



# Components report

## Six-month report

October 2020 / March 2021



EuFMD's programme, tools and initiatives

**FAST**

Foot-and-mouth And  
Similar Transboundary  
animal diseases

**Pillars**

eufmd activities

**Dt**

eufmd digital  
transformation

**vlearning**

eufmd virtual learning  
centre

**microLearning**

eufmd virtual learning

**vlc EA**

virtual learning centre  
for East Africa

**Tom**

eufmd training  
management system

**SimExOn**

simulation exercises  
online

**KnowBank**

eufmd knowledge bank

**GetPrepared**

emergency preparedness toolbox

**RiskComms**

risk communications

**SQRA**

a method for spatial qualitative  
risk analysis applied to fmd.

**Pragmatist**

prioritization of antigen management  
with international surveillance tool

**EuFMDiS**

european foot-and-mouth disease  
spread model

**Impact**

impact calculator

**Vademos**

fmd vaccine demand  
estimation model

**GVS**

global vaccine  
security

**PQv**

vaccine  
prequalification

**PCP**

progressive control  
pathway

**PSO**

pcp practitioner  
officers

**VPP**

veterinary  
paraprofessionals

**PPP**

public private  
partnership

Sustainable development goals, UN-SDGs. EuFMD's programme has a focus on



Together against wasting resources, think twice before printing.



Thinking of the  
environmental  
footprint

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# Pillar I (Output I)

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## **Pillar Objective**

Improved preparedness for management of FMD and similar TADs ('FAST disease') crises by Members and across Europe as a whole.

## **Pillar Co-ordinator**

**Maria de la Puente Arévalo**

**Melissa Mclaws**

**Pamela Hullinger**

# Component 1.1

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## (Activity 1)

### Training for Member Nations

#### Component Objective

Increased European expertise in FAST disease emergency management achieved through the delivery of training and the assistance to Member Nations to cascade training at national level.

#### Component Manager

Rodrigo Nova

#### Sub-activity level manager

1.1.1 Jenny Maud, Nadia Rumich

1.1.2 Rodrigo Nova, Esa Karalliu

1.1.3 Marcello Nardi

## 1. Background

A **training menu** has been developed and offered to the 39 EuFMD Member Nations (MN), to spend their training credits choosing from a range of options. Regular communication with the 39 Training Focal Points (TFP) ensures that the program is developed correctly and implemented by the end of each biennium (2019-2021 and 2021-2023).

The training menu includes online training courses (multi-country and tailored courses) and face-to-face courses (workshops and Real Time Trainings). Support for **regional initiatives** and assistance with **national training** is also included and encouraged as options in the training menu. Information was collected and analyzed, including feedback surveys from previous courses; expert opinion of component managers and EuFMD consultants working with the MN; questionnaires sent to the Training Focal Points (TFP); workshop to identify the training needs and gaps in emergency preparedness (held in September 2019). The new training menu includes topics related to FAST diseases. It focuses on providing countries with practical knowledge to deal with challenges related to disease detection, response (control) and the recovery phase after an outbreak. The new training program considers the risk that FAST diseases pose in the various MN.

In phase V, an additional effort is being made to support **capacity building** at national level. EuFMD training support services include training resources and materials that can be used at national level to cascade knowledge by the trainees participating in EuFMD courses and by national education institutions. The number of these **open-access resources** and their visibility and accessibility is being increased to meet the needs of the number of people making use of material created or referenced by EuFMD.

Together with the open-access resources (training resources and job aids), the online **FMD Emergency Preparedness** course and any other relevant training material, will be made available immediately for EuFMD members in case of a **FAST disease incursion**, in order to train a large number of veterinarians involved in emergency response in a short time.

In **Phase V**, in order to promote the **engagement of the private sector** in the prevention and control of FAST diseases, a percentage of training for private sector actors at national levels (livestock industries and associated with livestock value chains) will be accounted for by opening training opportunities to the private sector alongside the official veterinary service.

In order to ensure quality across the training programme and to carry out a continuous evaluation of the impact of our training programme, a **Training Quality Management System (TQMS)** is being established. This system aims to guarantee that EuFMD provides high-quality and high-impact training.

Moreover, during this phase, work is being carried out under component 1 to **achieve accreditation** of EuFMD courses as Continuing Professional Development (CPD) and /or part of a wider, European system for recognition of training for achievement of competencies by veterinary authority personnel.

EuFMD will be part of a working group that, within the framework of a **VetCEE dossier of Competence**, will aim to define the requirements for a postgraduate training programme in the field of Veterinary Public Health (VPH). The identification of a common quality standard for a middle-tier postgraduate specialization program in the field of VPH, will allow for mutual recognition within the EU of the national postgraduate training courses.

To guarantee **co-ordination** with, and engagement of, the relevant partners, regular meetings are organized during the Phase. The outputs of those meetings are used to adapt and improve the activities implemented under Component 1.

## 2. Team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Component supervisor</b>	Maria de la Puente Arevalo	Pillar I Co-ordinator
<b>Component manager</b>	Rodrigo Nova	Training Technical Co-ordinator
<b>Training and networking</b>	Nadia Rumich	Communication Officer
<b>Training development</b>	Jenny Maud	Training Programme Manager
<b>Chief Learning Officer</b>	Marcello Nardi	Learning Specialist
<b>Member Nation partners</b>	Training focal Points in each EuFMD MN	n/a
<b>Executive Committee oversight</b>	Lajos Bognar	Executive Committee member
<b>FAO officer</b>	Eran Raizman	FAO Regional office Europe

## 3. Countries or partner organizations involved

The direct beneficiaries of this component are the 39 Member Nations of EuFMD.

Communication with representatives of the **EU initiative Better Training for Safer Food (BTSF)** will take place to guarantee that the training offer of both projects (EuFMD and BTSF) is complementary.

## 4. Reporting

<i>Reporting format</i>	<i>Responsibility</i>	<i>Output</i>	<i>Distribution</i>	<i>Sent by</i>
<b>Six monthly report to ExCom</b>	Component manager	Written report and presentation	ExCom, STC	the Network and Training Support Officer
<b>Every two years report to MN</b>	Component manager	Written report and presentation	General Session	
<b>Website report</b>	Component manager	Written report	Website	
<b>Workshop/Mission reports</b>	Lead facilitator	Written report if required	EuFMD, NSAH, others if required	

## 5. Objective of the component

**Increased European expertise in FAST disease emergency management achieved through the delivery of training and the assistance to Member Nations to cascade training at national level.**

Component (Activity)	Objective	Narrative	Expected result	Monitoring	Evaluation	Assumptions and risks
1.1 Training for Member Nations	Increased European expertise in FAST disease emergency management achieved through the delivery of training and the assistance to Member Nations to cascade training at national level.	Training on FAST diseases, resources, tools and technical assistance is provided to all MN to enable cascade training at national level in order to develop their capacity to respond to FAST disease emergencies.	60% of the countries to have implemented national training activities using EuFMD training resources and/or training support services in four years	Regular collection of information through contacts with TFP. Procedure established in the training quality management system	Two external evaluations to be carried out by month 18 and 38 of Phase V	Assumes commitment from MN to develop and implement national trainings on FAST diseases and demand to use EuFMD training support services

## 6. Planned Component Sub-Activities

The expected result of the component will be achieved through **sub-activities**:

### 1.1.1. Training support services providing training resources, materials and expert guidance to cascade training on FAST diseases.

#### Training infrastructure

The ongoing COVID-19 situation has seen continued expansion of the virtual learning programme, and the capacity of the team supporting it. A further 1370 new users have been registered with the EuFMD virtual learning platform over five months since the last report, for an overall total of 15 838 users. Eight tutored virtual learning courses have been delivered across the EuFMD EC funded program during the September 2020 to January 2021 period, in addition to the support of a range of virtual workshops and similar activities.

The EuFMD virtual learning platform was upgraded to Moodle Workplace™ in November 2020. This new platform adds functionality for reporting, analytics and, importantly, support to the implementation of the Training Management System (see below). This platform follows the look and feel of the EuFMD overall.

A call for expression of interest for specialists in instructional design, learning technology and veterinary education is currently open, to further populate the roster of human resources available to support a further expansion of the virtual learning team.

#### Training resources

A new open access course on Simulation Exercises for Animal Disease Emergencies, based on a revised version of the course delivered in June 2020, will soon be available on the EuFMD virtual learning platform.

Work is now underway with the FAO e-learning academy to transition some of the open access courses onto the FAO academy platform in order to increase partnership. The first courses which will be transitioned in this way are the Introduction to FMD course and the Organizing Simulation Exercises for Animal Disease Emergencies course.

New resources have been added to the EuFMD Knowledge Bank, with activities now underway to promote the wider use of this resource. A number of new fact sheets and job aids have been developed to support awareness raising

and emergency response activities.

### **1.1.2. Training programme for Member Nations**

During this reporting period, the training menu was revised and updated to reflect the changes introduced due to the current pandemic situation. The updated training menu was shared with the training focal points.

The training focal points/contingency planners meeting, which was initially planned to occur face-to-face, was organized online on 29 – 30 October 2020. The objective was an update on recent activities carried out by EuFMD and tailor the planned activities to the country needs. Overall, thirty four senior representatives from twenty eight EuFMD Member Nations participated. As a follow-up, mails were sent to the training focal points with a summary of their training credits. They were also invited to allocate/reallocate indicating their priorities and preferred options from the training menu or donate their training credits.

A Training Credits bank was created to collect the un-allocated training credits which could be used to run additional courses for Member Nations, depending on their needs and requests. The training credits would be redistributed to countries based on risk and demand. Countries including Israel, Germany and Spain already received extra training credits from the bank, allowing them to participate in courses of interest.

The following courses were delivered during the reporting period:

An **FMD Emergency Preparation course for Serbia** to train official and private veterinarians was organized in November 2020. This is the third time this course is run for Serbia. Nearly 200 participants were registered, including 20 participants from Montenegro. The course was accredited by the Serbian veterinary chamber to count as Continued Professional Development (CPD) points. Unfortunately, there was a 32% completion rate which could be also due to the Covid-19 situation (including increase of workload and difficulties to find an appropriate private life-work balance).

A **FAST diseases Wildlife Surveillance** workshop, originally planned for spring 2020 in partnership with IREC (Ciudad Real, Spain), was re-structured using a blended approach (mix of virtual learning and face-to-face delivery). The first part of the course (v-learning) was delivered in February 2021. Over a hundred participants from 22 Member Nations, plus guest participants from Canada and the USA took part in this course. Pending on the Covid-19 situation, the face-to-face part is planned for June 2021.

A **FAST disease crisis management: Dealing with the psychological aspects and the public perceptions** v-learning workshop will be organized in March 2021. Over 100 participants are expected to take this course. This is a new course, aiming to further develop key competences on communication, resilience and ethics when dealing with an animal health crisis.

Due to the COVID-19 situation and travel restrictions, the following activities have been postponed:

- A National training in Germany that EuFMD agreed to support by providing an FMD expert.
- The Real Time Training which was originally scheduled for February 2020, will not be held during the current biennium. The training focal points were asked to either reallocate the training credits allocated to this option or carry them over to the next biennium.
- The FMD Laboratory Training organized by The Pirbright Institute which was originally scheduled to take place in May 2020.

### **1.1.3. Training Quality Management System (TQMS) to ensure the quality across EuFMD training programme and the continuous evaluation of the impact of EuFMD training**

Following the implementation of the Training Quality Management System (TQMS) in the first half of 2020, the EuFMD has enhanced processes for the constant development of the Quality system, to improve planning and delivery of learning projects.

The EuFMD is currently identifying international experts to engage in a follow-up evaluation of the TQMS. This review should evaluate the quality processes in place, identify future areas of development and review the impact strategy. It is scheduled to take place no later than March 2021, so that the outcomes can be reported to the 44<sup>th</sup> General Session of the EuFMD in April 2021.

An Impact survey was launched in January and February 2021 to address the learners who completed the courses in the first six months of the biennium and identify, as part of the Impact strategy, the potential outcomes in terms of learning and application of the learning.

This is a cross pillar activity, please refer also to component 3.3.4.

### **Implementation of a Training Management System (TMS)**

During the reporting period, the EuFMD has developed a plan for piloting the Training Management System (TMS), a tool which will support the capacity developing by allowing Member Nations to monitor the increased learning of the veterinarians via a Learning management system.

The EuFMD has finalized three key activities to start a pilot in the countries belonging to Pillar I:

- a competency framework that covers the main individual competencies in disease control has been created and validated;
- the Training Management System (TMS) concept has been introduced to Training Focal Points (TFPs) in a meeting on October 29th 2020 and has gathered an initial interest from multiple countries;
- the EuFMD eLearning platform has been upgraded to Moodle Workplace™, which will allow the EuFMD to create an area specific to the Training Management System.

The tool will be rolled out and presented to TFPs in the month of February 2021. A country among the Member Nations will be identified to start piloting the functionalities and processes of the Training Management System (TMS) before the end March 2021.

This is a cross pillar activity, please refer also to component 3.3.4.

### **Accreditation of EuFMD training courses**

The EuFMD has prepared a workplan for the accreditation of the courses of the EuFMD Training programme as Continuing Professional Development (CPD). A mapping of the main Veterinary Statutory bodies in the Member Nations has been finalized, and it will support the EuFMD in the identification of accreditation institutions to partner with, the procedures they follow for accreditation and those to target during the reporting period and before the end of the biennium.

Among the actions to improve collaboration with Member Nations, the Foot-and-mouth disease Emergency Preparedness virtual learning course, held for a Serbian-speaking audience in November 2020, was advertised by the local Veterinary Board.

**Sub-activities and their indicators**

<i>Sub-activity level</i>	<i>Description</i>	<i>Progress in the current period</i>	<i>Progress overall towards biennium indicator</i>
1.1.1. Training support services	Training support services: Training infrastructure.	EuFMD online platform is fully functional and has been upgraded	EuFMD online platform fully functioning and accessible.
	Training support services: open-access resources.	Knowledge Bank search functionality has been improved. Open-access Organizing Simulation Exercises course now available.	Two new open access online courses added and Knowledge Bank improved.
1.1.2. Training programme	1.1.2.1. Evaluation of the training needs and development of a training menu according to these. Each country will receive 10 training credits to choose from a range of options established in the training menu. Implementation of the training programme, delivering the different training courses (online and face-to-face), regional initiatives, missions and tailored in-country assistance. Co-ordination with the TFP including regular on-line and/or face-to-face meetings.	The implementation of the training programme is ongoing, adapting the trainings planned to the current situation through the conversion of workshops to online solutions.	Implementation of the training menu is on-going.  So far, 90% of the training credits are allocated and 10% of them are spent.
1.1.3. TQMS	1.1.3.1. Quality assurance across the training programme and assessment of its impact.	A Training Quality Management System has been developed and is currently being implemented for all courses organized. A TQMS evaluation follow-up is currently being organized and outcomes will be outlined in the next report.	Development of a TQMS finalized in first half of 2020. A training Impact evaluation framework for regular analysis has been created.
	1.1.3.2. Accreditation of EuFMD training courses.	Accreditation of EuFMD training courses as continuing professional development (CPD) and/or part of a wider system for recognition of training for achievement of competences by veterinary authority personnel. Participation in the working group to define requirements for a post graduate training programme in the field of veterinary public health (VPH), within the framework of a <b>VetCEE</b> dossier of Competence.	A mapping of the Veterinary statutory bodies relevant for the accreditation of courses has been finalized
			The EuFMD is liaising with countries where course delivery is planned before the end of the biennium to explore accreditation to CPD options

## 7. Issues for the Executive Committee attention

The development and offer of two new online courses at no training credit cost, together with the postponement of some courses, has led to a training credits underspend, compared to what it would be desirable in normal circumstances. The postponement of the Real Time Training and possibly the laboratory courses in The Pirbright Institute to 2022 will imply that the target “At least 90 % of the training credits spent by the MN by the end of each biennium” cannot be reached. These training credits will be carried over to the next biennium of the current phase V of the Programme.

Following the submission of surveys directed to those who were enrolled but did not complete the EuFMD courses, the results indicated lack of time as the main reason impacting on the veterinary services workload. In addition, some of the participants enrolled in the FMD Emergency Preparedness virtual course held in November 2020 for Serbian audience indicated that COVID-19 did have a negative impact on course completion.

Differences in the procedures of accreditation in the Continuing Professional Development (CPD) bodies within the region is delaying the accreditation of EuFMD courses. The EuFMD effort is focusing in mapping relevant bodies and procedures and progressively liaising with them to explore options for accreditations.

## 8. Priorities for the next six months

### Infrastructure

The Knowledge Bank is being advertised and additional job aids and training resources developed. Further improvements to the EuFMD Virtual Learning site are envisaged, particularly in terms of functionality for the Training Management System.

### Open access training resources

The focus for the open access courses will be the transition of some of the courses to the FAO Virtual Learning Academy. As the virtual learning programme continues to evolve in response to the COVID-19 pandemic, it will be important to explore potential to release further content on an open access basis.

### Training programme

Several courses are planned in the calendar for the upcoming six months, including the **Depopulation, disposal, cleaning and disinfection** course, In – Country Support Missions and National Simulation Exercises, the latter run using the crisis simulation exercise software.

EuFMD will explore the opportunity to run additional courses with the donated training credits, such as an **FMD emergency Preparation course** and/or an **Online LSD course**, pending on the preferences of the MN.

### TQMS

Preparation of the follow-up evaluation of the **Training Quality Management System (TQMS)** and creation of a plan for the follow-up of the observations before the end of the biennium.

### Training Management System (TMS)

Piloting the Training Management System (TMS) in at least a Member Nations, identification of improvements needed and further opportunities for development of the tool. Please also refer to component 3.3.4.

### Accreditation of EuFMD training courses

EuFMD will focus on liaising with Veterinary statutory bodies in Member Nations in order to accredit the courses to Continuing Professional Development (CPD).

## 9. Success stories and outputs

### Training programme

EuFMD has progressed in the implementation of the training programme despite the challenges associated to COVID-19. The online format allowed the training courses to go ahead, and an increased participation of a higher number of veterinarians than initially foreseen, whilst maintaining the learning objectives.

Nearly all Member Nations have either allocated their training credits or donated part of them, allowing other MNs to further increase their veterinary capacity by being able to participate in other training courses.

The FAST diseases Wildlife Surveillance course, originally planned as a workshop, was reorganized using a blended learning approach (online and face-to-face). The online component was delivered in February 2021, generating great interest with over 100 participants from 24 countries (22 MNs and two guest country) enrolled. In order to allow live interaction for an activity of this scale, the course required a considerable commitment from the operations team for logistical support.

## 10. Budget (€) COMP. 1.1

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
<b>Component 1.1</b>	21.938	21.130	808
<u>Consultancy Operational</u>			
<b>Component 1.1</b>	34.943	38.405	-3.462
<u>Consultancy Technical</u>			
<b>Component 1.1</b>	180.000	99.936	80.064
<u>Travel</u>			
<b>Component 1.1</b>	220.000	6.558	213.442
<u>Training</u>			
<b>Component 1.1</b>	86.000	17.263	68.737
<u>Contracts</u>			
<b>Component 1.1</b>	23.000	20.401	2.599
<u>Procurement</u>			
<b>Component 1.1</b>	15.000	3.833	11.167
<u>General Operating Expenses</u>			
<b>Component 1.1</b>	65.250	18.858	46.392
<b>Total Direct Eligible Cost</b>	<b>646.131</b>	<b>226.383</b>	<b>419.747</b>

# Component 1.2 (Activity 2)

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## Emergency Preparedness

### Objective

Improved national and regional capacity in FAST disease emergency preparedness through the provision of tools to test and improve contingency plans and through the establishment of networks for emergency preparedness and public-private engagement

### Component Manager

Koen Mintiens

### Sub-activity level manager

**1.2.1** Sally Gaynor, Nadia Rumich

**1.2.2** Shankar Yadav

**1.2.3** -

**1.2.4** Koen Mintiens

## 1. Background

The activities in this component will engage with, and be provided to, each of the 39 Member Nations. Some additional European countries, that are not EuFMD members, might be invited to activities under this component.

### GET Prepared

During phase IV of the program, the EuFMD developed the concept for a comprehensive toolbox (**GET Prepared**) of resources for contingency planners was developed. It was presented during the 43<sup>rd</sup> General Session of the EuFMD -GS43 (April 2019) and received great support from the Member Nations (MN). In Phase V, this tool will be populated with guidance documents, assessment tools and best practices. The work will be done in collaboration with the MN contingency planners. A forum will be set up to facilitate sharing of best practices and to identify improvements to the uptake or application of **GET Prepared** Toolbox contents. The identification of these gaps will support the planning of the development of new guidance documents under this component or of new training workshops under component 1.1.

### EuFMDiS

The development of the European Foot and Mouth Disease Spread Model, **EuFMDiS**, in the previous phase also received strong support from the MN. A sufficient number of countries will be incorporated into the model during Phase V to enable both national and Europe-scale assessment of the effects of FMD incursions and control measures. New features will be included in **EuFMDiS** in order to meet the priorities agreed by the expert panel under the Standing Technical Committee (STC). These new features will include the capacity of modelling wildlife-domestic animal interactions; the impact of changing biosecurity at animal holdings and during livestock movements; the incorporation of pastoralist system and the inclusion of carcass disposal capacity. EuFMDiS will be adapted to model other FAST diseases, on the basis of priorities identified by the STC and agreed with the Executive Committee. These activities will be accompanied by training initiatives and regular engagement with the user community to ensure adequate use of the model.

### Emergency Preparedness Network

An Emergency Preparedness Network (EP) will replace the previous Modelling, Vaccination and Contingency Planning Networks to continue providing up-to-date information on different topics related to FAST disease Emergency Preparedness (EP), act as a forum for EP experts and a database of veterinarians who have been trained in a Real Time Training (RTT) course. This network of EP experts will comprise contingency planners from different countries and experts from international organizations.

The work began during the last biennium to increase **collaboration and engagement of the private sector** in the prevention and control of FAST diseases, will continue during Phase V. The discussions and activities held with different stakeholders will lead to recommendations to improve future legislation and contingency plans in the MN and to raise awareness among the private sector.

## 2. Team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Component supervisor</b>	Maria de la Puente Arevalo	Pillar I Co-ordinator
<b>Component manager</b>	Koen Mintiens	Quantitative Risk Assessor
<b>Training and networking</b>	Nadia Rumich	Communication Officer
<b>Modelling expert</b>	Shankar Yadav	Quantitative Risk Assessor
<b>EuFMDiS user support</b>	Tiziano Federici	EuFMDiS assistant
<b>EuFMDiS developer</b>	Graeme Garner	EuFMD Technical officer
<b>EuFMDiS developer</b>	Richard Bradhurst	EuFMD Technical officer
<b>Executive Committee oversight</b>	Lajos Bognar; Olev Kalda	Executive Committee member
<b>FAO officer</b>	Eran Raizman	FAO Regional office Europe

### 3. Countries or partner organizations involved

The 39 Member Nations of EuFMD are the direct beneficiaries of this component. As the activities under this component have a strong relevance to Ukraine and Moldova, and other such European countries that are not currently MN, the agreement of the EC for their participation may be proposed.

The work done under this component will require the collaboration of the MN and different technical partners in the EU Commission, particularly EFSA (EuFMDiS) and Directorate F of DG-SANTE (GET Prepared). A continuous cooperation will also be established with the World Organisation for Animal Health (OIE) and the Emergency Management Center (EMC) of FAO to guarantee complementarity of work on emergency preparedness by the different organizations.

### 4. Reporting

Reporting format	Responsibility	Output	Distribution	Sent by the Network and Training Support Officer
Six monthly report to ExCom	Component manager	Written report and presentation	ExCom, STC	
Every two years report to MN	Component manager	Written report and presentation	General Session	
Website report	Component manager	Written report	Website	
Workshop/Mission reports	Lead facilitator	Written report if required	EuFMD, NSAH, others if required	

### 5. Objective of the component

**Improved national and regional capacity in FAST disease emergency preparedness through the provision of tools to test and improve contingency plans and through the establishment of networks for emergency preparedness and public-private engagement.**

Component (Activity)	Objective	Narrative	Expected results	Monitoring	Evaluation	Assumptions and risks
1.2 Emergency Preparedness	Improved national and regional capacity in FAST disease emergency preparedness through the provision of tools to assess and improve contingency plans and through the establishment of networks for emergency preparedness and public-private engagement.	Tools to assess and improve MN contingency plans are developed; Mechanism to facilitate discussion fora among experts in emergency preparedness and among private and public sector are established.	80% of the countries to have introduced some improvement in their contingency plans by the end of the phase as a result of the work done under this component.	Regular collection of information through contacts with TFP.	Two external evaluations to be carried out by month 18 and 38 of phase V.	Assumes commitment from MN to contribute in their development and use Assumes engagement of members of the networks.

## 6. Planned Component Sub-Activities

The expected results of the component will be achieved through sub-activities:

### 1.2.1. Tools for contingency planning and decision support for the better management of FAST disease risks

#### GET Prepared

Resource development is underway, with development focusing on priority areas that create bottlenecks in emergency response, and gaps that impact on human health. Examples of good practice on psychological support, killing, disposal, and cleaning and disinfection are being identified.

#### Development of resources

New resources that will be developed on psychological support, killing, disposal, and cleaning and disinfection will include self-assessment tools, fact sheets, case-studies and tools for estimating resources.

### 1.2.2. FAST disease modelling for Europe

#### European Foot and mouth Disease Spread Model (EuFMDiS)

As per the EuFMD's plan to include more countries in the EuFMDiS Users' Group, the model was demonstrated to representatives of Estonia, Latvia and Lithuania and they all confirm their engagement in developing EuFMD for their countries. By including these three countries in the EuFMDiS environment a new regional cluster of Baltic countries becomes available where cross-boundary disease spread can be applied. For Latvia and Lithuania, the data collection has started with the aim of having EuFMDiS operational by September 2021. The model development is planned in Estonia in the second semester of 2021.

Negotiations on developing the model in Switzerland continued but it was eventually not possible to continue due to data sharing restrictions that are in place in Switzerland.

New features in the EuFMDiS model were further developed. The concept of providing a herd biosecurity score was developed. This allows assessing the impact of enhanced herd biosecurity on the spread and control of FAST diseases. The results were presented at the EuFMD OS20. The concept of the wildlife component was also developed and presented at the EuFMD OS20. It provides FAST disease spread in wildlife and between wild and domestic animals. The concept is developed for classical swine fever in Spain.

During the EuFMD OS20 a workshop was organized to raise awareness on EuFMDiS among EuFMD Member Nations and other FMD free countries and to compare different vaccination strategies in a multi-country FMD outbreak in Europe. This workshop was repeated in March 2021 during the Annual Conference of the Society for Veterinary Epidemiology and Preventive Medicine. Criteria for different vaccination strategies are further investigated also in the context of the Public-private partnerships for the prevention and control of FAST diseases.

A webinar was organized for the EuFMDiS Users' Group to discuss the quality of the data that were used in the model and how they could be improved.

### 1.2.3. Emergency Preparedness Network for contingency planners and experts in emergency preparedness

#### Online network

The existing Vaccination, Modelling and Contingency Planning Networks have been merged into a new "Emergency Preparedness" Network. It was finalized in October 2020 and its availability noted at the training focal point/contingency planners meeting that month. Exactly how it is best managed beyond that group to facilitate sharing of resources and collaboration is still under discussion.

#### Working groups and meetings

No working groups or meetings were planned during this period according to the workplan.

#### **1.2.4. Public-private partnerships for the prevention and control of FAST diseases**

##### **Public-private partnership discussion forum and initiatives to increase collaboration and engagement of the private sector in the prevention and control of FAST diseases**

The PPP Problem Statement, with an action list to address specific issues like assuring business continuity during outbreaks, addressing animal health and welfare through emergency vaccination and sharing experience and training on disease outbreak preparedness was finalized, endorsed by all the private partners, and presented during the EuFMD OS20.

With the support of the EuFMD, the private stakeholders will invite their public stakeholders' partners and academia to a series of webinars and simulation exercises that address specific aspects of FAST outbreak control that are of concern. Specific issues and gaps that surface will be discussed by all participants to reach a consensus on possible solutions, who will be summarized in a series of recommendation documents that can support future development on animal health regulations. The following events were planned:

- 18 March '21: Webinar - Success Stories on Public-Private Partnership in Livestock Production and Animal Health.
- May '21: Webinar-Opportunities and Concerns for implementing regionalization and compartmentalization in FAST.
- June '21: Simulation Exercise - Context for applying emergency vaccination against foot-and-mouth disease in the EU.

A dedicated [Public-Private Partnership for Anticipating FAST-Disease Outbreaks page](#) was developed on the EuFMD website

## Sub-activities and their indicators:

	<i>Sub-activity level</i>	<i>Description</i>	<i>Progress in the current period</i>	<i>Progress overall towards biennium indicator</i>
1.2.1. Tools for Contingency Planning	1.2.1.1 GET Prepared	Development of a comprehensive toolbox ("GET Prepared") of resources for contingency planners	Ongoing identification of examples of good practice. Test version of the online GET Prepared tool close to completion. Existing resources identified for many of the 54 GET Prepared components and new resources being developed for 2 components.	a) Progress is in line with the indicator for identification and compilation of examples of good practice in EP during the first year of phase V. b) Progress is in line with the indicator for the online GET Prepared tool to be available by the end of the first biennium c) Progress is in line with the indicator for at least 95% of the components of emergency preparedness ('bricks in the wall') will contain assessment resources and examples of good practice by the third year of phase V
	1.2.1.2 Dev of resources	Development of resources such as guidance documents or assessment tools to fill a gap within a 'brick' in GET Prepared.	New resources developed on simulation exercises and risk communication.	Progress is in line with the indicator for two new resources developed per biennium, if a need is identified
	1.2.2.1 EuFMDiS	Incorporation of new countries to EuFMDiS to enable both national and Europe-scale assessment of the effects of FMD incursions and control measures. Addition of new features in EuFMDiS as agreed by the expert panel under the Standing Technical Committee (STC). Adaptation of the model to other FAST diseases. Support to EuFMDiS users to facilitate the use of the model to carry out studies that are useful to test their contingency plan.	Data have been (or being) collected from Spain and we are working closely with Switzerland to include them in the EuFMDiS modelling project. Work is underway to include the new model components. Users are supported through webinars, online and face-to-face meetings. Model advocacy is being done through oral and poster presentation and online meetings.	All activities are achievable within the given timeline: a) First versions of EuFMDiS for Spain, Ireland and North Macedonia ready. Switzerland to be ready in the next months. b) EuFMDiS adapted to CSF in the next months. c) Pastures pathway, wildlife component, biosecurity component and post-outbreak management to be available in the model in the next months. d) Five users support activities have been provided since the beginning of phase V: two webinars, two exercises with instructions to complete them and one face-to-face meeting.
1.2.2. FAST disease modelling				

1.2.3. Emergency Prep Network	1.2.3.1. Online network	Development of an online page to host the new Emergency Preparedness Network, integrating the previous Modelling, Vaccination and Contingency Planning networks. Provide opportunities for members to interact and learn through webinars or other resources related to contingency planning, emergency vaccination and disease modelling. Provide a forum to increase the sharing of good practices in emergency preparedness.		<ul style="list-style-type: none"> <li>a) Online site developed and participants enrolled with four months of delay in relation to indicator.</li> <li>b) No resources made available through the network so far.</li> </ul>
	1.2.3.2. Working groups and meetings	Organization of working groups and meetings to reinforce the discussion forum provided by the online network. Joint TFP/EP preparedness experts meetings might be considered	No activities planned for this period	A meeting will be held with contingency planners from EuFMD MN in September 2020.
1.2.4. PPP	1.2.4.1. PPP discussion forum and initiatives to increase collaboration and engagement of the private sector in prevention and control of FAST	Establish a discussion forum to work with different stakeholders on a) best practices to increase collaboration and engagement of the private sector in the prevention and control of FAST diseases; b) concerns and challenges of disease control for the private sector; c) better ways to raise awareness on FAST diseases among the private sector.	The discussion forum with the private sector stakeholders has been established. Three meetings took place. A Problem Statement document is drafted.	<ul style="list-style-type: none"> <li>a) Three meetings have already taken place. A governance structure for the PPP will be discussed in April, to include public stakeholders and academia in the debate.</li> <li>b) A first simulation exercise is planned for Nov-Dec 2020 (delayed because of COVID- 19).</li> </ul>

## 7. Issues for the Executive Committee attention

### EuFMDiS

The major issue identified was the availability of some important (and quality) data. In particular, to progress in the development of a Pan-European model, access to some summarized data from TRACES database has been requested to the EC, but no answer has been received so far.

### PPP

The dialogue between all public and private partners within the PPP needs to evolve swiftly as the European Commission is currently drafting the delegated acts of the Animal Health Law which will be implemented by April 2021. It is important that the concerns of the private sectors are given sufficient attention in the delegated acts.

## 8. Priorities for the next six months

### GET Prepared and development of resources

The development of GET Prepared will continue during the upcoming months and new resources will be developed if considered necessary to progress in the provision of tools under each of the components of the wall. This will include resources on psychological support, killing, disposal, and cleaning and disinfection.

### EuFMDiS

Several model parameters (such as within-herd component of the model, indirect contact parameters), model interface,

and EuFMDiS manual will be updated as per the recommendation of the third-party reviewer.

To develop the EuFMDiS Pan-European model, new member nations (such as Spain and Switzerland) will be included in the project.

The model will be developed with the inclusion of the biosecurity component and wildlife component. For this purpose, several meetings will be conducted to coordinate and collaborate with the stakeholders. Model parameterization will be carried through data collection from MS, literature and expert opinion.

The EuFMDiS will be adapted for classical swine fever spread and control modelling in Spain, as a proof of concept to extend it later to other countries.

Efforts will be made in coordinating with the MS to collect the data on post-outbreak management so that this component can be included in the EuFMDiS model.

Various scoping meetings will be organized to bring other MS in the modeling project (e.g. Baltic countries). The EuFMDiS team will support training for the users through webinar or on-site meetings for better use of the model.

### **PPP**

The governance structure for the PPP to prepare for FAST- disease outbreaks needs to be established to create a dialogue between the different partners. The concerns of the private partners need to be prioritized and one needs to be addressed during the simulation exercise/workshop to be organized for Nov-Dec 2020.

## **9. Success stories and outputs**

### **GET Prepared**

The online GET Prepared tool is now operational. For simulation exercises the following resources have been completed: a free-access on-line course consisting of seven modules, a set of guidance documents and a self-assessment tool. For emergency vaccination a guide on “Developing an emergency vaccination plan for foot-and-mouth disease” has been completed and will be published in March.

