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The EuFMD Phase V

Pillar I

The **Strategic Output**, or Pillar I of the Phase V EuFMD workplan (2019-2021) focuses on **Improving preparedness** for management of FMD and similar TADS ('FAST disease') crises by Members and across Europe as a whole.

Co-ordinator: Maria de la Puente Arévalo*

Pillar II

The **Strategic Output**, or Pillar II of the Phase V EuFMD workplan (2019-2021) focuses on **Reduced risk** to Members from the FAST disease (FMD and similar TADS) situation in the European neighbourhood.

Co-ordinator: Fabrizio Rosso**

Pillar III

The **Strategic Output**, or Pillar, III of the Phase V EuFMD workplan (2019-2021) focuses on **Sustaining and enhancing progress** in the roll out of the GF-TADs Global Strategy for control of FMD, and on increasing security in the supply of effective FMD vaccines.

Co-ordinator: Paolo Motta

*From September 2020, Pillar I is managed by three co-ordinators (M. DelaPuente Arévalo; Pamela Hullinger; Melissa Mclaws).

** From September 2020, Pillar II is managed by Nick Lyons.

Pillar I

The **Strategic Output**, or **Pillar I** of the Phase V EuFMD workplan (2019-2021) focuses on **improving preparedness for management of FMD and similar TADS ('FAST disease') crises by Members and across Europe as a whole.**

Beneficiaries: The main beneficiaries of Pillar I are the 39 EuFMD members.

Activities under seven interlinked Components will contribute to the achievement of these goals:

Component 1.1 - Training for EuFMD members

- Provide a training programme tailored to the EuFMD MNs, continuing with the training credits system;
- support countries to deliver national trainings and cascade to knowledge acquired in EuFMD courses;
- ensure the provision of high quality and high impact training through the implementation of a new Quality Management System.

Component 1.2 - Emergency preparedness

- Develop the GET Prepared toolbox in order to provide countries with tools to assess each component of emergency preparedness (EP) and share good EP practices;
- up-scale EuFMDiS to a pan-European model incorporating new features such as a wildlife component or the livestock movements to pastures;
- facilitate networking among EP experts and between public and private sector.

Component 1.3 - Emergency vaccination

- Increase the understanding of the level of preparedness to use emergency vaccination for FAST diseases in EuFMD members;
- establish a Public and Private Sector Platform (PPSP) for FAST disease vaccination to identify pathways or actions to improve the availability of vaccines suitable for use in disease emergencies;
- establish new mechanism for emergency procurement and supply of FMD vaccines.

Component 1.4 - South-Eastern Europe

- Support the risk-based surveillance activities in Thrace, possibility to extend this approach to other diseases and regions;
- support coordination activities at regional and national level in the South-Eastern European countries;
- improve emergency preparedness in the region through trainings, in-country support and simulation exercises;
- establish a diagnostic bank of reagents for FAST diseases available for the countries in the region.

Component 1.5 - Applied research

- Support applied research studies that deliver tools and knowledge addressing technical issues that are considered Europe-wide priorities for national preparedness against FAST diseases;
- facilitate coordination and communication between institutions in the FAST disease surveillance networks through the organization of scientific meetings and working groups.

Component 1.6 - Proficiency Testing Service:

- Provide financial support to allow a number of non-EU countries to participate in the annual Proficiency Testing Service (PTS) for National Reference Laboratories (NRLs) for FMD.

Component 1.7 - Disease risk assessment and forecasting

- Establish a new system to collect and analyze FAST disease information that will include risk assessment and forecasting;
- support the improvement, updating and use of the PRIoritisation of AntiGen MAnagementT with International Surveillance Tool (PRAGMATIST);
- support the submission of samples to institutes in the Special Committee for Surveillance and Applied Research (SCSAR) CSAR that have the capacity to provide laboratory support to surveillance for FAST diseases.

Pillar II

The **Strategic Output**, or **Pillar II** of the **Phase V** EuFMD workplan (2019-2021) focuses on **Reduced risk** to Members from the FAST disease (FMD and similar TADS) situation in the European neighbourhood.

Geographic scope: the neighbourhood 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.

Specifically: *having land-borders with EuFMD-members:* 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.

Activities under three interlinked Components will contribute to the achievement of these goals:

Component 2.1 Co-ordination and FAST control framework

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

The activities within this component will contribute to, or aim to ensure:

- Co-ordination with the GF-TADS partners (FAO, OIE), with other international agencies providing technical support to countries (AOAD), achieving a jointly agreed workplan with close daily interaction in the implementation and reporting to the regional steering committees and Joint Planning Committee (JPC, REMESA).

- 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.

- Co-ordination of inputs and efforts with the leading technical institutional partners (including CIRAD, EFSA, IZS, ANSES) to achieve improved laboratory and epidemiology networking in the European neighbourhood for better early warning and support to risk-based control strategies.

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

Component 2.2 Improved early warning for FAST diseases

- 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 measure implemented.

The activities within this component will:

-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 epidemics.

-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.

Component 2.3 Capacity development for surveillance and improved control programmes

- 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).

The activities within this component will:

-Develop and implement 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 activities (comp 2.2). I:

-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.

Pillar III

The **Strategic Output**, or **Pillar III** of the **Phase V** EuFMD workplan (2019-2021) focuses on **sustaining and enhancing progress in the roll out of the GF-TADs Global Strategy for control of FMD, and on increasing security in the supply of effective FMD vaccines.**

Beneficiaries: support to countries that are working through the PCP-FMD and that are assisted through roadmap meetings and indicated as priorities for PCP-FMD progress in the GF-TADs Global Strategy. Currently, these are circa 80 countries in 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 four interlinked Components will contribute to the achievement of these goals:

Component 3.1 - Effective implementation of the Progressive Control Pathway (PCP-FMD):

- provide support to the FAO/OIE FMD Working Group (FMD-WG), including in the development of tools and guidance documents to assist in the application of the Progressive Control Pathway for FMD Control (PCP-FMD). This will include provision of support to Regional Roadmap meetings, and to the allied processes for evaluation and assessment of national strategic planning documents. EuFMD will aim to assist the functional efficiency of the FMD WG processes, improving the quality and timing of feedback system to ensure countries receive rapid, timely and helpful feedback to PCP stage submissions;
- provide technical guidance to countries on PCP-FMD implementation. This will be achieved through the further development of the PCP-Support Officer (PSO) system, and by developing capacity development pathways for the PSOs, and through tools to provide improved guidance to countries, such as IT solutions to assist development and implementation of strategic plans;
- work with regional bodies to support regional networks in order to improve capacities for strategy development, and for the implementation of risk-based approaches to surveillance and control.

Component 3.2 - Improvement of global laboratory support:

- Support the co-ordination of the OIE/FAO FMD Reference Laboratory network;
- support diagnostic services, including laboratory typing of FMD samples from the six virus Pools by OIE/FAO Reference Centres, aiming at meeting surveillance targets in each pool required for guidance to Regional Roadmaps and risk managers in each region, as well as global threat forecasting;
- Support system for vaccine performance and matching needed by the Roadmaps, through better uptake and accurate application of test system by OIE/FAO Reference Centres and Regional Support Laboratories (RSL) in Africa and Asia. Progress towards validation of new tests for vaccine matching and measures of protection will be supported in first 24 months with the aim of transfer of these to RSLs and others in the second 24 months;
- Provide online training in FMD laboratory surveillance for the global and regional epidemio-surveillance networks.

Component 3.3 - Better training for progressive control:

- Develop and deliver a range of globally relevant training courses and resources, which aim to promote sustained PCP-FMD progress at national level, guided by ongoing consultation with partners in order to understand priorities for resource development. Activities will be guided by a Training Quality Management System (TQMS) that will consider both the quality and the impact of the training;
- Support GF-TADs partners and regional institutional bodies in the development of Virtual Learning Centers (VLCs) managed regionally in order to promote cascade of training to national level.

Component 3.4 - Increase of vaccine security:

- Support and inform a Public and Private Sector Platform (PPSP) established under the EuFMD Pillar I workplan, which will aim to increase understanding and promote practical solutions to improve the access of FMD endemic countries, particularly in PCP Stage 1 to 3, to quality FMD vaccines in the mid to long-term, by developing technical and policy study reports, guidance papers and application tools.

Working definition of FAST diseases

FAST: *FMD and Similar Transboundary (FAST) diseases.*

Europe is threatened by a number of these TADs. A prioritization /optimization of activities is needed, as is flexibility and adjustment of work plans in accordance with changes in risk.

A **categorization** of FAST diseases for which decisions on activities will need to be made, and support provided, is proposed as follows:

Category 1: FMD and currently PPR, capripoxviruses

Criteria for inclusion:

- ruminant infections with similar risk factors to FMD;
- currently present in directly bordering neighbourhood countries;
- vaccination is an option.

A decision on whether TADS with **clinical signs** similar to FMD should be in Category 1 is needed. Such as SVD and Seneca Valley virus (SVV: Senecavirus A infection).

Category 2: Rift Valley Fever, Bovine Ephemeral Fever

Criteria for inclusion:

- evidence for circulation /disease in one or more neighbourhood countries but NOT directly bordering EU MN;
 - vaccination is needed in response;
 - ruminants are directly affected with major losses.

Category 1 surveillance for other FAST may provide a cost-efficient means to monitor risk or provide early warning of these and may be justified. The need for contingency plans and effective vaccines for use in both the neighbourhood and potentially in EU-MN is recognized as a priority.

Category 3: Not included in the above because

- they currently cause outbreaks in EU-MN and the priority is not therefore for actions in the European neighbourhood (e.g. ASF);
 - co-ordination is well established at EU level: e.g. CSF, BT and AHS;
 - For these, no specific activities are planned at this point.

Note

1. A) Outbreaks of a Category 2 FAST disease in countries directly bordering an EU MN would be reason for moving to Category 1 status.
2. B) Some activities planned for Categories 1 and 2 may also be relevant to stakeholders concerned for Category 3, such as the platform on vaccine security (availability of effective vaccines for emergency application in EU and neighbourhood).

Pillar I (Output I)

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

*From September 2020, Pillar I is managed by three co-ordinators (M. DelaPuente Arévalo; Pamela Hullinger; Melissa Mclaws).

Component 1.1 (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

Esa Karalliu

Sub-activity level manager

1.1.1 Jenny Maud, Nadia Rumich

1.1.2 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>
Component supervisor	Maria de la Puente Arevalo	Pillar I Co-ordinator
Component manager	Esa Karalliu	Short Term Placement
Training and networking	Nadia Rumich	Communication Officer
Training development	Jenny Maud	Training Programme Manager
Chief Learning Officer	Marcello Nardi	Learning Specialist
Member Nation partners	Training focal Points in each EuFMD MN	n/a
Executive Committee oversight	L. Bognar; O. Kalda	Executive Committee member
FAO officer	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>	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

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.

<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>
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 COVID-19 pandemic restrictions have led to a rapid increase in the number and variety of training courses, workshops and resources delivered in an online format. To support this, the EuFMD has recruited additional staff for the virtual learning operational support team. In addition, a number of training events and resources have been developed to assist the rapid up-skilling of the EuFMD team to develop and deliver training events virtually.