### **EuFMDiS**

To reach out to a broader scientific community for the demonstration of EuFMDiS model development and its uses, abstracts were submitted for oral and poster presentation in the international conferences (SVEPM 2020 and ISESSAH 2020). Using the EuFMDiS model, a study was conducted, a poster prepared and submitted for SVEPM 2020 and was accepted for presentation. The abstract submitted for an oral presentation at ISESSAH was also accepted.

In addition to which the EuFMDiS planned to host a workshop during SVEPM 2020, for the broader audiences to raise awareness about the use of this model and its acceptability for the emergency preparedness of the FAST diseases (unfortunately both conferences have been postponed due to COVID19).

The EuFMDiS model has been endorsed by a third-party reviewer that concluded that EuFMDiS is a detailed simulation model that explicitly models within-herd and between-herd transmission of FMD, contributing to an intuitive understanding of the model by the user. The model can be used to evaluate different control strategies and can be of great help in contingency planning.

**10. Budget (€) COMP. 1.2**

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
<b>Component 1.1</b>	11.700	11.378	322
<u>Consultancy Operational</u>			
<b>Component 1.1</b>	34.943	38.405	-3.462
<u>Consultancy Technical</u>			
<b>Component 1.1</b>	80.000	194.957	-114.957
<u>Travel</u>			
<b>Component 1.1</b>	60.000	21.789	38.211
<u>Training</u>			
<b>Component 1.1</b>	43.000	15.560	27.440
<u>Contracts</u>			
<b>Component 1.1</b>	50.000	31.835	18.165
<u>Procurement</u>			
<b>Component 1.1</b>	-	-	-
<u>General Operating Expenses</u>			
<b>Component 1.1</b>	21.000	387	20.613
<b>Total Direct Eligible Cost</b>	<b>300.643</b>	<b>314.310</b>	<b>-13.668</b>

# Component 1.3 (Activity 3)

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## Emergency vaccination

### Objective

Increased preparedness for use of vaccination in emergency response plans for FAST diseases through an increased understanding of the constraints to use vaccination and through the establishment of new system to increase FMD vaccine security.

**Component manager:** David Mackay

### Sub-activity level manager

<b>1.3.1</b>	<b>Beatriz Sanz Bernardo</b>
<b>1.3.2</b>	<b>David Mackay</b>
<b>1.3.3</b>	<b>David Mackay</b>
<b>1.3.4</b>	<b>David Mackay</b>

## 1. Background

The activities in this component will engage with, and be relevant to, each of the 39 Member Nations.

The EuFMD will provide **regular guidance** to contingency planners at national and European (EU and GF-TADs) scale on all aspects of vaccine availability and performance for use in emergency vaccination programmes, for the priority FAST diseases. This activity will be linked closely to the work done under **component 7** of Pillar I to update and regularly use the PRAGMATIST to provide information of the FMD risks and the relative value of the antigens available for use in European emergency reserves.

A **Public and Private Sector Platform (PPSP)** will be established in order to generate some of this information, to improve understanding of issues and to identify pathways or actions to improve the availability of vaccines suitable for use by Member Nations in disease emergencies.

In close collaboration with **components 2 and 4** of Pillar I, the EuFMD will **scope the state of preparedness for emergency vaccination** in the plans of the Member Nations and on the issues that constrain them from inclusion of vaccination in their plans. The issues identified may be discussed by the **PPSP** to draft recommendations to address these constraints. Moreover, they may lead to the development of training activities for MN organized under components 1 and/or 4.

A new system to improve vaccine quality and availability will be established:

- A **pre-qualified supplier system** for the immediate procurement of vaccines meeting pre-agreed quality criteria for use in MN;
- An emergency procurement and supply mechanism for FMD vaccines, operating through FAO procurement procedures through application of the pre-qualification system with or without an assurance (Assured Supply) contracting modality: Assured emergency Supply Options (**AESOP**).

These new systems are relevant for Member Nations, and for the Global Strategy for the control of FMD. The work will be done in collaboration with Pillars II and III. The pre-qualified supplier and AESOP system may be a model for other FAST diseases. By the end of phase V or in future phases of the program, the extension to other diseases may be considered.

Once these new system are established, the EuFMD will have to **explain to the Member Nations** and other potential users, how to access them. In co-ordination with other components of the workplan, different meetings and fora will be used (e.g. Training focal points meetings (1.1); Online emergency Preparedness Network (1.2); Contingency planning focal points meetings (1.2); Management meetings (1.4)).

The new emergency procurement and supply system for FMD vaccines that complements the EU vaccine bank, will be one of the new mechanism of **emergency response** established in this new phase of the programme. Another new emergency response mechanism will be the diagnostic bank established under component 4 of Pillar I. The diagnostic bank will be established initially for South-Eastern Europe (SEE), as this is considered a priority area in term of risks. However, with the agreement of the European Commission and the Member Nations, the bank will be available for other countries or regions in the case of an outbreak. Overall, the EuFMD, through the new workplan, will be flexible to react in a timely manner in case of an emergency, mobilizing funds from different components as necessary (e.g. to deliver an online emergency training, to provide experts to assist in affected countries, etc.).

## 2. Team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Component supervisor</b>	Keith Sumption	Executive Secretary
<b>Component manager</b>	David MacKay	Vaccine Security Specialist
<b>Training and networking</b>	Nadia Rumich	Communication Officer
	Beatriz Sanz Bernardo	Collaborator from TPI
<b>Member State partners</b>		n/a
<b>ExCom oversight</b>	H. Roest	Executive Committee member
<b>FAO officer</b>	Eran Raizman	FAO REUT

## 3. Countries or partner organizations involved

The direct beneficiaries of this component are the 39 Member Nations of EuFMD. Cooperation will be established with the World Organisation for Animal Health (OIE) and the Emergency Management Center (EMC) of FAO, GF-TADS for the development of most of the sub-activities under this component.

## 4. Reporting

<b>Reporting format</b>	<b>Responsibility</b>	<b>Output</b>	<b>Distribution</b>	<b>Sent out by Network and Training Support Officer</b>
<b>Six monthly report to ExCom</b>	Component manager	Written report and presentation	ExCom, STC	
<b>Every two years report to MN</b>	Component manager	Written report and presentation	General Session	
<b>Website report</b>	Component manager	Written report	Website	
<b>Mission/Meeting reports</b>	Leader of the Mission/ Main facilitator of the meeting	Written report	EuFMD, AGAH, others if required	

## 5. Objective of the component

**Increased preparedness for use of vaccination in emergency response plans for FAST diseases through an increased understanding of the constraints to use vaccination and through the establishment of new system to increase FMD vaccine security.**

Component (Activity)	Objective	Narrative	Expected result	Monitoring	Evaluation	Assumptions and risks
1.3 Emergency vaccination	Increased preparedness for use of vaccination in emergency response plans for FAST diseases through an increased understanding of the constraints to use vaccination and through the establishment of new system to increase FMD vaccine security.	Establishment of a public-private platform and scoping work to improve understanding of FAST disease vaccination constraints in MN; Establishment of new system to increase FMD vaccine security.	60% of the countries to have incorporated changes in their contingency plans regarding the use of emergency vaccination against FAST diseases, as a result of the work done under this component, by the end of the phase;  3 million vaccine doses assured under AESOP/assurance programme.	Regular collection of information through contacts with focal points in the MN.	Two external evaluations to be carried out by month 18 and 38 of phase V.	Assumes commitment from MN to incorporate the recommendations given by the PPSP or to consider the use of the new system to increase vaccine security

## 6. Planned Component Sub-Activities

The expected result of the component will be achieved through **sub-activities**:

### 1.3.1. Sub-activities to better understand the level of preparedness to use emergency vaccination for FAST diseases in Member Nations:

Following the questionnaire circulated to EuFMD Member Nations during the summer of 2020, the results have been combined in an Executive Summary and distributed to the EuFMD Member Nations. The questionnaire identified potential constraints for the implementation of emergency vaccination, and the survey results were shared during the EuFMD OS'20.

These results have been the basis for a follow up session with the contingency planners/risk managers with the aim of confirming the findings of the questionnaire, prioritizing the importance of the identified gaps and discussing how EuFMD could facilitate enhanced preparedness for emergency vaccination. At the end of this phase, we expect to better understand the gaps/needs which will impact most countries for/during the implementation of emergency vaccination and to draft conclusions and recommendations

### 1.3.2. Establishment of a public and private sector platform (PPSP) for FAST disease vaccination PPSP regular meetings

The first meeting of the PPSP “Explore options to improve security of vaccine supply against Foot-and-Mouth and other similar transboundary diseases” was held in FAO, Rome, 22-23 January 2020. The meeting successfully brought together a wide range of stakeholders including manufacturers, reference laboratories, regulatory authorities and NGOs such as GALVmed. The meeting was used as an opportunity to launch the Ag Result FMD Vaccine Challenge Project which aims to introduce new market support mechanisms to promote the availability of high quality and epidemiologically relevant

FMD vaccines in East Africa. Participants expressed strong support to continued engagement within the PPSP to promote FAST vaccine security and the main actions agreed are listed below.

- 1) Further development of a Multi-Stakeholder Platform (MSP), through consultation between FAO and key private sector associations;
- 2) Establish a working group on vaccine pre-qualification and a second group on estimating vaccine demand and identifying the impediments to vaccine use;
- 3) Industry to develop a problem statement relating to the impact of the Nagoya Protocol on access to novel genetic material for the purpose of controlling novel disease threats in animals;
- 4) a more systematic approach to engaging private sector in international working meetings relating to surveillance or vaccination strategies and their impacts.

#### **Development of guidance papers and studies**

Guidance will be required on the technical requirements and procedure for pre-qualification (PQ) of FAST vaccines. Following the meeting in Rome a Technical Advisory Group on Pre-Qualification (**PQTAG**) was established involving experts from a range of public and private stakeholders. The PQ Project Manager produced a discussion paper on a procedure for PQ that will form the basis of a future guidance document.

#### **1.3.3. New system to improve FMD vaccine quality and availability**

##### **Pre-qualified supplier system for the immediate procurement of vaccines meeting pre-agreed quality criteria for use in MN**

The PQ Project Manager presented a proposal at the Rome meeting of the PPSP on how a future PQ procedure might operate. This proposal received a high level of support in principle, and stakeholders encouraged EuFMD to develop it further. This process has now started through setting up the PQTAG which started work at the end of March on defining the technical requirements for PQ. A parallel work stream will be launched shortly to develop proposals for the procedural requirements for PQ.

A project plan for the development of the PQ process as a whole has been developed to propose three phases; a pre-inception phase up to the end of 2020 to detail the proposed procedure and develop the plan to implement it; an inception phase between October 2020 and September 2021 during which preparations will be put in place to receive and evaluate applications and a second step from 2022 during which applications will be invited from volunteer companies; finally, an operational phase from late 2023.

##### **Assured emergency Supply Options (AESOP) for FMD vaccines**

The work on developing a PQ procedure is intended to provide one element of the Assured Emergency Supply Options for FMD vaccines (**AESOP**). In order to develop further options for long term agreements (LTAs) for supply of FMD vaccines as part of AESOP, it will first be necessary to put in place the systems both to ensure the quality of vaccines supplied and to provide assurance to manufacturers that if they invest in PQ of their vaccines, then a market for these vaccines will exist, thereby reducing risk and promoting vaccine security. The second element required will be a clearer picture of the demand for FMD vaccines and the impediments that exist to their use. This aspect will be addressed through Pillar III and sub-activity 1.3.1 of Pillar I. Work will therefore be phased and specific actions to achieve AESOP will start once the PQ project is sufficiently developed.

## Sub-activities and their indicators

	Sub-activity level	Description	Progress in the current	Progress overall towards biennium indicator
1.3.1. Preparedness for emergency vaccination	Scoping work to understand the approach to emergency vaccination in MN.	Scoping work for the state of preparedness for emergency vaccination in the plans of the Member Nations and on the issues that constrain them from inclusion of vaccination in their plans. This work will be done in close collaboration with components 2 and 4 of Pillar I and information will be gathered through interviews with focal points from the MN, surveys and/or discussions in different workshops and meetings. EuFMDiS will also be used to assess emergency vaccination needs for FAST diseases.	The results of the questionnaire were collected. Fifteen nations participated and their responses have been used to outline a working session with EuFMD Member Nations. The results of the questionnaires were reported during the OS'20.	A session with EuFMD Member Nations will be held in March 2021. The results from this session will be used to draft conclusions and recommendations to approach emergency vaccination
	Regular reporting and guidance to Member Nations.	Regular reporting to MN on the state of preparedness for emergency vaccination in the contingency plans across Europe and on the issues that constrain MN to include emergency vaccination in their plans. Regular updating to the MN on the work done by the PPSP, including the communication of identified pathways or actions to improve vaccine availability. Regular guidance to contingency planners on aspects of vaccine availability and performance for use in emergency vaccination programmes for the priority FAST diseases.	The report from the first PPSP meeting "Explore options to improve security of vaccine supply against Foot-and-Mouth and other similar transboundary diseases" has been made available online and shared with the MN	The PPSP meeting report has been sent out and made available according to what was established in the workplan
	1.3.2.1. PPSP regular meetings	Establishment of a public and private sector platform (PPSP) that will meet regularly to share information and opinions in order to improve understanding of issues and to identify pathways or actions to improve the availability of vaccines suitable for use by Member Nations in disease emergencies.	The first meeting of the PPSP "Explore options to improve security of vaccine supply against Foot-and-Mouth and other similar transboundary diseases" was held in FAO, Rome, 22-23 January 2020	The first physical meeting of the PPSP has taken place as scheduled. Agreement has been reached with major stakeholders to pursue work by virtual meetings and hold a second meeting in the margins, or as part, of the Open Session in October 2020. This meeting may ultimately be held remotely if COVID 19 contingency plans still apply at this time.
1.3.2. PPSP	1.3.2.2. Development of guidance papers and studies	Development of guidance papers through the establishment of and support to working groups of experts and/or development of studies on vaccine related issues. Priorities on the guidance papers and studies to develop will be established during the PPSP meetings.	An outline proposal for a PQ system has been developed in the form of a discussion document.	Discussion document on a proposal for a pre-qualification system for FAST vaccines has been drafted that will ultimately form the basis for a series of guidance document on operation of the PQ procedure.
	1.3.3.1. Pre-qualified supplier system for the immediate procurement of vaccines meeting pre-agreed quality criteria for use in MN.	Establishment of a pre-qualified supplier system for the immediate procurement of vaccines meeting pre-agreed quality criteria for use in MN.	A project plan for the development of the PQ procedure has been prepared. A technical Advisor Group on Pre-Qualification (PQTAG) has been established and has started to work remotely to develop this discussion document into a proposal for discussion at the Open Session.	A plan has been developed to deliver the inception phase of the PQ project by September 2021 so that EuFMD is in a position to accept applications for PQ from applications wishing to engage with this phase of the project. Terms of reference for PQTAG drafted

<b>1.3.3 System for vaccine security</b>	<p>1.3.3.2. Establishment of an emergency procurement and supply mechanism for FMD vaccines, operating through FAO procurement procedures through application of the pre-qualification system with or without an assurance (Assured Supply) contracting modality (AESOP).</p> <p>Supply Options (AESOP) for FMD vaccines. In a first phase, the system will be defined and the cost of maintaining the AESOP for 3 million FMD vaccine doses will be estimated. In a second phase, the system will be established and the vaccines for emergency response in Member Nations and in neighbouring countries will be available according to the contracts and/ or agreements established with the countries. In a third phase, the extension of the AESOP to other FAST disease might be considered.</p>	<p>FAO procurement division is involved in the discussion of the PQ system</p>	<p>The project plan envisages establishing the PQ system as first step in the development of AESOP.</p>
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## 7. Issues for the Executive Committee attention

The Executive Committee is asked to note the progress made in developing a proposal for a PQ procedure and to support the engagement of all stakeholders in the PQTAG in the pre-inception phase of the project.

## 8. Priorities for the next six months

### Scoping work

Conduct follow up interviews to confirm and prioritize the findings from the initial survey then prepare conclusions and recommendations for how to proceed addressing the highest priority gaps.

### Development of proposal for PQ procedure

Develop detailed proposal for the technical requirements for PQ through the work of the PQTAG and for the administrative and procedural requirements through cooperation with WHO and OIE as partner organization.

## 9. Success stories and outputs (communication products)

The first PPSP meeting was a great success with over 70 delegates from public and private sectors, involved in the security of supply of vaccines for FAST diseases, participating in this meeting held at the FAO headquarters. They expressed a high level of support for a Multi-Stakeholder Platform (MSP) that would enable closer co- operation on issues of common interest.

The report of the meeting is available [here](#).

# Component 1.4

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## (Activity 4)

South-Eastern Europe

### Objective

Improved surveillance and emergency preparedness against FAST diseases in South- Eastern Europe achieved through increased collaboration in the region, implementation of risk-based surveillance approaches, assessment and improvement of contingency plans and access to a diagnostic bank

Component manager

Goran Filipovic

Sub-activity level manager

- 1.4.1 Springer Browne
- 1.4.2 Goran Filipovic, Mirzet Sabirovic
- 1.4.3 Goran Filipovic, Kiril Krstevski
- 1.4.4 Kiril Krstevski

## 1. Background

Components 1.3. Thrace and 1.4. Balkans have been merged into this new component. Activities in this component are provided specifically to the following eight countries: Albania, Bosnia and Herzegovina, Bulgaria, Greece, Montenegro, North Macedonia, Serbia and Turkey. Moldova and Ukraine could be included in activities organized under this component

Historically, the Thrace region of Greece, Bulgaria and Turkey has been a high-risk area for the introduction of FMD and other trans-boundaries diseases into Europe. Coordinated activities and risk-based approach to surveillance during phase IV of the programme, has led to greater confidence in the FMD-free status of the region. The likelihood of early detection of an incursion is greatly increased. During phase V, this **risk-based surveillance approach** is being adapted to other FAST diseases and applied in other regions and/or countries covered by component (e.g. adaptation to LSD in Balkans countries).

In phase V, the work **to improve emergency preparedness** against FAST diseases in the region will continue to be a priority using different tools such as GET Prepared, adaptation of EuFMDiS to countries in the region, workshops, simulation exercises, and in-country support.

One of the components to improve preparedness in Phase V will be the establishment of a **diagnostic bank** of reagents for FAST diseases available for the countries in the region. This will be accompanied by activities to improve **laboratory proficiency and capacity** for FAST diseases across the region, for example supporting the organization of laboratory simulation exercises.

A key element of this component will continue to be facilitation of the co-ordination between the countries of the region. In the new phase, management meetings will be organized as **joint meetings**. This cost-efficient approach will facilitate co-ordination among South-Eastern European countries. There will also be smaller parallel meetings to discuss specific topics within the region, as necessary.

In this new phase, support will be given to the establishment of **national stakeholders networks** to connect veterinary services, laboratories, research institutions and universities in order to guarantee a transfer of knowledge from research institutions to decision-makers and that research is orientated to generate evidence to fill knowledge gaps identified by national competent veterinary services.

The research studies done with **EuFMDiS in the region** will be encouraged. EuFMDiS can assist to improve contingency plans by modelling for example, which control strategies would be more effective in the case of a FMD (or other FAST disease outbreak), resources needed in the case of an outbreak, etc. Currently, Bulgaria is part of EuFMDiS (as are Croatia and Romania), North Macedonia is working in the data collection to be included in the model and Turkey has shown great interest in adapting EuFMDiS to Thrace. Through **component 2** of Pillar I, economic and technical support will be given for the incorporation of new South-Eastern European countries to the model.

## 2. Team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Component supervisor</b>	Maria de la Puente Arévalo	Pillar I Co-ordinator
<b>Component manager</b>	Goran Filipovic	Preparedness Planning Expert
<b>Training and networking</b>	Nadia Rumich	Training and Networking
	Kiril Krstevski	EuFMD Balkans Network Leader
	Mirzet Sabirovic	Preparedness Planning Expert
	Springer Browne	External collaborator
	Enrico Mezzacapo	EuFMD Programme Specialist
<b>Member State partners</b>	South Eastern Europe focal points	n/a
<b>ExCom oversight</b>	C. Dile; Z. Atanasov	Executive Committee member
<b>FAO officer</b>	Eran Raizman	FAO REU

### 3. Countries or partner organizations involved

The direct beneficiaries of this component are Albania, Bosnia and Herzegovina, Bulgaria, Greece, Montenegro, North Macedonia, Serbia and Turkey. Croatia and Romania will be considered for some of the activities under this component. Additionally, Moldova and Ukraine could be included in activities organized under this component.

The work done under this component will require the close collaboration of the MN involved and of FAO REUT.

### 4. Reporting

Reporting format	Responsibility	Output	Distribution	Sent out by
<b>Six monthly report to ExCom</b>	Component manager	Written report and presentation	ExCom, STC	Network and Training Support Officer
<b>Every two years report to MN</b>	Component manager	Written report and presentation	General Session	
<b>Website report</b>	Component manager	Written report	Website	
<b>Workshop/Mission reports</b>	Lead facilitator/Leader of the Mission	Written report if required	EuFMD, NSAH, others if required	

### 5. Objective of the component

**Improved surveillance and emergency preparedness against FAST diseases in South-Eastern Europe achieved through increased collaboration in the region, implementation of risk-based surveillance approaches, assessment and improvement of contingency plans and access to a diagnostic bank.**

Component (Activity)	Objective	Narrative	Expected result	Monitoring	Evaluation	Assumptions and risks
<b>1.4 SEE</b>	Improved surveillance and emergency preparedness against FAST diseases in South-Eastern Europe achieved through increased collaboration in the region, implementation of risk-based surveillance (RBS), assessment and improvement of contingency plans and access to a diagnostic bank.	Risk-based surveillance system for FAST diseases are established and supported; Activities to facilitate collaboration, information sharing and to improve contingency planning in the region are carried out; A diagnostic bank is established.	Confidence of FAST disease freedom over 90 % in Thrace maintained for 48 months;  Focal points of eight countries in the region consider that their preparedness against FAST diseases has increase by the end of the phase (assessed in a scale 0 to 7).	Cameron model to calculate regularly level of confidence in absence of disease;  Collection of information through surveys done to the focal points at different moments of the phase.	Two external evaluations to be carried out by month 18 and 38 of phase V.	Assumes commitment from MN to participate actively in the various activities organized or supported by EuFMD.

## 6. Planned Component Sub-Activities

The expected result of the component will be achieved through sub-activities:

### 1.4.1. Risk-Based Surveillance (RBS) to maintain high level of confidence in the absence of FAST diseases in the region and in capacity for early detection of a FAST disease incursion

#### Support to Greece, Bulgaria and Turkey to maintain, improve or update the RBS system established in Thrace as necessary

Quarterly surveillance data (July-September and October-December) by Thrace countries were analyzed and the reports prepared and sent to the countries. No FMD cases were detected in this period, leading to further increase in the probability of freedom from FMD in the Thrace region, compared to the previous period. The new database (DB) for the surveillance data registration launched at the beginning of 2020, is giving good results.. This tool was developed to replace Google Fusion™, to ensure consistency and accuracy of data entry and to add additional functionalities (e.g. safe and organized storage of data, counter-check mechanism such as export of any possible data errors and user friendly search of old data). The Experimental Zooprohylactic Institute of Lazio and Tuscany (IZSLT), Rome, Italy, is hosting the tool. The DB allows the production of automatic results/reports when new data is uploaded during every cycle. The data output can be exported as an organized excel file. The output showing the number of visits carried out per each epi-unit can be consulted in a specific section of the DB which includes a map of the geographical area of Thrace.

Active surveillance by collaborators in Thrace countries includes clinical examinations and serological testing for FMD. However, passive surveillance through disease reporting by farmers and members of the public is an important component of FMD detection. To increase reporting of potential FMD cases, awareness handouts and a video are being produced for distribution in all Thrace countries. These activities should not only increase detection of potential incursions of FMD into the Thrace region, but also provide capacity building by increasing communication between farmers and regulatory officials for all animal disease reporting.

#### Establish new RBS system for FAST diseases in other countries or regions, as considered necessary

The Cameron model for “confidence in FMD freedom” was adapted to other FAST diseases (Peste des Petits Ruminants (PPR) and Sheep and Goat pox (SGP) during the previous reporting period. EuFMD is currently developing a contractual agreement with AUSVET for the revision of these new models, their migration from excel to R (R Core Team, 2013) and their integration within the new Thrace Database developed with the IZSLT Institute.

### 1.4.2. Support co-ordination activities at national and regional level in South-Eastern Europe: Improve regional co-ordination

A South Eastern Europe (SEE) online management meeting was held on the 10th February 2021, with the following objectives:

- Present progress done in the implementation of EuFMD Phase V workplan for the South Eastern Europe region;
- Agree on additional areas of interest where further support is required to improve emergency preparedness and coordination across the region;
- Agree on next steps for different activities to be organized until the end of the current biennium (September 2021).

For improved coordination of the activities in the region, representatives from the European Commission and FAO Regional Office for Europe and Central Asia (FAO REU) were invited to scope and discuss the activities planned in the region.

### **Establish national networks to connect veterinary services, laboratories, research institutions and universities**

Following the 1<sup>st</sup> call for proposals in September 2020 for policy and stakeholder networks engagement in generating evidence to meet specified national competent veterinary authority policy needs, seven proposals were received by the end of October 2020. They outlined a range of planned activities in collaboration with various stakeholders as appropriate to the main objective of the proposed study. The preliminary and technical assessment process of the proposals outlined:

- a) Five successful proposals clearly demonstrated that national veterinary competent authority requirements for science and research were considered jointly by the competent authority and providers of research. This would indicate that these proposals have been put forward following consultation and endorsement by a national veterinary competent authority. They covered vector surveillance (i.e. LSD and other vector borne animal diseases), cellular and humoral response to vaccination and interaction with colostral immunity in calves (i.e. LSD), improving farm biosecurity for FAST diseases prevention and control, and establishing a serum bank for FAST diseases prevention and control. In total, EuFMD awarded *circa* 48 000 EUR to successful projects.
- b) Two proposals did not demonstrate any consideration of proposed research in consultation with a national veterinary competent authority. This would indicate that these proposals may be primarily research rather than policy-driven and not jointly agreed as a policy priority. As such, these two proposals were considered as not being successful in meeting one of the key requirements specified the 1<sup>st</sup> call for proposals.

The successful projects have an average 6-8 months duration and are expected to generate evidence to support policy making. The aspects of best practice from the implementation of these projects will be incorporated in **a guide and a template for stakeholder networks engagement** which will be discussed and agreed at the EuFMD SEE Management Meetings, planned during the first half of 2021. This would ensure standardization of the approach in engaging national stakeholder networks to generate evidence and support policy during emergency and non-emergency times in the EuFMD SEE member nations, and would contribute to the overall SEE regional preparedness for dealing with FAST diseases threats and outbreaks.

#### **1.4.3. Sub-activities aimed at improving emergency preparedness, contingency plans and standard operating procedures**

##### **Training activities**

A virtual workshop on improved detection and typing of FMD virus using molecular techniques was delivered in December. The participants were from seven national laboratories with proven level of experience in the basic and more advanced PCR techniques. The training was organized in collaboration with the EU-RL for FMD.

Another virtual workshop focused on laboratory contingency planning is scheduled for 11 and 12 March.

##### **Simulation exercises**

A tabletop simulation exercise (TTX), with remote and on-site EuFMD assistance was conducted in the Republic of Serbia. It included the national veterinary competent authority in Belgrade and national institutes in Kraljevo and Nis. The TTX was held on the 26 November 2020. The main aim was to test the national response to an introduction of Peste des Petits Ruminants (PPR) and related national contingency plans, SOPs and procedures. A joint multi-country simulation exercise for Croatia, Bosnia & Herzegovina and Serbia has been agreed with the countries. The exercise will be organized in collaboration with FAO REU. The aim of the exercise is to assess response procedures in case of a Transboundary Animal Diseases (TADs) outbreak occurring simultaneously in the border region of Bosnia and Herzegovina, Croatia and Serbia, and should harmonize horizontal and vertical measures to avoid unnecessary overlap. It should also focus on the preparedness needs expressed by the beneficiary countries. The exercises will be supported via Conducttr™ crisis simulation software, Zoom video conferencing tool and other applications (Whatsapp, EuFMD events app). The exercise will last two days (23-24 February 2021).

### **In-country assistance**

To follow up on SEE Management meeting conclusion, a short survey on available Contingency plans/SOPs/guidelines for actions before, during and after FAST outbreak in SEE countries has been conducted.

Results of the survey identified the most common areas where documents for FAST diseases management are missing.

The report will be presented at the next SEE Management Meeting (10<sup>th</sup> of February 2021) for consideration and agreement on the next steps in order to assess existing operational manuals, SOPs and guidelines (in SEE and other countries). It should help identify the most appropriate model to be used and promoted (possibly interviews with the national FPs and/or CPs, exchange of documents of interest or PPTs by the countries).

#### **1.4.4. Diagnostic bank of reagents for FAST diseases available for the countries in the region**

##### **Development and maintenance of diagnostic bank of reagents for FAST diseases available for the countries in the region**

The process of reagent procurement to re-stock depleted reagents is in progress. Reagents for FMD diagnosis comprise the core set of reagents in the bank. However, additional specific components (PCR primers and probes) are to be incorporated as well to allow extended use of the PCR reagents for additional diseases (PPR, LSD, SPGP).

To address the difficulties with the reagents bank maintenance and deliveries to countries experienced during the first months of the COVID19 crisis, a secondary storage location has been agreed. Part of the reagents will be stored in North Macedonia, at the faculty of veterinary medicine Skopje. The reagents from this regional storage location could be transported by road to majority of the countries, should delivery from the primary location (IZLSER, Brescia) is not possible.

## Sub-activities and their indicators

	<i>Sub-activity level</i>	<i>Description</i>	<i>Progress in the current period</i>	<i>Progress overall towards biennium indicator</i>
<b>1.4.1. RBS</b>	1.4.1.1. RBS in Thrace	Support to Greece, Bulgaria and Turkey to maintain and improve the RBS established in Thrace. This will include the revision of the Cameron model, as necessary.	RBS is well maintained and fully operational. A new database replaced Google Fusion™ and is working well and is regularly used to upload surveillance data. Awareness video and handouts produced for distribution to farmers to increase passive surveillance of FMD.	The surveillance system continues to work regularly as foreseen and some important improvements have been included.
	1.4.1.2. Establishment of new RBS system.	Adaptation of the current RBS to other countries or regions and to other diseases, as considered necessary, for example to support the exit strategy in the Balkan countries to recover the LSD-free status.	EuFMD is currently developing a contractual agreement with AUSVET for the revision of the new models, their migration from excel to R (R Core Team, 2013) and their integration within the new Thrace Database developed with the IZSLT Institute.	Western Balkan countries will be consulted to understand if there is an interest to organize a virtual workshop on RBS.
<b>1.4.2. Co-ordination activities</b>	1.4.2.1. Improve regional co-ordination.	Management meetings will be regularly organized to define priorities in the region and follow up the outcomes of the activities carried out under this component. Additional multi-country activities such as simulation exercises will also contribute to improve the collaboration between countries in the region.	The first SEE Management Meeting of the year was held online on 10 <sup>th</sup> of February 2021.	Two management meetings will be organized in 2021, as foreseen (February and July 2021).
	1.4.2.2. Establish national networks to connect veterinary services, laboratories, research institutions and universities.	Support for the establishment of national networks to connect veterinary services, laboratories, research institutions and universities in order to guarantee knowledge transfer from research institutions to decision makers and that research is orientated to fill knowledge gaps identified by veterinary services. The key stakeholders that should be part of these national networks will be identified by each country and support will be given for these networks to produce studies or to organize activities that aim at improving emergency preparedness and response. Research studies done with EuFMDiS in the region will be encourage, as this tool can assist to improve contingency plans.	1 <sup>st</sup> SEE FAR call for proposals for evidence needs areas for targeted research support resulted in seven applications received by the deadline of end of October 2020  Five proposals to establish national networks to connect veterinary services, laboratories, research institutions, private sector and farmers were selected for EuFMD funding (total of EUR 48.000).	Five LoA with the institutions signed, the field work should take place over a minimum of six months with the final report provided by the end of June 2021.  Produce a draft guide and a template for stakeholders engagement to be presented for discussion and feedback at the 1 <sup>st</sup> SEE MM in early February 2021

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<b>1.4.3. Emergency</b>	<b>1.4.3.1. Training activities</b>	Specific workshops about topics of interest in the region will be organized or additional seats for participants from South-Eastern Europe will be offered to attend workshops organized under component 1. Specific laboratory training activities will be considered according to the needs of the countries. These might include training to comply with the “Minimum standards for laboratories working with FMDv”, following the guidance given by the SCBRM	A virtual workshop on improved detection and typing of FMD virus using molecular techniques was delivered in December.  The participants attended from seven national laboratories with proven level of experience in the basic and more advanced PCR techniques. The training was organized in collaboration with the EU-RL for FMD.	13 participants from 7 SEE countries attended the workshop on improved detection and typing of FMD virus using molecular techniques.  During the current biennium 29 from SEE countries (including Croatia, Romania and Ukraine) have been enrolled in courses organized under this component
	1.4.3.2. Simulation exercises	Technical support to organize national simulation exercises (including laboratory simulation exercises) will be offered to the countries from South-Eastern Europe. Economic support will also be given to facilitate that observer from other countries can attend national simulation exercises.  Multi-country simulation exercise will be organized for participants from South-Eastern Europe countries. Representatives from different institutions will be invited to participate in these simulation exercises (laboratories, veterinary services, universities, industry...).	A tabletop simulation exercise (TTX), with remote and on-site EuFMD assistance was conducted in Serbia in November. The objective was to test the national response to an introduction of Peste des Petits Ruminants (PPR) and related national contingency plans, SOPs and procedures.  A joint multi – country simulation exercise for Croatia, Bosnia & Herzegovina and Serbia is being organized, to be held 23-24 February 2021. The exercise will be organized together with FAO REU.	Three national simulation exercises have been supported and two more have been agreed (TTX in Bulgaria and drills in Albania). Discussions with SEE countries will take place to support up to three additional exercises by the end of the biennium.  One multi-country simulation exercise will be conducted in February 2021 and one additional one needs to be agreed with some SEE countries.
	1.4.3.3. In-country assistance	In-country assistance to apply GET Prepared toolbox and to improve contingency plans. This support will be given by EuFMD consultant or by experts within the region supported by EuFMD	A survey on available Contingency plans SOPs and guidelines for actions before, during and after FAST outbreak in SEE countries has been conducted. Results of the survey identified common areas where CPs/SOPs/guidelines for FAST diseases management are missing, as well as the best practices which can be used as model and example.	Two countries (Moldova and Albania) expressed the need to receive in-country support. A survey on available Contingency plans and SOPs in SEE countries was conducted. Results will be presented at the SEE Management Meeting in February 2021 to agree on identified areas and countries for further in country assistance activities.
<b>1.4.4. Diagnostic Bank</b>	1.4.4.1 Dev and maintenance of a diagnostic bank of reagents for FAST available for countries in the region.	Establishment of a diagnostic bank of reagents for FAST diseases available for the countries in the region.	Procurement of reagents for the second annual cycle (re-stocking) is in progress Secondary reagent storage location has been confirmed (Faculty of veterinary medicine Skopje in North Macedonia)	Diagnostic bank already established for FMD and maintenance continues as planned.  Additionally, PCR reagents for PPR, LSD, SPGP diagnosis (PCR) are included in the actual re-stocking plan.

## 7. Issues for the Executive Committee attention

Due to the ongoing situation of ASF and the COVID19, some of the countries might find difficulties to organize and receive support for national activities.

## 8. Priorities for the next six months

### Thrace

To obtain an external validation of the new Thrace models adapted for PPR and SGP and to work on the integration of the model on the website hosting the database where surveillance data are registered, in order to have a user-friendly system to obtain the confidence of freedom from the three diseases.

### Regional coordination

The next management meetings will be organized in February and July 2021

### National networks

The research proposals received as a response to the call opened in September 2020 provided a basis to prepare a draft guide and a template for stakeholder engagement. These documents were presented at the SEE MM in early February 2021 for feedback, which will be incorporated in preparation of the final documents for the SEE MM approval in early July 2021.

### Training and simulation exercises

In the next six months, the priorities will be to conduct and adapt the planned trainings, including training for laboratories, and simulation exercises agreed for the region and plan additional ones.

### In-country assistance

EuFMD will sponsor two people from Moldova to attend a training course in ANSES to learn PCR methods (This training has been postponed due to the current travel restrictions).

Based on results of the survey conducted in SEE countries to collect info regarding existing FAST diseases CPs/SOPs/guidelines, in country assistance will be provided to countries either by:

- assessing existing SOPs/ protocols/methodologies in other SEE countries to identify the most appropriate model to be used and promote (possibly interviews with the national FPs and/or CPs, exchange of documents of interest or PPTs by the countries), even if procedures are existing they can be improved by using the best models; or
- preparing learning materials/tutorials for SOPs/protocols/methodologies development, establishment and implementation (videos, PPTs, documents, forms) to be shared between SEE countries on e-learning platforms and other communication channels (for wider use having in mind the current travel restrictions).

These activities will be conducted in close cooperation with other similar projects in the region, to avoid overlap and ensure efficient coordination.

### Diagnostic bank of reagents

Assessment of annual reagent needs for FMD PT-2021 within the SEE laboratory network and organization of the deliveries (April-May).

## 9. Success stories and outputs

Awareness videos and handouts were developed through cooperation with our Thrace collaborators to increase passive surveillance of FMD. These activities should also strengthen communication between farmers and regulator officials for reporting of other FAST diseases.

A call for research proposals was launched in September 2020 to establish national stakeholder networks in SEE member nations to connect veterinary services, laboratories, research institutions, private sector and farmers. The call resulted in seven proposals received. Five of which were assessed as of high quality and selected for the EuFMD grant. The successful proposal methodologies provided a basis for the development of a guide and a template for stakeholder engagement. These documents will be presented for the SEE MM agreement and incorporated in the SEE member nations National Contingency Plans (NCPs). This will ensure a standardized approach for stakeholder networks engagement in SEE member nations in generating research and scientific evidence to support policy and decision making for FAST diseases.

A new concept to organize simulation exercises online or partially online with the assistance of a crisis simulation software has been used during implementation of the simulation exercise in Serbia, allowing conduction of the exercise in three places simultaneously (central, regional and local disease control levels). A new feature of the software have been tested, allowing players to communicate directly through the software's virtual channels, and evaluators to observe and assess overall communication during the simulation of the emergency.

Positive feedback has been received from the participants for the laboratory workshop held in December.

## 10. Budget (€) COMP. 1.4

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
<b>Component 1.1</b>	21.938	21.130	808
<u>Consultancy Operational</u>			
<b>Component 1.1</b>	34.943	38.405	-3.462
<u>Consultancy Technical</u>			
<b>Component 1.1</b>	50.000	47.666	2.334
<u>Travel</u>			
<b>Component 1.1</b>	40.000	-	40.000
<u>Training</u>			
<b>Component 1.1</b>	25.000	-	25.000
<u>Contracts</u>			
<b>Component 1.1</b>	80.000	-	80.000
<u>Procurement</u>			
<b>Component 1.1</b>	-	-	-
<u>General Operating Expenses</u>			
<b>Component 1.1</b>	10.000	-	10.000
<b>Total Direct Eligible Cost</b>	<b>261.881</b>	<b>107.202</b>	<b>154.679</b>

# Component 1.5 (Activity 5)

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## Applied Research

### Objective

Delivery of valuable tools and knowledge addressing technical issues considered Europe- wide priorities for national preparedness against FAST diseases through the implementation of an Applied Research Program (ARP)

### Component Manager

Etienne Chevanne

### Sub-activity level manager

1.5.1 Etienne Chevanne, Francesca Renzetti

## 1. Background

Since 2008 the EuFMD has provided support for small applied research projects that are relevant to the priority technical issues of the EuFMD Member Nations (MN). The EuFMD Fund for Applied Research, **EuFMD-FAR**, is under Pillar I for management purposes. The priorities for applied research - identified during the 41<sup>st</sup> EuFMD General Session- are primarily technical and economic issues affecting FAST emergency management in the MN. However, applied research supporting Pillar II and III objectives is also eligible for funding.

The Standing Technical Committee (**STC**) and the Special Committee on Surveillance and Applied Research (**SCSAR**) assist in identifying thematic priorities. **Two calls per year** will be launched for these research studies to be assigned to institutions that better fit with the established criteria. The **criteria** established to select the applicants during phase IV will be maintained in the new phase:

- Relevance to strategic objectives or specific components of the EuFMD Strategy;
- Address generic problem identified as common to many Member Nation veterinary services;
- Likelihood of tangible results or outputs;
- Urgency of need for results/outputs and lack of alternative funding;
- Synergy or complementarity with field based activities relating to FMD;
- Value for money.

**Applications** are welcome from any source and are not limited by geographical origin and the proposals will be assessed in **two stages**. **Firstly** by external referees (Referee Panel), **then** by the STC (acting as the Grant Review Board). The STC are a multidisciplinary panel of experts who are familiar with the priorities, scope of the fund and the context of the institutions which are expected to utilize the knowledge, tools and outputs.

Funding will be allocated by the EuFMD through **Letters of Agreement** (LoA), which are contracts between the FAO of the UN and not-for-profit institutions. In exceptional circumstances, for instance where LoAs cannot be applied, the funds may also be allocated through direct implementation mechanism by the Secretariat.

**Co-ordination and communication** between institutions in the FAST disease surveillance networks will be a key element of this component, which will also aim at providing a platform for review of progress and prioritization. Regular meetings will be organized to provide a discussion forum for the members of the STC, the SCSAR and also the Special Committee on Biorisk Management (SCBRM)

The **EuFMD Open Sessions**, organized every two years, will aim to continue to be the largest technical and scientific meeting on FMD to be held on a regular basis, with nearly 300 participants, drawn mainly from the public sector, scientific institutions and regulators, academia and private sector. In the new phase, the Open Sessions will have a broader scope covering FAST diseases.

## 2. Team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Component supervisor</b>	Melissa Mclaws	Executive Secretary
<b>Component manager</b>	Etienne Chevanne	Risk Management Specialist
<b>Training and networking</b>	Nadia Rumich	Training and Networking
<b>Member State partners</b>		n/a
<b>ExCom oversight</b>	H. Roest	Executive Committee member
<b>FAO officer</b>	Eran Raizman	FAO REU

### 3. Countries or partner organizations involved

The direct beneficiaries of this component are the 39 Member Nations of EuFMD. Priority is given to research outputs which will directly benefit EuFMD Member Nations; however, neighbourhood countries and countries worldwide are also likely to impact from funded projects with global application.

The STC and SCSAR advise on research priorities and assist in review of applications.

### 4. Reporting

<i>Reporting format</i>	<i>Responsibility</i>	<i>Output</i>	<i>Distribution</i>	<i>Sent out by Network and Training Support Officer</i>
<b>Six monthly report to ExCom</b>	Component manager	Written report and presentation	ExCom, STC	
<b>Every two years report to MN</b>	Component manager	Written report and presentation	General Session	
<b>Reports established in the LoAs</b>	LoAs contractees	Written report and a presentation if required	STC, Open Session	

### 5. Objective of the component

**Delivery of valuable tools and knowledge addressing technical issues considered Europe-wide priorities for national preparedness against FAST diseases through the implementation of an Applied Research Program (ARP).**

<b>Component (Activity)</b>	<b>Objective</b>	<b>Narrative</b>	<b>Expected result</b>	<b>Monitoring</b>	<b>Evaluation</b>	<b>Assumptions and risks</b>
<b>1.5 Applied research</b>	Delivery of valuable tools and knowledge addressing technical issues considered Europe-wide priorities for national preparedness against FAST diseases through the implementation of an applied research program (ARP).	Research studies carried out in order to deliver tools and knowledge that address technical issues considered Europe-wide priorities for national preparedness against FAST diseases.	20 peer reviewed papers and reports published by the end of the phase; average impact level of these publications 7 (scale 0 to 10) as assessed by external technical Panel.	Peer reviewed papers and reports published.	Two external evaluations to be carried out by month 18 and 38 of phase V.	Assumes the generated knowledge and tools will have high impact and MN will make use of them.

## 6. Planned Component Sub-Activities

The expected result of the component will be achieved through sub-activities:

### 1.5.1. Funded research projects Call for research proposals

During the reporting period, a competitive Fund for Applied Research (FAR) call for application was drafted and submitted to the EuFMD Standing Technical Committee (STC). The Call includes three research themes (as discussed during the STC meeting on 3 June 2020), as follows:

1. Define criteria on when to implement emergency vaccination in disease free countries – technical lead: Malin Grant, Koen Mintiens, Shankar Yadav – geographical scope: EuFMD Member Nations – disease scope: FMD, PPR, LSD, and SGP.
2. Policy support tools for economic analysis of FAST control strategies (considering biosecurity based business continuity) – technical lead: Bouda Vosough Ahmadi, Koen Mintiens, Shankar Yadav – geographical scope: EuFMD Member Nations – disease scope: FMD, PPR, LSD, SGP and RVF.
3. Operational optimization of environmental sampling – technical lead: Etienne Chevanne, Paolo Motta, Melissa McLaws – geographical scope: FMD endemic settings – disease scope: FMD

The previous FAR call (March-June 2020) which aimed at evaluating the performance of surveillance for clinical FMD among small ruminants received 21 proposals from 14 European Neighborhood countries. Three studies<sup>1</sup> were selected and during the reporting period, administrative issues were followed-up to allow the studies' implementation and preliminary results shared by the end of the biennium.

The study on 'Harmonization and calibration of VNT methods used for post-vaccination monitoring in different FMD Reference Laboratories' was provided a 5-month extension for the completion of activities, so that results can be available before the end of the biennium.

### Regular meetings of the STC and SCBRM

Standing Technical Committee online meeting were held on 9 September 2020 and on 4 February 2021 and September 2020, focusing on the organization of the Open Session 2020 Special Edition (OS20) and on the upcoming FAR Call (see above), respectively.

Special Committee for BioRisk Management (SCBRM) online meetings were organized on 10 November 2020 and in February 2021. During the meeting on November 2020 was discussed the development of on-line course on biosafety to be made available on the EuFMD virtual learning platform and tailored to the expected target (endemic countries versus FMD-free countries), and course outline was drafted by SCBRM experts. It was also discussed the further revision of Minimum BioRisk Management Standards for FMD laboratories (the inclusion of representatives from FMD endemic countries in the SCBRM, the need for novel round of inspections of facilities in EU Member, and how standards should be adapted to other FAST diseases), accepted disinfection/inactivation methods and Lateral Flow Devices (LFD) inactivation methods. The latter topic has been further discussed in February.

### EuFMD Open Session 2020 - Livelihoods @ risk in a FASTER world

Because of the COVID-19 pandemic, the EuFMD Open Session (OS) 2020 'Livelihoods @ risk in a FASTER world' initially planned for the end of October 2020 in Marseille, has been restructured in a virtual Special Edition and held in December 2020. It was also the opportunity to mark the foundation of the Commission whose constitution was approved on the 11<sup>th</sup> December 1953. The focus remained on FMD, but other FAST diseases were also considered

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<sup>1</sup> "Compréhension et corrélation de la surveillance clinique et prévalence de la fièvre aphteuse chez les petits ruminants au Cameroun" – LANAVET and Direction des Services Vétérinaires – Budget 11 210 246 francs CFA.

"Evaluating the role of small ruminants in the spread and endemicity of Foot-and-Mouth Disease in Northern Nigeria" – NVRI-Vom with support from The Pirbright Institute – Budget 4 347 588 NGN – a 3-month extension to the LoA was granted

"Retrospective evaluation of clinical surveillance for Foot-and-Mouth Disease in small ruminants at some high risk areas in Egypt" – GOVS Egypt – budget transferred to FAO Egypt for further dissemination, budget USD 20,370.

in posters and oral presentations. The OS20 Special Edition was a success, the augmented virtual environment counted more than 3,000 users and more than 24,000 page views (<https://eufmdvirtual.com/>). Sessions were made publicly available and streamed live on Facebook and YouTube.

a) The 1<sup>st</sup> Session “Measuring animal movements and drivers for FAST risk mapping” (Chair: James Wood) held on 8 December 2020 aimed to scrutinize how animal mobility drivers and network analysis can contribute to risk mapping for FAST diseases and how animal movement changes and related risks can be monitored and forecasted.

b) The 2<sup>nd</sup> Session “From risk to actions, make them happen” (Chair: Katharina Staerk) held on 10 December 2020 aimed to consider how improved surveillance, control and prevention measures well address properly risk changes and forecast.

c) The 3<sup>rd</sup> Session “Vaccine security and critical resources for emergency management” (Chair: Sten Mortensen) held on 15 December 2020 aimed to compare national and regional approaches to ensure sufficient critical resources in FAST crises, including quality vaccines and diagnostics, to ensure proper response during multi-country epidemics.

d) The 4<sup>th</sup> Session “Resilience to long term FAST crises: the importance of preparedness and planning to help ensure animal welfare, supply chain and business continuity in prolonged emergency responses” (Chair: Germán Cáceres Garrido) held on 17 December 2020 aimed to consider how control strategies and policies and preparedness planning could ensure greater resilience of businesses and support services in the livestock sector in the event of a prolonged disease emergency situation, comparing approaches to the problem in Europe and other normally FMD free regions.

These sessions were followed by a series of workshops to translate into action the recommendations of the Conference, linked to the EuFMD workplan:

1. Risk Mapping and Forecasting for FAST diseases workshop held on 19 January 2021 (Chair: David Redding), linked to Sessions I and II, aimed to gather technical experts from various disciplines to scrutinize what tools and methodologies for investigating animal mobility can best contribute to risk mapping for FMD and FAST diseases, and how risk information can be monitored and used for FAST diseases forecasting. Three working group sessions were conducted in parallel: (i) Missing mobility data and drivers: how to fill data gaps; (ii) Strengths and limitations for integration of network indicators and risk mapping and forecasting into surveillance and control interventions for FAST diseases and finally (iii) Capacity building approaches and mentoring, how to maximize impact.

2. “The Special Committee for Surveillance and Applied research” (SCSAR) workshop held on 22 January 2021 during which were presented the progress made on risk-based surveillance in the European neighborhood. Three working group sessions were organized and focused on the (i) optimization of active and passive surveillance (Chair: Donald King); (ii) Diagnostic capacity in Member countries during crisis (Chair: Kiril Krstevski) and (iii) Integrated disease surveillance and control (chair: Michel Bellaiche).

3. “EuFMDiS for improved preparedness” workshop was organized on 27 January 2021 and linked to Sessions III and IV. It aimed at raising awareness on EuFMDiS among EuFMD Member Nations and other FMD free countries, showing some of its main features as a decision support tool for contingency planners, but also comparing different vaccination strategies in a multi-country FMD outbreak simulation in Europe.

4. “Capacities for disease management: building business environments for supporting disease control and livelihoods” held on 5 February 2021, aimed to discuss the available approaches and data to predict increasing demand for vaccines of livestock diseases, and also to review what tools, methodologies and resources are needed to build an enabling environment to supply the increased vaccine demand. The workshop was based on the recommendations of the Vaccine Security meeting held in January 2020 (FAO, Rome), which aimed at exploring options to improve security of vaccine supply against FAST diseases. Specific focus will be on creating a public private partnership (PPP) platform that facilitates this process. Two working group sessions were run in parallel: (i) developing an analytical model to predict FMD vaccine demand for endemic countries: opportunities and options for the application and use of the model and (ii) How to create an enabling multi-stakeholder environment to address vaccine demand.

The **OS20 conclusions** were provided in a plenary session on 16 February 2021 with two key topics being forecasting of socioeconomic consequences of FAST diseases and capacities to overcome increased risk and resilience of livestock sector to FAST diseases (Chairs: James Wood, Giancarlo Ferrari). It was highlighted the value of the OS platform to connect animal health researchers, representatives of public and private sector as well as international organizations.

### Sub-activities and their indicators:

	<i>Sub-activity level</i>	<i>Description</i>	<i>Progress in the curr</i>	<i>Progress overall towards biennium indicator</i>
1.5.1. Funded research projects	Call for research proposals	Following advice received by the STC, the SCSAR, and the SCBRM, a call for research proposals will be released and widely circulated on a regular basis.  Research applications will be reviewed in a two stage process, first by external referees (Referee Panel) then by the STC (acting as the Grant Review Board). Successful applications will be contracted through LoAs.	A FAR call for proposal was drafted and submitted to the STC	The first call for research proposals in 2020 was carried out, the second FAR call will be launched early 2021
	Research studies	Research projects will be carried out according to the signed LoA, completed project will be assessed and results will be made available.	Administrative process for the 3 retained proposals is ongoing.	2 LoA were signed, specific arrangements were made for the third proposal (Egypt)
1.5.2. Meetings	1.5.2.1. Regular meetings of the STC, SCSAR and SCBRM	Meeting will be regularly organized for the STC and the SCSAR so they can discuss and produce advice and guidance on research priorities. This includes meeting at the Open Session which is held every two years, and guiding the Secretariat on the format and content of the session.  Meetings of the SCBRM will also be regularly organized so they can discuss and provide guidance on laboratory training, including the Minimum Standards and support needs of the FMD Biorisk management community	STC online meetings on September 2020 and February 2021.  SCBRM online meetings on November 2020 and February 2021.  The OS20 has been restructured because of global COVID19 restrictions. A specific workshop has allowed the SCSAR to meet.	a) The STC has met twice during the reporting period.  b) The OS20 has provided the opportunity to the SCSAR to meet.  c) The SCBRM has met twice during the reporting period.
	1.5.2.2. EuFMD Open Sessions	The EuFMD Open Session is organized every two years and the topic of these sessions will be decided following the advice of the STC and the SCSAR.	A special edition of the OS2020 (virtual) has been delivered in December 2020-January 2021	

## 7. Issues for the Executive Committee attention

The COVID19 global situation has impacted the organization and delivery of the Open Session 2020. A virtual event has been organized, building on the experience gained by the team on the organization of virtual events.

## 8. Priorities for the next six months

Issue a second FAR call for proposals, with the topics identified by the STC, namely:

- Define criteria on when to implement emergency vaccination in disease free countries;
- Policy support tools for economic analysis of FAST control strategies (considering biosecurity based business continuity);
- Operational optimization of environmental sampling.

Increase visibility of FAR-funded research projects on the EuFMD website.

Further discussion to validate of the inactivation protocol to ensure safe shipment of genetic material through Lateral Flow Devices by the SCBRM.

## 9. Success stories and outputs

A call for proposal has been issued in two languages and received 21 applications across the European Neighborhood. Three proposals were retained based on their technical merit and value for the region.

## 10. Budget (€) COMP. 1.5

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
<b>Component 1.5</b>	18.284	17.879	405
<u>Consultancy Operational</u>			
<b>Component 1.5</b>	34.943	38.405	-3.462
<u>Consultancy Technical</u>			
<b>Component 1.5</b>	-	-	-
<u>Travel</u>			
<b>Component 1.5</b>	72.000	15.282	56.718
<u>Training</u>			
<b>Component 1.5</b>	40.000	4.214	35.786
<u>Contracts</u>			
<b>Component 1.5</b>	200.000	9.645	190.355
<u>Procurement</u>			
<b>Component 1.5</b>	-	-	-
<u>General Operating Expenses</u>			
<b>Component 1.5</b>	25.000	2.715	22.285
<b>Total Direct Eligible Cost</b>	<b>390.227</b>	<b>88.141</b>	<b>302.086</b>

# Component 1.6 (Activity 6)

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**Proficiency Test Services**

**Objective**

**Europe-wide participation in Proficiency Test Services run by the FMD EU Reference Laboratory through support for countries that are not part of the EU or candidates states**

**Component Manager**

**Kiril Krstevski**

**Sub-activity level manager**

**1.6.1 Kiril Krstevski, Francesca Renzetti**

## 1. Background

The new **component 6** of Pillar I will continue to have the same objective as in the previous phase. It will still be managed through a LoA with the EU Reference Laboratory (EU-RL), who will administer the PTS and also will facilitate the participation of representatives from the supported countries involved in the annual EU reference laboratory meetings.

The intention is that the activities of this component ensure better alignment of neighbourhood NRLs with the EuFMD and EU standard for FMD diagnostic NRLS performance.

## 2. Team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Component supervisor</b>	Maria de la Puente	Pillar I Co-ordinator
<b>Component manager</b>	Kiril Krstevski	EuFMD Balkans Network Leader
<b>Component manager</b>	Francesca Renzetti	EuFMD Programme Specialist
<b>Training and networking</b>	Nadia Rumich	Training and Networking
<b>Member State partners</b>	Beneficiary countries	n/a
<b>ExCom oversight</b>	S. Zientara	Executive Committee member
<b>FAO officer</b>	Eran Raizman	FAO REU

## 3. Countries or partner organizations involved

The activities in this component will be specifically provided to EuFMD Member Nations that are not EU members and those for which the agreement with DG SANTE is that they cover the cost of their participation in the PTS: Bosnia and Herzegovina, Belarus, Kosovo\*, Moldova, Norway, Switzerland and Ukraine.

## 4. Reporting

<i>Reporting format</i>	<i>Responsibility</i>	<i>Output</i>	<i>Distribution</i>	<i>Sent out by</i>
<b>Six monthly report to ExCom</b>	Component manager	Written report and presentation	ExCom, STC	Network and Training Support Officer
<b>Every two years report to MN</b>	Component manager	Written report and presentation	General Session	
<b>Reports established in the LoAs</b>	LoA contractees	Written report and presentation if required	STC, Open Session	

## 5. Objective of the component

**Europe-wide participation in proficiency test services run by the FMD EU Reference Laboratory through support for countries that are not part of the EU or candidates states.**

<i>Component (Activity)</i>	<i>Objective</i>	<i>Narrative</i>	<i>Expected result</i>	<i>Monitoring</i>	<i>Evaluation</i>	<i>Assumptions and risks</i>
<b>1.6 PTS</b>	Europe-wide participation in proficiency test services run by the FMD EU Reference Laboratory through support for countries that are not part of the EU or candidates states.	Non-EU countries that are EuFMD MN are able to participate in PTS on an annual basis.	7 eligible countries to participate each year in the PTS and attend the annual EU-RL meeting.	LoA interim and final reports	Two external evaluations to be carried out by month 18 and 38 of phase V.	Assumes commitment from the beneficiary countries to participate in the mentioned activities.

## 6. Planned Component Sub-Activities

The expected result of the component will be achieved through **sub-activities**:

### 1.6.1. Support to eligible countries

#### Support to eligible countries to participate in PTS for FMD NRL

There were no activities during the reporting period. Registration for this years' PTS will be open in the coming period.

#### Support to eligible countries to participate in the annual EU-RL meeting

The annual EU-RL meeting was held as a virtual meeting on 26 and 27 November and there was no need to provide additional support (travel, accommodation) for the eligible countries to participate. The EuFMD activities and support to the EU RL network were presented at the meeting.

### Sub-activities and their indicators:

	<i>Sub-activity level</i>	<i>Progress in the current period</i>	<i>Progress overall towards biennium indicator</i>
<b>1.6.1. Support</b>	1.6.1.1. Support to eligible countries to participate in PTS for FMD NRL	There were no activities during the reporting period. Registration for this years' PTS will be open in the coming period.	Six out of seven eligible countries undertook PT testing and reported back their results
	1.6.1.2. Support to eligible countries to assist the annual EU-RL meetings	Given the virtual format of the last EU-RL meeting, no additional support was needed for eligible countries to participate	The annual EU-RL will be held as an online event on 26-27 November

## 7. Issues for the Executive Committee attention

No issues.

## 8. Priorities for the next six months

Coordination with the EU-RL to identify further training needs for the eligible countries, based on the outcomes of the last PT (PT -2020). Realization of the postponed PCR training (Moldova).

Communication with laboratory focal points to encourage their participation in the next PTS (PT-2021) and help with the registration process whenever needed.

## 9. Success stories and outputs (communication products)

A podcast on the FMD Proficiency Testing Service provided by the EU-RL, and the collaboration with EuFMD was recorded

## 10. Budget (€) COMP. 1.6

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
<b>Component 1.6</b>	2.194	1.625	569
<u>Consultancy Operational</u>			
<b>Component 1.6</b>	34.943	38.405	-3.462
<u>Consultancy Technical</u>			
<b>Component 1.6</b>	-	6.477	-6.477
<u>Travel</u>			
<b>Component 1.6</b>	-	-	-
<u>Training</u>			
<b>Component 1.6</b>	-	-	-
<u>Contracts</u>			
<b>Component 1.6</b>	35.000	32.303	2.697
<u>Procurement</u>			
<b>Component 1.6</b>	-	-	-
<u>General Operating Expenses</u>			
<b>Component 1.6</b>	-	-	-
<b>Total Direct Eligible Cost</b>	<b>72.137</b>	<b>78.810</b>	<b>-6.673</b>

# Component 1.7 (Activity 7)

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Disease risk assessment and forecasting

## Objective

Improved global and neighborhood FAST disease risk assessment and forecasting, with information to Member Nations and the public made available on a regular basis.

## Component Manager

Melissa Mclaws

## Sub-activity level manager

1.7.1 Melissa Mclaws, Shankar Yadav

1.7.2 Melissa Mclaws

1.7.3 Etienne Chevanne, Kees Van Maanen

## 1. Background

The objective of this component is to improve the quality, usefulness and availability of information gathered concerning FMD risk of entry into MN. It should also facilitate the use of this information by risk managers, in order to prepare countries to respond in the event of an incursion.

This component will establish a **system for integration of sources of information** relevant to FAST disease risk forecasting in the European neighborhood region, including support to use and validation of expert opinion forecasting on epidemic trends for FAST diseases in the endemic viral ecosystem.

In this new phase, the Quarterly FMD Report (prepared jointly with the WRL) will be transformed into an on-line with a user-friendly adaptable **dashboard** that will allow to produce user-tailored reports. The new report will better integrate risk information from different sources to provide FAST disease forecasting in the European neighborhood.

The **PRAGMATIST** tool, developed by EuFMD and the WRLFMD, will continue being a key in providing a clear summary of the risks and the relative value of the antigens available for use in European emergency reserves (antigen banks) and its outputs will be better integrated in the quarterly global report. The PRAGMATIST tool will be further developed during the new phase, as our ability to forecast FMD epidemics improves.

During the new phase, EuFMD will assist countries identified as priorities by the SCSAR to monitor viral circulation of FAST diseases. Active **support will be provided for the submission of samples** to institutes in the SCSAR that have the capacity to provide laboratory support to surveillance for FAST diseases. This activity and the funds allocated to it will be coordinated with those carried out/funded under Pillars II and III.

## 2. Team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Component supervisor</b>	Melissa McLaws	Pillar I Co-ordinator
<b>Component Manager</b>	Melissa McLaws	FMD Risk Management Specialist
<b>Training and networking</b>	Nadia Rumich	Communication Officer
	Melissa McLaws	FMD Risk Management Specialist
	Kees Van Maanen	FMD Laboratory Specialist
	Etienne Chevanne	FMD Risk Management Specialist
<b>Key informants network</b>	Key informants (people/institutions)	n/a
<b>ExCom oversight</b>	Valentin Almansa	
<b>FAO officer</b>		FAO REU

## 3. Countries or partner organizations involved

The direct beneficiaries of this component are the 39 Member Nations of EuFMD, including all EU Member Nations. This component will involve work with countries identified as priorities by the SCSAR.

Involvement of the OIE and FAO will be essential for this component, in particular to share risk information and coordinate efforts to develop efficient reporting and risk communication tools. Greater integration of reporting between the EuFMD and European FMD references centers (EU-RL, and OIE and FAO centers) will be an objective of this component 7.

#### 4. Reporting

Reporting format	Responsibility	Output	Distribution	Sent out by
Six monthly report to ExCom	Component manager	Written report and presentation	ExCom, STC	Network and Training Support Officer
Every two years report to MN	Component manager	Written report and presentation	General Session	
On-line tool	Component manager	On-line tool monthly update	Website	

#### 5. Objective of the component

Improved global and neighborhood FAST disease risk assessment and forecasting, with information to Member Nations and the public made available on a regular basis.

Component (Activity)	Objective	Narrative	Expected result	Monitoring	Evaluation	Assumptions and risks
Disease risk assessment and forecasting	Improved global and neighbourhood FAST disease risk assessment and forecasting, with information to Member Nations and the public made available on a regular basis	Information on FAST disease risk is collected and analyzed; risk assessment and forecasting information is made available to European risk managers	Improved information on FAST disease risks and on antigens available to MN 36 months during phase V	Published monthly reports and recording of updates done to tools (online on-line map-based tool and PRAGMATIST)	Two external evaluations to be carried out by month 18 and 38 of phase V	Assumes enough information will be available to assess the risk and forecast important changes in risk and/or disease outbreaks

#### 6. Planned Component Sub-Activities

The expected results of the component will be achieved through sub-activities:

##### 1.7.1. System to provide information on FAST disease risk assessment and forecasting: Collection and integration of risk information from different sources

###### Disease risk assessment and forecasting

Under this sub-activity, a system to monitor changes in the risk of introduction of FAST diseases from the European neighbourhood to EuFMD Member Nations will be developed, building on the experience and knowledge of *the Generic risk assessment for the introduction of animal diseases (G-RAID) consortium*. This system will combine risk information from the source (Pillar 2) countries with the pathways by which the different FAST diseases could enter Europe (eleven pathways have been identified). The possibility of adapting existing models from the G-RAID group is being explored.

This work is building on previous work to assess the likelihood of introduction of FMDV from Northern African countries (Algeria, Morocco, and Tunisia) to Spain, which provided valuable information about the available data and resources available to devote to monitoring the risk.

###### On-line reporting tool

The FMD quarterly report continues to be produced jointly with the WRL. Information gathered from EuFMD's

activities in Pillar II is included in this report.

The EuFMD has defined FMD risk parameters that are not currently available from any other data source. The plan going forward is that data on these parameters would be collected and maintained by EuFMD and combined with other data (laboratory data, outbreak reports) on an online dashboard. Most of these parameters relate to the PCP-FMD and would be collected during FMD Roadmap Meetings.

A detailed concept note describing the dashboard has been developed. Regular discussions are underway with the WRL and FAO (Empres-i) to identify a sustainable way to implement the dashboard, building on synergies and avoiding duplication with other initiatives.

**1.7.2. System to provide information about the risks and the relative value of the antigens available for use in European emergency reserves**

**PRioritisation of AntiGen MAnagementT with International Surveillance Tool (PRAGMATIST)**

The information required to update PRAGMSTIST is included in the FMD quarterly report. The team from the University of Surrey presented their work at the EuFMD Open Session.

**1.7.3. Support for submission of samples from countries identified as priorities by the SCSAR to institutes that have the capacity to provide laboratory support to surveillance for FAST diseases:**

See activities under components 3.1 and 3.2.

## Sub-activities and their indicators

Sub-activity level	Description	Progress in the current period	Progress overall towards biennium indicator
<b>1.7.1.1. Collection and integration of risk information from different sources</b>	Definition of a system for regular collection of specific information from different sources, including information collected through the work developed under Pillars II and III and information provided by key informants. Harmonization and quality check of the collected information.	Global FMD Quarterly reports published regularly in collaboration with the WRL. Information from the FAST disease report was included in the FMD quarterly report	Progress is aligned with the biennium indicators
<b>1.7.1.2 Disease risk assessment and forecasting</b>	Regular assessment of the collected information in order to understand FAST disease trends and risk factors, allowing to provide some forecasting	The risk framework developed in the pilot project with Spain was reviewed and revised with a view to the sustainable implementation. A meeting was held with members of the generic risk assessment for the introduction of animal diseases (G-RAID) to explore the possibility of adapting an existing framework	The initial phase of this project was completed during the summer 2020. Next phases of the project (including more countries and other FAST diseases) will be developed in the upcoming months.
<b>1.7.1.3 On-line reporting tool</b>	Development of an on-line map-based tool with an adaptable dashboard for regular reporting to Member Nations on FAST disease risks. Monthly update of the information available through the tool	Discussions ongoing with the WRL to define this project and identify how to implement it. A company with expertise has been consulted and provided a quote. A survey has been developed to gather information about stakeholders' data needs. Meetings have also been held with EMPRES, as a substantial upgrade is planned for EMPRES-i Data related to FMD risk and the PCP have been defined, these parameters are not available elsewhere, and could be collected and maintained by EuFMD	Work will be done in the following months to further elaborate on the new online dashboard. A joint EuFMD/WRLFMD report is being published quarterly.
<b>1.7.1.4 Generation of information</b>	Research studies to generate information necessary to understand FAST disease risks (e.g. livestock movement studies in priority countries or regions)	An application for funding has been received by EuFMD from Egypt to carry out animal mobility survey (in the framework of the risk mapping training cycle). CIRAD was associated in the review.	Opportunities for research studies targeting animal mobility data gaps will be shared among the European neighboring countries involved in the risk mapping training cycle.
<b>1.7.2.1. PRioritisation of AntiGen MAnagementT with International Surveillance Tool (PRAGMATIST)</b>	The PRAGMATIST tool will be kept updated and the results of the validation and sensitivity analysis carried out will be incorporated. In co-ordination with Pillars II and III, work might be done to make the PRAGMATIST tool more flexible and increase its availability, adapting it to endemic countries. A "user-guide" will also be developed.	The information required to update PRAGMATIST is included in the FMD quarterly report.  The team from the University of Surrey presented their work at the EuFMD Open Session.	Planning work done to improve PRAGMATIST
<b>1.7.3.1. Procurement of sampling</b>	Provision of sampling and/or diagnostic material to priority countries. Support for samples	See components 3.1 and 3.2	

<b>and/or diagnostic</b>	shipping to institutes in the SCSAR that have the capacity to provide laboratory support to FAST diseases surveillance		
<b>1.7.3.2. Training for sampling</b>			

## 7. Issues for the Executive Committee attention

No issues.