The EuFMD virtual learning platform (<https://eufmdlearning.works/>) now has 14450 users, representing an increase of 3200 new users over six months. Eight tutored virtual learning courses have been delivered across the EuFMD EC funded program during the April-September 2020 period, including three new courses.

An upgrade of the software for the EuFMD has been agreed and will be implemented in the coming months. This will involve a transition to an improved platform, Moodle Workplace™ which has additional functionalities to support the roll-out of the Training Management System (TMS), allowing national focal points to track the training of their personnel. See 1.1.3 for more details on this.

Training resources

The search functionality of the [EuFMD Knowledge Bank](#) has been improved and updated. The next steps will be to increase the visibility of the platform and continue to develop new resources for the Knowledge Bank.

The open-access virtual learning course “Introduction to FMD” was translated into French with the assistance of French veterinary services. This is now freely accessible for self-enrolment on the EuFMD Virtual Learning website.

The modules developed for the online course on Simulation Exercises are currently being revised following participant feedback and will be made available as an open-access course.

1.1.2. Training programme for Member Nations

The following courses have been delivered during the reporting period:

The workshop “**Organizing simulation exercises for animal diseases**” initially planned in March 2020 was delivered in June 2020. There were 146 enrolled trainees, from various EuFMD Member Nations, and some countries from Southern Africa. All participants were monitored in their advancement for the completion of the course. A questionnaire was sent to those not completing the course, in order to guarantee a constant improvement of the training process. This tutored course was structured over four weeks and included virtual-learning modules and weekly assignments to be prepared in country teams. The overall appreciation of the course was very positive and this format allowed to train a higher number of participants than initially foreseen. This course was offered to all Member Nations at no training credits cost.

An **FMD emergency Preparation course for Spain** was organized in June 2020. This is the fifth time this course is run for Spain to train official and private veterinarians in the country. The feedback from the course was via a survey and was very positive and although the completion rate was lower, possibly due to the Covid-19 situation, than in previous editions, 139 people completed the course. Some aspects should be improved, in particular, rechecking the final assessment to better link the questions to the learning objectives, and to translate or add subtitles to videos which are currently only available in English.

An online course “**LSD Preparedness Pilot course**” was developed and delivered under the GfTADs umbrella in July 2020, in collaboration with FAO Regional Office for Europe and Central Asia (REU and the Friedrich-Loeffler Institute (FLI)). A total of 343 participants were enrolled. The audience comprised colleagues working for the relevant competent authorities from countries in Europe and Asia, LSD experts, international agencies, and vaccine manufacturers. The course was structured over four weeks and it included virtual learning (v-learning) modules, two

live webinars and an active discussion forum. 94% of the respondents to the feedback survey considered the course was relevant to their training needs; most highlighted the expertise and knowledge of the trainers and highly valued the content of the course. Suggestions for improvement of future courses were also gathered, such as increasing the number of pictures and videos

An **FMD Emergency Preparation course** took place in September 2020. Over 150 participants were enrolled from Finland, Ireland, Norway, Portugal and Sweden.

Due to the COVID-19 situation and travel restrictions, some activities have been postponed, in particular a National training in Germany that EuFMD agreed to support by providing an FMD expert and the Wildlife Surveillance course that was planned in Spain for spring 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

After the finalization of the **Quality Assurance manual** with the support of University of Nottingham (UK) in 2020, the EuFMD implemented a **Training Quality Management System (TQMS)** in the first half of 2020. It has adopted a body of procedures which apply quality assurance checks to the training events developed and delivered by the EuFMD.

In May 2020, the EuFMD finalized a risk assessment of the internal training processes, aimed at identifying the main risks linked with the training lifecycle. Subject matter experts from each Pillar were asked to identify the potential risks during the preparation of training events and suggest improvements. The outcome of the process consisted in a summary of the areas to monitor and an action plan to improve the quality of the trainings.

The EuFMD implemented quality checks at specific stages of the analysis of the needs, the development and design of content, the delivery of the training and final evaluation of the impact of the course. The purpose of these procedural checks is to ensure the risks impacting the quality are monitored and managed. The EuFMD created tools and guidance to provide training to staff involved and track completion of the quality checks implemented. Starting from September 2020, all EuFMD's training events are adapted according to the new TQMS framework.

Implementation of a Training Management System (TMS)

During the reporting period, the EuFMD developed a plan for the implementation of a Training Management System (TMS) to support the learning activities in countries across all three Pillars. Please refer to component 3.3.4.



TQMS is about procedures and TMS is about a system to be developed to keep track of the competences trainees acquire.

Accreditation of EuFMD training courses

The progress in the activity is related to the implementation of the Training Quality Management System (TQMS) on which the accreditation process is based and which will increase the potential interest from relevant bodies and training providers.

<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.	EuFMD online platform fully functioning and accessible.
	Training support services: open-access resources.	Knowledge Bank search functionality has been upgraded. Open-access Introduction to FMD course now available in French. Simulation Exercise virtual learning course run as a tutored module. Amendment of the modules into an open-access format is planned.	Open-access resources available, and more easily accessible once the KB search functionality has been upgraded.
1.1.2. Training programme	1.1.2.1. Implementation of a demand driven training programme covering identified priority areas in the fields of detection, emergency preparedness, emergency management and recovery for FAST diseases.	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.
1.1.3. TQMS	1.1.3.1. Quality assurance across the training programme and assessment of its impact.	Development of a Training Quality Management System in order to ensure the quality across the training programme; carry out regular evaluations of the impact of our training programme to improve the training design that can achieve higher capacity development at country level. This system will guarantee that EuFMD provides high-quality and high impact training.	Completion of a risk assessment to identify risks linked with training Quality Assurance completed in May 2020. Development of a TQMS finalized in first half of 2020.
	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 VetCEE dossier of Competence.	Development of a TQMS finalized in first half of 2020. A training Impact evaluation framework for regular analysis has been created.
		Progress is related to the implementation of the TQMS. The face-to-face meeting planned with VetCEE did not take place due to travel restrictions, and contacts were kept by e-mail.	EuFMD's courses to be delivered within the established competencies frameworks and/or to be recognized by different statutory bodies in Europe.

7. Issues for the Executive Committee attention

EuFMD's effort to adapt the courses offered in the training menu to online solutions to achieve the planned objectives is ongoing. However, the adaptation of some of the courses that have a strong field component presents certain challenges.

During the reporting period, two new online courses were developed and offered at no training credit cost. This, together with the postponement of some of the courses, has led to a training credits underspend compared to what it would be desirable in normal circumstances.

A lower percentage in the completion rate of several courses has been observed and preliminary discussions on this seem to indicate a relation with the impact that COVID-19 has on the veterinary services workload. This will be further explored through a survey that has been sent to participants who did not complete the courses.

8. Priorities for the next six months

Infrastructure

The upgrade of the EuFMD Virtual Learning Platform will take place in the last quarter of 2020. Additional training and recruitment of human resources to meet the anticipated needs from the ongoing expansion of virtual activities due to the COVID-19 pandemic will continue.

Open-access training resources

The Simulation Exercises virtual learning course will be revised and made available on an open-access basis. Additional resources will be developed and added to the Knowledge Bank. The new Knowledge Bank will benefit from increased visibility to improve uptake of its resources.

Training programme

A revision of the training menu will take place at the beginning of the autumn considering the necessary adaptations to online solutions and the postponement of courses with a strong field component towards the summer of 2021.

Several courses are planned in the calendar for the upcoming six months, including the theoretical part of the "Wildlife Surveillance course", "Psychological aspects and communication with the public during an outbreak workshop" and an FMD Emergency Preparation Course for Serbia and Montenegro.

Training Focal Points will be asked to allocate their training credits if this has not been done yet and a redistribution of unallocated training credits will be done among interested countries after consultation. A meeting with the Training Focal Points will be organized shortly to discuss this and other topics related to training and emergency preparedness.

TQMS

A constant monitoring of the TQMS quality assurance will be conducted. The EuFMD is providing training, guidance and instructions documents to all staff involved in training activities to develop efficient processes and improve the development and delivery of courses.

Training Management System (TMS)

Please refer to component 3.3.4.

Accreditation of EuFMD training courses

A workplan to gain accreditation for EuFMD courses will be developed in the next reporting period. EuFMD will be focusing on applying the improvements stemming from the adoption of a **Training Quality Management System (TQMS)** to increase the potential for course accreditation.

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 course “Organizing simulation exercises for animal disease emergencies” was a good achievement. The online format allowed the training to go ahead, maintaining the learning objectives and allowed participation of a higher number of veterinarians than initially foreseen.

Trainees who completed the courses provided positive feedback and in particular the quality of trainers, content developed and the practical assignments they had to complete. The last assignment was voluntary and consisted in the creation of a video to show how the simulation exercise planned during the course would actually be conducted. Four videos were received and they can be accessed on the EuFMD’s [YouTube channel](#).

EuFMD finalized the **Training Quality Management System (TQMS)**, which is expected to have a positive impact on the certification of future courses by external educational organizations and be also pivotal for the future development of a **Training Management System (TMS)**.

10. Budget (€) COMP. 1.1

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
Component 1.1	21.938	12.549	9.389
<u>Consultancy Operational</u>			
Component 1.1	34.943	29.226	5.717
<u>Consultancy Technical</u>			
Component 1.1	180.000	76.585	103.415
<u>Travel</u>			
Component 1.1	220.000	6.399	213.601
<u>Training</u>			
Component 1.1	86.000	14.631	71.369
<u>Contracts</u>			
Component 1.1	23.000	20.289	2.711
<u>Procurement</u>			
Component 1.1	15.000	3.812	11.188
<u>General Operating Expenses</u>			
Component 1.1	65.250	6.425	58.825
Total Direct Eligible Cost	646.131	169.916	476.215

Component 1.2 (Activity 2)

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. In Phase V, GET Prepared will be populated with guidance documents, assessment tools and best practices. The work is being done in collaboration with the MN contingency planners

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.

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>
Component supervisor	Maria de la Puente Arévalo	Pillar I Co-ordinator
Component manager	Koen Mintiens	Quantitative Risk Assessor
Training and networking	Nadia Rumich	Communication Officer
Modelling expert	Shankar Yadav	Quantitative Risk Assessor
EuFMDiS user support	Tiziano Federici	EuFMDiS assistant
EuFMDiS developer	Graeme Garner	EuFMD consultant
EuFMDiS developer	Richard Bradhurst	EuFMD consultant
GET prepared leader	Sally Gaynor	Emergency Preparedness Expert
Member State partners	Contingency planning focal points	n/a
ExCom oversight	L. Bogнар; O. Kalda	Executive Committee member
FAO officer	Eran Raizman	FAO REU

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 European countries that are not currently MN, EuFMD will seek EC agreement for their participation.

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 out by 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	
Mission reports	Leader of the Mission	Written report if required	EuFMD, NSAH, REU, 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 result	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

The list of good practice examples e.g. resources for stamping out have been identified in the UK (Humane Slaughter Association), Austria (University of Vienna), UK (University of Nottingham) and EU (Better Training for Safer Food) is progressing. Some resources will require adaptation for EuFMD purposes.

Existing resources have been identified for many of the 54 components of GET Prepared wall and a test version of the GET Prepared tool is close to completion.

Development of resources

Resource development is underway, with initial development focusing on continuing the work from Phase IV on risk communication and simulation exercises, and ongoing work under Component 1.4 on simulation exercises.

The following new resources have been developed on risk communication and simulation exercises:

- Planning Risk Communication on Foot-and-Mouth Disease: A guide.
- An on-line training course on how to organize simulation exercises. This course was delivered under components 1.1/1.4. Seven training modules, four assignments and multiple templates were developed for this course. Feedback from the course will be used to update the modules, with the aim of having the course available for free-access.
- An on-line questionnaire to assess the level of preparation in relation to simulation exercises.

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 modeling project, a preliminary model was developed and is in use in Spain. Some pilot studies were conducted to test the country-level and regional models for their evaluation. The pilot EuFMDiS models for Italy and Bulgaria have been updated with new datasets.

Progress has been made to include the wildlife and biosecurity components in the model by autumn 2020. The users of EuFMDiS were supported and involved in different activities (modeling exercise, hands-on training, and model installation) through virtual meetings and online forums either in a group or individually, as needed.

The EuFMDiS model has been endorsed by a third-party reviewer, concluding that the 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. However, the reviewer indicated some areas of improvement in the model, which have been addressed. The EuFMDiS manual has been updated and made more user-friendly. The within-herd part of the EuFMDiS model has been parameterized with new data, obtained from recent literature. The EuFMDiS model interface has been updated to summarize the key output variables so that users could use them immediately after completion of the simulations.

The EuFMDiS model is being developed for Classical swine fever.

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 and will be made available for the users shortly.

Working groups and meetings

An online meeting with contingency planners and risk managers will be organized in October 2020.

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

A new meeting with the private stakeholders is planned shortly.

The final draft of the Problem Statement was provided to private stakeholders’ representatives for consolidation by their members. This will be discussed at the next meeting, with the aim of finalizing the document and have it presented and discussed at the Open Session 2020 of the EuFMD, to be held in December 2020 online.

The organization of a workshop/simulation exercise with the private partners will be postponed to the first quarter of 2021 due to the rescheduling of the OS20 to December 2020.

	<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 3 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. Self-assessment questionnaire developed for simulation exercises.	Progress is in line with the indicator for two new resources developed per biennium, if a need is identified
1.2.2. FAST disease modelling	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.	A preliminary model for Spain has been developed. Contacts have been made with Switzerland and Turkey (THRACE region) for data collection to include them in the EuFMDiS modelling project. Progress in the development of the model with new feature (wildlife component and biosecurity component) has been achieved and work is progressing well towards the final outcome. Users are supported through online and virtual meetings. A manuscript was submitted to a peer-reviewed journal.	All activities are achievable within the given timeline: a) First version of EuFMDiS for Spain, is ready. Switzerland and Turkey THRACE region to be included in the modeling projects in coming months. b) EuFMDiS should be adapted to CSF by October 2020. c) Pastures pathway, wildlife component, biosecurity component and post-outbreak management to be available in the model in the next months. d) In addition to one-to-one virtual meetings, six users support activities have been provided since the beginning of phase V: two webinars, three exercises with instructions to complete them and one face-to-face meeting.

1.2.3. Emergency Prep Network	1.2.3.1. Online network	<p>Development of an online page to host the new Emergency Preparedness Network, integrating the previous Modelling, Vaccination and Contingency Planning networks.</p> <p>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.</p>	<p>The Emergency Preparedness Network has been developed and will be made available to the users shortly.</p>	<p>a) Online site developed and participants signed-up shortly with some months of delay in relation to indicator.</p> <p>b) No resources made available through the network so far.</p>
	1.2.3.2. Working groups and meetings	<p>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</p>	<p>An online meeting has been planned for October 2020.</p>	<p>A meeting will be held with contingency planners from EuFMD MN before December 2020.</p>
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	<p>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.</p>	<p>The discussion forum with the private sector stakeholders has been established. Four meetings took place.</p> <p>A Problem Statement document was drafted to be presented at the OS20</p>	<p>a) A governance structure for the PPP will be discussed October, to include public stakeholders and academ in the debate.</p> <p>b) A first simulation exercise planned for Q1 2021</p>

7. Issues for the Executive Committee attention

EuFMDiS

In order to progress in the development of a Pan-European model, it would be useful to include additional data such as, for example, information already collected and registered by countries (e.g. import/export of animals/goods in TRACES).

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 should 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 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 the completion of an open-access online course on simulation exercises.

The FMD Emergency vaccination guidance will be finalized.

EuFMDiS

To develop the EuFMDiS Pan-European model, new member nations (such as Switzerland and Turkey (THRACE)) will be included in the project. Various scoping virtual meetings will be organized to bring other MN in the modeling project (e.g. Baltic countries).

New features such as post-outbreak management component and shared pasture component will be added in the model. For this purpose, several meetings will be conducted to coordinate and collaborate with the stakeholders for data collection. Update of some of the current models will be carried out with new datasets through coordination with MN. 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.

The EuFMDiS team will continue supporting training for the users through webinar or virtual meetings for better use of the model.

Emergency Preparedness Network

Progress in this sub-activity will be a priority during the following months and resources, such as videos, documents or live webinars, will be made available to achieve the established objectives.

PPP

The dialogue with the private stakeholders needs to be re-established as soon as possible to prepare their contribution to OS20 and to organize a simulation exercise in Q1 2021.

9. Success stories and outputs

GET Prepared

A test version of the online GET Prepared tool is close to completion.

EuFMDiS

It is noteworthy that 10 member nations have already participated in the EuFMDiS modeling project and these MNs are applying the modeling tool in their own context. Two other MNs (Switzerland and Turkey) have agreed to participate in the project and are in the process of collecting data, whereas others (Estonia, France and Belgium for instance) have expressed interest. Interestingly, specific questions were received from a member nation to support their policy planning and the EuFMDiS model was used to provide answers.

To reach out to the broader scientific community for the demonstration of EuFMDiS model development and its uses, a manuscript describing the theoretical aspects of EuFMDiS was submitted to a peer-reviewed journal. Additionally, the EuFMD will host a workshop during the Society for Veterinary Epidemiology and Preventive Medicine Annual Conference (SVEPM) 2021, for the broader audiences to raise awareness about the use of this model and its acceptability for the emergency preparedness of the FAST diseases.

PPP

The Problem Statement with concerns and proposed solutions on FAST disease control of the private stakeholders is close to completion. It will be presented and discussed at OS20.

10. Budget (€) COMP. 1.2

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
Component 1.2	11.700	6.757	4.943
<u>Consultancy Operational</u>			
Component 1.2	34.943	29.226	5.717
<u>Consultancy Technical</u>			
Component 1.2	80.000	164.093	-84.093
<u>Travel</u>			
Component 1.2	60.000	21.669	38.331
<u>Training</u>			
Component 1.2	43.000	15.298	27.702
<u>Contracts</u>			
Component 1.2	50.000	31.660	18.340
<u>Procurement</u>			
Component 1.2	-	-	-
<u>General Operating Expenses</u>			
Component 1.2	21.000	170	20.830
Total Direct Eligible Cost	300.643	268.873	31.769

Component 1.3 (Activity 3)

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

1.3.1 Beatriz Sanz Bernardo

1.3.2 David Mackay

1.3.3 David Mackay

1.3.4 David Mackay

1. Background

The EuFMD Open Session meeting in 2018, “**Increasing Global Security in the supply of FMD vaccines**” attracted huge interest, reflecting the degree of concern that lack of availability of vaccines is constraining progress at every level.

The activities in this component 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 is **scoping 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>
Component supervisor	Keith Sumption	Executive Secretary
Component manager	David MacKay	Vaccine Security Specialist
Training and networking	Nadia Rumich	Communication Officer
	Beatriz Sanz Bernardo	Collaborator from TPI
Member State partners		n/a
ExCom oversight	H. Roest	Executive Committee member
FAO officer	Eran Raizman	FAO REU

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

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	
Website report	Component manager	Written report	Website	
Mission/Meeting reports	Leader of the Mission/ Main facilitator of the meeting	Written report	EuFMD, NSAH, REU, 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:

Scoping work to understand the approach to emergency vaccination in MN

A questionnaire relevant to emergency vaccination (including their opinion about a pre-qualification system) was developed and circulated to Focal points from European countries to be forwarded to their contingency planners and/or risk managers.

Regular reporting and guidance to Member Nations

The report from the first meeting of the PPSP “Explore options to improve security of vaccine supply against

Foot-and-Mouth and other similar transboundary diseases” held in FAO, Rome, 22-23 January 2020 has been made available online and Focal points from EuFMD Member Nations informed.

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

PPSP regular meetings

The main actions agreed at the January 2020 meeting are listed below, with their follow-up:

- 1) Further development of a Multi-Stakeholder Platform (MSP), through consultation between FAO and key private sector associations:

Informal discussions have been held within EuFMD/FAO and stakeholders about the type of PPSP that could best deliver the outcomes required to improve vaccine security.

- 2) Establish a working group on vaccine pre-qualification and a second group on estimating vaccine demand and identifying the impediments to vaccine use:

The Technical Working Group on Pre-Qualification (PQTAG) was established in March 2020 and held four meetings between March and June. The group developed a proposal describing a technical approach to pre-qualification of FAST vaccines, relating specifically to vaccines against FMD in the first instance.

- 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:

Industry stakeholders have agreed to prepare problem statement on the Nagoya Protocol detailing the practical issues that they consider this protocol raises and how these issues might be addressed within the context of the PPSP.

- 4) A more systematic approach to engaging private sector in international working meetings relating to surveillance or vaccination strategies and their impacts:

This topic has not yet been addressed.

An online workshop ‘Vaccine security: Assuring the supply of quality vaccines’ will be held in early December as part of the Open Session 2020. The workshop will bring together the PPSP members to review feedback from the consultation on the PQ proposal and agree the way forward with this project. The workshop will also review actions (1) to (4) above to receive reports on progress. The objectives for the PPSP for the next six months will be agreed.

Development of guidance papers and studies

In August 2020, the PQTAG circulated the document ‘A pre-qualification procedure for vaccines against FAST diseases’ for a six-week period of consultation involving participants who attended the first meeting of the PPSP meeting in Rome. Work has started within EuFMD to develop the business case for establishing an effective and efficient PQ system to be overseen by EuFMD. The business case will define how PQ could fit within a wider framework of assured supply and will further develop the project plan outlining the options for delivery and the ways in which the PQ system can be made sustainable.

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 first key milestone of the project plan for a PQ system has been delivered in terms of publishing the document ‘A pre-qualification procedure for vaccines against FAST diseases’. The PQTAG included representatives of OIE, WHO, industry and regulators who reached agreement on how best the overall approach followed in the WHO Vaccine PQ procedure could be adapted to the particular requirements and environment for veterinary vaccines.