## 8. Priorities for the next six months

To develop a rapid risk assessment model that will enable EuFMD Member Nations to assess regularly the risk of incursion of FAST diseases, building on previous work by EuFMD and G-RAID. It is planned to do this under an LOA with Sciensano.

To identify a sustainable way forward in the development of an FMD dashboard, in collaboration with the WRL and EMPRES-I, as appropriate. A platform to collect and maintain FMD risk data (PCP stages, vaccination information) will be developed; and eventually displayed in the dashboard.

With colleagues in Pillar II and III, identify gaps in surveillance knowledge, and develop support (including guidance or training) to enhance sample submissions accordingly.

## 9. Success stories and outputs

The joint [EuFMD/WRLFMD](#) quarterly report on FMD global situation continues to be published on time, and includes information from work in Pillar II.

**10. Budget (€) COMP. 1.7**

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
<b>Component 1.7</b>	10.970	9.752	1.218
<u>Consultancy Operational</u>			
<b>Component 1.7</b>	34.943	34.914	29
<u>Consultancy Technical</u>			
<b>Component 1.7</b>	60.000	60.707	-707
<u>Travel</u>			
<b>Component 1.7</b>	26.000	-	26.000
<u>Training</u>			
<b>Component 1.7</b>	10.000	-	10.000
<u>Contracts</u>			
<b>Component 1.7</b>	34.000	31.256	2.744
<u>Procurement</u>			
<b>Component 1.7</b>	13.000	-	13.000
<u>General Operating Expenses</u>			
<b>Component 1.7</b>	10.000	69	9.931
<b>Total Direct Eligible Cost</b>	<b>198.913</b>	<b>136.699</b>	<b>62.214</b>

# Pillar II (Output II)

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## **Pillar Objective**

**Reduced risk to EuFMD Members from the European neighbourhood (progressive control of FAST diseases in EU neighbouring regions)**

## **Pillar Co-ordinator**

**Nick Lyons**

## Introduction

The presence and regular occurrence of Foot-and-mouth and Similar Transboundary Animal Diseases (**FAST**) in countries neighbouring European borders, is a constant risk for introduction and spread into Europe. Actions aimed at **improving the surveillance and control in European neighbourhood** can **reduce** the probability of FAST spreading towards European borders, **improve** production and reduce the **impact** that such diseases have on the economy and livelihoods in European neighbouring countries. Furthermore, the constant monitoring of the epidemiological situation can provide relevant risk information and contribute to increase awareness on major animal disease threats in the regions neighbouring Europe.

Foot-and-mouth disease (FMD) is present in European neighbouring countries with various serotypes and lineages reported. The increased **animal movements** driven by seasonality, climate, festivities, social and economic factors compound the risk of spreading FMD virus towards European borders. This is evidenced by the genotyping analysis carried out on isolates sent to the international reference laboratories from different regions. Other transboundary animal diseases affecting FMD susceptible species such as **Peste des Petits Ruminants (PPR)**, **Sheep and Goat Pox (SGP)**, **Lumpy Skin Disease (LSD)**, **Rift Valley Fever (RVF)**, and **Bovine Ephemeral Fever (BEF)**, are also present at various levels in the European neighbouring regions. Considering that these diseases have similar risk factors and/or control measures, the definition and implementation of **integrated controls for multiple diseases** can lead to improved results and better use of resources.

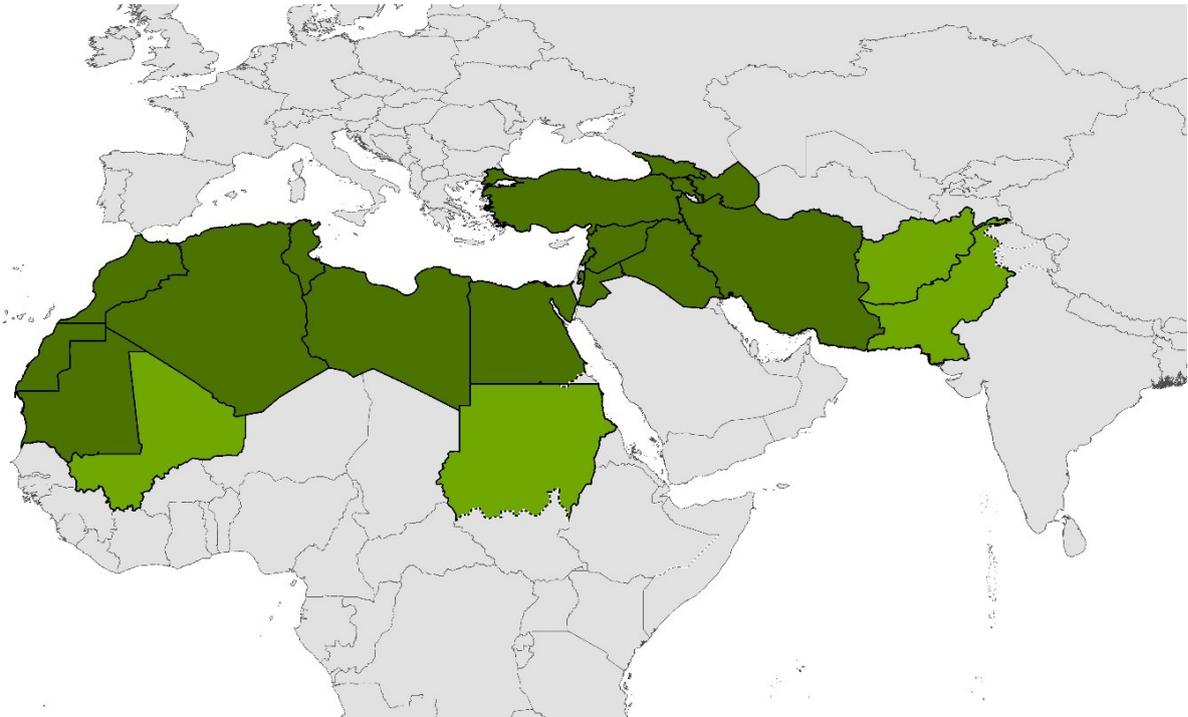
An integrated approach for FAST risk-based surveillance and control in the European neighbourhood and the availability of timely information to risk managers can improve the capacity for **early detection and prompt reaction to FAST incursion and circulation**. The regular submission of diagnostic samples to international reference laboratories improves the understanding of the connection between different disease events, and allows the detection of new strains which could threaten the European neighbourhood and beyond. An increase in national and regional capacity for FAST prevention and control, achieved through the development and delivery of **training programme** for national staff, is essential to prevent and control animal diseases. Furthermore, **Public Private Partnerships (PPP)** can contribute to adequate emergency arrangements for vaccine supply in situations where the international vaccine banks would be unable to provide effectively.

The activities included in Pillar II are targeted to the 16 European neighbouring countries (Algeria, Armenia, Azerbaijan, Egypt, Georgia, Iran, Iraq, Jordan, Lebanon, Libya, Mauritania, Morocco, Palestine, Syria, Tunisia, and Turkey) in three sub-regions (South East Europe, South-East Mediterranean and North Africa). The outputs of the three components of Pillar II, respectively addressing the three sub-regions to optimize resources, make use of the expertise developed and promote the dissemination of results within the EU neighbourhood. Activities proposed at the country level will be adapted to the specific country needs and to the different contexts, in order to improve impact and achieved significant results.

Taking into account the outputs identified, and the cost-benefits of extending the planned activities to other countries according to the indication and guidance of the Executive Committee, the EuFMD could involve West Africa, the Sahel, Middle East and West Eurasia in events and training programmes organized within the Pillar II workplan.

## The European neighbourhood

The neighbourhood of the current 39 EuFMD Members Nations (MN) is defined as the neighbouring countries which are **not MN** and which **either** have land borders with EuFMD MN **or** are members of the Mediterranean animal health network (REMESA), **or** whose animal health status provides an early warning for FAST disease spread to the neighbourhood of Europe. The activity of Pillar II includes EuFMD Member Nations in European neighbouring region (Turkey, Georgia).



### Specifically:

EuFMD Member Nations in European neighbouring region: Turkey, Georgia.

Having land-borders with EuFMD Member Nations: Armenia, Azerbaijan, Iran, Iraq, Syria, Lebanon, Palestine, Jordan, and Egypt.

Non-EU Members of REMESA: Jordan, Lebanon, Egypt, Libya, Tunisia, Algeria, Morocco, and Mauritania.

Countries significant for epidemic spread of FAST diseases to the above countries: Sudan, Mali, Afghanistan and Pakistan.

# Component 2.1 (Activity 2.1)

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## Co-ordination and FAST control framework Component Objective

Enhanced co-ordination with GF-TADs partners, international agencies and national competent authorities and improved implementation of strategic plans for FAST control at national and regional level

### Component managers

South-East Europe	<b>Carsten Potzsch</b>
South-East Mediterranean	<b>Shahin Baiomy</b>
North Africa	<b>Abdenacer Bakkouri</b>

## 1. Background

Different national, regional and international organizations are involved in activities in the European neighbourhood aimed at **improving national capacities and capabilities** to prevent and control transboundary animal diseases. The use of training methodologies, tools, experience, networks developed by EuFMD for diseases similar to FMD, is beneficial to improve the prevention and control of other transboundary animal diseases (TADs), without duplicating initiatives and activities already in place. An **improved co-ordination** with other institutions will allow a **better use of the resources** available and enhance support to countries.

Regular updates on the progress of the EuFMD workplan can allow a better harmonization of the activities implemented in European neighbourhood. The **regular reporting of FAST situation** and control strategies adopted in EU neighbouring countries can lead to a better understanding of the epidemiological situation and **major risks present at the EU borders**.

The Progressive Control Pathway (**PCP**) for FMD control is a tool to assist endemic countries to manage progressively the FMD risks. The value of this approach for national and regional progress has been demonstrated and has stimulated the development of several similar (progressive and “step-wise”) approaches for international action against Rabies, Peste des Petits Ruminants (PPR), and African Trypanosomiasis. The PCP-FMD approach has been applied by the EuFMD in the past years to assist European neighbouring countries to define their national strategy and then monitor its impact.

The **progression along the PCP** remains the main expected achievement within this programme for the EU neighbouring countries in order to improve control of FMD. The co-ordination mechanism is aimed at better identifying the specific needs of the different countries in the neighbourhood to **develop and revise the FMD control strategies** according to the different PCP stages, taking into consideration risks, socio-economic benefits and difficulties in the implementation of control measures. Within this component, the EuFMD will assist countries in progression of PCP, within the roadmaps supported by GF-TADs and will assist the delivery of the programme established by EPINET and LABNET (network established within roadmaps).

The promotion of **Public-Private Partnerships** through the development of new collaboration schemes between public services and private sector in the veterinary domain, is key for improved FAST monitoring and control. The implementation of **new synergies** between public and private sectors can support the achievement of relevant goals, especially with regard to surveillance of diseases, emergency preparedness and availability of vaccines.

## 2. Team

	South East Europe	South East Mediterranean	North Africa
<b>Management of programme</b>	C. Pötzsch - N.Lyons	S. Baiomy - N.Lyons	A. Bakkouri - N.Lyons
<b>Standing Technical Committee</b>			G. Caceres Garrido
<b>Executive Committee</b>			
<b>FAO</b>	E. Raizman	F. Mayen	M. Bengoumi
<b>OIE</b>		G. Yehia	R. Bouguedour

### 3. Countries or partner organizations involved

Direct beneficiaries of this component are the EuFMD Member Nations, Turkey and Georgia, and non EuFMD Members of the European neighbourhood. Other EuFMD Member Nations will benefit in terms of improved risk information and reduced risk from neighbouring countries.

Partners include FAO, OIE (Regional and Sub-regional offices), the EU Commission, regional organizations active in agricultural sector such as the Arab Organization for Agricultural Development, regional economic and trade unions such as the Arab Maghreb Union, the Economic Cooperation Organization (ECO) and others, in addition to networks established under GF-TADs such as REMESA and signatories of the Statement of Intentions (SOI).

The FAO/OIE reference laboratories, international centers of expertise and European reference laboratories will be involved in the activities according to the different expertise available and required.

Training opportunities and other activities developed and delivered might be extended to countries in the regions, which are significant for epidemic spread of FAST diseases to the above countries such as Sudan, Mali, Afghanistan and Pakistan.

### 4. Reporting

Reporting format	Responsibility	Output	Distribution	Sent out by
<b>Six monthly report to ExCom</b>	Component managers for the three sub-regions	Written report and presentation	ExCom, STC	Network and Training Support Officer
<b>Every two years report to MN</b>	Component managers for the three sub-regions in co-ordination with oversight board	Written report and presentation	General Session	
<b>Workshop reports</b>	Lead facilitator	Written report	ExCom, oversight members	

### 5. Objective of the component

**Enhanced co-ordination with GF-TADs partners, international agencies and national competent authorities and improved implementation of strategic plans for FAST control at national and regional level.**

Component (Activity)	Objective	Narrative	Expected result	Monitoring	Evaluation	Assumptions and risks
<b>2.1 Co-ordination and FAST control framework</b>	Enhanced co-ordination with GF-TADs and other partners, and improved implementation of strategic plans for FAST control.	Implementation of co-ordination mechanism aimed at better identifying the specific needs of the different countries in the neighbourhood for FAST control and provision of assistance to develop and revise the FMD control strategies according to the different PCP stages.	Activities coordinated at regional level with synergies among partners. At least 5 countries advancing to PCP stage 3 or above and/or providing FMDV circulation data in PCP stage 2. Reduced risk months where emergency management responses is required against FAST diseases.	Six- month progress report and official reported data.	Two external evaluations to be carried out by month 18 and 38 of phase V.	Commitments of GF-TADs and other partners on co-ordination & collaboration Identification of FMD as a priority by national competent authorities and implementation of integrated strategies for FAST diseases.

## 6. Planned Component Sub-Activities

### Activities and expected results

The activities within this component will contribute or ensure:

1) Co-ordination with the GF-TADs partners (FAO, OIE), with other international agencies providing technical support to countries (e.g. AOAD), achieving a jointly agreed workplan, with close regular interaction in the implementation and reporting to the regional steering committees and Joint Permanent Committee (JPC) of REMESA and the SOI.

This should ensure:

- an agreed basis for delivery of national support to FMD and FAST disease surveillance and control with the National Competent Authorities;

- an established framework for regular monitoring and reporting of the FAST situation, response to emergency events, and prioritization of efforts to promote surveillance and control in the European neighbourhood.

2) Improved implementation of strategic plans for FAST control at national level, on the basis of PCP principles, availability of resources and results of control strategies already in place.

3) Co-ordination of inputs and efforts with the leading technical institutional partners (including CIRAD, EFSA, IZSs, ANSES), to achieve improved laboratory and epidemiology networking in the European neighbourhood for better early warning and support to risk-based control strategies, with increased efficacy and improved guidance to the countries of the sub-regional epidemiology and laboratory networks of the PCP roadmaps.

4) Improved engagement with private sector (including private sector veterinarians, education and training providers and vaccine producers) in line with PCP and PPP principles.

The expected results under this component will mainly be expressed in terms of:

- a) progress in cooperation with regionally coordinated GF-TADs programmes and roadmaps;
- b) regular reporting to Member Nations and partners of the FAST situation and national progression on the PCP in the EU neighborhood;
- c) implementation of the epi-lab networks workplans and enhancements of regional networks;
- d) clear roles and active collaboration between public and private sectors in national control strategies (PCP implementation) in the neighbouring region.

### 2.1. Regular monitoring and reporting of FAST situation and control strategies adopted in European neighborhood and regular co-ordination with GF-TADs and other partners

FAO and OIE sub-regional offices of North Africa, Middle East and South East Europe were involved in the planning of the six-month activities, and regularly invited in the events organized during this month period.

A methodology has been developed to define and regularly update the country risk profile (hazard of FMD spread considering to the control strategy implemented) in the European neighbourhood. The system is based on accurate measurement of FMD prevention, surveillance and control activities carried out in each neighboring country based on the self-assessment tool (SAT). The system allows to measure accurately the country progress in the implementation of measures that relate to FMD prevention, surveillance and control ("FMD Control Score"), and contribute to inform on the likelihood of entry of FMD from the assessed country into neighboring countries or EU Member Nations. The system can also assist in the measurement of the impact of EuFMD Pillar II activities in the EU neighboring countries.

A methodology has been defined (see comp 1.7) to assess the likelihood of FAST introduction into EuFMD MN through the development of a deterministic model. The model considers most important risk pathways contributing to the likelihood of introduction of FMDV (and other FAST); estimates likelihood of the introduction via the pathways of importance; compares the source countries to their likelihood of introduction, predicts the number of changes/variation in the likelihood of introduction based on deviations in input variables (functioning as an early-

warning system); and estimates the probability of exposure and potential consequences in EuFMD MN.

The quarterly FAST reports are produced under this component. They give an update on surveillance reports and control activities relevant to FAST diseases in the European neighborhood, with contributions from all three Pillar II sub-regions. The FMD information is also used to inform the quarterly FMD report produced by the WRLFMD in collaboration with EuFMD. “Country cards” including regularly updated information risk populations, data on outbreaks, vaccination and sero-surveillance of FAST diseases are being developed for North Africa, Middle East and have been completed for the Southeast European Neighborhood (SEEN) countries. These cards involve direct engagement with individual countries and through regional epi and lab networks. These data will be used to monitor the FAST risk situation in the countries of the Statement of Intentions (SOI) and facilitate regional risk assessments and modelling of potential spread.

All meetings held between October 2020 and March 2021 during the reporting period were online format due to the COVID-19 situation.

### **South East European Neighbourhood (SEEN)**

The FAST situation and control strategies adopted in SEEN countries are regularly monitored and reported, including through: i) monthly online meetings with focal points in SEEN countries; and ii) three-monthly reports of the national consultants of the TransCaucasus countries (TCC). This includes updating and monitoring progress in the implementation of national FMD control plans (OCP, RBSP) in SEEN countries.

➤ Statement of Intention for mutual cooperation between Transcaucasia and neighbouring countries in the control of FMD and other TADs

The following meetings were held within the framework of the Statement of Intention (SOI) agreement:

#### *1) Virtual Meetings on risk information sharing.*

A series of meeting was held between SOI countries, the IZSLT and EuFMD to:

- exchange updates on the current state of information sharing of FMD disease outbreaks and vaccination within the framework of the SOI;
- agree on details of data sharing on FAST diseases outbreaks, control/vaccination and surveillance;
- identify criteria to better monitor regional risks of FAST diseases, including risk maps, market prices of animals and animal products;
- agree on amendments to improve database functionalities and user friendliness.

A meeting was held in October 2020, with participants from all six SOI countries and Pakistan to agree on future improvements of the SOI database. During two meetings in November with Turkey and the Transcaucasus countries, details were given on reporting FAST outbreaks and control measures including vaccination and the inclusion of FAST surveillance information, market prices and risk maps. The improvement of database functionalities was also agreed. Follow-up meetings in February/March guided the implementation of these changes.

#### *2) Meeting between Iran, Turkey and EuFMD*

Iran requested support from EuFMD to obtain four million doses of FMD vaccines to protect the livestock in high-risk areas and prevent the potential spill over to EuFMD Member Nations and the EU. EuFMD has endeavored to support Iran Veterinary Organization’s request in the procurement process of FMD vaccines and organized a meeting between EuFMD, Iran and Turkey with representatives from FAO, OIE and DG-SANTE. Turkey has indicated the possibility to supply vaccine doses to Iran.

#### *3) Meetings between Turkey, Iran, Pakistan and EuFMD*

A tripartite meeting was held in February 2021. Countries gave updates against the agreed framework regular sharing of risk information from bordering areas related to the occurrence of outbreaks, vaccination programmes, animal movements, surveillance results and control measures implementations, vaccine and vaccination effectiveness and capacity building. In 2020, Pakistan joined the initiative on sharing of data and information on vaccination and outbreaks of FMD and other FAST diseases every three months, and outbreaks within one week.

4) *5th Joint Permanent Committee (JPC) meeting of the SOI*

This meeting was held on 25<sup>th</sup> November 2020 and Armenia, Azerbaijan, Georgia, the Islamic Republic of Iran, Iraq, the Russian Federation, Turkey and EuFMD participated. Representatives from FAO and OIE were present as observers. Priorities of the SOI in 2020-21 were defined as:

- a) Maintain the reporting system of outbreaks and vaccinations through the on-line system and mapping tool with the active participation and contribution of the seven countries. Harmonize the participation in the reporting system by countries and clarify levels of involvement.
- b) Inclusion of more FAST diseases
  - Inclusion of surveillance information in the reporting system;
  - Facilitation of data entry and sharing of information with the continued improvement of the user interface.
- c) Invite the veterinary services of Pakistan to consider entering into the collaborative action through data sharing and signing the SOI.
- d) Harmonize and synchronize the data and information on FAST risks of the SOI database and the EuFMD quarterly report on significant FAST disease events and information. This information is used for improved regional risk forecasting and preparedness for the benefit of the members of this SOI, and neighbouring countries. Standardization of the information made available for an updated regional risk forecasting
- e) Progress in the development of a risk mapping system for the identification of regional risk hotspots and implement improved integrated surveillance for FAST diseases in risk areas and populations to include national regional risk maps and data on animal value, market activities and movements.
- f) Improve regional FAST preparedness through diagnostic and laboratory support to SOI member countries based on regional needs assessment (ANSES Laboratory assessment) and apply protocols to facilitate the exchange of samples (e.g. protocol for submission of FMD samples to the SAP institute).
- g) Promote and implement activities aimed at monitoring the effectiveness of vaccines used in the region, thanks to the newly established Group for Vaccination Advice, Guidance and Consultation (GVA), and share results and continue monitoring of the vaccination programme in line with the FAO/OIE Guidelines on PVM;
- h) Improve emergency preparedness capacity for FAST diseases through multi-country simulation exercises for SOI members and follow-up on shortcomings;
- i) Improve FAST disease control and surveillance through the implementation of socioeconomic studies on impact of control plans for priority FAST diseases and development of public-private partnerships (PPP) for FAST monitoring and control.

Concluding the meeting, focus was on the

- importance of improved early detection and early warning for FAST diseases incursion, the need to better identify drivers for increased risks and the role risk mapping can play in this.
- need for diagnostic support and role of regional laboratories like ARRIAH and the SAP Institute
- importance to continue regular quarterly meetings for exchange of information on FAST diseases and related activities between countries in the region, which play a crucial role in FAST epidemiology and between EuFMD and sub-/regional FAO and OIE offices.
- need and value of the continued support and contributions of the GF-TADs and the SOI countries which is crucial for the success of the cooperation.

Under Pillar II, the following SOI and SEEN meetings are planned in the upcoming months of 2021:

- Meeting on risk information sharing for SEEN countries to assess the current state, needs of the countries and plan improvement of the SOI database.
- SOI meeting – Joint Permanent Committee (CVOs)

➤ Coordination of activities related to FAST diseases with FAO and OIE

*Coordination Meeting between EuFMD, FAO SEC, FAO REU, FAO RAP and OIE on FAST diseases programmes in the European neighbourhood and West Eurasian region in October 2020*

During the meeting, representatives gave updates on the past, ongoing and planned main activities in the European

neighbourhood and West Eurasian region on TADs and FAST. Activities of common interest and potential synergies were identified and future information sharing between OIE, FAO and EuFMD in the region on TADs and FAST diseases discussed. It was agreed to hold similar coordination meetings including all of the parties every three months; the next meeting is planned for February 2021.

### **Middle East**

#### ➤ Co-ordination with the Arab Organization for Agricultural Development (AOAD)

A virtual meeting between the EuFMD and the AOAD was organized in June 2020. The main objectives of the meeting were to discuss the priorities for the region and how they might be addressed; identify possible synergies between the programmes delivered; and agree on modalities for improved coordination and collaboration. It was agreed to: a) share the work programs between the two organizations; b) Identify the common targets and the list of activities that can be delivered in mutual support; c) organize a follow-up meeting to agree on the modalities of the collaboration (to be organized after a consultation phase AOAD is having with beneficiary countries).

Since that meeting, the work programs of the two organizations have been shared, and members from AOAD have participated in EuFMD events (e.g. the risk mapping workshops organized with CIRAD under component 2.2). Following a request from AOAD, the EuFMD nominated the Deputy Executive Secretary as member in their steering committee of the regional program of the control of transboundary animal diseases. The objectives of this committee are to supervise, oversee, and follow-up the implementation of their program.

#### ➤ Coordination of activities with FAO and OIE

A Coordination Meeting between EuFMD, FAO and OIE was held in December 2020. During the meeting, representatives gave updates on the past, ongoing and planned main activities in the Middle East on FAST diseases. Activities of common interest and potential synergies were identified and future information sharing between OIE, FAO and EuFMD in the region on FAST diseases discussed. It was agreed to hold similar coordination meetings regularly, including all the parties.

### **North Africa**

#### ➤ REMESA JPC meetings

EuFMD has been involved regularly in JPC meetings in which the workplan to support REMESA has been consistently reported and planned. Due to the COVID-19 situation, the last meeting was held online (16<sup>th</sup> December 2020) and EuFMD presented the outcomes and workplan progress with regards to the priorities agreed during the previous meeting. These included (i) Improved coordination with regular updates of FMD control strategies (ii) Early warning (definition of hot spot locations, design risk based multi-disease surveillance, risk information sharing) (iii) Capacity building (progressive applied learning for laboratories and veterinary services) for which a project concept note was shared with REMESA secretariat, using additional funds made available by the French government.

#### ➤ REPIVET-RELABSA activities

The regular meetings of epidemiology and laboratory sub-networks under REMESA (REPIVET and RELABSA) are a forum to share information on FAST diseases. The outcomes contribute to the quarterly FAST reports and the joint EuFMD-WRL report on FMD.

#### ➤ OIE meeting on vector borne diseases

In addition, EuFMD participated in regional online events organized by partners, including the OIE meeting on Vector Borne Diseases in the North Africa region held in December 2020, and the virtual training workshop on “Surveillance system evaluation tool (SET)” organized in January 2021 for North Africa under the project “Building resilience to agroterrorism and agrocrime affecting animal health”. The latter was funded by Canada and implemented under the consortium of OIE, INTERPOL and FAO.

### 2.1.1 Revision of national FAST strategic plans according to updated risk assessment, socio-economic analysis, monitoring and evaluation results

#### South East European Neighbourhood (SEEN)

- Official Control Plan (OCP) of Turkey and Georgia and Risk-Based Strategic Plan for FMD control of Iran, Azerbaijan and Kyrgyzstan

The GF-TADs FMD Working Group (FMD WG) has reviewed the Official Control Plan (OCP) from Turkey and Georgia to progress to PCP stage 3, and the Risk-Based Strategic Plan for FMD control (RBSP) from Kyrgyzstan to move from provisional to full stage 2. Turkey has postponed re-submission of its plan until 2021. Georgia is working on the updated plan while Kyrgyzstan has been accepted for PCP stage 2. Azerbaijan had also submitted its updated RBSP to the FMD WG and is planning to submit an OCP in 2021. EuFMD has assisted the review of the Georgian plan and the sero-surveillance design for Kyrgyzstan.

- RBSP support planning meeting between Iran and EuFMD

I.R of Iran requested EuFMD assistance for the RBSP updating and the review of its national FMD control strategy. A planning meeting was held in August with a follow-up meeting in December 2020. Iran is currently reviewing its RBSP and support will be provided by EuFMD.

#### Middle East

- RBSP of Sudan

EuFMD has been supporting Sudan since 2018 in developing their RBSP for FMD, through a series of workshops, which culminated in submission of the plan to the FMD-WG. Sudan received feedback and EuFMD has provided support in responding to this through the PCP Support Officer (PSO) system. Sudan has had difficulties in addressing the feedback and has requested several deadline extensions from the FMD-WG for resubmission of the RBSP.

Part of the recent support for RBSP development was focused on surveillance with a virtual workshop organized in December 2020 at the request of Sudan. The main focus of the workshop was on improving surveillance and early detection of the FAST diseases in Sudan. This included a dedicated session on the current status of the RBSP, in anticipation of a deadline for resubmission at the end of December 2020. EuFMD experts, the PSO (PCP Support Officer) for Sudan, Dr. Dulu (OIE Programme Officer from the OIE Sub-Regional Representation for Eastern Africa), and six members of the FMD taskforce team in Sudan participated in the session. It was clarified that the plan has been amended and updated based on the comments provided by the PSO, although a comprehensive operational plan was still pending. The EuFMD experts offered to assist by reviewing and discussing the draft operational plan before resubmission to the FMD-WG. It was stated that the funding of the RBSP would be possible through the “**Livestock Epidemio-Surveillance Project to Support Livelihoods of vulnerable rural smallholders and pastoralists (LESP-SLSP)**” project through the European Commission.

### 2.1.2 Implementation of laboratory and epidemiology network work plans in the European neighborhood with development of best practices promoted in Roadmap regions

#### South East European Neighbourhood (SEEN)

- Epi-lab network

The SEEN sub-regional meeting of EpiNet and WelNet of the West Eurasian countries was held in April together with the Virtual Workshop on Improving surveillance and early detection of FAST animal diseases in the South-East European Neighbourhood (SEEN) countries. The network workplans were reviewed and streamlined with other activities in the frame of SOI and the EuFMD workplan. It was concluded that the SEEN region is a model region as most of the network activities take place here, with contributions from other countries in Western Europe being rare. A West Eurasia Epidemiology and Laboratory Network Meeting is planned for February 2021 by GF-TADs.

### **2.1.3 Promotion of public-private partnerships (PPP) for FAST monitoring and control and development of new partnerships**

The first session of the EuFMD–OIE in-depth online course on “**Applying Public-Private Partnerships in the Progressive Control of FAST Diseases**” mentioned above included up to four participants per country from **North Africa**.

In all Pillar II sub-regions, active identification of relevant stakeholders in both the private and public sectors is taking place in order to prepare a virtual workshop by the end of March 2021. The focus is currently on the I.R. of Iran, Morocco, Sudan and Tunisia.

➤ **Trainings and activities on Socioeconomic Impact Assessment for FAST Diseases**

As a follow-up of the recent in-depth virtual learning course on socioeconomics, held simultaneously in French and English, a two-day workshop is currently planned to take place by the end of March 2021. Countries from both North Africa and the Middle East would be involved. It will focus on the design and the implementation of socioeconomic impact assessments, building on the lessons learnt during the online training.

## Sub-activities and their indicators

Sub-activity level	Description	Progress in the current period	Progress overall towards biennium indicator
2.1.1 Improved national FAST control plans, networks and regular co-ordination with Gf-TADs partners and international agencies	1. Regular monitoring and reporting of FAST situation and control strategies adopted in European neighbourhood and regular co-ordination with GF-TADs and other partners.	<p>Co-ordination with the GF-TADs partners (FAO, OIE), with other International agencies providing technical support to countries (e.g. AOAD) and networks established in the regions, achieving a jointly agreed workplan with close daily interaction in the implementation and reporting to the regional steering committees and Joint Permanent Committee (JPC, REMESA).</p> <p>FAO and OIE sub-regional offices of North Africa, Middle East and South East Europe were involved in the planning of the 6 month activities, and regularly invited in the events organized during this period.</p> <p>EuFMD Deputy Executive Secretary nominated as member in the steering committee of the regional program for control TADS adopted by AOAD.</p> <p>A virtual coordinating meeting with EuFMD FAO &amp; OIE regional offices in the Middle East was organized and will be held regularly. Monthly online meetings were organized with focal points in SEEN countries and 3-monthly reports of the TransCaucasus countries (TCC) national consultants regular provided to monitor progress in the implementation of national FMD control plans (OCP, RBSP). The following meetings have been or will be held within the framework of the Statement of Intention agreement:</p> <ol style="list-style-type: none"> <li>1. Virtual Meetings on risk information sharing</li> <li>2. Meeting between Iran, Turkey and EuFMD</li> <li>3. Meetings between Turkey, Iran, Pakistan and EuFMD</li> <li>4. 5<sup>th</sup> Joint Permanent Committee (JPC) meeting of the SOI</li> </ol>	<p>BEF survey was conducted in the European neighbourhood. The methodology used can be useful for other purposes. An overall understanding of the level of surveillance, occurrence, awareness, vaccination, and laboratory capacity has been defined. Country cards including risk populations, data on outbreaks, vaccination and sero- surveillance of FAST diseases were developed and completed for the SEEN countries. These data will be used to monitor the FAST risk situation in the countries of the Statement of Intentions (SOI) and facilitate regional risk assessments and modelling of potential spread.</p>
	2. Revision of national FAST strategic plans according to updated risk assessment, socio-economic analysis, monitoring and evaluation results	<p>Provide technical assistance for implementation of strategic plans for FAST control at national level on the basis of PCP principles, availability of resources and results of control strategies already in place. Tools already developed by FAO (LMT, SET, EMAI) and results of their implementation will be regularly considered for enhancing the assistance provided according to the needs.</p>	<p>Official Control Plan (OCP) of Turkey and Georgia and Risk-Based Strategic Plan for FMD control of I.R of Iran, Azerbaijan and Kyrgyzstan</p> <p>RBSP support planning meeting between I.R of Iran and EuFMD</p> <p>RBSP support to Sudan.</p> <p>Results of the assessment of laboratory capacity and capabilities of national reference laboratories for FAST diseases in REMESA countries of North Africa and Middle East have been discussed and shared with countries to identify priorities and laboratory network action plans</p>

	<p>Emergency support for FAST diseases will be provided to countries under this component according to the priorities identified with EC and GF-TADs partners and considering the risks for EuFMD Member Nations identified.</p>	<p>With the assistance of EuFMD the FMD task force team in Sudan has developed and revised the RBSP according to the comment of the FMD working group. A virtual workshop on development of RBSP in Sudan was organized with a dedicated session for discussion the finalizing the RBSP.</p>	
<p>3. Implementation of laboratory and epidemiology network work plans in the European neighbourhood with development of best practices promoted in Roadmap regions.</p>	<p>Co-ordination of inputs and efforts with the leading technical institutional partners (including CIRAD, EFSA, IZSS, ANSES and others) to achieve improved laboratory and epidemiology networking in the European neighbourhood for better early warning and support to risk-based control strategies with increased efficacy and improved guidance to the countries of the sub-regional epidemiology and laboratory networks established in roadmaps.</p>	<p>A virtual workshop has been organized on improving surveillance and early warning in the Middle East and SEEN countries. The v- workshop replaces the REPIVET and RELABSA workshop that cannot be held due to Covid19 situation. Followed by two meetings with Libya and Egypt.</p> <p>Regional group for vaccination advice, guidance and consultation (GVA) has been proposed for REMESA countries and TORs discussed. The first GVA core group meeting was held in November 2020</p>	<p>In North Africa REPIVET and RELABSA have defined priorities and actions in line with EuFMD workplan</p> <p>Basis for the creation of group for vaccination advise, guidance and consultation have been implemented and the core GVA group was set up for North Africa.</p>
<p>4. Promotion of public-private partnerships (PPP) for FAST monitoring and control and development of new partnerships.</p>	<p>Improved engagement with private sector (including private veterinarians, training providers and vaccine producers) in line with PCP and PPP principles.</p>	<p>.</p>	<p>Role of private sector in surveillance has been studied and improvement identified to enhance sensitivity of surveillance.</p>

## 7. Issues for the Executive Committee attention

The progress on development of RBSP in Lebanon is influenced by the local situation. Kits have been delivered to Lebanon (and to Syria) to carry out a sero-surveillance designed during the last workshop.