Following the workshop in December 2020, the project plan will be developed to move from the pre-inception to the inception phase. As part of this plan, a decision will be made on how to move forward from planning to implementation.

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-activity level	Description	Progress in the current period	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.	A questionnaire was prepared and circulated. Preparation work has been made for in-group discussion following the questionnaire to identify barriers and share good practices to be prepared for emergency vaccination.	The final outcomes of the questionnaire are expected to be ready before the end of the year.
	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.	Reporting on progress with the PPSP will take place at the workshop planned for December 2020	The PPSP meeting report on the meeting held in Rome January 2020 was published.
1.3.2. PPSP	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.	Planning for a workshop in December 2020 has progressed.	A workshop of the PPSP will take place in December 2020.
	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 was published for consultation.	The technical proposal for PQ has been published and work is progressing to develop the business case including options for delivery.
	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.	PQ TAG published proposal for PQ procedure.	PQ TAG established and operational. Technical specification for the procedure published for consultation.

<p>1.3.3.2. Assured emergency Supply Options (AESOP) for FMD vaccines.</p>	<p>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). 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>Business case under development defining how PQ will fit within overall AESOP scheme</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 that a proposal for the technical specification of PQ procedure for FAST vaccines has been published by the PQTAG for consultation.

The Committee should note that the proposal includes the creation of a Standing Committee for Pre-Qualification to oversee the operation of the procedure. Detailed proposals in terms of composition, terms of reference and relationship to other committees are being further developed and will be brought to the Executive Committee for discussion as part of the inception phase of the project.

8. Priorities for the next six months

Scoping work

Ongoing: Development of a questionnaire to gain a better understanding of 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. Key people in the different countries will be contacted during the following months. This will be done remotely (telephone, online meetings) and taking the opportunity to interview different risk managers when possible.

Development of proposal for PQ procedure

Develop the business case for the PQ project including options for delivery and ways in which the PQ system can be made sustainable.

9. Success stories and outputs (communication products)

The PQTAG published a discussion document on a pre-qualification procedure for FAST vaccines which represents a practical approach to pre-qualification, adapted to the specific requirements of the veterinary domain.

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

10. Budget (€) – Comp. 1.3

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
Component 1.3	21.938	12.549	9.389
<u>Consultancy Operational</u>			
Component 1.3	34.943	29.226	5.717
<u>Consultancy Technical</u>			
Component 1.3	50.000	22.573	27.427
<u>Travel</u>			
Component 1.3	40.000	-	40.000
<u>Training</u>			
Component 1.3	25.000	-	25.000
<u>Contracts</u>			
Component 1.3	80.000	-	80.000
<u>Procurement</u>			
Component 1.3	-	-	-
<u>General Operating Expenses</u>			
Component 1.3	10.000	-	10.000
Total Direct Eligible Cost	261.881	64.348	197.533

Component 1.4 (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 Omid Nekouei*, Enrico Mezzacapo

1.4.2 Goran Filipovic, Mirzet Sabirovic

1.4.3 Esa Karalliu, Kiril Krstevski

**Left the EuFMD in August 2020*

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 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 fill knowledge gaps identified by 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>
Component supervisor	Maria de la Puente Arévalo	Pillar I Co-ordinator
Component manager	Goran Filipovic (from March 2020)	Short Term Placement
Training and networking	Nadia Rumich	Training and Networking
	Kiril Krstevski	EuFMD Balkans Network Leader
	Mirzet Sabirovic	Preparedness Planning Expert
	Omid Nekouei	Risk assessment Specialist
	Esa Karalliu	Short Term Placement
	Enrico Mezzacapo	EuFMD Programme Specialist
Member State partners	South Eastern Europe focal points	n/a
ExCom oversight	C. Dile; Z. Atanasov	Executive Committee member
FAO officer	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
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	
Website report	Component manager	Written report	Website	
Workshop/Mission reports	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
1.4 SEE	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 (January-March and April-June) by Thrace countries was 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 framework for the surveillance data registration was launched. 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 (export error function), user friendly search of old data). The Experimental Zooprophyllactic Institute of Lazio and Tuscany (IZSLT), Rome, Italy, is hosting the tool. In the future, the framework will allow the production of automatic results/reports when new data is uploaded during every cycle. 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 reporting period. In particular, the adaptation took place for Bulgaria and Greece, who expressed interest in extending the use of the model.

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

In relation to the adaptation of Thrace model to other diseases, Turkey informed the EuFMD in April 2020 that they do not need an adapted model for PPR or SGP at the moment, but will continue to use it for FMD, with some minor adaptations (Qurban Festival monthly scores and Istanbul province as ‘high risk’ versus the other four provinces as ‘low risk’). Bulgaria and Greece agreed on the methodology and parameters for adaptation of Cameron model to other FAST diseases. However, some of the parameters used for Greece are still pending validation from the side of the Greek veterinary services.

During the Management meeting held online in July 2020, these developments were presented to all South Eastern Europe (SEE) countries.

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 organized in July 2020. The following objectives were outlined:

- 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 in the second part of 2020.

The activities agreed to be implemented in following months include:

- Support to the THRACE region on updating the Cameron model and its integration in THRACE database;
- Progress with the preparation of a call for research proposals targeting the areas identified through a questionnaire on Policy Evidence Needs Assessment and National Stakeholders Networks in the Western Balkan;
- Organization of several national simulation exercises and one multi-country simulation exercise for Serbia, Bosnia & Herzegovina and Croatia;
- Organization of an online workshop on laboratory contingency planning;
- Extension of reagents existing in the Diagnostic Bank to other diseases.

To achieve improved coordination of the activities in the region, Dr. Rasmussen, from the European Commission, Drs. Hovari and Beltran Alcrudo (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

The questionnaire on Policy Evidence Needs Assessment and National Stakeholders Networks in the SEE countries was developed. Interviews with the focal points of these countries were conducted to gather feedback from the countries' veterinary services, laboratories, national universities and research institutes on the evidence needs areas for targeted research to support the national veterinary authorities' policy and decision making.

The EuFMD activity is specifically aimed at promoting the collaboration between these institutions by providing small research grants for applied research studies. These studies should facilitate establishment of national stakeholders' networks for provision of evidence and supporting the national authorities control programmes during emergency and non-emergency times.

Results of the questionnaire and the interviews, stratified across four main themes (surveillance, disease control, laboratory capabilities, and legislation and practices), and have identified a series of priorities.

All participants in the management meeting in July agreed to the identified priority areas and diseases, and the need to progress with the preparation of a call for research proposals targeting the identified priority areas.

The first research grant call was launched in September for circa €40,000 to support up to five proposals to establish national networks to connect veterinary services, laboratories, research institutions, private sector and farmers. The project should be either desk-based and/or field-based with the geographical focus in the SEE countries supported through component 1.4.

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

Training activities

The initially planned course on "How to Organize a Simulation Exercises for Animal Diseases" was adapted to an online format and was delivered in June. This was particularly relevant for SEE countries and the online format allowed to increase the number of participants trained.

Simulation exercises

A tabletop simulation exercise (TTX), with remote assistance by the EuFMD, was conducted in Montenegro to test the national CSF Contingency plan. Various stakeholders from the veterinary services in the country participated in the exercise. This event was a pilot project to test a new concept of partially online simulation exercises using a software designed for emergency simulation. This software was used to deliver injects to the players to their devices (mobile phones, computers, etc.). The software (Conductrr©) simulated a real situation, helped to keep participants focused and enhance interaction among participants. Other participants (evaluators, observers and moderators) followed the activities from a distance through the software and via video link.

A comprehensive evaluation report summarizing the outcomes from the exercise was prepared and a short video from the exercise are available on the EuFMD v-Learning platform. Feedback from the participants was very positive.

An FMD simulation exercise in Albania was initially planned to take place in June, but had to be rescheduled. The exercise was split in two events: A tabletop exercise, which was held on 22 September 2020 and a field exercise (drills on a farm) that will be organized in May 2021.

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 during the last week of February 2021.

In-country assistance

The participation of two people from Moldova in a laboratory training course to be provided by ANSES Institute in France was postponed due to travel restrictions.

Examples of work instructions and standard operational procedures (SOPs) for FMD Albanian contingency plan implementation were developed for the simulation exercise preparation, as the review of the Albanian system to respond to animal health emergencies and contingency plan for FMD highlighted some gaps.

In-country assistance component will support operational aspects of FAST contingency planning and response in SEE countries and promote harmonization of the animal health emergency strategy management and exchange of good practices among SEE countries.

At the Management meeting in July, it was agreed to assist countries with the development of CP SOPs/working instructions when these are needed and identifying existing SOPs in the different countries that can be used as a model for others.

To follow up on management meeting conclusion, a survey to collect information on existing SOPs/protocols/methodologies in SEE countries has been prepared. Results of survey will help identify areas and countries for further in country assistance activities.

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

First reagent deliveries in essential reagents for FMD PT participation and ensured continuous capacity for on-time FMD diagnosis begun in May 2020. Reagents were distributed to six out of seven scheduled destinations. The last delivery (N. Macedonia) is still pending and IZSLER reported that restrictions in available transport options are the cause of this significant delay.

One part of the reagents (NSP ELISA kits) close to expiry-date was delivered to Greece and Bulgaria to be used for serological testing, as part of the THRACE surveillance programme.

The proposal for reagent re-stock for the second annual cycle, including extension to PPR and LSD/SPGP was presented at the online Management Meeting and approved by the National Focal Points of the beneficiary countries. Shortly after, detailed specification for re-stocking was prepared and the reagent selection process was based on the principles of cost-effectiveness and proven validity. The system was revised and proposals for improvements drafted.

<i>Sub-activity level</i>	<i>Description</i>	<i>Progress in the current period</i>	<i>Progress overall towards biennium indicator</i>	
1.4.1. RBS	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. The new database was launched and the Thrace model was adapted to other FAST diseases (PPR SGP). Some parameters were adjusted for Turkey. A new database was developed to replace Google Fusion, to ensure consistency and accuracy of data entry and to add additional functionalities.	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.	Bulgaria and Greece agreed on the methodology and parameters for adaptation of Thrace model to other FAST diseases (PPR and SGP). The model was adapted for both countries. However, validation for some of the parameters by the Greek authorities is pending.	Western Balkan countries will be consulted to understand if there is an interest to organize a virtual workshop on RBS.
1.4.2. Co-ordination activities	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 second SEE Management Meeting of the year was organized online in July 2020.	Two management meetings were organized in 2020, as foreseen. The next SEE management meeting will take place at the beginning of 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.	Evidence needs areas for targeted research support were identified by contacting the SEE countries veterinary authorities (survey and interviews) The first research grant call was launched in September for circa €40,000 to support up to five proposals to establish national networks to connect veterinary services, laboratories, research institutions, private sector and farmers.	The deadline for submission of proposals is the 23rd October 2020. Once the proposals have been selected and the 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.
1.4.3. Emergency	1.4.3.1. Training activities	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	The “How to Organize a Simulation Exercise for animal diseases workshop, initially scheduled to take place on 24th- 27th of March 2020 was converted to an online course delivered in June 2020. Every	22 trainees from SEE countries (including Croatia, Romania and Ukraine) were enrolled.

	<p>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.</p>	<p>SEE country was invited to nominate four people to attend the online course.</p>	
1.4.3.2. Simulation exercises	<p>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...).</p>	<p>TTX was organized in Montenegro in June 2020. TTX was organized in Albania in September 2020. A field simulation exercise (drills on a farm) in Albania will be organized as soon as the Covid situation allows it. A joint multi – country simulation exercise for Croatia, Bosnia & Herzegovina and Serbia has been agreed with the countries, to be held in the end of February 2021. The exercise will be organized together with FAO REU.</p>	<p>Two national simulation exercises have been supported and two more have been agreed (TTX in Serbia and drills in Albania). Discussions with SEE countries will take place to support up to four additional exercise by the end of the biennium. One multi-country simulation exercises has been agreed for February 2020 and one additional one needs to be agreed with some SEE countries.</p>
1.4.3.3. In-country assistance	<p>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</p>	<p>Examples of work instructions and standard operational procedures (SOPs) for FMD Albanian contingency plan implementation were developed as reference material for simulation exercise. These procedures have been used as a base for production of future national SOPs.</p>	<p>Two countries (Moldova and Albania) expressed the need to receive in-country support. A survey to collect information on existing SOPs/protocols/methodologies in SEE countries was prepared. Results of the survey will identify areas and countries for further in country assistance activities.</p>
1.4.4. Diagnostic Bank	<p>1.4.4.1 Dev and maintenance of a diagnostic bank of reagents for FAST available for countries in the region.</p> <p>Establishment of a diagnostic bank of reagents for FAST diseases available for the countries in the region.</p>	<p>The diagnostic bank has been set and ready-to-be delivered FMD reagents are now stored at IZSLER (Brescia, Italy) according to the development plan for the first year. Reagents were delivered to six countries for PT and continuous capacity for FMD diagnosis Plan for the second annual cycle re-stock was prepared</p>	<p>Diagnostic bank already established for FMD. Diagnostic bank for FMD will be extended to cover additional diseases (PPR, LSD and SPGP)</p>

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.

Uninterrupted maintenance of the diagnostic bank assumes normal activity of the FAO/OIE Reference Laboratory in Brescia (IZLSER).

Delivery of reagents from Brescia to one of the scheduled destinations (N. Macedonia) is still pending as a result of the ongoing COVID19 crisis. Alternative solutions to prevent such outcomes in future are needed (e.g. dispersed storage, locations, including some in the region).

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 that hosts the database where surveillance data are registered in order to have a more user friendly system to obtain the confidence of freedom from the three diseases.

Regional coordination

The next management meeting will be organized in February 2021.

National networks

The research proposals received as a response to the call opened in September 2020 will be reviewed and those that fit better the objectives of strengthening the national networks between veterinary services, laboratories, research institutions and universities will be selected. Letters Of Agreement will be signed with the selected institutions.

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).

To follow up on management meeting conclusions, a survey to collect information on existing SOPs/protocols/methodologies in SEE countries was prepared. Results of the survey will serve to identify areas and countries for further in-country assistance activities.

Identified areas where SOPs/ procedures/methodologies are missing will be further tackled either by:

- analyzing existing SOPs/ procedures/methodologies in other SEE countries to identify the best model to be used and promote (exchange of documents of interest by the countries), even if procedures are existing they can be improved by using the best models ; or
- preparing learning materials for establishment of SOPs/ procedures/methodologies (videos, PPTs, documents) to be shared on e-learning platforms and channels for wider use (also having in mind travel restrictions).

Diagnostic bank of reagent

Begin procurement process, as per the developed plan. Fine-tune and incorporate solutions for improvement of the system, considering the conclusions from the first-year revision.

9. Success stories and outputs

Significant progress has been done in relation to the Thrace project, with the development of a new database to register surveillance data. The new database is user-friendly, ensures consistency and accuracy of data entry and incorporates some useful search and reporting functionalities. The model was also adapted to PPR and SGP for Bulgaria and Greece.

A call for research proposal was launched in September 2020 to provide grants to up to five proposals with the objective to establish national networks in SEE countries to connect veterinary services, laboratories, research institutions, private sector and farmers.

A new concept to organize simulation exercises online or partially online with the assistance of a crisis simulation software has been developed and tested in two countries (Montenegro and Albania) The feedback from this first experiences was excellent with successful achievement of the exercise objectives. Additional simulation exercises in SEE countries will be supported this way, particularly while the travel restrictions are on-going.

10. Budget (€) COMP. 1.4

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
Component 1.4	27.024	15.445	11.579
<u>Consultancy Operational</u>			
Component 1.4	34.943	29.226	5.717
<u>Consultancy Technical</u>			
Component 1.4	223.600	184.603	38.997
<u>Travel</u>			
Component 1.4	84.000	4.591	79.409
<u>Training</u>			
Component 1.4	87.000	11.746	75.254
<u>Contracts</u>			
Component 1.4	35.000	4.873	30.127
<u>Procurement</u>			
Component 1.4	120.000	3.119	116.881
<u>General Operating Expenses</u>			
Component 1.4	58.000	8.420	49.580
Total Direct Eligible Cost	669.567	262.024	407.543

Component 1.5 (Activity 5)

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 41st 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>
Component supervisor	Keith Sumption	Executive Secretary
Component manager	Etienne Chevanne	Risk Management Specialist
Training and networking	Nadia Rumich	Training and Networking
Member State partners		n/a
ExCom oversight	H. Roest	Executive Committee member
FAO officer	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</i>
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	
Reports established in the LoAs	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).

Component (Activity)	Objective	Narrative	Expected result	Monitoring	Evaluation	Assumptions and risks
1.5 Applied research	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 call for application was issued in French and English to support up to **three proposals to evaluate the performance of surveillance for clinical FMD among small ruminants** (funding of circa **€50,000** was available). Project proposals had to be field-based with the geographical focus in European Neighborhood countries (North and West Africa, the Middle East, and the South East European Neighborhood).

Twenty-one applications from 14 countries were received. Two technical experts reviewed the proposals in a two-stage process and three studies were retained, as follows:

- « Compréhension et corrélation de la surveillance clinique et prévalence de la fièvre aphteuse chez les petits ruminants au Cameroun »
- “Evaluating the role of small ruminants in the spread and endemicity of Foot-and-mouth disease in Northern Nigeria”
- “Retrospective evaluation of clinical surveillance for foot-and-mouth disease in small ruminants at some high risk areas in Egypt”.

1.5.2. Meetings for co-ordination and communication

Regular meetings of the STC, SCSAR and SCBRM

Standing Technical Committee online meetings were held in June and September 2020 (four meetings scheduled during the year) with the last one focused on the Open Session 2020. A SCBRM meeting was held in June and one scheduled for November with main focus on revision of Minimum Biorisk Standards and biosecurity trainings for laboratories A SCSAR meeting will be held on the margins of the OS20.

EuFMD Open Session

Because of the COVID-19 pandemic, the EuFMD Open Session (OS) 2020 initially planned for the end of October 2020 in Marseille, has been restructured in a virtual format, and delayed until December 2020

The OS20 will be organized in different virtual sessions dealing with (i) Measuring animal movements and drivers for FAST risk mapping, (ii) from risk to actions: making them happen, (iii) vaccine security and critical resources for emergency management and (iv) resilience to long term FAST crises: the importance of animal welfare, supply chain and business continuity. The focus will remain FMD but similar TADs will be also considered. A website with a detailed description of the sessions has been designed during the reporting period. <https://www.eufmd.info/os20faster>

For each session, keynote presentations and short pre-recorded interventions will be proposed. A space for e-posters will be also available, and a call for abstract submission has been issued (deadline for submission: 20 October).

Following the OS20, workshops will be organized to reflect, discuss and work on the conference outcomes and a final closure day was agreed, to share the conclusions of the OS20. The workshops proposed and linked with the EuFMD workplan are:

- Vaccine security. Assuring the supply of quality vaccines (first week December- before OS20);
- Risk Mapping and Forecasting (19 January 2021);
- Special Committee for Surveillance and Applied research (SCSAR) (22 January 2021);
- EuFMDiS for improved preparedness (27 January 2021);
- Capacities for disease management: building business environments for supporting disease control and livelihoods (28 January 2021).

<i>Sub-activity level</i>	<i>Description</i>	<i>Progress in the current period</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.	FAR call for proposal was issued and 21 applications received. Three proposals were finally retained.	The next call for proposals will take place before the end of the year.
	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 three retained proposals is ongoing.	Administrative process ongoing
1.5.2. Meetings	1.5.2.1. Regular meetings of the STC, SCSAR and SCBRM	Meeting will be regularly organized to 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 meeting in September 2020. SCBRM online ting in June 2020. The next meeting will take place in November 2020.	a) Four meetings of the STC have taken place in 2020. b) c) SCBRM will have met twice by the end of 2020.
	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) is planned for December 2020-	

7. Issues for the Executive Committee attention

The COVID19 global situation has impacted the organization of the Open Session 2020. Restructuration is now complete into a virtual event, 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:

- Improving the policy support toolbox for economic analysis of FAST control strategies;
- Study to define guidance "criteria" on when to vaccinate against FMD, LSD, sheep pox and or/PPR;
- Studies on the scale of diagnostic bank requirements for the EU for FAST disease crises;
- Review of the relevance of COVID19 track and trace and other tools for their relevance to future management of FAST diseases (e.g. tracing vehicle movements);
- Surveillance systems performance evaluation (comparison and application of tools);
- Operational optimisation of environmental sampling.

Validation 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>			
Component 1.5	18.284	10.619	7.665
<u>Consultancy Operational</u>			
Component 1.5	34.943	29.226	5.717
<u>Consultancy Technical</u>			
Component 1.5	-	-	-
<u>Travel</u>			
Component 1.5	72.000	15.198	56.802
<u>Training</u>			
Component 1.5	40.000	4.191	35.809
<u>Contracts</u>			
Component 1.5	200.000	22	199.978
<u>Procurement</u>			
Component 1.5	-	-	-
<u>General Operating Expenses</u>			
Component 1.5	25.000	1.346	23.654
Total Direct Eligible Cost	390.227	60.601	329.626

Component 1.6 (Activity 6)

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>
Component supervisor	Maria de la Puente	Pillar I Co-ordinator
Component manager	Kiril Krstevski	EuFMD Balkans Network Leader
	Francesca Renzetti	EuFMD Programme Specialist
Training and networking	Nadia Rumich	Training and Networking
Member State partners	Beneficiary countries	n/a
ExCom oversight	S. Zientara	Executive Committee member
FAO officer	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>
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	
Reports established in the LoAs	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.

Component (Activity)	Objective	Narrative	Expected result	Monitoring	Evaluation	Assumptions and risks
1.6 PTS	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

The following non-EU countries have registered and will be supported to participate in PTS 2020: Belarus, Moldova, Ukraine, Kosovo*, Switzerland and Norway. Bosnia and Herzegovina did not register. The laboratory representative confirmed that they did not participate due to work overload and limited staff availability, rather than reagent availability.