Future EpiNet and WelNet activities for SEEN countries require GF-TADs planning for the next EpiNet and WelNet meeting of the WestEurasian countries (instead of the West Eurasian Roadmap Meeting 2020).

In North Africa, the organization of FMD roadmap meeting or similar events alongside the REMESA JPC meetings should be promoted, in coordination with the GF-TADs and FMD-WG, in order to establish a system able to assess regularly the improvements along the FMD PCP. The use of the different tools developed by the EuFMD (e.g. Self- Assessment Tool) would help to assess the progression of countries in FMD control.

Continued collaboration with the AOAD may be helpful for implementing activities, including potential collaborations on training delivery.

## 8. Priorities for the next six months

Production of the FAST reports, considering different ways of presenting data, and updating the country cards and informing risk analysis components of other parts of the workplan.

Continue the activities launched under the Laboratory and Epidemiology networks of the REMESA framework. Virtual meetings, instead of country missions or bilateral meetings, should be organized regularly with North African countries to follow the implementation of actions defined during the REPIVET-RELABSA initial workshop. Follow up to the PPP and SEI v-learning courses through liaising with relevant stakeholders from different countries.

Continue support to SEEN countries on the progression along the PCP, especially Turkey and Georgia to stage 3. Also continued support to I.R of Iran and Sudan.

Continue coordination meetings between EuFMD, FAO SEC, FAO REU, FAO RAP and OIE on FAST diseases programmes in the European neighbourhood and West Eurasian region to improve mutual cooperation and utilize synergy effects between different national and regional FAST related activities.

## 9. Success stories and outputs

Due to the restrictions on travel connected to the global situation of COVID-19, the REPIVET and RELABSA workshop for Middle East was postponed. However, in order to ensure the continuity of work and overcome the problems created by the current travel restrictions, EuFMD proposed to hold a virtual-workshop with the aim of improving the surveillance of FAST (FMD and similar Transboundary animal diseases) in Middle East with the same specific objectives. The virtual workshop format presents an opportunity to change the way of facilitating the epi-lab networks and other activities previously conducted via face to face events, with more distant support and increased focus on applied learning and field studies.

The SOI is a successful model of regional cooperation, trust building, and an effective mechanism of regional early warning for FAST diseases. New countries are eager to join this initiative and this model could be used in other regions.

Podcasts recorded and placed online: (*clickable links*)

- Crucial topic of socioeconomics around Animal Health issues - *Bouda Ahmadi*.
- The role of regional collaboration to control FMD and other TADs - *Tamilla Aliyeva*.
- Improving data collection for livestock health and productivity in LMICs - *Bouda Ahmadi and Andrew R Peters*.
- Livestockdata.org a new tool which has the objective to drive informed livestock decision-making - *Bouda Ahmadi and Gareth Salmon*.
- Evaluation of emergency preparedness for FMD and similar TADs – *M. Shuppers*.
- Primary Surveillance -Atelier Technique in Tunisia, *Mackenzie, Ausvet*.

**10. Budget (€) COMP. 2.1**

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
<b>Component 2.1</b>	15.020	14.629	391
<u>Consultancy Operational</u>			
<b>Component 2.1</b>	67.672	69.827	-2.155
<u>Consultancy Technical</u>			
<b>Component 2.1</b>	140.000	160.770	-20.770
<u>Travel</u>			
<b>Component 2.1</b>	80.000	14.461	65.539
<u>Training</u>			
<b>Component 2.1</b>	55.032	32.503	22.529
<u>Contracts</u>			
<b>Component 2.1</b>	35.000	41.402	-6.402
<u>Procurement</u>			
<b>Component 2.1</b>	20.000	12.353	7.647
<u>General Operating Expenses</u>			
<b>Component 2.1</b>	16.000	9.989	6.011
<b>Total Direct Eligible Cost</b>	<b>428.724</b>	<b>355.933</b>	<b>72.791</b>

# Component 2.2 (Activity 2.2)

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**Improved early warning for FAST diseases**

## **Component Objective**

**Develop and implement integrated disease surveillance program focused on specific risk hubs, in order to provide updated risk information, optimize the veterinary service resources and improve the effectiveness of control measures implemented.**

## **Component managers:**

South-East Europe  
South East Mediterranean  
North Africa

**Carsten Potzsch**  
**Shahin Baiomy**  
**Abdenacer Bakkouri**

## 1. Background

The European neighbouring sub-regions of the Maghreb, South East Mediterranean and South East Europe are key areas for a number of emerging risks for Europe. A better knowledge of the **livestock flows** in these regions would be a major advantage in forecasting dangers threatening Europe. It would also be useful information for the national veterinary services in designing more **effective national disease surveillance and control program**.

The implementation of specific surveys and the **monitoring of proxy indicators** of animal movements, especially in areas with a general lack of national animal identification system and movement monitoring (e.g. North Africa or Near East), are key elements to tailor a risk-based approach for surveillance and for the development of early warning system. The combination of **qualitative risk analysis and risk mapping** can contribute to assess the risk of introducing and disseminating FMD and similar TADs within the EU neighbouring countries and across their borders. The resulting risk-maps will be useful to develop **disease surveillance** program focused **on specific risk hubs**, in order to optimize the veterinary service resources deployed in the field and improve the effectiveness of control measures implemented.

## 2. Team

	South East Europe	South East Mediterranean	North Africa
<b>Management of programme</b>	C. Pöttsch - F. Rosso	S. Baiomy - F. Rosso	A. Bakkouri - F. Rosso
<b>Standing technical Committee</b>			G. Caceres Garrido
<b>Executive Committee</b>			
<b>FAO</b>	E. Raizman	F. Mayen	M. Bengoumi
<b>OIE</b>		G.Yehia	R. Bouguedour

## 3. Countries or partner organizations involved

Direct beneficiaries of this component are the EuFMD Member Nations Turkey and Georgia and non EuFMD Members of the European neighbourhood. Other EuFMD Member Nations will benefit in term of improved risk information and reduced risk from neighbouring countries.

Partners include FAO, OIE (Regional and Sub-regional offices) and EU Commission, regional organization active in agricultural sector such as Arab Organization for Agricultural Development, as well as regional economic and trade unions such as Union Maghreb Arab (UMA), Economic Cooperation Organization (ECO) and others and networks established under GF-TADs such as REMESA.

FAO/OIE reference laboratories, international centres of expertise and European reference laboratories will be involved in the activities according to the different expertise available and required.

Training opportunities and other activities developed and delivered might be extended to countries in the regions significant for epidemic spread of FAST diseases to the above countries such as Sudan, Mali, Afghanistan and Pakistan.

#### 4. Reporting

Reporting format	Responsibility	Output	Distribution	Sent out by Network and Training Support Officer
<b>Six monthly report to ExCom</b>	Component managers for the three sub-regions.	Written report and presentation	ExCom, STC	
<b>Every two years report to MN</b>	Component managers for the three sub-regions in co-ordination with oversight board.	Written report and presentation	General Session	
<b>Workshop reports</b>	Lead facilitator	Written report	ExCom, oversight members	

#### 5. Objective of the component

**Develop disease surveillance program focused on specific risk hubs, in order to provide timely risk information, optimize the veterinary service resources deployed in the field and improve the effectiveness of control measures implemented.**

Component (Activity)	Objective	Narrative	Expected result	Monitoring	Evaluation	Assumptions and risks
<b>2.2 Improved early warning for FAST diseases</b>	Develop integrated disease surveillance program focused on specific risk hubs	Identification of risk hotspots in the European neighbourhood and develop disease surveillance program focused on specific risk hubs, in order to improve availability of updated risk information, optimize the veterinary service resources deployed in the field and improve the effectiveness of control measures implemented.	Risk hot-spots for FAST diseases identified in at least 6 EU neighbouring countries and risk maps regularly updated Regular risk- based surveillance for multiple diseases implemented for 12 months in 2 in the EU neighbourhood hot spot locations At least 7 countries regularly participating in multi-country risk information sharing system	6 months progress report and official reported data.	Two external evaluations to be carried out by month 18 and 38 of phase V.	Country commitments and interest on implementing regular integrated surveillance in risk hotspots and sharing of information

## 6. Planned Component Sub-Activities

### Activities and expected results

The activities will implement mainly the workplans agreed at the co-ordination level (comp 2.1) and will take place at the national level, with the advanced technical institutions and reference centres providing support services to surveillance.

The activities within this component will contribute to or ensure:

- 1- Identification of risk hot spots for FAST diseases taking into consideration animal movements, presence and circulation of animal diseases, efficacy of control programmes, socio-economic aspects and other risk factors;
- 2- Implement a programme of risk-based surveillance for multiple diseases in risk hot-spot locations on a regular or continuous basis for detection of virus circulation and early warning of FAST unusual epidemiological events;
- 3- Improve the sharing of risk information between countries and between technical expert networks, promote the collaboration between countries for improved surveillance of FMD and similar TADs.

The expected results under this component will mainly be expressed in term of quantifiable indicators for improved communication of surveillance results. This includes the number of neighbouring countries which have identified risk hot-spots for FAST diseases and utilizes the risk maps based on animal mobility in surveillance and control plans; the number of countries which conduct regular risk-based surveillance implemented for multiple diseases in hot spot locations able to provide valuable risk information; the number of countries regularly participating in multi- country risk information sharing practice for FAST diseases similar to the THRACE and Trans-Caucasus “statement of intentions” agreements.

### 2.2.1 Identification risk hot-spots for FAST diseases and development of updated risk maps based on animal mobility and other risk factors

#### South East European Neighbourhood (SEEN)

- Risk mapping for improved FAST surveillance and early detection, and follow-up meetings

A virtual training was held between May and June 2020, under the framework of a 2-year programme developed by CIRAD and EuFMD (Letter of Agreement). This virtual training was made up by a 2.5-week induction phase, using the English online pedagogical toolkit on Spatial Qualitative Risk Assessment methodology, followed by a virtual workshop (6 live sessions distributed over two weeks). Twelve participants from Armenia, Azerbaijan, Georgia, Turkey, Iran (Islamic Republic of) and Iraq participated in the virtual training. It was the first time for Iraq to be engaged in this training activity. Participants developed risk maps for the introduction and spread of FMD in their countries. To keep the national risk maps updated and improve the skills of the participants, two follow-up meetings with participants were organized in July 2020 and January 2021 by EuFMD, with CIRAD experts. National and regional risk maps for the introduction and spread of FAST diseases will be made available in the SOI database (see planned meeting on risk information sharing for SEEN countries in October). Risk maps produced under this training programme have been integrated in PCP-FMD strategic documents developed in the region and will also be used in the follow-up activities of the EuFMD Risk-Based Surveillance workshops.

The I.R of Iran (was selected by CIRAD and EuFMD as one of the three pilot countries in the European Neighborhood to receive further support for the collection and analysis of information on national and transboundary animal movements, and the identification of drivers of animal mobility, modelling and predicting national and regional animal mobility patterns affecting FAST circulation (activity 2.1.1 and 2.1.2 of the LoA with CIRAD). During the reporting period, the 1<sup>st</sup> workshop of a series of three was held with 10 participants from I.R of Iran.

#### Middle East

- Risk mapping for improved FAST surveillance and early detection, and proposal for animal mobility survey

A virtual training was held between January and February 2021, under the framework of a two-year programme developed by CIRAD and EuFMD (Letter of Agreement) – previous trainings were in April 2019 and July 2019. This virtual training was made up by a three-week induction phase, using the English online pedagogical toolkit on Spatial Qualitative Risk Assessment methodology (updated following the SEEN workshop, see above), followed by a virtual workshop (6 live sessions distributed over three weeks). Twelve participants from Egypt, Libya, Sudan, Jordan and Lebanon participated in the virtual training. It was the first time for Lebanon and Jordan to be engaged in this training activity. Participants developed risk maps for the introduction and spread of FAST disease in their countries (FMD, SGP, PPR, RVF, LSD).

The EuFMD received a proposal from the Veterinary services in Egypt requesting the technical and financial support in conducting a study on animal mobility for updating risk maps and development of risk-based surveillance protocols and risk-based control measures for FMD and FAST diseases in Egypt. The EuFMD agreed to support the study through the Small Research Grant mechanism, and CIRAD has provided technical review of the proposal. This proposal will be aligned with the activities 2.1.1 and 2.1.2. of the LoA with CIRAD, Egypt being selected as one of the three pilot countries in the European neighborhood (see above). During the reporting period, the 1<sup>st</sup> workshop of a series of three has been conducted with ten participants from Egypt.

### **North Africa**

- Risk mapping for improved FAST surveillance and early detection,

A virtual training was held between September and October 2020, under the framework of a two-year programme developed by CIRAD and EuFMD (Letter of Agreement). This virtual training, delivered in French, was made up by a three-week induction phase, using the French online pedagogical toolkit on Spatial Qualitative Risk Assessment methodology (updated following the SEEN workshop, see above), followed by a virtual workshop (6 live sessions distributed over three weeks). Thirteen participants from Tunisia, Algeria, Morocco, Mauritania, Chad and Senegal attended the virtual training. Participants developed risk maps for the introduction and spread of FAST disease in their countries (FMD, PPR, RVF, LSD).

Tunisia was selected by CIRAD and EuFMD as one of the three pilot countries in the European Neighborhood to receive further support for the collection and analysis of information on national and transboundary animal movements, and the identification of drivers of animal mobility, modelling and predicting national and regional animal mobility patterns affecting FAST circulation (activity 2.1.1 and 2.1.2 of the LoA with CIRAD). During the reporting period, the 1<sup>st</sup> workshop of a series of three has been conducted with 10 participants from Tunisia.

## **2.2.2 Implementation of regular risk-based surveillance (RBS) for multiple diseases in hot spot locations.**

### **Middle East**

Following a virtual workshop on surveillance for FAST diseases in the Middle East (March and April 2020), the surveillance activities in the participating countries included:

- Libya

The main objectives of the meeting were to discuss the surveillance options that were defined during the virtual workshop according the surveillance objectives and also to agree on the proposed activities in response to the RVF and FMD outbreaks that were recently reported in Libya (Syndromic surveillance and Improving surveillance for early warning of Rift Valley Fever (RVF) Disease).

- Syndromic surveillance:

Syndromic surveillance involves the collection, analysis and interpretation of routinely health-related data. Typically, this uses data on clinical signs but can also include production parameters (e.g. milk production) or sales of antibiotics. Trends in the reports of these data are monitored over time and space, and threshold levels are set whereupon an investigation is initiated.

A pilot phase was launched in four sites: Al Kufra in southeast, Ubari in southwest, Tobruk in the east and Regdali in northwest. The animal health workers involved in the surveillance were trained by the EuFMD national experts on the methods and types of data to be collected using KoBoToolbox. However, due to the current economic and political situation in Libya, the NCAH could not secure funding to sustain this surveillance. EuFMD is currently exploring other ways of supporting the pilot initiative (for example MoUs with Universities).

- Improving surveillance for early warning of Rift Valley Fever (RVF) Disease in Libya :

The main objectives are to: a) Strengthen surveillance, diagnostic and response capacities of veterinary services for RVF; b) Identification of hotspots areas (risk factors: suitable areas for vector, seasonal vector abundance, animal movements, etc.) for RVF; c) Improve livestock health, protecting humans from RVF and sensitizing population at risks at these targeted regions which are the most affected or at risk of infection by RVF; and d) Conduct RVF survey in hotspot areas.

a) Training and awareness

With the assistance of EuFMD national experts in Libya training materials on collection samples were developed, the course targeted field public and private veterinarians, paraveterinarians, veterinary assistants and laboratory workers with main objectives to : a) provide background on proper specimen sampling and packaging to ensure that high quality specimens arrive at the laboratory and b) Clarify the laboratory procedures to give the field workers greater insight into what happens to the samples after they are submitted.

b) Identification of hotspots areas

Regarding the second component, an entomological training course was delivered in collaboration with the *Istituto Zooprofilattico Sperimentale dell 'Abruzzo e del Molise Giuseppe Caporale* (IZSAM) and with the support of the Enhancing Research for Africa Network (ERFAN). The course was addressed to participants from the National Center of Animal Health (NCAH), the National Center of Disease Control (NCDC), the Omar Al-Mukhtar University (OMU) and the University of Tripoli (UOT).

The training was piloted in a virtual format in Libya and could be proposed to other countries in the region. The training will be followed by the implementation of entomological surveillance in risk locations, assisted by backstop support of experts from IZSAM and followed by a review of the in-field work, including an observation of the change occurred and the new competences acquired. This v-Learning course focused on the entomological surveillance of Rift Valley Fever and other mosquito-borne arboviroses.

The final part of this training was the provision of follow-up remote support to field activities. Participants planned these in identified high-risk areas (Tobruk, Al Marj, Ajdabiya, Misrata, Tripoli, Al Zawai, Gharyan and Hamada Al Hamra) as part of a pilot. Mosquito collection was successfully conducted in Tripoli identifying the presence of *Culex pipiens*. A final follow-up meeting with the participants was held in February 2021 to review of the results and impact of the training.

c) Conduct RVF survey in hotspot areas.

Sero-surveillance was conducted near urban areas along the Tunisian border among beef and dairy cattle. Sampling is ongoing and at the time of writing 163 serum samples had been collected. In addition, around 240 blood samples were collected from Tripoli, Zawai and Misrata and the sampling will be continued in parallel with the FMD vaccination campaign in 2021.

➤ Egypt

The Veterinary services in Egypt requested the support of EuFMD to conduct active surveillance (both sero- and clinical surveillance) at international border areas. The objective of the surveillance was to estimate the serological prevalence of NSP antibodies among the large and small ruminant populations, focusing on the 6-18 months age category in the targeted governorates. Diagnostic kits were delivered through the FAO office in Cairo.

The sero-surveillance was conducted in November 2020 targeting six governorates along the border (Aswan, Matrouh, New Valley, North Sini, South Sini, and Red Sea). Sera were collected from 1,680 randomly selected animals and tested using a 3ABC NSP ELISA. The results revealed an overall NSP seroprevalence of 10.8% (182/1,680; 95%CI 9.4-12.4%) for small and large ruminants combined. The highest seroprevalence was in Aswan governorate (23.6%) with the lowest

being in Matruh governorate.

➤ Lebanon

A FMD sero-surveillance in production systems and geographical areas identified to be at risk was designed with the support of EuFMD. A sero-survey for cattle targeting two farming systems was suggested: large farms and subsistence farm systems in four areas with specific criteria concerning the high risk of FMD. Two types of farming systems of sheep were also targeted in the plan: flocks with villages in three governorates and transhumant flocks before and after the seasonal movements. The diagnostic kits have been delivered through the FAO office in Beirut. However, due to the political and financial situation in Lebanon, the veterinary services were not currently able to secure logistical support to conduct the surveillance which was instead supported by EuFMD.

The surveillance was conducted in November 2020. Sera from 1,634 randomly selected animals were collected from Akkar, North Lebanon, Mount Lebanon, Baalbek-Hermel, Beqaa and Nabatiea. The intention is to test these samples for NSP antibodies using a 3ABC ELISA at the national laboratory. The results of this surveillance will be discussed at a the proposed virtual workshop on development of RBSP in April 2021.

➤ Syria

Using donor funding, the veterinary authority intends to conduct an initial vaccination campaign to cover 350,000 heads of cattle against Lumpy skin disease (LSD), extending to all cattle in the country at a later stage. The veterinary authority is planning to implement a small-scale immunogenicity study to assess the quality of imported LSD vaccines, and has requested technical and logistical support from EuFMD. The results of FMD seroprevalence studies, also supported by EuFMD, are pending.

**North Africa**

➤ Development of national plan for FAST risk-based surveillance for early detection / case finding

As stated in the previous report, the earlier REPIVET-RELABSA workshops discussions included the national plan for FAST risk-based surveillance for early detection/case finding, as well as the identification of high-risk areas. Other topics considered were design and implementation of targeted surveillance and promotion of the role of key stakeholders (private vets, paravets and farmers representatives) in passive and syndromic surveillance. The following action points were also identified with the participating countries:

- Development of a system to facilitate reporting of routine clinical cases by private veterinarians, demonstrating that observational surveillance is continuous and feeding into syndromic surveillance.
- Facilitate PPPs for surveillance with involvement of stakeholders; organize national workshops to encourage the creation of producers' technical associations for improving health status of their stock (in line with the *Fédération nationale des Groupements de Défense Sanitaire* - GDS in France).
- Better understanding of informal channels of communication between stakeholders (for example, use of social media by private vets).
- Promote the characterization of circulating pathogens, particularly for FMD, in order to adapt vaccination programs.

Plans are underway to work with countries in developing their surveillance strategies in identified hotspot locations. The EuFMD is identifying external expertise to lead the activity in the region (a LoA is under development).

### **2.2.3 Regular participation of countries in multi-country risk information sharing system for FAST diseases**

#### **South East European Neighbourhood (SEEN)**

➤ Regular reporting and risk information sharing within the Statement of Intention between Transcaucasia (TCC) and neighbouring countries.

There is continued reporting of FMD outbreaks and vaccination in border areas as part of the SOI. Currently, FMD outbreaks and vaccination progress are reported on a monthly basis by Turkey and the TCC. See component 2.1 for details of meetings that have occurred in support of this initiative.

The database for sharing of data on FMD outbreaks and vaccinations is currently hosted by the IZSLT, Italy. Turkey has reported outbreaks in the border regions with other SOI countries immediately after laboratory confirmation. This has resulted in targeted and timely vaccination campaigns in neighbouring Armenia and Georgia. During this reporting period, GIS/mapping functionalities and further data capture and analysis functions were implemented.

Country cards with risk populations, data on outbreaks, vaccination and sero-surveillance of FAST diseases were developed and completed for the SEEN countries. These data will be used to monitor the FAST risk situation in the countries of the Statement of Intentions (SOI) and facilitate regional risk assessments and modelling of potential spread.

#### **North Africa**

Regular meetings of epi and lab networks in the region were organized, including the preliminary group for FAST vaccination advice, guidance and consultation (GVA) meeting (July 2020) and the first meeting of the GVA core in November 2020, and where risk information is shared allowing updates of information through the country cards in the region.

## Sub-activities and their indicators

	Sub-activity level	Description	Progress in the current period	Progress overall towards biennium indicator
2.2.1 Identification of risk hot spots for FAST diseases and implementation of regular risk-based surveillance	1. Identification risk hot-spots for FAST diseases and development of updated risk maps based on animal mobility and other risk factors.	Identification of risk hot spots for FAST diseases considering animal mvts, wildlife, presence and circulation of animal diseases, efficacy of control programmes, socio-economic situation and other risk factors.	<p>Advanced virtual workshop on qualitative Risk assessment and mapping and on animal mobility is launched (autumn 2020) in collaboration with CIRAD. Main expected outcome is the development country risks maps in order to improve FAST risk-based surveillance and early detection.</p> <p>Virtual workshop on risk mapping and animal mobility for ME countries with CIRAD.</p>	<p>Improvements in the identification of risk locations were done in North Africa (Morocco, Algeria, Tunisia and Libya) Assistance for definition hotspots RVF in North Africa ongoing.</p> <p>In previous REPIVET-RELABSA workshop , high-risk locations were identified, shared and risk factors discussed. This should be improved and refined as a next step in country base meetings.</p>
	2. Implementation of regular risk-based surveillance (RBS) for multiple diseases in hot spot locations	Implementation of risk-based surveillance for multiple diseases in risk hot-spot locations of neighbouring region on a regular or continuous basis for detection of FAST virus circulation and early warning of FAST unusual epidemiological events.	<p>EuFMD provided technical assistance and diagnostic support for designing and implementing sero-surveillance in Egypt, Lebanon and Syria. Surveillance results were available for 6 border governorates in Egypt.</p> <p>In Lebanon the surveillance conducted in the high-risk areas and also targeted the high-risk animal sectors.</p> <p>A pilot phase of the entomological surveillance conducted Tripoli identified the presence of <i>Culex pipiens</i>.</p> <p>To continue the activities implemented under REPIVET-RELABSA networks, including the plans developed for FAST risk-based surveillance for early detection/case finding, , EuFMD is seeking expertise provider to lead the follow up on national-base activity in the region.</p> <p>A virtual workshop on development of RBSP in Sudan was organized and focused on surveillance, a specific follow-up meeting with epi unit team is proposed to write and present a draft integrated surveillance system for FAST diseases.</p>	<p>Design and diagnostic support provided for surveillance in Egypt, Lebanon and Syria.</p> <p>Targeted surveillance in high-risk areas planned in North Africa to be followed up with national meetings. Shared results of the surveillance in Egypt.</p>

<p>3. Regular participation of countries in multi-country risk information sharing system for FAST diseases.</p>	<p>Improve the sharing of risk information between countries and among technical networks, and promote the collaboration between countries for improved surveillance of FMD and similar TADs.</p>	<p>Continued reporting of FMD outbreaks and vaccination in SEEN countries. Currently FMD outbreaks and vaccination progress are reported monthly by Turkey and TCC. During this reporting period the Russian Federation has resumed reporting, Iran has not resumed reporting. FMD outbreaks in the border areas according to the SOI are reported immediately, usually on the day of confirmation, to the participating countries and EuFMD. The database for sharing of data on FMD outbreaks and vaccinations has been transferred from Google maps/fusion table based platform to a database developed and currently hosted at the IZSLT, Italy. The national experts for the group for FAST vaccination advice, guidance and consultation have been designated for North Africa in July 2020 and the first GVA core group meeting was held in November 2020.</p>	<p>New SOI system for data sharing and database developed. Continuation of information sharing in SEEN Information sharing has been identified a priority in REMESA and FMD EPI-Lab networks in Middle East and North Africa.</p>
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## 7. Issues for the Executive Committee attention

EuFMD has replaced face-to-face activities with online meetings or virtual workshops, with revised objectives and expected outcomes. Despite the difficulties, this has created opportunities to develop new modalities for distant events and backstop support for beneficiary countries that can change and improve the way of delivery some activities included in the workplan, with an optimization of the resources.

To further develop risk-based surveillance strategies in the European Neighborhood, external expertise is being sought through a LoA.

## 8. Priorities for the next six months

Advance the implementation of risk based surveillance in areas that have received risk-mapping training through CIRAD. This will be expanded to other areas following the training.

Improve the sharing of data and information in the SOI database to better facilitate early warning of FAST diseases and user friendliness. Further development of the SOI database (inclusion of GIS/mapping functionalities).

Consider further expansion of the entomological surveillance building on the experience of implementing this activity in Libya.

## 9. Success stories and outputs

Following the work done with EU neighbouring countries on risk mapping and animal mobility, various countries have adopted risk-based approach for surveillance and control of FAST. Morocco and Algeria implemented risk based surveillance at the end of 2019, and modified large ruminants FMD vaccination from annual to biannual. Morocco implemented vaccination of small ruminants in risk locations, Egypt implemented surveillance at the border with Sudan, Lebanon and Syria have designed a risk-based sero-surveillance.

The database for sharing of data on FMD outbreaks and vaccinations implemented in SEEN has been successfully hosted at the IZSLT, Italy. GIS/mapping functionalities were included and the addition of further countries (Iraq, Pakistan) was implemented. Turkey has reported outbreaks in the border regions with other SOI countries immediately after laboratory confirmation. This has resulted in targeted and timely vaccination campaigns in neighbouring Armenia and Georgia. A similar concept of risk information sharing has been discussed in North Africa and agreed with REPIVET-RELABSA participants.

Podcasts recorded and placed online: (clickable links)

- FMD risk assessment and early warning systems (Dr. Carsten Pötzsch)
- The Importance of training on Risk assessment and risk mapping on TADs - (Dr. Hanan Yousif)
- Challenges of the implementation of animal movement in risk mapping for TADs - (Dr. Gabriel Poujol)
- Qualitative risk assessment and risk mapping for FMD and similar TADs - (Dr. Elena Arsevaska)

## 10. Budget (€) COMP. 2.2

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
<b>Component 2.2</b>	12.498	11.378	1.120
<u>Consultancy Operational</u>			
<b>Component 2.2</b>	67.672	69.827	-2.155
<u>Consultancy Technical</u>			
<b>Component 2.2</b>	100.000	114.890	-14.890
<u>Travel</u>			
<b>Component 2.2</b>	85.000	17.740	67.260
<u>Training</u>			
<b>Component 2.2</b>	45.000	13.517	31.483
<u>Contracts</u>			
<b>Component 2.2</b>	130.000	148.542	-18.542
<u>Procurement</u>			
<b>Component 2.2</b>	35.000	12.425	22.575
<u>General Operating Expenses</u>			
<b>Component 2.2</b>	4.998	3.291	1.707
<b>Total Direct Eligible Cost</b>	<b>480.168</b>	<b>391.611</b>	<b>88.557</b>

# Component 2.3 (Activity 2.3)

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## Capacity development for surveillance and improved control programmes

### Component Objective:

Develop and implement a program for capacity building that supports national and regional activities for improved PCP progress and FAST disease control (comp.2.1) and improved early warning surveillance, notification and early response (comp 2.2)

### Component managers:

South-East Europe  
South East Mediterranean  
North Africa

Carsten Potzsch  
Shahin Baiomy  
Abdenacer Bakkouri

## 1. Background

The **capacity development opportunities** offered to the European neighbouring regions by the EuFMD in the past years, have been intense and focused on assisting countries in improving their national FMD control plans and monitoring their effectiveness. Specific attention has been given to the development and delivery of various training courses (e.g. FMD outbreak investigation, post-vaccination monitoring, risk assessment along the value chain, FMD socio-economic impact assessment, laboratory diagnosis, safe trade, progressive control) in order to improve knowledge on FMD surveillance and control, and guarantee sustainability of the achievement reached in different countries.

**Face-to-face training** and **e-learning** has allowed the national veterinary services to gain a more sustainable and long-term capacity to investigate outbreaks and collect samples of good quality, implement risk-based control measures, better understand FAST impact and identify options to reduce risk associated with trade. **Socio-economic** and **cost benefit analysis** for FAST control can be promoted through specific training opportunities aimed at assisting policy makers in defining best integrated control strategies with proper engagement of stakeholders.

**Laboratory capacity** to confirm, and investigate, suspicions and epidemiological skills to adapt surveillance according to the risk, are necessary to implement an early detection system with a good level of sensitivity. Regular training and **networking between centres of expertise** can contribute to build capacities in Europe and neighbouring countries.

Component 2.3 will use the EuFMD training platform to cover the specificities of other TADS or other learning priorities to improve preparedness for the threats identified. The training programme of Pillar II will be based on the concept of **'progressive applied training'** to combine training events at sub-regional and national level with practical implementation (field activities and studies) of the subjects taught. Specific attention will be also dedicated to the improved regional and national capacity to **"cascade" training** as well as to the **induction courses** before the events organized within Pillar II.

## 2. Team

	South East Europe	South East Mediterranean	North Africa
<b>Management of programme</b>	C. Pöttsch - N.Lyons	S. Baiomy - N.Lyons	A. Bakkouri - N.Lyons
<b>Standing technical Committee</b>			G. Caceres Garrido
<b>Executive Committee</b>			
<b>FAO</b>	E. Raizman	F. Mayen	M. Bengoumi
<b>OIE</b>	D. Montabord	G.Yehia	R. Bouguedour

## 3. Countries or partner organizations involved

Direct beneficiaries of this component are the EuFMD Member Nations Turkey and Georgia, and non EuFMD Members of the European neighbourhood. Other EuFMD Member Nations will benefit in terms of improved risk information and reduced risk from neighbouring countries.

Partners include FAO, OIE (Regional and Sub-regional offices) and EU Commission, regional organization active in agricultural sector such as Arab Organization for Agricultural Development, as well as regional economic and trade unions such as Union Maghreb Arab (UMA), Economic Cooperation Organization (ECO) and others and networks established under GF-TADs such as REMESA.

FAO/OIE reference laboratories, international centres of expertise and European reference laboratories will be involved in the activities according to the different expertise available and required.

Training opportunities and other activities developed and delivered might be extended to countries in the regions significant for epidemic spread of FAST diseases to the above countries such as Sudan, Mali, Afghanistan and Pakistan.