The EuFMD has informed all laboratories that it will support those which lack specific reagents by sending what is required (linked to the maintenance of the diagnostic bank).

Nominated staff from the National Laboratory in Moldova will be trained in PCR. The training is scheduled for April/May 2021 in ANSES. The coordinated ANSES / EuFMD PTS follow-up activities triggered this training request.

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

PT samples were sent to all beneficiary countries that registered to participate in PT 2020 (Belarus, Moldova, Ukraine, Kosovo*, Switzerland and Norway). Three of these countries (Belarus, Moldova and Ukraine) also received the essential reagents from the diagnostic bank to test the PT samples. All registered countries responded and reported back their PT-results to EU-RL. The annual EU-RL meeting will be held as an online event this year (24-25 Sept), due to the COVID19 crisis.

Sub-activity level	Progress in the current period	Progress overall towards biennium indicator
1.6.1. Support	1.6.1.1. Support to eligible countries to participate in PTS for FMD NRL	Belarus, Moldova, Ukraine, Kosovo*, Switzerland and Norway received PT samples and reported their results to EU-RL
	1.6.1.2. Support to eligible countries to assist the annual EU-RL meetings	No activities planned for the reporting period
		Six out of seven eligible countries undertook PT testing and reported back their results
		The annual EU-RL will be held as an online event on 24-25 September

7. Issues for the Executive Committee attention

No issues.

8. Priorities for the next six months

Follow up with countries once returned PT results are analyzed by the EU-RL (ANSES). Close coordination with EU-RL to identify source of problems and propose tailored support under available mechanisms for each laboratory with non-conforming PT results.

9. Success stories and outputs (communication products)

All participating laboratories submitted their results to EURL on time. Provision of essential reagents and training opportunities have been acknowledged as important factors for maintaining relevant FMD diagnostic methods functional and aligned with international standards.

10. Budget (€) COMP. 1.6

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
Component 1.6	2.194	965	1.229
<u>Consultancy Operational</u>			
Component 1.6	34.943	29.226	5.717
<u>Consultancy Technical</u>			
Component 1.6	-	2.449	-2.449
<u>Travel</u>			
Component 1.6	-	-	-
<u>Training</u>			
Component 1.6	-	-	-
<u>Contracts</u>			
Component 1.6	35.000	32.125	2.875
<u>Procurement</u>			
Component 1.6	-	-	-
<u>General Operating Expenses</u>			
Component 1.6	-	-	-
Total Direct Eligible Cost	72.137	64.765	7.372

Component 1.7 (Activity 7)

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

Omid Nekouei

Sub-activity level manager

1.7.1 Maria Teresa Scicluna, Melissa Mclaws

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.

The activities carried out under component 1.8 are included in **component 7** of Pillar I. This new 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 format of the Global Monthly Report will be transformed into an on-line map-based tool 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 establishment of a network of **Global Intelligence Focal Points** (GIFP) began during the last phase, in order to improve understanding of the FMD situation for the different virus pools. In phase V, key informants will also be used to obtain inputs such as local interpretation of public data, information on surveillance and control measures carried out in endemic countries or information on market prices.

Whenever a relevant knowledge gap in assessing the risk of introduction of FAST diseases into the European neighborhood is identified by the Special Committee on Surveillance and Applied Research (SCSAR), funds will be allocated to **research studies** that can generate that information (e.g. livestock movement studies in priority countries or regions). Funding of this type of studies will be done in co-ordination with component 5 of Pillar I, Pillar II and III, as relevant.

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>
Component supervisor	Maria de la Puente Arévalo	Pillar I Co-ordinator
Component Manager	Omid Nekouei	FMD Risk Management Specialist
Training and networking	Nadia Rumich	Communication Officer
	Maria Teresa Scicluna	FMD Laboratory Specialist
	Melissa McLaws	FMD Risk Management Specialist
	Kees Van Maanen	FMD Laboratory Specialist
	Etienne Chevanne	FMD Risk Management Specialist
Key informants network	Key informants (people/institutions)	n/a
ExCom oversight		
FAO officer		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

<i>Reporting format</i>	<i>Responsibility</i>	<i>Output</i>	<i>Distribution</i>	<i>Sent out by Network and Training Support Officer</i>
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	
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

During the reporting period, baseline surveillance data on FAST diseases was collected through country cards (standard data collection tool). In collaboration with the Pillar II team, these cards are currently being shared with the focal points of the related European neighbouring countries in order to validate and integrate them.

Co-ordination is maintained with Pillar I and III to ensure that relevant risk information are gathered by EuFMD team or through EuFMD activities globally, for the use of the risk assessment model.

Disease risk assessment and forecasting

Under the EuFMD-IZSLT agreement, a tool has been developed to formulate a hazard score of the FMD endemic countries. The aim of the tool is not to perform a risk assessment but to derive valuable information at country level to better characterize the hazard and to use this integrative piece of information for future risk evaluations. The hazard score is based on the level of implementation of the activities to support the FMD prevention, surveillance and control systems that each country has currently put in place

A flexible survey questionnaire for rapid risk assessments was designed to be administered to selected experts from the Member Nations of interest. Experts will be provided with criteria (i.e. baseline data including level of infection in the source country, Self-Assessment Tool score, country cards) to be considered in assigning likelihood to each entry pathway.

The current phase of this project focuses on the likelihood of introduction of FMDV from Northern African countries (Algeria, Morocco, and Tunisia) to Spain and France. The risk assessment methodology was reviewed by two experts from the Spanish public health sector, and the Spanish animal health experts to be consulted for the risk assessment have been identified. In the next phases, the regular expert elicitation relying on this flexible risk assessment model will enable to assess the baseline risk of introduction of FAST diseases and will highlight potential risk changes based on changes in input parameters and experts' evaluations.

On-line reporting tool

A concept note for the design and development of a pilot user-friendly, dynamic and open-access online dashboard that would display the latest FMD outbreaks and on-going viral dynamics in the endemic pools, has been coordinated with Comp. 3.1 and discussed with the WRLFMD during the previous quarter. It was foreseen that the dashboard would supplement the joint Quarterly FMD Global Report by providing near real-time and historical FMD surveillance data, using publicly available data as well as data from FAO/EuFMD, WRLFMD, and other international partners, and will be a communication, decision-support and reporting tool for the global FMD surveillance. It was expected to contribute to the increase of sample submissions to the World Reference Laboratory for FMDV characterization.

During the reporting period, and based on the discussions with the EuFMD, the WRLFMD has released a static but temporary online dashboard displaying basic information to supplement the joint quarterly report. The WRLFMD also proposed a prototype version of a dynamic online dashboard. The EuFMD is discussing internally to identify parameters that could be collected through its activities (risk assessment model, PRAGMATIST, PCP-FMD progress monitoring, vaccination and elements of the country cards) and of use in a joint online dashboard with WRLFMD.

Generation of information

A proposal for funding of a nationwide animal mobility survey from the government Services in Egypt was received by the EuFMD. The funding was accepted and the proposal is under current review by CIRAD.

Quarterly FAST report have been published regularly for Member countries and Neighbouring regions. The reports include list of FAST events occurred in European neighbourhood, not available in other sources and relevant for risk assessment.

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 MAnagement with International Surveillance Tool (PRAGMATIST)

After having discussed with University of Surrey and WRLFMD on PRAGMATIST improvement timeline of activities was discussed and would need to follow up in order to: include the provision of guiding material for the PRAGMATIST WebApp users; finalize an article on PRAGMATIST to be published in a peer-review journal; organize a training for end-users on PRAGMATIST.

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:

Procurement of sampling and/or diagnostic material

Under Component 3.2, during the reporting period, a review of sample submissions to WRLFMD and the OIE/FAO FMD Reference laboratories network between 2010 and 2017 has been carried out, as baseline data to assess and identify general trends per FMDV serotype Pools and countries. The objectives of this work are to identify consistent gaps in surveillance in Pools and develop a “surveying approach” to define the main and key barriers that are limiting the sample submissions including knowledge, logistical and laboratory limitations as well as opportunities feeding back to the countries (More information can be found under component 3.2 of this report).

Training for sampling

Please refer to the section above. Training may be designed from the outcomes of such a survey.

Sub-activity level	Description	Progress in the current period	Progress towards indicator	overall biennium
1.7.1. Risk assessment and forecasting	1.7.1.1. Collection and integration of risk information from different sources	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	Collection of baseline survey data on FAST diseases from neighbouring countries was carried out (FAST country card). Submission to the European Neighbourhood countries for validation and integration is underway.	Progress is aligned with the biennium indicators
	1.7.1.2. Disease risk assessment and forecasting	Regular assessment of the collected information in order to understand FAST disease trends and risk factors, allowing to provide some forecasting	A general, flexible survey questionnaire for rapid risk assessments has been developed and was reviewed by external experts. Spanish professionals for the first round of expert elicitation were identified. FAST report published with relevant events occurred in European neighbourhood.	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.
	1.7.1.3. On-line reporting tool	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	Internal discussions were initiated to identify the parameters that could be integrated in the dashboard. No more progress done in the reporting period.	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.
	1.7.1.4. Generation of information	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.
1.7.2. PRAGMATIST	1.7.2.1. PRioritisation of AntiGen MAnagement with International Surveillance Tool (PRAGMATIST)	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.	Plans are made to support the update and improvement of PRAGMATIST over the next 2 years, partly through a co-funded PhD (University of Surrey).	Planning work done to improve PRAGMATIST
1.7.3. Submission of samples	1.7.3.1. Procurement of sampling and/or diagnostic material	Provision of sampling and/or diagnostic material to priority countries. Support for samples shipping to institutes in the SCSAR that have the capacity to provide laboratory support to FAST diseases surveillance	Work has been done to identify consistent gaps in surveillance in FMD pools and develop a “surveying approach” to define the main and key barriers that are limiting the sample submissions including knowledge, logistical and laboratory limitations as well as opportunities feeding back to the countries.	Work done to identify gaps in surveillance as a preliminary step to support provision of sampling and/or diagnostic material. Actual support to countries will be provided in the upcoming months
	1.7.3.2. Training for sampling		No progress done in the reporting period	Actual training support to countries will be provided in the upcoming months

7. Issues for the Executive Committee attention

No issues.

8. Priorities for the next six months

To implement the proposed risk assessment project as planned, in the next months, contacting France to conduct a similar work to the one that was done with Spain. Expand the design to include other countries and FAST diseases (by the end of 2020).

To implement a prototype version of an online dashboard either jointly designed with WRLFMD or designed by an external service provider, by January 2021.

Identify through a surveying approach with Component 3.2, the rationale behind sample submission gaps to WRLFMD from the national laboratories in targeted countries, and develop support (including guidance or training) accordingly.

9. Success stories and outputs

The first two joint [EuFMD/WRLFMD](#) quarterly report on FMD global situation, 2020 were published, replacing the EuFMD Global Monthly Report and the WRLFMD Quarterly Report.

10. Budget (€) COMP. 1.7

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
Component 1.7	10.970	5.792	5.178
<u>Consultancy Operational</u>			
Component 1.7	34.943	26.569	8.374
<u>Consultancy Technical</u>			
Component 1.7	60.000	42.200	17.800
<u>Travel</u>			
Component 1.7	26.000	-	26.000
<u>Training</u>			
Component 1.7	10.000	-	10.000
<u>Contracts</u>			
Component 1.7	34.000	31.083	2.917
<u>Procurement</u>			
Component 1.7	13.000	-	13.000
<u>General Operating Expenses</u>			
Component 1.7	10.000	-	10.000
Total Direct Eligible Cost	198.913	105.644	93.269

Pillar II (Output II)

Pillar Objective

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

Pillar Co-ordinator

Fabrizio Rosso - Nick Lyons*

*Nick Lyons from September 2020

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.

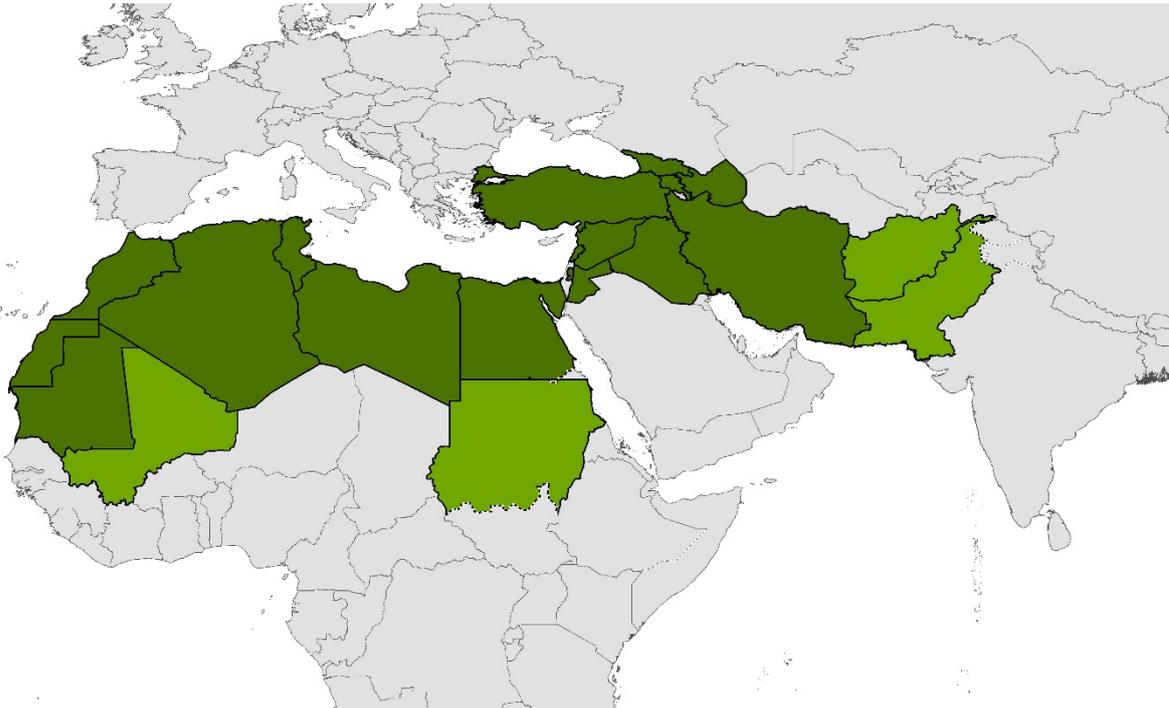
An integrated approach for FAST risk-based surveillance and control in the European neighbourhood and the availability of timely information to risk managers, can improve the capacity for **early detection and prompt reaction to FAST incursion and circulation**. The regular submission of diagnostic samples 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 Member 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)

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	Carsten Potzsch
South-East Mediterranean	Shahin Baiomy
North Africa	Abdenacer Bakkouri

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
Management of programme	C. Pöttsch - N.Lyons	S. Baiomy - N.Lyons	A. Bakkouri - N.Lyons
Standing Technical Committee			G. Caceres Garrido
Executive Committee			
FAO	E. Raizman	F. Mayen	M. Bengoumi
OIE	D. Montabard	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), 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.

The 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 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 Network and Training Support Officer
Six monthly report to ExCom	Component managers for the three sub-regions	Written report and presentation	ExCom, STC	
Every two years report to MN	Component managers for the three sub-regions in co-ordination with oversight board	Written report and presentation	General Session	
Workshop reports	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
2.1 Co-ordination and FAST control framework	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, REMESA).

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:

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

2.1.1 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.

“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 SEEN countries. These cards involve direct engagement with individual countries and through regional epi and lab networks. Currently, the SEEN countries review their country cards and add any missing information. 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.

Under this component, within the global context of COVID-19, a web-based survey was conducted in May 2020 to better understand the impact of COVID-19 on emergency preparedness and response for FMD and similar transboundary (FAST) diseases in the European neighbourhood.

The questionnaire was addressed to the **Central Veterinary Officers** of 18 neighboring countries (Five of North Africa, Six of Middle East and Seven of South East European Neighborhood) and reflected the situation during the first two months of the pandemic where the movement restrictions to control the COVID-19 epidemic were implemented and might have affected the activities of veterinary services and animal health laboratories involved in performing COVID-19 diagnostic tests.

The results of the above survey were shared confidentially with the countries, regional and sub-regional FAO and OIE offices and REMESA Secretariat in specific reports for each region involved.

All meetings between April and September were held in an online format due to the COVID-19 situation.

South East European Neighbourhood (SEEN)

- Regular reporting of FAST

The SEEN sub-region contributes to the EuFMD reports:

- Pillar II Report on significant FAST disease events and information
- FAST Reports: Foot-and-Mouth Disease, joint EuFMD- WRL report

The FAST situation and control strategies adopted in Southeast European Neighbourhood (SEEN) countries are regularly monitored and reported, including through: i) monthly online meetings with focal points in SEEN countries; ii) three-monthly reports of the national consultants of the TransCaucasus countries (TCC). This includes monitoring of amendments, updating and 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 have been held within the framework of the Statement of Intention (SOI) agreement:

SOI Meetings between Iraq and EuFMD

Two bilateral meetings between Iraq and EuFMD were held in March 2020. During the 2019 SOI meeting in Paris, it was agreed to include the Veterinary Services of the Republic of Iraq into the collaborative actions defined under the agreement. As a result of these meetings, Iraq has participated in SOI activities (Workshops on SEEN FAST surveillance, Risk mapping, ANSES Laboratory assessment, SOI meetings) and has started sharing information on FMD outbreaks and vaccination in the SOI database.

Bilateral meeting between Iran and EuFMD

In April 2020 during a preparatory meeting for the first meeting between Turkey, Iran, Pakistan and EuFMD, Iran and EuFMD agreed on modalities of cooperation and information sharing under the SOI.

SOI Meetings between Turkey, Iran, Pakistan and EuFMD

Tripartite meetings were held in April and in September 2020. Mechanisms for 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 were agreed. Pakistan agreed on sharing of data and information on vaccination and outbreaks of FMD and other FAST diseases every three months, and outbreaks within one week. The data sharing was agreed for areas of

high risk FMD entry into Iran being the bordering district of Baluchistan (mainly small ruminants) and districts of origin of cattle to be traded with Iran. In order to increase the impact of the cooperation, it was also agreed to immediately share the most significant categories of data and information (e.g. occurrence of serotype Asia 1 which is not present in Turkey) and any change in the epidemiological situation (e.g. the emergence of new strains). In Pakistan this information is usually available after one week.

During the April meeting, the need for facilitating the submission of FMD samples for molecular diagnosis and vaccine matching was mentioned. Dr. Pakdil offered the diagnostic services of the SAP institute in Turkey to the SOI countries as part of the mutual collaboration under the SOI and the West Eurasia laboratory network. The EuFMD and Turkey have drafted a “Protocol for the submission of FMD samples to Sap institute”. This protocol is currently being reviewed by Iran, Iraq and Pakistan and will be officially accepted afterwards.

Meeting on the current state and the future of the SOI database

This meeting was held in May between EuFMD and IZSLT, where the database is currently hosted. The inclusion of the following categories into the reporting under the database was agreed:

- more countries and territories (Iraq and Pakistan)
- other FAST diseases (PPR, LSD, SGP, BEF, RVF)
- other risk information including FAST surveillance results, risk maps for the introduction and spread of FAST diseases, animal mobility and market prices

The first category has been achieved with implementation of the latter two to be agreed in detail during the planned meeting on risk information sharing for SEEN countries in October.

As a result of the above meeting, a confidentially agreement between IZSLT and EuFMD was agreed and a information sharing framework concept note drafted and agreed.

Under Pillar II, the following SOI and SEEN meetings are planned in the following months of 2020

- Meeting on risk information sharing for SEEN countries to assess the current state, needs of the countries and plan improvement of the SOI database (October).
- RBSP workshop with Iran (October or November).
- Safe trade workshop with Pakistan (end of 2020).
- Network meeting of the West Eurasia Roadmap (SEEN contributions) (20-22 October).
- SOI meeting – Joint Permanent Committee (CVOs) (November).
- Meeting of the Group for Vaccination Advice, Guidance and Consultation (GVA) (November).

➤ 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 July 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 October.

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 are addressed; identify possible synergies between the programmes delivered; agree on modalities for improved coordination and collaboration.

The objectives of the meeting also included establishing the FMD regional epidemiology and laboratory, networks with active engagement into activities in support of the implementation of the control strategies.

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).

- Most relevant FAST events

On 30 April 2020 a new outbreak of lumpy skin disease (LSD) was reported on a dairy farm in Jableh District, Latakia Governorate, Syria (date of start of the outbreak: 2 April 2020; status: resolved on 26 April). A total of fifteen affected individuals were observed among calves, heifers and adult cows and two deaths were recorded. Cattle in the district and province were reportedly vaccinated against the disease in March 2020.

At the end of June/early July 2020, new clinical cases of Lumpy Skin Disease (LSD) were detected in Jisr-ash-Shughur sub-district of Northwest Syria. This sub-district is located in areas beyond government control and borders Latakia governorate, where LSD was recently reported from Jableh. The local NGO veterinary team reported an estimated morbidity of about 40%.

North Africa

- REMESA JPC meeting

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 context, the last meeting was held online (24 June 2020) and EuFMD presented the outcomes with regards to the priorities agreed during the previous meeting, including (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).

- REPIVET-RELABSA activities

Two online meetings were held to follow up the REPIVET RELABSA activity initiated through the workshop held in Marrakech in February 2020:

- Online follow-up meeting REPIVET and RELABSA subnetworks of REMESA for North Africa - strengthening surveillance for FAST early detection (April, 23rd 2020). It was carried out with attendance of involved countries (focal points of the Epi-LAB networks of the REMESA in North Africa: Algeria, Mauritania, Morocco and Tunisia), the FAO and OIE Sub-regional Offices for North Africa, The Pirbright Institute (TPI), ANSES, IZSLER, secretariat of Enhanced Research for Africa network (ERFAN, represented by - IZSAM, and the Ministry of Agriculture Fisheries and Food, Spain.