#### 4. Reporting

<i>Reporting format</i>	<i>Responsibility</i>	<i>Output</i>	<i>Distribution</i>	<i>Sent out by</i> Network and Training Support Officer
<b>Six monthly report to ExCom</b>	Component managers for the three sub-regions	Written report and presentation	ExCom, STC	
<b>Every two years report to MN</b>	Component managers for the three sub-regions in co-ordination with oversight board	Written report and presentation	General Session	
<b>Workshop reports</b>	Lead facilitator	Written report	ExCom, oversight members	

#### 5. Objective of the component

**Support the capacity development needed to develop and implement control strategies and surveillance for FAST diseases (comp 2.1) and early warning system (comp 2.2).**

<b>Component (Activity)</b>	<b>Objective</b>	<b>Narrative</b>	<b>Expected result</b>	<b>Monitoring</b>	<b>Evaluation</b>	<b>Assumptions and risks</b>
<b>2.3 Capacity development for surveillance and improved control programmes</b>	Improved capacity to develop and implement control strategies and surveillance for FAST diseases	Develop and implement a program for capacity building that supports national and regional activities for improved PCP progress and FAST disease control (comp.2.1), improved early warning surveillance, notification and early response to FAST diseases (comp 2.2)	Evidence of improved capacities of national laboratories on FAST diagnosis in 3 countries, and 2 new training course scheme developed to assist FAST control and early warning system	6 months progress report and official reported data.	Two external evaluations to be carried out by month 18 and 38 of phase V.	Identification of participants to training with active role in control and surveillance programmes and interest in the topics proposed.

#### 6. Planned Component Sub-Activities

##### Activities and expected results

The activities will implement mainly the capacity development work plans agreed at the co-ordination level (component 2.1). The 16 neighbouring countries plus four or five of the most significant neighbours for risk and early warning will be direct beneficiaries. Experienced technical institutions and reference centres will be supported to ensure capacity in the European partners as well neighbourhood reference centres.

The activities within this component will contribute to or ensure:

- Development and implementation of a program of capacity building that will support national and regional activities required for improved PCP progress and FAST disease control (comp.2.1) and implement improved early warning surveillance, notification and early response activities (comp 2.2). As part of this, they will:

- Develop improved capacity in the network of FAST disease reference laboratories in the neighbourhood to undertake the confirmatory and specialized tests required by the programme;
  - Develop resources that enable “national cascade” training on progressive control and on recognition and control of FAST diseases;
  - Develop a body of evidence on vaccine efficacy and vaccination effectiveness for FAST diseases through studies conducted at national level or by regional technical partners and facilitate the sharing of the results to improve decision on vaccination programmes (including the scheduling of FAST vaccination).
- Building international awareness and understanding among public and private veterinarians and para-professionals in the EU neighbouring region on FAST disease recognition, surveillance and control through e-learning courses and online events.

To ensure that EuFMD’s courses are of world-leading standard, educational quality will be maintained through a quality assurance system, co-ordinated across the three Pillars of the EuFMD work programme (see components 1.1 and 3.3). Focus will be on developing training which will have lasting impact, and this will be guided by an impact evaluation system in line with guidance of an external international panel of adult-learning experts, and again co-ordinated across the three pillars.

The expected results under this component will be evaluated at the mid-term stage, and mainly expressed in terms of number of national laboratories with improved capacity for FAST diagnosis; number of studies on vaccine efficacy and vaccination effectiveness implemented and results shared; number of training course schemes developed and delivered to assist FAST control and surveillance; number of trainees completing e-learning courses and the impact of the course measured by their recall and subsequent application.

### **2.3.2 Improvement of national laboratories capacity for FAST diagnosis. South East European Neighbourhood (SEEN)**

- Participation in Proficiency Testing Schemes (PTS)

All SOI countries annually participate in the PTS of the FMD World Reference Laboratory.

#### **Middle East and North Africa**

- Laboratory capacity assessment

The French Agency for Food, Environmental and Occupational Health and Safety (ANSES) carried out an assessment of National Reference Laboratory capacities in 2019, supported by EuFMD through a small research grant, across the REMESA region. Eight countries were invited to take part in this study (Algeria, Egypt, Jordan, Lebanon, Libya, Mauritania, Morocco and Tunisia). An online questionnaire based on the “FAO laboratory mapping tool” was submitted to all the participants.

The result of the study was shared with the participants and discussed during the REPIVET-RELABSA workshop in Marrakech. A workplan to address the priorities identified was developed and financial support was partially funded by France.

Within the collaboration with ANSES, the national laboratory capacity of francophone countries of REMESA has been addressed through a virtual laboratory training course taking place over January and February 2021. Ten sessions are being delivered for 16 participants from Algeria, Mauritania, Morocco and Tunisia. The objective is to address some of the training needs identified in the relevant survey. The virtual training sessions include two modules on emergency laboratory diagnostics and post vaccination monitoring. The developed training scheme will be made available later to other European Neighbourhood regions.

### 2.3.3 Implementation of studies on vaccine efficacy and vaccination effectiveness and sharing of results South East European Neighbourhood (SEEN)

#### ➤ Immunogenicity studies

FMD small scale immunogenicity studies in large and small ruminants with local vaccines used, have been conducted in Georgia, Azerbaijan and Armenia in 2018/19. All sera have been tested in the national laboratories. Sera from in Armenia and Georgia were sent to IZSLER Brescia. Testing has been conducted on samples received from Georgia and advice was provided upon request of the country, on how to interpret the results and improve tender specifications for vaccine purchase. Due to the COVID-19 situation and the difficulties created in the delivery and testing of the samples at the IZSLER, sera have not been shipped from Azerbaijan and results are therefore pending.

#### ➤ Group for vaccination advice, guidance and consultation for SEEN countries (GVA)

The establishment of a SEEN group for vaccination advice, guidance and consultation (**GVA**), aimed at building capacities in the region and exchange of expertise in vaccinology, was proposed during the Workshop on improved surveillance for FAST diseases in April, and the TORs were communicated. It was agreed that the SEEN GVA will benefit from first working experiences in the NA and ME sub-regions. Nominations for the GVA were sent out in December 2020, and are currently being followed up with the organization of the first meeting, learning from the experiences of the groups being established already in North Africa and the Middle East.

#### Middle East

#### ➤ Immunogenicity studies

Jordan: Following the post vaccination workshops and v-learning that EuFMD has delivered in the region (online course, sub-regional meeting and in-country workshop), a small PVM trial was carried out on a governmental sheep farm with the aim to quantify antibody titres under field conditions. A request was made to EuFMD for support in the form of serological kits. There are ongoing discussions on sharing these sera with an international reference laboratory for virus neutralization tests (VNT).

#### ➤ Regional group for FAST vaccination advice, guidance and consultation

The first meeting for the regional group for FAST vaccination advice, guidance and consultation was held virtually in November 2020, attended by five delegates nominated by the CVOs of Egypt, Jordan, Lebanon, Palestine and Sudan. Also present were representatives from the regional office of the OIE/FAO, EuFMD, the World Reference Laboratory for Foot-and-Mouth Disease (The Pirbright Institute); and the French Agency for Food, Environmental and Occupational Health & Safety (ANSES). The objectives of the meeting were to introduce the Group for Vaccination Advice, Guidance and Consultation (GVA) for FAST diseases; establish the core group for the GVA in the Middle East; review the vaccination strategies and vaccines used in the Middle East region; share information on the available results of recent sero-surveillance, immunogenicity, and other post-vaccination monitoring studies.

The meeting started with an introduction to the GVA (objectives, TORs, expected outcomes) and the main aim of this group in assisting countries of a region in the design and implementation of post-vaccination monitoring (PVM) activities and act as a platform to exchange experience and expertise on vaccination for FAST diseases. The core group composition and core group member profile were outlined.

A session was dedicated to the current FAST disease epidemiological situation and PVM activities in the Middle East. A presentation on selecting FMD vaccines in the Middle East was delivered by Dr King (head of the World Reference Laboratory for FMD [WRLFMD]) and presentations from country representatives on the epidemiological situation of FAST diseases and PVM activities followed. An action plan for the group was proposed by EuFMD for discussion.

The following important points were noted during the meeting:

- The region is under persistent threats of FAST diseases, and the surveillance of these diseases is significantly impacted by the global situation due to the COVID-19 which, for instance, has affected the regular submission of the field samples from FMD outbreaks to the WRLFMD.
- Vaccination is one of the most important tools to combat FAST diseases. However, most of the countries in the region do not monitor adequately the effectiveness of FAST vaccination, neither at the population level nor through small scale studies;
- Countries' expectations from establishing this group are similar and based on mutual needs and requirements of this region
- The establishment of the core group may need to be reconsidered based on the candidate profile indicated in the terms of reference to ensure the group is independent and avoids any conflict of interest that may occur.

The following recommendations were made:

- Risk and other information relevant to vaccines and vaccination strategies should be regularly shared among countries in the region to assist risk management and mitigation.
- Promoting the regular collaboration between countries in the region and the international reference laboratories will assist in better understanding the risks and providing evidence to support the appropriate vaccines that should be used.

Following the meeting, the roles of core group members, focal points, and observers were better defined and a second round of nominations was conducted to ensure the involvement of the appropriate candidates according to their respective roles. The core group of the GVA in the Middle East should be established by February 2021.

#### **North Africa**

- Regional group for FAST vaccination advice, guidance and consultation

The first meeting of the GVA core group for North Africa was held in November 2020 under the REPIVET and RELABSA networks activity. Libya was invited as an observer. A GVA action plan was suggested by EuFMD for the next six months. For the upcoming meeting, EuFMD expects the sharing of available FMD and PPR PVM results for studies recently implemented in Algeria and Morocco.

#### **2.3.4 Development and delivery of training course schemes to assist FAST control and Early Warning System**

##### **South East European Neighbourhood (SEEN)**

Participants from SEEN countries joined the following courses:

- FMD Laboratory Investigation Training Course in English for Pillar II and III countries, November-December;
  - In-depth course on LSD Preparedness in Russian, October-November;
- Training modules on Post-vaccination Monitoring for I.R of Iran and Iraq are planned for March 2021.

##### **Middle East**

- Sudan

A virtual workshop on development of RBSP in Sudan was held in December 2020. The main focus was on improving surveillance and early detection of FAST diseases. The objectives of the workshop were to improve skills for designing integrated surveillance for FAST diseases for early detection in high-risk areas and define risk-based strategies according to surveillance objectives for priority diseases. The workshop was over two days with

participation of 22 FMD task force members from the veterinary services and national laboratory. The following five topics were covered : introduction to animal disease surveillance, measuring diseases in populations, diagnostic tests, survey design and overview of risk-based surveillance. Each topic was supported by interactive exercises. As a follow-up to this workshop, it was agreed to organize a specific meeting with the epi unit members and surveillance team to write and present a draft integrated surveillance system for FAST diseases in Sudan.

### **2.3.5 Delivery of learning courses to audience of vets and para-professionals to promote awareness of FAST diseases and national cascade of training and resources**

#### ➤ REMESA projects

Two projects are being developed through funds from the government of France for francophone countries in North Africa to contribute to the capacity development. The first project is focused on improvement of lab capacity in coordination with ANSES (see 2.3.2). The second was to develop capacity for regional training through collaboration with a regional based institution in order to improve critical competencies identified for FAST surveillance and control. A concept notes for these projects was shared at the last Executive Committee and subsequently with the REMESA JP meeting in December 2020. EuFMD is currently identifying partner institutions in the region to be involved in the activity including those from Algeria, Morocco and Tunisia.

#### ➤ Rift Valley Fever

An open-access course on RVF is being developed by EuFMD in collaboration with EMPRES-AH. The aim of this new course is to raise awareness of the current RVF situation through the provision of a virtual training course which should assist individuals in the efficient recognition of RVF, including preventive control measures and actions to be taken on infected farms to minimize the risk of onwards transmission and disease in humans. The course will target field veterinarians and veterinary paraprofessionals (public and private) working in countries that are either endemic or at high risk of RVF.

The objectives of the course are to : (i) raise awareness about RVF at the field level among official veterinarians, private and paraveterinarians, and other animal health workers who are providing services to farms and farmers at potential risk of infection; (ii) support efficient recognition and early detection of RVF in the field; (iii) strengthen reporting systems; (iv) provide a source of information and job aids on RVF topics and support the activities of field staff and (v) provide key information to help contain outbreaks and prevent infection of animal health workers.

This short self-directed virtual-learning course will delivered via the EuFMD online platform in the form of freely accessible modules that will be accessible via mobile phones, and suitable to be downloaded for offline viewing.

The modules should cover specific topics related to RVF (approximately 10 minutes per module) with links for additional materials including “job-aids” to be delivered as brochures with infographics on clinical signs, sampling, outbreak investigation, risk-based surveillance, and biosecurity including aspects of public health to support field staff activities.

## Sub-activities and their indicators:

Sub-activity level	Description	Progress in the current period	Progress overall towards biennium indicator	
2.3.1 Develop and implement a program of capacity building that supports national improved PCP progress and early warning surveillance	1. Training infrastructure and quality assurance system across the training programme	Maintenance and improvement of the training infrastructure, including online platform. Development of Training Quality Management System (TQMN) to ensure high quality across the training programme (this sub-activity is coordinated with Pillar I/ III)	Implementation of a Training Quality Management System has been developed and is currently being implemented for all courses organized.	A Training Quality Management System has been developed and is currently being implemented for all courses organized.
	2. Improved of national laboratories capacity for FAST diagnosis.	Definition of training programme according to the outcomes of Laboratory Mapping Tool exercise and PTSs results. Support and facilitate the implementation of PTSs in the neighbouring regions.	Assessment of National Reference Laboratory capacities for FMD and other TADs across the REMESA region and SEEN countries. A virtual training workshop for improved FAST laboratory Diagnostic capacity was delivered in collaboration with ANSES through 10 virtual sessions (12 January – 04 February 2021) for 16 participants from North Africa countries (Algeria, Mauritania, Morocco and Tunisia)	Baseline of laboratory capacities and capabilities has been established in North Africa and Middle East. A Laboratory virtual training was delivered to north Africa countries with the aim of organizing one for Middle East and SEEN regions.
	3. Implementation of studies on vaccine efficacy and vaccination effectiveness and sharing of results	Assistance further implementation of PVM studies in North Africa, Transcaucasus and new studies in Iran, Iraq and Middle East countries. Build and assist vaccination advisory groups within epi-lab networks in different FMD roadmaps.	<p>EuFMD provided technical assistance in designing PVM trail in Jordan and kits and training will be provided.</p> <p>The first GVA core group activities meeting was held I in November for North Africa. T</p> <p>The first meeting of GVA in the ME was held in November 2020, roles of the core group member, focal point and observer identified and the 2<sup>nd</sup> round of nominations conducted.</p>	<p>Results of field trial in TCC and NA were made available and shared. Georgia and Azerbaijan took actions with regards to the results of the study for the procurement of new vaccines.</p> <p>New studies are designed and implemented (e.g. Jordan)</p> <p>The regional group for vaccination advise, guidance and consultation will facilitate, upon request, the design, the implementation and/or the interpretation of PVM studies and results.</p>

<p>4. Development and delivery of training course schemes to assist FAST control and Early Warning System.</p>	<p>Organization of e-learning, workshops and in-country meetings on topics which have been identified as a priority to assist progressive control of FAST diseases, surveillance and early warning system. This may include, but is not limited to topics such as PPP, socio economic analysis, serosurveillance design, early detection and exercises to assess FAST emergency preparedness. Delivery of training material and courses in local languages and assist implementation of cascade training and related field studies and activities. Develop track training system to map training for vets.</p>	<p>Specific training on risk mapping and animal mobility is launched in collaboration with CIRAD (28 sept – 12 oct 2020) for 6 counties from North and West Africa.</p> <p>For North Africa, two projects are being developed with France funding support for francophone countries with aim to contribute to the capacity development. the first project (see 2.3.2) is focused on improvement of lab capacity (in coordination with ANSES) and the second on development of capacity for cascade training and enhancement of countries' capacity to manage FAST diseases by enabling Veterinary Services to deliver high quality training in order to improve critical competencies identified for FAST surveillance and control..</p>	<p>E-learning and virtual workshop on risk mapping and surveillance can be progressively expanded in training schemes. A training on entomological surveillance and RVF has been developed and delivered in Libya</p>
<p>5. Delivery of learning courses to audience of vets and para-professionals to promote awareness of FAST diseases and national cascade of training and resources.</p>	<p>Development and delivery of online courses and resources for wide dissemination of training which aim to raise awareness of FAST diseases, their clinical signs, diagnosis, reporting mechanism and control. This will include adaptation of existing EuFMD online courses together with the creation of new courses and resources. Courses will be made available in local languages, and support provided to enable the cascade of these courses and resources at national level.</p>	<p>Different v-learning courses have been delivered to neighbouring countries: Risk Assessment along the value chain, Public-private partnership, FMD Investigation training course in different languages, LSD investigation training course, socioeconomic FAST impact assessment.</p> <p>Design of an open-access course on RVF aimed at field-based animal health workers and designed specifically for mobile phones.</p>	<p>RAVC delivered to 191 participants from 45 countries(14 are neighbouring countries) FITC Russian delivered to 190 participants from 14 countries (5 are neighboring countries) PPP delivered to 227 participants From 35 countries (14 are neighbouring countries) LSD course delivered to 343 participants from 61 countries (12 are neighbouring countries) Socio economic FAST impact assessment in-depth course delivered from November 2020 to January 2021 for 221 participants from 58 Countries (12 are neighbouring countries).</p>

## 7. Issues for the Executive Committee attention

The endorsement of the group for vaccination advice, guidance and consultation (GVA) by the CVOs is considered strategic in assisting countries in designing, implementing analyzing results of post vaccination monitoring activities and for exchanging experience and expertise on vaccination for FAST diseases. GVAs are being established although getting appropriate nominations from CVOs has been challenging.

Based on the results assessment of national reference laboratory capacities across the REMESA region on FMD and other TADs (which will be reproduced in SEEN), specific technical assistance of the international references laboratories is necessary to improve the capacity of the national laboratories for FAST diagnosis. Systems should be defined to guarantee such assistance and measure the improvements (e.g. Proficiency test schemes, laboratory mapping tool adapted to FMD and other TADs).

The importance of building expertise on entomology in the North Africa and Middle East in order to assess the presence and abundance of competent vectors for LSD, RVF and BEF, should be addressed through specific training modality and expertise support. A course format should be developed and delivered to the region. A dedicated online course was organized by EuFMD in coordination with IZSAM to Libya in July 2020. According to the current context of RVF in Libya, similar course should be delivered to other countries of North Africa and Middle East.

## 8. Priorities for the next six months

Development of training material for veterinarians, paravets and farmers to assist the recognition and reporting of FAST diseases.

Definition and implementation of the workplans for the GVA for regions.

Learning from and expanding the virtual laboratory training to other sub-regions according to need.

Identify and offer topics of importance and interest for webinars of the FMD Practical Management Series in Russian.

Plan to implement immunogenicity studies as part of PVM in other countries of Pillar II with the use of TCC expertise, with a special focus on I.R. of Iran.

## 9. Success stories and outputs

The first meeting of the GVA was organized in the Middle East and North Africa regions (the latter under the REPIVET and RELABSA activities) and a 6 six-month work plan was proposed.

Early results indicate a successful virtual laboratory training performed by ANSES and supported by EuFMD.

The training on PVM carried out in the recent period and the associated technical assistance have facilitated the implementation of different immunogenicity studies in countries of the EU neighbourhood (Morocco, Algeria, Tunisia, Jordan, Georgia, Armenia and Azerbaijan), adoption of appropriate FMD vaccination strategy in Algeria and Morocco (based on six monthly large ruminants mass vaccination, and also in Morocco risk-based FMD annual vaccination of small ruminants) and the results have driven some cases changes in the specification of the vaccine tenders (Georgia and Azerbaijan).

An integrated focus on the reduction of regional risks of FAST diseases, including risk-based surveillance, risk mapping, socio-economic impact assessments and the promotion of PPP, through schemes of EuFMD trainings, workshops and direct country support, is perceived effective and powerful by the participating countries.

## 10. Budget (€) COMP. 2.3

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
<b>Component 2.3</b>	10.498	9.752	746
<u>Consultancy Operational</u>			
<b>Component 2.3</b>	67.672	69.827	-2.155
<u>Consultancy Technical</u>			
<b>Component 2.3</b>	155.000	166.402	-11.402
<u>Travel</u>			
<b>Component 2.3</b>	55.000	11.881	43.119
<u>Training</u>			
<b>Component 2.3</b>	50.000	26.108	23.892
<u>Contracts</u>			
<b>Component 2.3</b>	65.000	37.972	27.028
<u>Procurement</u>			
<b>Component 2.3</b>	25.000	391	24.609
<u>General Operating Expenses</u>			
<b>Component 2.3</b>	12.000	3.063	8.937
<b>Total Direct Eligible Cost</b>	<b>440.170</b>	<b>325.398</b>	<b>114.772</b>

# Pillar III (Output II)

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## **Pillar Objective**

**Sustained Global Strategy, Cascading capacity building for FAST control,  
Laboratory networking for surveillance**

## **Pillar Co-ordinator**

**Paolo Motta**

# Component 3.1 (Activity 3.1)

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## Global Strategy Implementation

### Component Objective

Sustained and effective implementation of the FMD Global Strategy achieved through improved technical guidance to countries and assistance to GF-TADs Regional Roadmaps meetings.

### Component Manager

Etienne Chevanne

### Sub-activity level manager

**3.1.1** Etienne Chevanne, Erica Tomat

**3.1.2** Etienne Chevanne, Paolo Motta

**3.1.3** Etienne Chevanne, Melissa McLaws

## 1. Background

The overall aim of this component for Phase V is to sustain further the effective implementation of the GF-TADs FMD Global Strategy and to promote and assist the progress of the Global Strategy.

The activities carried out under Component 3.1 offer a range of direct **initiatives supporting the FAO/OIE Working Group** on FMD control for regionally-coordinated and targeted national assistance to countries for the effective implementation of the Progressive Control Pathway (**PCP-FMD**). The achievement of the GF-TADs Working Group action plan at global and regional levels will also be supported also taking into account the requests from the Working Group. Cooperation will also be co-ordinated with the FAO/OIE PPR Global Eradication Programme (GEP) Secretariat.

Tailored **PCP application tools** and guidance documents will be developed to improve quality and timing of the review of national control plans and the effectiveness of the assistance to countries of the GF-TADs Working Group.

Support will be provided to the **GF-TADs Regional Roadmaps** meetings for FMD control, and to improve the assessment and evaluation mechanism of countries. Support to **Regional Networks** and co-ordination with Regional institutional bodies will be established to improve capacities for strategy development, PCP progress at national levels, and for the implementation of risk-based approaches for FAST diseases surveillance and control.

**Technical guidance to PCP-FMD implementation** by countries will be improved through the management and development of the **PCP-Support Officer (PSO) system** and by the further roll-out of its' implementation. This will include PSO training and capacity development, and support to PSOs to improve guidance to countries, including informatics and web applications. Appropriate guidance documents will be improved to better assist the development and implementation of strategies at national level.

The visibility and impact of these activities will be promoted through support to improved communication and improved online presence (GF-TADs website on FMD Global Strategy).

### 1. Team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Component supervisor</b>	Paolo Motta	Pillar III co-ordinator
<b>Component manager</b>	Etienne Chevanne	FMD Risk Management Specialist
<b>Training and networking</b>	Nadia Rumich	Training and Networking
<b>GF-TADs-FMD WG</b>	The members of the GF-TADs-FMD WG are key partners in the activities of this component.	n/a
<b>ExCom oversight</b>	TBD	Executive Committee

### 3. Countries or partner organizations involved

This component involves collection of data at global level from countries working through the PCP-FMD and benefitting from support through roadmap meetings, and which are indicated as priorities for PCP-FMD progress in the GF-TADs Global Strategy. Currently, these are about 80 countries in continental countries of Asia, the Middle-East and Africa (with the exception of North African countries which are members of REMESA and Southern African countries with FMD free zones).

Activities under this component are carried out in order to assist the activities of the GF-TADs FMD Working Group and co-operation is foreseen with the World Organisation for Animal Health (OIE), and with FAO/OIE PPR GEP Secretariat.

## 4. Reporting

Reporting format	Responsibility	Output	Distribution	Sent out by
<b>Six monthly report to ExCom</b>	Component manager	Written report and presentation	ExCom, STC	Network and Training Support Officer
<b>Every two years report to MN</b>	Component manager in co-ordination with FAO colleagues GF-TADs FMD Working Group	Written report and presentation	General Session	
<b>Workshop reports</b>	Lead facilitator	Written report	ExCom, oversight members	

## 5. Objective of the component

**Sustained and effective implementation of the FMD Global Strategy achieved through improved technical guidance to countries and assistance to GF-TADs Regional Roadmaps meetings.**

This will involve continued support to the GF-TADs FMD Working Group (WG) and assistance to the achievement of the action plan at global and regional levels, in consistency with the requests from the WG for support from EuFMD.

Component (Activity)	Objective	Narrative	Expected result	Monitoring	Evaluation	Assumptions and risks
<b>3.1 Global Strategy Implementation</b>	Sustained and effective implementation of the FMD Global Strategy achieved through improved technical guidance to countries and assistance to GF- TADS Regional Roadmaps meetings.	Significant improvement in quality, rate of approval and national implementation of FMD Control plans is supported by the enhancement of the PCP-support officer (PSO) system, support of regional technical networks, assistance to GF-TADs Regional Roadmaps meetings and engagement with Regional institutional bodies	Increase to 25 in certified PCP support officers by the end of Phase V; Increase to 15 the submission by countries and processing by GF-TADs WG of strategic plans (risk assessment, risk-based surveillance and/or control plans) every two years.	GF-TADs Steering Report; Regular collection of info through procedure established through the PSO system.	Two external evaluations to be carried out by month 18 and 38 of phase V	Assumes collaboration and request for EuFMD support from target countries Risk that institutional procedures (FAO/OIE) change the scope or do not accept EuFMD expertise and inputs.

## 6. Planned Component Sub-Activities

The expected result of the component will be achieved through **sub-activities**:

### 3.1.1 Improved technical guidance and support to PCP-FMD implementation by countries, through the management and development of the PCP-support officer (PSO) system:

#### PCP Support Officer (PSO) Network co-ordination and development for improving guidance to countries:

To date, more than 80 countries are engaged in the PCP-FMD and since 2019, the GF-TADs WG has officially assigned a PCP-FMD Support Officer (PSO) to 30 of these countries (recently, Azerbaijan, Palestine and Zambia were assigned a PSO). Particular PSO support was given to the Veterinary Services of Burkina Faso (in provisional PCP-FMD Stage 1) in developing a Risk Assessment Plan that has been technically reviewed by the GF-TADs FMD WG and has been submitted in January 2021 to the RAG West Africa (final step before acceptance of [Burkina Faso](#) in full PCP-FMD Stage 1). In addition, PSO assistance, through bimonthly online meetings, is provided to the Veterinary Services of the [Democratic Republic of Congo](#), in setting-up a multidisciplinary FMD expert team and drafting a RAP. There is also active PSO support for [Sudan](#), [Iran](#) and [Cameroon](#).

During the current semester, the EuFMD and the other partners of the GF-TADs FMD WG have discussed the expansion of the PSO network through the involvement of experts from the OIE/FAO Reference Centers. Following the recent SADC Roadmap meeting recommendations (2-5 Nov 2020), the PSOs expansion will be piloted in SADC region where three experts from the FAO/OIE Reference Centers have been identified in January 2021, and engaged in the PSO Training Development Framework (see below). In addition, three ECTAD officers from West and Central Africa will be involved in the PSO Training development framework, to be later assigned to Liberia, Nigeria and Niger.

**The PSO Network** has been updated regularly on the relevant EuFMD and GF-TADs FMD WG activities through PSO online meetings in December 2020 and February 2021 (respectively the 11<sup>th</sup> and the 12<sup>th</sup> online meeting - Minutes of the meetings are shared with the GF-TADs FMD WG within two weeks of the meeting), during which PSOs were invited to share successes and challenges in collaborating with assigned countries. A specific online meeting with PSOs in West and Central Africa was held in February 2021, to review the work done since mid-2019, and share lessons learnt to further improve the PSO system (Terms of reference and Training Development Framework).

The PSO repository has been updated with the most recent documents during the reporting period. **New templates of the RAP, RBSP and OCP** have been developed in French, English, Russian and Portuguese (only RAP). These templates have been made available on the [EuFMD](#) and [GF-TADs](#) websites.

A concept note for the **PSO Training Development Framework** has been submitted to the GF-TADs FMD WG, describing a three-step progression process for PSO including training and mentoring activities. The practical implementation of this framework is being developed in collaboration and coordination with Component 3.3 and the EuFMD Chief Learning Officer. Within this framework, a series of short open-access virtual learning courses on the PCP-FMD have been developed with the technical involvement of experienced PSOs. The **'Introduction to the RBSP'** course has been launched on the EuFMD virtual learning platform during the reporting period, and the 'Introduction to the RAP' and 'Introduction to the OCP' courses are under development. In addition, the open-access course 'What is the PCP-FMD?' has been reviewed, to be consistent with the newly developed PCP-FMD related templates, processes, guidance and courses.

#### Collaborate with FAO and OIE to support expert team missions in assisting countries

Due to the SARS-CoV-2 crisis and travel restrictions during this reporting period, field missions have not been conducted.

### 3.1.2 GF-TADs Regional Roadmaps meetings for FMD control supported and regional technical networks of experts on disciplines related to PCP-FMD progress strengthened through Regional institutional bodies engagement:

*Ensure roll-out and follow-up of GF-TADs Regional Roadmaps meetings (RM) for FMD control;*

Adapting to the situation due to the SARS-CoV-2 pandemic, the organization and delivery of the **3<sup>rd</sup> FMD Roadmap meeting (RMM) for SADC members** was held in a virtual format between 2-5 November 2020, with the assistance of the Virtual Learning Center in Southern Africa.- VLC SADC (see Section 3.3.4). The 3<sup>rd</sup> FMD RMM for SADC was a success, 14 countries out of the 16 SADC countries participated (average daily attendance of 44 participants), ten countries were assessed in PCP-FMD Stages and the Regional Advisory Group (RAG) in SADC was renewed for a three-year term. Of relevance, Angola participated in the meeting and engaged in the FMD PCP for the first time, being assessed in Provisional Stage 1. The RMM final report was made available online in English and French.

During the reporting period, the EuFMD provided operational and technical assistance to the GF-TADs FMD WG for the design and organization of three **online meetings with the Regional Advisory Groups (RAGs) of East Africa, SADC region and West Eurasia**. The GF-TADs FMD WG provided updates on recent development of the PCP-FMD Toolkit and procedures and received updates from the RAGs regarding regional FMD control strategy and the acceptance of plans that received a favorable feedback from the GF-TADs FMD WG (cf. PCP-FMD review support system). Online meetings with the RAG Middle East, SAARC, West Africa and Central Africa are being planned for the next semester.

*Support Regional Networks and coordinate with Regional institutional bodies to improve capacities for national strategy development and PCP progress, and for implementation of risk based approaches for FAST diseases surveillance and control*

Following the completion of the training on Risk Analysis to support Safe trade and FMD control in East Africa with the **Intergovernmental Authority on Development (IGAD)** Center for Pastoral Areas & Livestock Development, support was given to Uganda in the integration of the results of this study in their current review of the RBSP, and in the preparation and submission of a manuscript for publication 'Risk of foot-and-mouth disease spread through cattle movements in Uganda' in the OIE Scientific Review.

Support to regional networks has also been provided and coordinated via the strengthening of the Virtual Learning Centre (VLC) in Southern Africa and the establishment of a VLC in Asia and the Pacific (see Comp. 3.3).

### 3.1.3 Development of tailored PCP-FMD application tools to (i) improve the functional efficiency of the Secretariat GF-TADS WG, and (ii) increase visibility and impact through support to improved communication and online presence (GF-TADs website on FMD Global Strategy)

*Support the GF-TADs FMD Working Group in improving the timing and efficiency of review of national control plans;*

**The PCP-FMD Self-Assessment tool (SAT)** has been used during the virtual RMM in SADC, and in an expert knowledge exercise involving experienced PSOs and led by IZSLT, to review the tool, weight the 93 statements and assess the level of 'hazard reduction' based on the country scoring in the SAT, as per the request from the Standing Technical Committee. The final report of this activity highlighted the need for a revision of the SAT statements, and this activity will be carried out at the end of the current reporting period. The SAT has also been translated in French and Russian, and a dedicated [webpage](#) has been developed to make the tool available online. Scripts for two videos tutorials on the SAT (in English and French) were developed internally and will soon be recorded.

**A PCP-FMD Review Support System**, supported by the EuFMD, has been further mobilized during the reporting period. Weekly and biweekly meetings with the GF-TADs FMD WG have been organized to further support the reviewing process of the Tanzanian Risk-Based Strategic Plan and the Burkina Faso Risk Assessment Plan, and the alignment between OIE and PCP-FMD evaluation processes. Following a recent renewal of the GF-TADs FMD WG composition (new FAO co-chair appointed, and current vacant place at the OIE left by Djahne Montabord) the EuFMD has proposed the establishment of a dedicated Support Unit to the GF-TADs FMD WG. At the time of reporting this proposal has been submitted to the GF-TADs Management Committee for acceptance, to enable the provision of dedicated assistance to the GF-TADs FMD WG in the day-to-day operations, and organization of activities for the period 2021-2022.

*Support the improvement of communication and online presence to enhance visibility and impact*

The Communication officer of the GF-TADs Global Secretariat in FAO and of the EuFMD staff have worked together during the reporting period to ensure the timely publication of the PCP-FMD related documents and meetings reports and improve consistency in the communication strategies.

**Other activities (in support of and in coordination with Component 3.2):**

Support to Burkina Faso (and the National Lab in Ouagadougou) to take part in the 2020 FMD Proficiency testing scheme of the WRLFMD.

Lateral Flow Devices (LFDs) for FMD diagnosis were further distributed in West and Central Africa during the reported period (please see Section 3.2.2 for details). Results from the Burkina Faso samples revealed circulation of serotype SAT2 topotype VII lineage lib-12 in samples collected between February and July 2020.

Assistance was provided to Niger and Burkina Faso national laboratories to acquire ELISA-Ag kits from IZSLER, to strengthen FMD surveillance capacities in the region (please see Section 3.2.2 for details).

## Sub-activities and their indicators

	Sub-activity level	Description	Progress in the current period	Biennium indicator
3.1.1. Improved technical guidance and support to implementation of PCP-FMD	3.1.1.1. PSO Network co-ordination and development for improving guidance to countries	Ensure support to countries in provisional and full stages of the PCP-FMD, by improving the guidance for progressive control programmes	The PSO Training Development Framework has been submitted to the GF-TADs FMD WG in collaboration with Comp. 3.3. and will be piloted in the upcoming semester in the SADC and West and Central Africa regions. 2 National strategic plans have been reviewed by the GF-TADs FMD WG. The RAP, RBSP and OCP templates were published online, in French, English, Russian and Portuguese. An RBSP open access virtual learning course was delivered on the EuFMD virtual learning platform. RAP and OCP open access courses delivery is underway.	a) Training and mentorship scheme for PSOs fully implemented by Sept 2020, and at least 15 new PSOs certified by Sept 2021 b) Increase to 10 the submission by countries and processing by GF-TADs WG of strategic plans (risk assessment, risk-based surveillance and/or control plans) by Sept 2021.
	3.1.1.2. Collaborate with FAO and OIE to support expert team missions in assisting countries according to WG requests	Provide technical assistance and support EuFMD experts to respond to emerging FMD, and FAST diseases situations, for progressive control at regional or national levels.	Due to the SARS-CoV-2 crisis and travel restrictions during this reporting period, field missions have not been conducted.	a) At least three EuFMD experts participate in team missions by Sept 2021.
3.1.2. Regional networks and bodies	3.1.2.1. Ensure roll-out and follow-up of GF- TADs Regional Roadmaps meetings for FMD control.	Organization and facilitation of regional Roadmap Meetings (MENA, West Eurasian, Eastern Africa, Central Africa, West Africa, SADC, SAARC) incl. the support in technical assessment and follow-up actions; Co-ordination with the Working Group including regular on-line and/or face-to-face meetings.	EuFMD has provided operational and technical support for the organization, delivery and follow-up of the 3 <sup>rd</sup> FMD SADC RMM, and to 3 online meetings with RAGs.	a) Support the organization in co-ordination with the FMD WG of at least two Roadmap Meetings by Sept 2021.
	3.1.2.2. Support Regional networks and coordinate with Regional institutional bodies to improve capacities for national strategy development, PCP- FMD progress, and implementation of RB approaches for FAST diseases surveillance and control	Strengthen technical capacities and the network of PSOs to provide tailored national support to countries on epi and lab issues relevant for PCP-FMD progress in target regions. Achieved through: (i) support of the relevant Regional Epi and Lab Networks and (ii) engagement and collaboration with Regional institutional bodies (AU-IBAR, IGAD, SADEC, SARC, SACIDS). The	Support to regional networks via the establishment of the Virtual Training Centres (VLCs) (see Comp. 3.3).  Consultation and definition of procedures to support and coordinate actions for building PCP-FMD capacities conducted with Regional partners Western and Central Africa.	a) Support and co-ordination mechanism developed and established in at least 2 Roadmap regions by Sept 2021. Collaboration agreement achieved and implemented with regional bodies in at least 1 Roadmap region and by Sept 2021

3.1.2. Support GF-TADS Regional Roadmaps, regic		activities of the PSO mentoring and training network to be linked to the training development and delivery under component 3.3.		
	3.1.2.2. Support Regional networks and coordinate with Regional institutional bodies to improve capacities for national strategy development, PCP- FMD progress, and implementation of RB approaches for FAST diseases surveillance and control	Strengthen technical capacities and the network of PSOs to provide tailored national support to countries on epi and lab issues relevant for PCP-FMD progress in target regions. Achieved through: (i) support of the relevant Regional Epi and Lab Networks and (ii) engagement and collaboration with Regional institutional bodies (AU-IBAR, IGAD, SADEC, SARC, SACIDS). The activities of the PSO mentoring and training network to be linked to the training development and delivery under component 3.3.	Support to regional networks via the establishment of the Virtual Training Centres (VLCs) (see Comp. 3.3).  Consultation and definition of procedures to support and coordinate actions for building PCP-FMD capacities conducted with Regional partners Western and Central Africa.	b)
3.1.3. Application tools to	3.1.3.1. Support the GF-TADS Working Group in improving the timing and efficiency of review of national control plans	Provision and improvement of tools and guidance documents to (i) facilitate and assist country ability to develop nat. strategic plans for PCP progression and (ii) assist the GF-TADS WG documents assessment and review mechanism	A PCP-FMD Review Support Team was further mobilized, weekly and biweekly meetings of the GF-TADS FMD WG conducted and 2 National Strategies reviewed.  EuFMD has proposed the establishment of a dedicated Support Unit to the GF-TADS FMD WG and was accepted by the GF-TADS Management Committee to further assist the GF-TADS FMD WG.	a) Improved and uniformed guidance documents and tool to assist the development and review process of national strategic plans by Sept 2020 b) Time between submission of strategic plan by a country and final acceptance not to exceed 6 months by Sept 2021
	3.1.3.2. Support the improvement of communication and online presence to enhance visibility and impact.	Dev of an interactive online dashboard for the integration and communication of relevant information on the PCP-FMD stage, progress activities and objectives, and to display the planning of related events.	Regular coordination and consultation was held with WRLFMD for the development of an online dashboard (component 1.7) and technical engagement established with potential service providers.	a) Interactive online dashboard developed by Sept 2021 b) Websites updated on monthly basis

## 7. Issues for the Executive Committee attention

The SARS-CoV-2 global crisis has further impacted some of the activities under Component 3.1 during the reporting period. Nevertheless, new virtual solutions have been developed and adapted to address the needs of the EuFMD work programme and have also been proposed and agreed in support to the GF-TADs FMD WG.

## 8. Priorities for the next six months

### 3.1.1.

- Pilot the PSO Training Development Framework and progress with the coordination with the GF-TADs FMD WG for the expansion of the PSO network through the involvement of experts from the OIE/FAO reference centers (pilot in SADC and West and Central Africa);
- Keep refining a repository (PCP-FMD Toolkit), in coordination with Comp. 3.3, of relevant training and guiding resources to assist countries in the development of strategic plans;
- Strengthen Collaborate with partners in West and Central Africa (coordination with Components 3.2 and 3.3) to improve the uptake of the PCP-FMD.

### 3.1.2.

- Support the Comp. 3.3 activities for the Virtual Learning Centers in Southern Africa and Asia and the Pacific and the development of collaboration with regional partners in East Africa (FAO/ECTAD and IGAD) for the establishment of a PCP-FMD support hub aligned with the VLC approach;
- Support the organization of one (virtual) RMM and RAG meetings as per the GF-TADs FMD WG workplan for 2021.

### 3.1.3.

- Integrate the support provided by the EuFMD to the GF-TADs FMD WG within the framework of a newly established Support Unit.

## 9. Success stories and outputs

New virtual solutions and formats have been developed and adapted to address the needs of the EuFMD work programme and have also been proposed and agreed in support to the GF-TADs FMD WG. These include the organization and delivery of a virtual FMD Roadmap Meeting for SADC region, and three virtual meetings with Regional Advisory Groups (RAGs) of East Africa, SADC and West Eurasia.

The PCP Review Support System has proven instrumental in supporting the GF-TADs FMD WG in the timely review of strategic plans submitted by countries. The EuFMD proposal for the establishment of a dedicated Support Unit to the GF-TADs FMD WG has been accepted by the GF-TADs Management Committee.

The RAP, RBSP and OCP templates in French, English, Russian and Portuguese (RAP only) have been made publicly available, as well as the SAT tool in English and French.

Improved collaboration with the ECTAD Team in West and Central Africa, and alignment with the DTRA-funded activities in region (PCP-FMD progress, laboratory and surveillance capacity building).

## 10. Budget (€) COMP. 3.1

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
<b>Component 3.1</b>	4.752	4.876	-124
<u>Consultancy Operational</u>			
<b>Component 3.1</b>	48.180	55.862	-7.682
<u>Consultancy Technical</u>			
<b>Component 3.1</b>	130.000	102.568	27.432
<u>Travel</u>			
<b>Component 3.1</b>	70.000	11.883	58.117
<u>Training</u>			
<b>Component 3.1</b>	46.000	6.305	39.695
<u>Contracts</u>			
<b>Component 3.1</b>	30.000	17.168	12.832
<u>Procurement</u>			
<b>Component 3.1</b>	-	-	-
<u>General Operating Expenses</u>			
<b>Component 3.1</b>	20.000	3.520	16.480
<b>Total Direct Eligible Cost</b>	<b>348.932</b>	<b>202.182</b>	<b>146.750</b>

# Component 3.2 (Activity 3.2)

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## Improved Global Laboratory Support

### Component Objective

Strengthened global laboratory surveillance support and improved FMD virus intelligence to guide regional and national implementation of the GF-TADs Strategy

### Component Manager

Kees van Maanen

### Sub-activity level manager

3.2.1 Kees van Maanen, Jenny Maud

3.2.2 Kees van Maanen, Paolo Motta, Erica Tomat

3.2.3 Kees van Maanen, Etienne Chevanne

## 1. Background

Under the EuFMD Phase IV workplan Component 3.3, support to the global FMD laboratory network was implemented as part of the joint FAO/OIE Global FMD Control Strategy to improve **regional laboratory networks** and ensure better **technical expertise development at regional levels**. The core of the international surveillance required was through a contract with The Pirbright Institute (TPI) to provide services globally, including diagnostic service, vaccine matching, molecular epidemiological analysis of worldwide and regional FMD patterns, and provision of laboratory proficiency test (PTS) ring trials to FMD laboratories in non-EU states and internationally.

The strategy for Phase V builds on this experience, adding further emphasis in increasing the level and quality of support to Regional Laboratories and the OIE/FAO Laboratory Network, including associated surveillance and training for all the Roadmap regions (mainly through online programmes). This Component will aim at improving FMD virus intelligence to guide GF-TADs and Regional and National Risk managers. It will also support progress towards the targets required for regional Roadmap vaccine priority and provide a global surveillance information base relevant to EuFMD member nations (MN) and to all countries which are not officially free of FMD.

The activities under this Component provide direct support to the co-ordination and activities of the annual workplan of the **OIE/FAO FMD Reference Laboratory Network** to ensure better technical expertise development and networking at regional levels. Global and regional epidemio-surveillance networks will also be supported through online and virtual **training in FMD laboratory surveillance** for all Roadmap regions.

The role of TPI in providing the core of the international surveillance required will be supported by a contract to provide the services described above, and to continue as Secretariat of the OIE/FAO FMD Lab Network. It will also continue to support a set of Regional Support Laboratories in pools 3, 4 and 5 to screen samples from their regions as part of the need to achieve Pool level surveillance targets. To improve the sample collection and typing and address surveillance gaps in regions identified by the OIE and FAO Reference Centres as priorities, support will be tailored for **diagnostic services**. This will include laboratory typing of FMD samples from the six virus Pools by OIE/FAO Reference Centres, aiming at the attainment of surveillance targets in each pool required for guidance to Regional Roadmaps and risk managers in each region, as well as for global threat forecasting.

To sustain a shift in emphasis towards **regional vaccine selection and performance**, a system for vaccine performance and matching needed by the Roadmaps will be supported. A specific focus will be placed on better uptake and accurate application of test systems by OIE/FAO Reference Centres and Regional Support Laboratories (RSLs) in Africa and Asia, including the associated work to validate tests and identify correlates of protection. Progress towards validation of new tests for vaccine matching and measures of protection will be supported during the first 24 months with the aim of transfer to RSLs and others in the second 24 months.

## 2. Team

Role	Name	Status
<b>Component supervisor</b>	Paolo Motta	Pillar III Co-ordinator
<b>Component manager</b>	Kees van Maanen	
<b>Training and networking</b>	Nadia Rumich	Training and Networking
<b>Partner organisations</b>	WRLFMD and the FAO/OIE FMD Reference Laboratory Network are key technical partners. The OIE a funding partner through funding of twinning programmes	
<b>ExCom oversight</b>	TBC	
<b>FAO</b>	TBC	
<b>OIE</b>	TBC	
<b>EU Commission</b>	TBC	

### 3. Countries or partner organizations involved

A close collaboration is foreseen with OIE/FAO Reference Centres and Regional Support Laboratories (**RSLs**) in Africa and Asia, and work will be implemented also in support of the global OIE/FAO FMD Reference Laboratory network. Activities in this component are in support of the implementation of the Global Strategy for FMD Control, particularly in West Africa, East and Southern Africa and South Asia during the first 24 months, and may be expanded in South-East Asia in months 25-48 after review of progress.

### 4. Reporting

Reporting format	Responsibility	Output	Distribution	
<b>Six monthly report to ExCom</b>	Head of WRL	Written report and presentation	ExCom, STC	<i>Sent out by Network and Training Support Officer</i>
<b>Yearly</b>	WRL	Annual network report from head of the WRL	ExCom, STC	
<b>Every two years report to MN</b>	Component manager	Written report and presentation	General Session	
<b>Report on workshop or e-learning course</b>	Component manager or lead facilitator	Written report		

### 5. Objective of the component

**Strengthened global laboratory surveillance support and improved FMD virus intelligence to guide region and national implementation of the GF-TADs Strategy.**

This will involve continued support to the OIE/FAO FMD Reference Laboratory Network to support progress of regional diagnostic services and vaccine selection and performance, consistent with the needs of the OIE/FAO FMD Reference Laboratory Network.

Component (Activity)	Objective	Narrative	Expected result	Monitoring	Evaluation	Assumptions and risks
<b>3.2 Improvement of global lab support</b>	Strengthened global laboratory surveillance support and improved FMD virus intelligence to guide regional and national implementation of the GF-TADs Strategy.	Attainment of surv. targets OIE/FAO FMD RLN and Regional Support Labs for each pool required for guidance to Regional Roadmaps will be supported through improved diagnostic services and system for vaccine performance and matching.	Enhanced level and quality of surveillance information FMD Reference Laboratory Network with an increase in the virus Pool achieving sampling targets for laboratory surveillance (from 1 to 4 out of 6).	Annual Reports the global OIE/FAO FMD Reference Laboratory network.  Regular collection of information through established and Global Monthly reports of the EuFMD.	Two external evaluations to be carried out by month 18 and 38 of phase V.	Relies on the functioning and commitment of global OIE/FAO FMD Reference Laboratory network, and the engagement of countries to attain surveillance targets in each pool.

## 6. Planned Component Sub-Activities

### 3.2.1 Strengthened co-ordination of the OIE/FAO FMD Reference Laboratory network

Due to the SARS-CoV-2 pandemic, the 15<sup>th</sup> **annual meeting of the OIE/FAO FMD Laboratory Network** was organized as virtual sessions on December 2<sup>nd</sup> and 3<sup>rd</sup> 2020. Many colleagues participated in the meeting and the final version of the meeting minutes were circulated end of January 2021.

WRLFMD and EuFMD have reviewed and improved the contents of a series of v-learning modules (FMD Diagnostics) for the delivery of FMD laboratory surveillance training course (FLITC) in all Roadmap regions. The third FLITC course was delivered in November 5<sup>th</sup> – December 3<sup>rd</sup> 2020 (see also Section 3.3.4). The course was followed by 167 participants (from 35 different countries) of which 130 studied > 50% of the modules. In total 106 participants completed the course and passed the final assessment and consequently received a certificate. The course was very well received as illustrated by the overall rating of the course of 4.7 on a scale of 5 in the post course survey.

### 3.2.2 International surveillance and guidance to Regional Roadmaps and risk managers enhanced in each pool

#### Support diagnostic services by OIE/FAO Reference Centres, including laboratory typing of FMD samples from the six virus Pools

A new format for a joint quarterly global report (accommodating input from EuFMD FAST) has been prepared and implemented in 2020 (<https://www.wrlfmd.org/ref-lab-reports> or <http://www.fao.org/eufmd/resources/reports/quarterlyreport/en/>). Sample panels for a new proficiency testing scheme (Phase XXXII) have been prepared and samples dispatched to the participating laboratories. As of February 2021, PT shipments have been sent to 24 laboratories supported in the WRLFMD LoA.

#### Improve the sample collection and typing from regions identified by the OIE/FAO Reference Centres as priorities

During the reporting period, the SARS-CoV-2 pandemic has had a negative impact on the submissions of samples to WRLFMD. During the shut-down phase, WRLFMD staff were deployed to hospitals to assist in routine COVID-19 RT-PCR testing, but work at Pirbright has been resumed now and WRLFMD has started to receive overseas samples for testing. Samples collected from Pakistan and Vietnam have been received and analysed, as described in the second quarterly report of 2020. Further samples from Nigeria, Uganda, Laos, Cambodia and Thailand were received to the WRLFMD during December 2020 – January 2021.

The temporal evolution of the virological surveillance in the different FMDV Pools since the establishment of the Global Strategy was reviewed during the previous and current reporting periods, using sample submission and virus characterization data from the FAO/OIE reference laboratories network. Information was extracted from the annual reports of the World Reference Laboratory for Foot-and-Mouth Disease (WRLFMD) between 2012 and 2019 and was then used to identify key gaps in sample submission and viral characterization. The number and trends of samples submitted, serotyped and sequenced indicate that the surveillance coverage is variable. Some gaps are consistent over time, highlighting inadequate virological surveillance and virus characterization, particularly in FMD virus Pools 2 (S. Asia), 5 (W. Africa) and 6 (Southern Africa). This analysis indicates there is a need for targeted intervention to improve virological surveillance, and that further investigation is required to better characterize the types of technical, logistical, capacity hurdles currently limiting the surveillance and diagnostics capacities in these regions. An abstract on this preliminary analysis was submitted at the EuFMD OS20. Further analysis during the reporting period is integrating data from 2020 together with other key information, a manuscript for publication will be drafted.

In collaboration with component 3.1, support was given to Burkina Faso (and the National Lab in Ouagadougou) to take part in the 2020 FMD Proficiency testing scheme of the WRLFMD. Lateral Flow Devices (LFDs) for FMD diagnosis were further distributed in ten countries in West and Central Africa

during the reported period: six LFD-Ag kits and six extraction kits were shipped to FAO RAF Accra, for the FAO ECTAD Team to assist in the distribution and deployment based on the regional needs. This initiative aims at improving the virological FMD surveillance by proposing a simple, cost-effective approach to submit samples to FMD reference laboratories. During the reporting period, Burkina Faso and Niger reported the use of LFDs and shipped the positive (and inactivated) ones to ANSES for virus characterization, and are liaising with a FMD reference laboratory to ship the positive and inactivated LFDs for virus characterization (following the protocol developed by ANSES). Results from the Burkina Faso samples revealed circulation of serotype SAT2 topotype VII lineage lib-12 in samples collected from February and July 2020.

Assistance was provided to Niger and Burkina Faso national laboratories to acquire ELISA-Ag kits from IZSLER, to strengthen FMD surveillance capacities in the region.

### **3.2.3 Vaccine selection and performance supported, including sustenance for improved methods for matching and protection measures**

#### *Improve uptake and accurate application of test system by OIE/FAO Reference Centres and Regional Support Laboratories in Africa and Asia*

The international COVID-19 crisis and the consequences for WRLFMD have significantly affected the progress of activities to support vaccine selection and performance. More progress is expected in the next reporting period. WRLFMD has recently signed an agreement with Biogenesis Bago (Argentina) to include their vaccines in the routine testing that is undertaken for field viruses, and new results were described in Q4 2020 for the O- Campos vaccine from this supplier. An immunogenicity study was supported in Uganda in collaboration and coordination with the WRLFMD, FAO UG and national stakeholders (NALIRRI), and the trial was initiated in April 2020 and is currently ongoing. Sera from these studies in Uganda have been received to WRLFMD and testing is underway. With funding from an OIE Twinning Project, WRLFMD is helping the African Union's Pan-African Veterinary Vaccine Center in Addis Ababa to establish systems to evaluate the quality and suitability of FMD vaccines intended for use in Africa. Immunogenicity studies to collect large volumes of reference sera have been completed for six FMD vaccines that could be applied to the African market and further studies (at least three further vaccines) are planned in 2021.

#### *Progressively support advancement towards validation of new tests for vaccine matching and measures of protection*

In order to help standardize the protocols that are used to assess whether vaccines are suitable for use in endemic settings, **new reference antigens** have been selected for Eastern Africa (<https://www.wrlfmd.org/node/2096/>). Sequencing has been completed and antigenic profiling in partnership with IZSLER, Italy, is underway (funded by an OIE Twinning Project). Candidate regional reference viruses have also been used for recent studies in Mongolia and for on-going work in Kazakhstan (funded by other sources). In order to address changes in the availability of serotype A FMDV vaccines in Africa (i.e. A-Eritrea-98 no longer supplied by BI), the WRLFMD has recently expanded vaccine-matching testing of isolates to evaluate an alternative vaccine (A-SAU-95).

The activities under this Component will provide direct support to the annual workplan coordination and activities of the **OIE/FAO FMD Reference Laboratory Network** to ensure better technical expertise development and networking at regional levels.

During December 2020, the WRLFMD organised an Annual meeting of the OIE/FAO FMD Laboratory Network ([www.foot-and-mouth.org](http://www.foot-and-mouth.org)) to collate recent data from OIE and FAO FMD Reference Laboratories. The Network has recently published a new paper to review the status of serotype C; to provide recommendations on the future use of live FMDVs from this serotype and the inclusion of serotype C strains in FMD vaccines. A second paper from the Network (accepted in January 2021) describes gaps in the availability of reference standards for FMD diagnostic methods.

	Sub-activity level	Description	Progress in the current period	Biennium indicator
D Laboratory network	3.2.1.1 Co-ordination support for the OIE/FAO FMD Reference Laboratory network	Provide direct support to the annual workplan co-ordination and activities of the OIE/FAO FMD Reference Laboratory network to ensure better technical expertise development and networking at regional levels, including support in the organization of the annual workplan co-ordination meeting.	Virtual 15 <sup>th</sup> annual meeting of OIE/FAO reference laboratory network 2 and 3 December 2020, minutes of the meeting are available and report is under finalization by the WRL.	a) One annual meeting organized per year and the number of invited representatives attending from regional laboratories is at least equal to the number of attendees supported in Phase IV
	3.2.1 OIE/FAO Roadmap regions	Develop and conduct at least an annual, global (online) training in FMD laboratory surveillance in English and in French.	WRLFMD in collaboration with EuFMD has delivered the third FLITC course (November 5 <sup>th</sup> – December 3 <sup>rd</sup> 2020) with 167 participants (106 participants completed the course).	a) One online global training organized and delivered and attended by 250 trainees by Sept 2021
3.2.2. International surveillance and guidance	3.2.2.1 Support diagnostic services by OIE/FAO Reference Centres, including laboratory typing of FMD samples from the 6 virus Pools	Support diagnostic services for samples submitted to the WRL, as well as testing that can be delegated to leading laboratories in the OIE/FAO FMD Reference Laboratory Network with WRL support and supervision.	Quarterly reports summarizing WRLFMD activities available at: <a href="http://www.fao.org/eufmd/resources/reports/quarterlyreport/en/">http://www.fao.org/eufmd/resources/reports/quarterlyreport/en/</a> and <a href="https://www.wrlfmd.org/ref-lab-reports">https://www.wrlfmd.org/ref-lab-reports</a> .  New format for quarterly global report (accommodating input from EuFMD GMR) has been prepared and in 2020 four quarterly reports have been published. Due to the COVID-19 pandemic the numbers of samples submitted are considerably lower than in previous years	a) 1500 samples submitted for antigen detection and serotyping, and 200 samples for vaccine matching by Sept 2021; b) 200 samples for P1 sequencing by Sept 2021
	3.2.2.2 Improve the sample collection and typing from regions identified by the OIE/FAO Reference Centres as priorities	Support sampling from outbreaks and testing, including procurement of reagents and kits, and assist sample shipment mechanism from National Labs in Pools 3, 4, and 5 to the Regional and International Reference Laboratories.	No funding has been used for specific sample shipments (in this reporting period). Rapid diagnostic tests samples collected in West Africa and have been shipped to the EU-RL and analysed. Support has been provided to Burkina Faso and Niger with the purchase of ELISA-Ag kits in response to recent outbreaks.	a) Adequate number of antigen ELISA kits and PCR reagents provided for surveillance
3.2.3 Vaccine selection and performance support*	3.2.3.1 Improve uptake and accurate application of test system by OIE/FAO Reference Centers and Regional Support Laboratories in Africa and Asia	Support sample screening at laboratories in Pools 3, 4 and 5 and shipment from these and other areas of high strategic importance to International Ref Labs. Support vaccine matching tests or complete genome sequencing (where appropriate), virus neutralization tests (VNTs) in the context of PVM studies and vaccine quality studies.		a) Characterization of FMDV from at least 30 different outbreaks across six different countries, and 100 FMD viruses per pool by the Sept 2021

	<p>3.2.3.2 Progressively support advancement towards validation of new tests for vaccine matching and measures of protection *</p>	<p>Review and assist the development of improved vaccine matching methods, for prioritizing development and implementation of tests to cover a wider range of reference viruses and vaccine strains.</p>	<p>a) Outcomes of ongoing studies for novel methods reviewed and assessed by Sept 2020; b) Collaboration with Regional Laboratories at least 2 Pools to cover reference viruses and vaccine strains established by Sept 2021;</p>
<p><i>* The validation and implementation of improved vaccine matching methods will be progressively supported through the workplan and may be expanded in months 25-48 after review of progress.</i></p>			

## 7. Issues for the Executive Committee attention

### Impact of COVID-19

Despite the COVID-19 crisis, core capability to process and generate data for submitted samples within WRLFMD has been maintained, although overseas submissions during this period have again been very low

Samples panels for a new proficiency testing scheme (Phase XXXII) have been prepared and samples dispatched to the participating laboratories in 24/30 countries supported in the WRLFMD LoA. Shipment to one country is in progress. Two countries have declined to participate, and three countries have not responded to the invitation.

## 8. Priorities for the next six months

- Continue the collaboration with the WRLFMD in identifying virological surveillance gaps and develop resources for guiding further collaboration, including finalization of a report and manuscript of a report on historical surveillance trends and gaps to better define follow-up actions and intervention;
- Progress with the coordination and identify collaboration mechanisms for the development of tailored online visualization tools/dashboards.

## 9. Success stories and outputs

In the current semester, the WRLFMD and EuFMD have reviewed and improved the contents of a series of v-learning modules (FMD Diagnostics) for the delivery of FMD laboratory surveillance training course (FLITC) in all Roadmap regions. As planned this course has been delivered in the period November 5<sup>th</sup> – December 3<sup>rd</sup> 2020 with 106 participants from 35 countries completing the course and with positive feedback from the participants

A comprehensive historical analysis has been conducted by EuFMD of all virological data available from the OIE/FAO FMD Reference Laboratories Network reports published between 2012 and 2019. This analysis indicates there is a need for targeted intervention to improve virologic surveillance, and that further investigation is required to better characterize the types of technical, logistical, capacity hurdles currently limiting the surveillance and diagnostics capacities in these regions. An abstract on this preliminary analysis has been submitted at the EuFMD OS20. In parallel with these activities, WRLFMD has developed a pilot “interactive dashboard” that can be used to display global FMD outbreak, risk and molecular epidemiological data.

Despite the SARS-CoV-2 pandemic has negatively impacted sample submission, LFDs have been used in the field during outbreak investigations in Burkina Faso and positive and inactivated LFDs have been shipped the positive (and inactivated) ones to ANSES for virus characterization. Results from the Burkina Faso samples revealed circulation of serotype SAT2 topotype VII lineage lib-12 in samples collected from February and July 2020.

**10. Budget (€) COMP. 3.2**

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
<b>Component 3.2</b>	8.944	8.127	817
<u>Consultancy Operational</u>			
<b>Component 3.2</b>	48.180	55.862	-7.682
<u>Consultancy Technical</u>			
<b>Component 3.2</b>	16.000	28.376	-12.376
<u>Travel</u>			
<b>Component 3.2</b>	17.000	-	17.000
<u>Training</u>			
<b>Component 3.2</b>	14.000	20	13.980
<u>Contracts</u>			
<b>Component 3.2</b>	400.000	389.474	10.526
<u>Procurement</u>			
<b>Component 3.2</b>	18.000	3.407	14.593
<u>General Operating Expenses</u>			
<b>Component 3.2</b>	22.000	5.776	16.224
<b>Total Direct Eligible Cost</b>	<b>544.124</b>	<b>491.043</b>	<b>53.081</b>

# Component 3.3 (Activity 3.3)

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**Better training for Progressive Control**

**Component Objective**

**Improved national and regional capacity for progressive control of FMD through delivery of high impact training in at least six roadmap regions**

**Component Manager**

**Jenny Maud**

**Sub-activity level manager**

**3.3.1 Jenny Maud**

**3.3.2 Marcello Nardi**

**3.3.3 Jenny Maud, Ludovica Mei**

**3.3.4 Jenny Maud, Maria de la Puente Arevalo, Paolo Motta**

## 1. Background

Under Components 2.4 and 3.4 of the EuFMD Phase IV workplan (2015-19) a series of **v-learning courses** were developed in support of the roll out of the **Global Strategy for FMD Control**. These included open access training courses on the PCP, FMD investigation, a series of three in-depth training courses on risk-based FMD control strategies, and initiatives exploring novel modalities for online networking, including through **mobile phone** communication tools such as Whatsapp™. These courses have been delivered to veterinarians in countries across the European neighborhood and additionally from five Roadmap regions (West, Central, East and Southern Africa, South Asia) and have been delivered in English, French, Arabic and Russian.

The strategy for Phase V builds on this experience, adding further emphasis on mechanism to decentralize delivery and to **cascade training to national level**, and to link the training provided to real-world outcomes in the development and implementation of FMD control strategies through links with the Progressive Control Pathway Support Officers (**PSO**) system and regional partnerships. The activities in this component will provide globally relevant training resources to all countries which are not officially free of FMD, and those working with such countries to implement progressive control. They will be guided by the findings of the PCP-support officer (PSO) system and the Regional Advisory groups (RAGs) for each Roadmap. The activities of this component will also involve close liaison with GF-TADs partners, and alignment with the availability of resources in partner (GF-TADS) regional offices that can effectively deliver the training at regional or national levels.

The overall aim of this Component will be to **strengthen the training resources available and develop a series of new e-learning courses** based on the needs and priorities identified by the stakeholders and partners listed above, ensuring relevance across multiple countries and regions. The focus is providing training resources relevant to all countries that are not free of FMD in West and Central Africa, East Africa, Southern Africa and South Asia during the first 24 months of the programme. Additional regions (South-East Asia may be added in months 24-48 after review of progress, and other regions deprioritized.

In order to ensure that EuFMD's courses are of world-leading standard, that the quality is maintained across the training programme and a continuous evaluation of the impact of the training programme is conducted, a **Training Quality Management System** is being established in co-ordination with the three Pillars of the EuFMD work programme (see Components 1.1 and 2.3). Focus will be on developing training which will have lasting impact, and this will be guided by an impact evaluation system in line with guidance of an external international panel of adult-learning experts coordinated across the three pillars.

A key focus for this component will be the **cascade of training to national level** through assisting countries to deliver national level training to their veterinary service staff, together with key wider audiences including in the private sector and veterinary para-professionals (VPPs). To promote this cascade at national level, EuFMD will support regional GF-TADs partners, technical networks and institutional bodies in the development of **Virtual Learning Centres (VLCs)**. These VLCs will be managed regionally (e.g. in GF-TADs regional offices) with the support of EuFMD and aim to:

- link to the activities of the Regional Roadmap and the regional PSO support system to prioritize, co-ordinate and deliver tailored training at regional level;
- catalyze and better tailor training resources already available, and attract and assess the regional needs for development of new training resources;
- provide virtual support to regional epidemiological and laboratory networking;
- support national cascade of training in the region;
- leverage contribution of resources from other providers and additional funding such that the VLC hosts multiple courses relevant to control of FAST diseases and becomes financially and technically self-sustaining;
- develop system allowing national veterinary services and individual training participants to record and monitor the training undertaken, promoting continuing professional development;
- strengthen the understanding of the policy issues affecting the effective implementation of control measures.

## 2. Team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Component supervisor</b>	Paolo Motta	Pillar III Co-ordinator
<b>Component manager</b>	Jenny Maud	Training Programme
<b>Training and networking</b>	Nadia Rumich	Training and Networking
<b>Partner organizations</b>	Training activities carried out in collaboration with regional partners and organizations in support of the GF-TADs Global Strategy for FMD control.	
<b>ExCom oversight</b>	TBC	
<b>FAO</b>	TBC	
<b>OIE</b>	TBC	
<b>EU Commission</b>	TBC	

## 3. Countries or partner organizations involved

A close collaboration is foreseen with regional FAO or OIE offices. Additionally, roll-out may make use of collaborations with regional multilateral organizations and bodies, non-governmental organizations (NGOs), academic institutions, especially where such partnerships might bring sources of additional funding or resources. Activities in this component are in support of the implementation of the Global Strategy for FMD Control, particularly in West Africa, East and Southern Africa and South Asia during the first 24 months, and may be expanded in South-East Asia in months 25-48 after review of progress.

## 4. Reporting

<i>Reporting format</i>	<i>Responsibility</i>	<i>Output</i>	<i>Distribution</i>	<i>Sent out by Network and Training Support Officer</i>
<b>6 monthly report to ExCom</b>	Component manager/supervisor	Written report and presentation	ExCom, STC	
<b>Every 2 years report to MN</b>	Component manager	Written report and presentation	General Session	
<b>Report on workshop or e-learning course</b>	Component manager or lead facilitator	Written report		
<b>Report on training quality and impact</b>		Written report		

## 5. Objective of the component

Improved national and regional capacity and expertise for progressive control of FMD through delivery of high impact training in at least six roadmap regions.

Component (Activity)	Objective	Narrative	Expected result	Monitoring	Evaluation	Assumptions and risks
<b>3.3 Better training for progressive control</b>	Improved national and regional capacity and expertise for progressive control of FMD through delivery of high impact training in at least six roadmap regions.	The training provided will link to real-world outcomes in the development and implementation of FMD control strategies. This will be achieved through synergy with the PSO system and regional partnerships in order to strengthen the available training and develop new resources, ensuring quality management and cascading to national level.	At least 2500 individuals from the target countries* have completed at least one EuFMD v-learning course.	Regular collection of data through EuFMD v-Learning platform and procedure established in the training quality management system	Two external evaluations to be carried out by month 18 and 38 of phase V.	Relies on the commitment of national veterinary services and individuals to participate in and complete e-learning courses.

\* Target countries for 2019-21 are those in West, Central, East and Southern Africa and South Asia. Training courses developed should also be relevant to regions included under Pillar II activities.

## 6. Planned Component Sub-Activities

### 3.3.1 Training infrastructure: maintenance and improvement of online platform

The last semester has seen continued expansion of the virtual learning programme, and the capacity of the team supporting it. A further 1370 new users have been registered with the EuFMD virtual learning platform over five months since the last report.

The EuFMD virtual learning platform was upgraded in November 2020. This new platform adds additional functionality for reporting, analytics and, importantly, functionality to support the implementation of the Training Management System (see below). The appearance of the platform has also been updated in line with EuFMD's Phase V communications standards.

Further details on the training infrastructure are reported under sub-activity 1.1.1.

### 3.3.2 Development of a Training Quality Management System (TQMS) to ensure the quality and the continuous evaluation of the impact of training

The **Training Quality Management System (TQMS)** have been introduced in the second half of 2020, and the processes have been further enhanced for the constant improvement of the quality system, with the aim to improve the planning and delivery of learning projects. International experts are currently being identified to engage in a follow-up evaluation of the Training Quality Management System (TQMS). The objectives of this review will be to evaluate the quality processes in place and identifying future areas of development. The review is scheduled to take place not later than the month of March 2021, with the aim to present the outcomes during the 44<sup>th</sup> General Session of the EuFMD in April 2021. Please refer also to component 1.1.

### 3.3.3 Development and delivery of e-learning courses in support of progressive control

#### Consultation and prioritization for training development

A training needs assessment has been conducted for Southern Africa. The training needs assessment aimed to identify key gaps and training needs relating to FAST but also other animal health priorities in the region. FAST related gaps identified including socio-economic impact analysis, stakeholder consultation, outbreak investigation and laboratory diagnostics. African swine fever and anti-microbial resistance were also identified as key gaps.

A similar process is now underway for Asia and the Pacific.

#### Development of new training courses

The following new training courses are currently under development:

##### 1) *Introduction to the Official Control Plan (OCP)*

This course is aligned to the earlier developed Introduction to the Risk-Based Strategic Plan and provides information on the purpose, development and content of an OCP, required to progress to PCP-FMD Stage Three. It is intended as a go-to resource to support international and national experts working to develop these plans, as well as to be incorporated in the PSO Training Development Framework (see Comp. 3.1), but also to be used as an induction course prior to more in-depth workshops or consultations on the subject.

##### 2) *Introduction to the Risk Assessment Plan (RAP)*

Aligned to both the RBSP and OCP courses, this course discusses the RAP, required to progress to PCP-FMD Stage One. As per the OCP course above it is intended for multiple applications and audiences.

##### 3) *Introduction to Rift Valley Fever (RVF- also under component 2.3)*

This course is being developed in response to training needs identified in the European neighbourhood under the Pillar II program. The course aims to raise awareness of the target audience at field veterinarians and veterinary paraprofessionals.

#### Delivery of training courses

The following courses have been delivered for Pillar III countries from September 2020 to January 2021:

##### *In-depth Socioeconomic Impact Assessment*

The third edition of this course was organized in November and December 2020. The contents of the modules and assignments were revised following feedback from the previous version of the course. In addition, a series of new self-directed modules on participatory methods were developed. The course aims to build capacity for socio-economic impact assessment of FAST and involves four hours study per week over a six week period. It includes a series of live webinars, self-directed online modules and tutor marked assignments. The final assignment of the course asked participants to work in a country group to develop a proposal for a follow-up socioeconomic impact assessment in their country.

The outline of the course is as follows:

- Week one: developing an impact framework for FAST: what are the impacts of FMD and how does an outbreak develop?
- Week two: how can we investigate the impact of FAST?
- Week three: data analysis and management
- Week four and five: animal health economics tools to support decision making
- Week six: designing a study and economic modelling.

Countries in Pillars II and III were invited to nominate up to four participants. A total of 220 participants were nominated from 59 countries. Of these, 123 participants started the course and 56 completed the entire course. A total of 40 final projects were submitted. These final projects have been reviewed by the team of EuFMD experts and will be sent back before the end of the current semester to the nominating organizations with recommendations on their further implementation. In addition, a number of stand-out project proposals have been submitted for which investigations into possible future support for implementation are ongoing.

#### *FMD Laboratory Investigation Training Course (see also Section 3.2.1)*

The third edition of this course was organized in partnership with The Pirbright Institute. Countries in Pillars I, II and III were invited to nominate laboratory staff to join the course, with nominations requested from Chief Veterinary Officers and training focal points and also the opportunity for participants to sign themselves up for the course. The course was available for a four-week period and consisted of two live webinars, online videos on laboratory techniques and thirteen self-directed online modules. The modules content is provided by The Pirbright Institute and had been revised for this edition of the course following feedback from the previous two editions. The course covers the following topics:

- Week one: pathogenesis, diagnosis, lesion ageing
- Week two: sample dispatch, virus detection
- Week three: serology, sequencing and vaccine matching
- Week four: quality assurance, biosecurity.

A total of 238 participants were nominated for the course, of which 167 from 35 countries started the course. In total 106 participants completed the course and passed the final assessment and consequently received a certificate.

#### *Open Access Lumpy Skin Disease Module*

A course on lumpy skin disease was developed in partnership with the FAO Regional Office for Europe and Central Asia and piloted in July 2020, with improvements made to the course following the initial pilot. The first module of this course was made available as an open access online resource in November 2020 in response to the rapid emergence of LSD in South East Asia, through the newly established Virtual Learning Centre for Asia and the Pacific (VLC-RAP). The open access module was used as a taster module, and invited interested participants to sign-up for the tutored course held in January 2021 (see below). To date, 226 participants have viewed the short open access course.

#### *Lumpy Skin Disease Preparedness Course for Asia and the Pacific*

The first tutored course organized through the VLC-RAP was a tailored version of the LSD preparedness course. The course was tailored to the regional situation by experts funded by the OIE regional office for Asia and the Pacific under a regional GF-TADs initiative. The course was organized over a four-week period beginning in January 2021, and consisted of two live webinars, six self-directed online modules and a very lively online discussion forum. The course covers the following topics:

- Week one: introduction
- Week two: clinical and laboratory diagnosis
- Week three: epidemiology and outbreak investigation
- Week four: surveillance, control and eradication of LSD

A total of 401 participants from countries across Asia and the Pacific were nominated for the course, in a mix of nominations by CVOs and self-nominations. At the time of writing the course was not yet completed.

#### *Lumpy Skin Disease Training Course for Southern Africa*

A version of the lumpy skin disease course has also been tailored for the Southern Africa region with the course opening webinar held in February 2021. A total of 352 participants have been enrolled on the course. Nominations were organized through CVOs, training focal points and also by self-nomination.

### 3.3.4 Implementation of system for cascade training

#### Support the development of Virtual Learning Centres (VLCs)

##### *Southern Africa*

The VLC for Southern Africa continues to be led by Wilmot Chikurunhe as VLC manager, with mentoring provided by Maria Delapuenta as EuFMD counterpart. A review of activities to date was conducted in September 2020. The key recommendations including a continued focus on long-term sustainability of the VLC and increased skills transfer from EuFMD to the Southern Africa VLC team to further enable the VLC to become self-sufficient.

A regional training needs assessment has been completed and is reported above. Training needs assessment is seen as an ongoing process and this assessment will continue to be updated as new information is gathered.

The VLC team played a key role in supporting the virtual delivery of the Southern Africa FMD Regional Roadmap meeting, including the set-up of an online page, organization of all video recordings and live zoom based events (see Section 3.1.2). The successful organization of the meeting demonstrated the capacity that has now been successfully transferred to the VLC team.

The VLC has also received funding from outside EuFMD resources to begin to develop and deliver training on other regionally important animal health priorities, demonstrating progress towards stability. This includes funding under the FAO South-South co-operation initiative to develop a course on African Animal Trypanosomiasis and regional-level funding to support virtual training on anti-microbial resistance.

The next regional specific course, a tailored version of the Lumpy Skin Disease preparedness course, started in early February 2020 with 352 participants enrolled (see above).

##### *Asia and the Pacific*

Corissa Miller joined the team as an interim manager (September 2020 to April 2021) of the VLC for the Asia and the Pacific region (RAP) in September 2020 and has supported its establishment, with support by Jenny Maud as EuFMD counterpart. This VLC has seen strong support from FAO and ECTAD colleagues in the region, with enthusiasm for the potential for virtual training to support regional activities. Originally, the first year of the VLC's activities were intended to focus on the establishment of the VLC functions and delivery of EuFMD's courses, with gradual transfer of skills such that the VLC would begin to develop its own courses in year two. The level of interest received has meant that this program has been accelerated, with additional funding provided by FAO RAP colleagues enabling course development to begin in year one.

Key activities of the VLC in the September 2020 to January 2021 period have included:

- development of a detailed work program for the first year of the VLC including courses to be developed and delivered, launch event establishment of a training focal points network, establishment of an advisory group and development of a sustainability plan;
- consultation with a range of stakeholders, including FAO regional colleagues, to understand immediate requests for virtual support to training provision and begin to map and collaborate with other regional initiatives on virtual training.
- awareness raising event with FAO regional colleagues;
- recruitment of an instructional designer (Achila Longchar – ECTAD funded);
- release of a short open access module on lumpy skin disease in response to the regional emergency (see above);
- tailoring of the lumpy skin disease preparedness course to the region and delivery in January 2021 (see above).

Recruitment of a full-time VLC manager is currently underway, in the meantime Corissa Miller continues to support the VLC in a part-time role, alongside Tang Hao, who is funded by FAO ECTAD.

##### *East Africa*

Initial meetings have been held in January 2020 with regional colleagues to establish a third Virtual Learning Centre (VLC) for East Africa. The first steps include the development of a work programme for the initial phase of the VLC and the recruitment of a VLC manager. The vacancy announcement for this position is expected to be released during

February. Rodrigo Nova will mentor the VLC manager and work directly with the FAO Eastern Africa colleagues to develop the work programme in the period before a counterpart is in place.

*Development of resources for cascade training, including for veterinary paraprofessionals*

The activities to support training for veterinary paraprofessionals will benefit of additional funds made available for a project (BMGF) focused on training of veterinary paraprofessionals. The training resources developed will be leveraged for use under the Pillar III programme. The “Veterinary paraprofessional capacity skills training” project has been signed on the 25 November 2020 and at the time of reporting country assessments is ongoing and three target countries in key geographies of South Asia and Sub-Saharan Africa will by April 2021. At the time of reporting, the Letters of Agreement (LoA) are being finalized with the two project partners, the World Veterinary Association (WVA) and HealthforAnimals.

*Develop system for monitoring of national training of veterinary service staff (Training Management System- TMS)*

A plan for piloting **the Training Management System (TMS)**, a tool which will support the capacity developing by allowing Member Nations to monitor the increased learning of the veterinarians via a Learning management system has been developed

A competency framework that covers the main individual competencies in disease control for FMD free countries (see component 1.1) has been developed and it will now be extended to non-free countries (Pillars II and III). The upgrade of the EuFMD virtual learning platform to Moodle Workplace™ will allow the creation of an area specific to the Training Management System.

The tool will be rolled out and presented to countries with the aim to start pilot in the Pillar III countries by the end of the biennium. This is a cross pillar activity, please refer also to Component 1.1.

	<i>Sub-activity level</i>	<i>Description</i>	<i>Progress in the current period</i>	<i>Biennium indicator</i>
3.3.1 Training infrastructures	3.3.1.1	Maintenance and improvement of the training infrastructure, including online platform. This sub-activity is co-ordinated with sub-activities 1.1.1.1 and 2.3.1.1.	EuFMD online platform has been fully functioning 100% of the time April to September 2020. An upgrade to the platform is scheduled for the last quarter 2020.	EuFMD online platforms will be functioning and accessible to users 24 months per biennium during phase V.
	3.3.2.1	Development of a TQMN in	The Training Quality Management System being implemented for all courses organized. A TQMS evaluation follow-up is currently being organized and outcomes will be reported in the next report. Management System has been developed and is currently being implemented for all courses organized.	Development and full implementation of the TQMS by June 2020.
3.3.2. TQMN	Quality assurance across the training programme and assessment of its impact	order to ensure quality across the training programme; carry out regular evaluations of the impact of the training prog in order to inform the design of a training offer that can achieve higher capacity development at country level. This system will guarantee that EuFMD provides high-quality and high impact training. This sub-activity is co-ordinated with sub-activities 1.1.1.1 and 2.3.1.1.		
3.3.3 Development and delivery of training	3.3.3.1	Priorities for the new training to be developed, and for delivery of existing training will be guided by the findings of the PSO system, the Regional Advisory groups (RAGs) for each Roadmap, by GF-TADS partners and EuFMD's consultations with national and regional partners.	GF-TADS partners are updated on EuFMD training planned on a quarterly basis. Training needs assessment has been conducted for Southern Africa VLC and will be conducted in Q1 2021 for the Asia and the Pacific VLC	Update on training development and delivery prioritization available for EuFMD Executive Committee and GFTADS partners every six months.
	3.3.3.2	Based on the priorities identified in 3.3.3.1, new courses will be developed, suitable for delivery in multiple regions and translation into relevant languages.	New open access and tutored course on Lumpy skin disease made available to pillar III countries. Open access courses on the Official Control Plan and Risk Assessment Plan underway.	Two new courses developed and delivered by Sept 2021.
	3.3.3.3	Delivery of courses	Courses will be delivered at global, regional or national level, including delivery of training in appropriate regional languages (including English, French, Russian and Arabic).	<b>398</b> individuals from the target countries* have completed at least one EuFMD training course between 1 September 2019 and 31 September 2020.
3.3.4 Implementation of system for cascade training	3.3.4.1	Support the development of virtual learning centers (VLCs)	Support GF-TADS regional partners in the development of VLCs which will provide regionally tailored online courses, support virtual networking, promote national cascade of training courses and resources and attract the specific needs of the region. Support regional partners to transition these VLC's to independent sustainability	a) At least two regions with VLCs established and supported by EuFMD by Sept 2021.

## 7. Issues for the Executive Committee attention

As noted in the previous report to the Executive, there is growing demand for virtual training, and particularly, the demand for the VLCs to rapidly upskill in the development and delivery of training suitable for regional needs. Careful prioritization of EuFMD's assistance and support of these potential projects will be necessary in order to prioritize those activities that will have greatest impact on EuFMD's strategic objectives.

## 8. Priorities for the next six months

- Finalization of open access virtual learning courses on Risk Assessment Plan (RAP) and Official Control Plan (OCP), in support of PCP countries and for progress in the completion of the PSOs Training Pathway;
- Development of new open access modules based on parts of the "in-depth" virtual learning courses, and adaptation of existing in-depth virtual learning courses to FAST;
- Work with partners in Southern Africa VLC to continue to deliver the planned virtual learning courses and to support the continued skills transfer, with the VLC expected to lead the delivery of courses outside the EuFMD work programme, including on African Animal Trypanosomiasis and Anti-microbial resistance;
- Progress the collaboration with partners in the Asia-Pacific VLC (finalize recruitment of a VLC manager, organize an official launch event, develop the network of training focal points, form an advisory group, deliver the planned EuFMD virtual learning courses and develop a sustainability plan); the VLC has also received funding to develop and deliver a number of courses outside the EuFMD work programme during this period;
- Development of a work program for the East Africa VLC, and recruitment of supporting human resources including the VLC manager. The first course for this VLC is planned for July 2021;
- Continue to support virtual training courses for East, West and Central Africa regions, including through leveraging regional colleagues and partnerships to assist in training delivery in the regions;
- Roll-out of a pilot of the Training Management System (TMS) in the Pillar III. This pilot is expected to be coordinated with the VLC SADC. In addition, the TMS will need to be adapted and tailored for support to national authorities as part of the Veterinary para-professional capacity skills training project.

## 9. Success stories and outputs

New virtual training have been developed in response to training needs identified in the European neighbourhood (e.g. RVF course) and in support of the FMD PCP and the GF-TADs Global Strategy (RBSP open access virtual course finalized and RAP and OCP courses initiated).

The VLC for Southern Africa successfully co-ordinated the first virtual regional roadmap meeting, demonstrating the capacities built within the VLC team for virtual training delivery, and the value of virtual activities to support PCP-FMD progress while physical meetings cannot be held.

The VLC for Asia and the Pacific rapidly released a short open access virtual learning module on lumpy skin disease, followed by the tutored course organized in January 2021, demonstrating the value of virtual learning in providing rapid training to large numbers of veterinarians in response to emerging disease threat

The design and implementation of the VLC model approach for establishment of regional virtual training centers has been well received by FAO colleagues showing strong potential to improve the regional roll-out of EuFMD virtual learning courses to wider audiences. The model has been used to develop a funding proposal by FAO to further support the already established VLCs and to support the establishment of new VLCs in other regions.

**10. Budget (€) COMP. 3.3**

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
<b>Component 3.3</b>	3.914	3.251	663
<u>Consultancy Operational</u>			
<b>Component 3.3</b>	48.180	55.862	-7.682
<u>Consultancy Technical</u>			
<b>Component 3.3</b>	168.000	146.814	21.186
<u>Travel</u>			
<b>Component 3.3</b>	18.000	5.283	12.717
<u>Training</u>			
<b>Component 3.3</b>	10.000	-	10.000
<u>Contracts</u>			
<b>Component 3.3</b>	30.000	-	30.000
<u>Procurement</u>			
<b>Component 3.3</b>	-	-	-
<u>General Operating Expenses</u>			
<b>Component 3.3</b>	45.000	6.292	38.708
<b>Total Direct Eligible Cost</b>	<b>323.094</b>	<b>217.502</b>	<b>105.592</b>

# Component 3.4 (Activity 3.4)

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**Improved security in FMD vaccine supply**

## **Component Objective**

**Improved security in FMD vaccine supply: support the Public Private Sector Platform (PPSP) to identify and promote solutions to improve security in access to effective vaccines.**

## **Component Manager**

**Bouda Vosough Ahmadi**

## **Sub-activity level manager**

**3.4.1 Bouda Vosough Ahmadi, Paolo Motta**

**3.4.2 Bouda Vosough Ahmadi**

## 1. Background

The network of stakeholders engaged in FMD control met at the 2018 Open Session of the EuFMD. There was the need to address the issues related to “Increasing Global Security in the supply of FMD vaccines”, including the lack of confidence in supply of available vaccines constraining PCP progress in multiple regions. This multi-stakeholder conference provided the opportunity to define better a set of priorities to increase availability of quality and effective vaccines:

- define and tackle barriers preventing availability of quality vaccines must be defined and addressed;
- quantify and predict the current unmet demand for vaccines, and its future growth;
- as manufacturers are a key partner in the network of stakeholders contributing to FMD control, new forms of partnerships between public and private sectors are needed to improve vaccine availability;
- a shift in the vaccine stewardship paradigm is required to (i) create an enabling environment for investment in vaccine security, (ii) continue to support R&D for innovative technologies and partnerships, and (iii) ensure inclusion of all stakeholders in the value chain.

To address these priorities and the issues surrounding Global Vaccine Security particularly for endemic settings, the establishment of this new Component of the EuFMD Workplan Phase V was suggested during the 43<sup>rd</sup> General Session of the EuFMD (in April 2019), and agreed by Member Nations. This new Component 3.4 aims to support to Public Private Sector Platform (**PPSP**) for vaccine security established under Component 1.3 of Pillar I. In particular, it aim to identify and promote solutions to improve security in access to effective FMD vaccines in endemic settings. The activities of this Component will be linked closely to the work under Component 1.3 of Pillar I.

By bringing together regulators, risk managers, research and private sector stakeholders, the platform will be supported by **working groups**, and associated studies. It will aim to address information gaps affecting investment decisions. In multiple regions, the lack of confidence in supply of available vaccines is a major issue affecting PCP progress and this Component aims **to support and inform the PPSP** to define and promote solutions to improve security in access to effective vaccines and increase mid to long term levels of supply to assist PCP progress.

Based on the identified priorities by the PPSP and the Secretariat, technical and policy **study reports, guidance papers and application tools** will be developed to:

- i. Analyze the technical and policy issues and constraints limiting access to quality and effective FMD vaccine supply, particularly to countries in PCP Stage 1 to 3, and with a focus upon the lack of vaccine supply for Sub-Saharan Africa (SSA);
- ii. Identify pathways and define actions and mechanism towards creating an enabling environment for investment in vaccine security, ensuring inclusion of all stakeholders in the value chain and increasing mid and long-term supply of quality and effective FMD vaccine;
- iii. Enable the development and implementation of the assured emergency supply options (AESOP) and allied pre-qualification system under the PPSP, to improve confidence and availability of assured quality vaccines.

These outputs will be discussed by the PPSP to inform action-planning for accelerated rate of investment in FMD vaccine production by the private sector, as well as to guide targeted capacity development activities under other Components of the EuFMD workplan and tailored assistance to Regional and National Risk managers.

## 2. Team

<i>Role</i>	<i>Name</i>	<i>Status</i>
<b>Component supervisor</b>	Paolo Motta	Pillar III Co-ordinator
<b>Component manager</b>	Bouda Vosough Ahmadi	
<b>Training and networking</b>	Nadia Rumich	Training and Networking
<b>Member State partners</b>		n/a
<b>ExCom oversight</b>		
<b>FAO officer</b>	TBD	
<b>OIE</b>		
<b>EU Commission</b>		

## 3. Countries or partner organizations involved

This component involves collection of data at global level from countries that are working along the PCP-FMD and are supported through roadmap meetings, and which are indicated as priorities for PCP-FMD progress in the GF-TADs Global Strategy. In particular, it is foreseen that the activities will involve countries in PCP Stage 1 to 3, and with a focus upon the lack of vaccine supply for sub-Saharan Africa (SSA).

Activities under this component are carried out in order to complement the activities under Component 1.3 of Pillar I and support the PPSP, and cooperation is foreseen with the World Organisation for Animal Health (OIE) and the GF-TADs FMD Working Group.

## 4. Reporting

<i>Reporting format</i>	<i>Responsibility</i>	<i>Output</i>	<i>Distribution</i>	<i>Sent out by</i>
<b>Six monthly report to ExCom</b>	Component manager	Written report and presentation	ExCom, STC	EuFMD Secretariat
<b>Every two years report to MN</b>	Component manager	Written report and presentation	General Session	EuFMD Secretariat
<b>Every two years Evaluation report</b>	Component manager	Guidance papers and/or studies to be available	EuFMD, NSAH, and EuFMD partners if required	EuFMD Secretariat
<b>Mission/Meeting reports</b>	Leader of the Mission/ Main facilitator of the meeting	Written report	EuFMD, NSAH, others if required	Component Manager

## 5. Objective of the component

**Improved security in FMD vaccine supply: support the Public Private Sector Platform (PPSP) to identify and promote solutions to improve security in access to effective vaccines.**

<i>Component (Activity)</i>	<i>Objective</i>	<i>Narrative</i>	<i>Expected result</i>	<i>Monitoring</i>	<i>Evaluation</i>	<i>Assumptions and risks</i>
<b>3.4 Improved security in FMD vaccine supply</b>	Improved security in FMD vaccine supply: support to the Public Private Sector Platform (PPSP) for vaccine security to identify and promote solutions to improve security in access to effective vaccines.	Develop significant understanding of technical and policy issues and solutions for access to quality and effective FMD vaccine supply, and identify pathways towards increased mid and long term supply particularly in countries in PCP Stage 1 to 3. This will inform and assist action-planning for accelerated rate of investment in FMD vaccine production by private sector.	At least 4 Reports published by the PPSP platform to inform and guide innovative approaches and partnerships for accelerated rate of investment in FMD vaccine production by private sector achieved.	Regular collection of information through contacts with the working groups.	Two external evaluations to be carried out by month 18 and 38 of phase V.	Assumes commitment from public and private stakeholders to incorporate the recommendations given by the PPSP and/or to consider the use of the new system to increase vaccine security expertise and inputs.

## 6. Planned Component Sub-Activities

### 3.4.1. Advance the understanding of technical and policy constraints and solutions for improved vaccine access and supply in countries in PCP Stage 1 to 3

#### Understand the barriers and drivers for adoption and factors influencing the supply

Further progress has been made on the model development for quantifying and estimating future demand for vaccine. The model has been developed using R software and due to the uncertainty and variation surrounding many of the parameters a stochastic approach was taken. Disease control policy is being linked to the projected PCP stage as estimated by individual countries at previous Regional Roadmap meetings. The required vaccine strains are based on WRL-FMD recommendations with vaccine needs reported as mono-strain equivalent doses.

#### **Model description**

There are two sides to the model – emergency vaccination (which is reactive vaccination in response to an outbreak) and prophylactic vaccination (which is vaccination as part of a country's control programme). The control strategy is linked to each country's Progressive Control Pathway stage as developed by EufMD and as indicated in the relevant Regional Roadmaps.

An expert elicitation survey has initiated in December 2020 to assign a range of values to the parameters linked to PCP stage. It was sent out to around 80 experts in the field via email. Roughly 20% completed the survey in round 1 (December 2020). The experts were also asked to nominate others who they believe would be able to provide insight into the topic. The three main parameters requested in the questionnaire related to:

The number of outbreaks which would be expected to reduce each year if a country was either – to remain in a PCP stage or progress to the next PCP stage. The proportion of outbreaks covered with emergency vaccination for each

PCP stage. Finally, the proportion of livestock which are routinely vaccinated as part of a country control programme for each PCP stage. A description of the model and preliminary results of the survey presented in the EuFMD's Open Session 2020 and further discussed in a follow up workshop that was held on 5<sup>th</sup> February 2021. Feedback received from the experts attended the workshop will be incorporated in further development and enhancing the model.

The survey results were weighted depending on the candidates own opinion of their expertise on FMD and the PCP (unfamiliar, casually acquainted, familiar, knowledgeable and expert). Another two rounds of the expert elicitation will occur within the current semester (ending in March 2021), which should improve the accuracy of EuFMD PCP stage related values. There will be ongoing model evaluation to ensure that values predicted are analyzed for accuracy. In order to do this, the EuFMD is looking to compare model predictions with individual country reports. A complete sensitivity analysis for some of the variables in the model should be completed and this will identify which variables have a more significant impact on vaccine dose estimates.

### **3.4.2. Development of guidance and advice to the PPSP**

#### *Regular co-ordination with the PPSP*

Following delivery of the virtual course by the EuFMD in June-July 2020 on "Applying public-private partnerships to FAST disease control (APPP-FAST)" a regional virtual workshop for South Eastern Europe Neighboring Countries (SEEN) was held in October 2020 that focused on further knowledge exchange on application of PPP in disease control and developing PPP ideas and assessing the enabling environment needed. For the countries in two regions of Middle East and North Africa, the EuFMD is arranging country specific meetings that will be held for a selected number of counties by April 2021 (under Pillar II and III).

In addition a specialized workshop entitled "Capacities for disease management: building business environments for supporting disease control and livelihoods" was held on 5<sup>th</sup> February 2021 under EuFMD's OS20 umbrella. Prof Andy Peters of the University of Edinburgh chaired the workshop and two invited keynote speakers - Ms Nina Henning (GALVmed) and Dr Gabriel Varga (Zoetis) - presented experiences from the Ag-result and ALPHA projects. In the workshop, the two following items were discussed and debated in details in two parallel sessions attended by about 15 experts each: 1) Developing an analytical model to predict foot-and-mouth disease vaccine demand for endemic countries: opportunities and options for the application and use of the model; and 2) How to create an enabling multi-stakeholder environment using a PPP mechanism to address vaccine demand.

#### *Produce technical and policy study reports and guidance papers*

The EuFMD is collaborating with Frontiers Journal and a number of experts has initiated to produce a collection of scientific and peer-reviewed papers that will be published in a special edition (or Research Topic) of this journal entitled: "Socioeconomics of Vaccine Security for Transboundary Animal Diseases". This Research Topic aims to gather latest research and insights from scientists, economists and policy analysts that are targeted at addressing various aspects of TADs vaccine security. In total 36 authors have indicated their interests in submission of their articles by 28 February 2021.

3.4.1. Advanced understanding

<p>3.4.1.1. Understand the barriers and drivers for adoption and factors influencing the supply</p>	<p>Consultative and research work to quantify the current unmet demand and predicted future growth for vaccines with a special focus in SSA and characterize technical and regulatory challenges for novel vaccine platform opportunities. This work will be in collaboration with Components 1.7 of Pillar I (through the key informants established under that Component) and Component 3.1 of Pillar III (PSOs system).</p>	<p>a) Report on the model &amp; estimated current unmet demand and future growth presented at 44 General Session (April 2021)</p> <p>b) One PPSP meeting report produced per year (Report of the OS20 WS on PPSP will be available by early Mar 2021).</p>	<p>1) A research study on quantifying vaccine demand (reflecting supply) is ongoing. Model and preliminary results were presented in OS20 in December 2020; Expert elicitation and the model will be finalized by end of March 2021</p> <p>2) Planning started to organize a validation workshop to be held in May 2021 to test the model based on a number of case study countries.</p>
<p>3.4.2.1. Regular co-ordination with the PPSP</p>	<p>Regularly share information and guidance in order to improve understanding of issues and to identify pathways or actions to improve vaccine access and inform strategies to increase supply in countries in PCP Stage1 to 3</p>	<p>a) Two PPSP face-to-face meetings per annum</p> <p>b) One PPSP meeting report produced per year</p>	<p>1) A socioeconomics course/workshops was held in October 2020 and collaboration started with GF-TADs in their upcoming West Africansocio-economic studies under the DTRA funded GF- TADs project;</p> <p>2) Contributions are being made to organizing the first webinar of application of PPP to control ASF disease under GF-TADs framework. This workshop will be held in June 2021.</p>
<p>3.4.2.2. Produce technical and policy study reports and guidance and promote the development of the AESOP and allied pre-qualification system under the PPSP</p>	<p>Based on the priorities identified during the PPSP meetings and by the Secretariat, guidance papers and advisory documents will be developed through the establishment and support to working groups of experts and/or the development of studies on related issues. This will also facilitate the development and implementation of AESOP to improve confidence and availability of assured quality vaccines.</p>	<p>a) Three guidance papers and/or studies to be available by Sept 2021</p> <p>b) Satisfactory review of PPSP members</p>	<p>1) Slow progress on finalizing the Socioeconomic guidelines for FMD due to changes in working groups and GF-TADs.; Discussions are in progress with the GF-TADs and FMD-WG on (financial and technical) arrangements and timetable of making this ready.</p>

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## 7. Issues for the Executive Committee attention

Vaccine demand modelling has progressed and preliminary results being presented at the OS20 Conference in December 2020 and discussed during one of the OS20 workshops (on 5<sup>th</sup> February 2021). An expert elicitation is ongoing and would allow to finalize the model in the next reporting period to be added to the PCP FMD Toolkit in support of the GF-TADs FMD WG and the community of PCP countries.

## 8. Priorities for the next six months

- Concluding the ongoing expert elicitation and the model finalization
- Organize a virtual workshop for the validation of the model with country and regional level stakeholders to prepare a manuscript for publication and for advocacy with the GF-TADs FMD WG, and to make available the model for national policy makers as an additional tool in the PCP Toolkit;
- Drafting and finalizing a report on “the current unmet demand and future growth” based on the results of the model that will be presented at the 44th General Session (April 2021)”
- Strengthen the coordination with the PPSP and the collaboration for vaccine demand estimation (Comp. 1.3);
- Public-private vaccine security platform: a) problem definition and explore options and their feasibility; b) liaise with private sector, experts and economists in FAO and other institutes to describe the best analytical frameworks to be developed, and identify and locate relevant datasets to be used; c) report the findings and plan for implementation;
- Further development of vaccine PPSP liaising with partners based on the recommendation of the OS20 workshop held on 5<sup>th</sup> Feb 2021;
- Follow up on PPP business cases gathered in the APPP-FAST course;
- Strengthen the coordination with the PPSP and the collaboration for vaccine demand estimation (Comp. 1.3);

## 9. Success stories and outputs

The development of a vaccine demand model to estimate the size of the FMD disease vaccine market in endemic countries (i.e. demand for vaccine) has continued and initial results were presented during the OS20 and the specialized workshop entitled “Capacities for disease management: building business environments for supporting disease control and livelihoods” that was held on 5th February 2021 under EuFMD’s OS20 umbrella. The virtual course of Socioeconomic Impact Assessment of FAST Disease were delivered in English and French languages in Nov-Dec 2020 where about 200 participants from 58 countries, in both French and English versions of the course from Africa, Middle East, Asia and South East Asia participated.

## 10. Budget (€) COMP. 3.4

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
<b>Component 3.4</b>	1.398	1.625	-227
<u>Consultancy Operational</u>			
<b>Component 3.4</b>	48.180	55.862	-7.682
<u>Consultancy Technical</u>			
<b>Component 3.4</b>	19.400	24.551	-5.151
<u>Travel</u>			
<b>Component 3.4</b>	15.000	-	15.000
<u>Training</u>			
<b>Component 3.4</b>	5.000	-	5.000
<u>Contracts</u>			
<b>Component 3.4</b>	15.000	-	15.000
<u>Procurement</u>			
<b>Component 3.4</b>	-	-	-
<u>General Operating Expenses</u>			
<b>Component 3.4</b>	5.000	864	4.136
<b>Total Direct Eligible Cost</b>	<b>108.978</b>	<b>82.903</b>	<b>26.075</b>

## EuFMD Committees

Executive Committee, Standing Technical Committee (STC), Special Committee for Surveillance and Applied Research (SCSAR), Special Committee on Biorisk Management (SCBRM), Tripartite Groups.

## Hold-FAST tools

**AESOP.** Assured emergency supply options; **EuFMDiS,** FMD spread model; **GET PREPARED** toolbox. Emergency preparedness; **GVS.** Global Vaccine Security; **Impact Risk Calculator;** **Online Simulation Exercises;** **Outbreak Investigation application;** **Pragmatist.** Prioritization of antigen management with international surveillance management tool; **PCP-FMD.** Progressive Control Pathway for foot-and-mouth disease. **PCP-Support Officers;** **SAT.** PCP Self-Assessment Tool; **RTT.** Real Time Training; **SMS Disease reporting;** **SQRA toolkit.** A method for spatial qualitative risk analysis applied to FMD; **Telegram;** **TOM.** EuFMD training management system; **Global Monthly reports;** **VADEMOS.** Vaccine Demand Estimation Model; **VLC.** Virtual Learning Center. Microlearning.

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## United Nations Sustainable Development Goals (UN-SDGs)

EuFMD's programme has a main focus on



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