Two sessions were fully covered during the meeting:

- Update on the epidemiological situation of FAST diseases with specific focus on FMD and Rift valley Fever (RVF) in the State of Libya;
- Update on the recent surveillance and control activities implemented for FAST diseases and discussion of risk related to recent outbreak in Libya and Impact of the COVID-19 on Veterinary services day-to-day activity;
- REPIVET RELABSA Online meeting – core group for FAST vaccination advice, guidance and consultation designation for North Africa (21 July 2020). The meeting focused on:

- Review of country proposals and constitution of the group for FAST vaccination advice, guidance and consultation for North Africa (Libya to be invited to join the group later and the first meeting of the group to be organized by October 2020);
- Mutual sharing of the available results of national surveys of sero-surveillance, FAST post-vaccination monitoring studies and vaccination programs launched recently.

2.1.2 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 GFTADs 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 end of the year, 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. The country missions to Georgia and Azerbaijan in 2018 and 2019 provided important inputs for the draft control plans of these two countries.

- RBSP support planning meeting between Iran and EuFMD

Iran requested EuFMD assistance for the RBSP updating and the review of its national FMD control strategy. A planning meeting was held in August. After the review of the national FMD strategy, EuFMD will work with Iran on the RBSP.

Middle East

- RBSP of Sudan

EuFMD has been working in Sudan since 2018 to progress FMD control and has supported the veterinary services of the country in developing the FMD control plan. After a first workshop organized in Sudan in April 2018 with the objectives to bring together the FMD task force for a critical review of the current control strategy, identify gaps in the situation analysis and discuss the implementation of monitoring and evaluation of the control strategy, Sudan has developed and submitted the RBSP to the GF-TADs FMD working group in March 2019. Recently, the GFTADs FMD working group provided the feedback on the plan. In November 2019, a meeting with FMD task force members was held in Khartoum to further assist in developing the risk-based strategy considering the comments indicated by the working group.

The feedback of the GFTADs FMD working group on the RBSP was discussed during the workshop, revisiting goals and objectives, aspects of the outbreak investigation, surveillance and vaccination strategies, identification of risk hotspots, and monitoring and evaluation. At the end of the meeting, a list of assignments were defined and agreed with the participants for preparing the last version of the RPSB to be submitted to the working group. Recently, the last version of the RBSP has been submitted to the country PCP Support Officer for revision before official submission to the FMD WG, but at the time of reporting the RBSP has not been submitted yet to the WG.

2.1.3 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 October.

Middle East

- REPIVET and RELABSA workshop for Middle East

A workshop for the Epidemiology (REPIVET) and Laboratory (RELABSA) Networks under the REMESA framework was proposed to be organized in Amman, Jordan in March 2020, aimed at improving surveillance for FMD and similar TADs in high risk areas of Middle Eastern countries through the identification of methodology, prioritization of areas and activities and involvement of stakeholders. Due to the restrictions on travel connected to the global situation of COVID-19, the workshop was postponed. However, in order to ensure the continuity of work, EuFMD proposed to hold a virtual-workshop with the aim of improving the surveillance of FMD and similar Transboundary animal diseases (TADs) in Middle East with the same specific objectives. Two follow up meetings were held with Libya and Egypt to follow up the outputs obtained during the virtual meeting on improving surveillance in the Middle East; discuss surveillance for the FAST diseases (objectives, options, and components); identify the potential support from EuFMD to support improving surveillance for FAST diseases. (This is described in the component 2.2.2).

North Africa

As mentioned under 2.1.1, the first Epi (REPIVET) and laboratory (RELABSA) REMESA sub-networks workshop was held in Marrakech 10-12 February 2020, fully supported by EuFMD and organized in coordination with REMESA Secretariat. The focus was on strengthening surveillance for FAST early detection in North Africa (Algeria, Mauritania, Morocco, and Tunisia) and the promotion of the creation of a regional group for FAST vaccination advice, guidance and consultation. And followed by two follow up meetings.

2.1.4 Promotion of public-private partnerships (PPP) for FAST monitoring and control and development of new partnerships**South East European Neighbourhood (SEEN)**

- Training on PPPs

SEEN countries participated in the in-depth course on Applying Public-Private Partnerships (PPP) in the Progressive Control of FAST Diseases, June-July 2020

A two-day workshop was held on Applying PPP to FAST diseases control for SEEN countries in September 2020. This workshop was a follow-up of the in-depth virtual learning course on PPP held earlier in 2020. This workshop focussed on identifying needs, benefits and opportunities for PPPs and on the support for countries to build successful business cases for PPPs, and subsequently implement, monitor and evaluate PPPs in the national context.

- Trainings on Socio-Economic Impact Assessment for FAST Diseases

A two-day workshop was held on Socio-economic Impact Assessment of FAST diseases for SEEN countries in September 2020.

This workshop was a follow-up for the participants of the in-depth v-learning course on socio-economics in 2019. It focussed on designing a Socio Economic impact assessment study for FAST diseases in SEEN countries and the implementation of the Socio Economic impact assessment study.

North Africa

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 has included up to four participants per country from **North Africa**

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 months activities, and regularly invited in the events organized during this period. 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 meeting have been or will be held within the framework of the Statement of Intention agreement: -two bilateral meetings with Iraq and Iran in March and April 2020 to agree on modalities of cooperation and information sharing under the SOI; -meeting between Turkey, Iran, Pakistan in April to define mechanisms for 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.</p> <p>The EuFMD collaborated with FAO/OIE framework (GF-TADs) and co-founded the organization of the 1st Epi-lab network for FMD in the Middle East.</p> <p>A REPIVET and RELABSA workshop was organized in Morocco in consultation and collaboration with REMESA Secretariat and was followed by two online follow up meetings.</p> <p>A virtual meeting with AOAD was organized and there will be follow up meetings.</p> <p>A Bovine Ephemeral Fever survey was carried out (in January) among the all former trainees of EuFMD courses in the European Neighbourhood to better assess level of knowledge, presence of surveillance and occurrence of the disease.</p>	<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.</p> <p>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,	Provide technical assistance for implementation of strategic plans for FAST control at national level on the basis of PCP principles, availability of resources and	<p>Official Control Plan (OCP) of Turkey and Georgia to progress to PCP stage 3 and RBSP of Kyrgyzstan have been reviewed by the GF TADs FMD Working Group</p> <p>The vaccination strategy of Morocco has been reviewed according to the results of activities previously conducted with</p>

<p>monitoring and evaluation results</p>	<p>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. 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>EuFMD on identification of risk areas, risk based surveillance, vaccine field trial.</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>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</p>	<p>strategy in Morocco</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 REPIVET and RELABSA workshop was held in Marrakech for North African countries focused on risk based surveillance and post vaccination monitoring. Followed by two online meetings</p> <p>A virtual workshop has been organized on improving surveillance and early warning in the Middle East and SEEN countries. The v-workshop replace 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.</p>	<p>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.</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>The involvement of the private sector (private vets and farmers) was discussed and action points identified during the North Africa workshop in order to improve the sensitivity of the passive surveillance and reporting system in high risk locations.</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 political, financial situation and the commitment of the country. Kits have been delivered to Lebanon (and to Syria) to carry out a sero-surveillance designed during the last workshop.

A Joint Permanent Committee meeting should be held in 2020 to update the SOI agreement, including newly participating countries and the expected mandate of the sharing of information and data of FAST diseases.

Future EpiNet and WelNet activities for SEEN countries require GFTADs 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 and help to estimate a country risk score of FMD spread according to: 1- legal framework, 2-veterinary services capacities, 3-surveillance and diagnosis, 4-prevention and control.

8. Priorities for the next six months

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.

Extending the activity of identification of risk and risk mapping to include other countries in the Middle East (e.g. Jordan and Lebanon).

As a follow up to the PPP e-learning course, regional workshops will be organized to facilitate the implementation of the partnerships and field studies on cost-benefits analysis and socio-economic impact of FAST diseases.

Continue support to SEEN countries on the progression along the PCP, especially Turkey and Georgia to stage 3.

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.

Finalize the model for assessing the country risk profile with expert elicitation on the weighting system adopted to evaluate the different aspects of the control strategy considered in the Self-Assessment Tool.

9. Success stories and outputs

A Bovine Ephemeral Fever survey was conducted targeting over 21 countries of the broad European neighbourhood. The survey was sent to 1.600 Veterinarians, on the EuFMD database, from the European neighbouring countries. It is a good example on how the network established with EuFMD workplan can be used as source of information related the presence of diseases, knowledge, awareness, surveillance plan, vaccine and vaccination.

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 FMD and similar Transboundary animal diseases (TADs) in Middle East with the same specific objectives. The virtual workshop might represent 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.

A survey was conducted with EU neighbouring countries to assess the impact of COVID 19 and connected restrictions on surveillance and control activities of veterinary services. The outcome of the survey indicated increased risk of incursion and spread of FAST disease and reduced capacity to implement prompt control measures during the months of March and April (when the survey was launched).

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>			
Component 2.1	15.020	8.688	6.332
<u>Consultancy Operational</u>			
Component 2.1	67.672	53.138	14.534
<u>Consultancy Technical</u>			
Component 2.1	140.000	140.021	- 21
<u>Travel</u>			
Component 2.1	80.000	14.381	65.619
<u>Training</u>			
Component 2.1	55.032	28.510	26.522
<u>Contracts</u>			
Component 2.1	35.000	41.174	-6.174
<u>Procurement</u>			
Component 2.1	20.000	12.285	7.715
<u>General Operating Expenses</u>			
Component 2.1	16.000	8.263	7.737
Total Direct Eligible Cost	428.724	306.460	122.264

Component 2.2 (Activity 2.2)

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	Carsten Potzsch
South East Mediterranean	Shahin Baiomy
North Africa	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
Management of programme	C. Pöttsch - F. Rosso	S. Baiomy - F. Rosso	A. Bakkouri - F. Rosso
Standing technical Committee			G. Caceres Garrido
Executive Committee			
FAO	E. Raizman	F. Mayen	M. Bengoumi
OIE	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 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
Six monthly report to ExCom	Component managers for the three sub-regions.	Written report and presentation	ExCom, STC	Network and

Every two years report to MN	Component managers for the three sub-regions in co-ordination with oversight board.	Written report and presentation	General Session	Training Support Officer
Workshop reports	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
2.2 Improved early warning for FAST diseases	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

A v-workshop series was held jointly between CIRAD and EuFMD. It consisted in a 2.5 week induction course in May and a 2 week technical workshop in May/June.

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, follow-up meetings with participants were agreed between EuFMD and CIRAD. The first meeting for all participating countries took place in July 2020, this will be followed by quarterly meetings for country clusters (1: Turkey, Iran, Iraq; and 2: TCC). It is planned that 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).

Middle East

- Risk-mapping and animal mobility

The activity started with two consecutive workshops held in CIRAD, Montpellier (1-12 April 2019), and in FAO, Rome (15-19 July 2019) to train national animal health authorities on optimization of risk-based surveillance for TADs. After the workshops, the participants were able to list and define risk factors, analyze and interpret animal movement data (SNA), deploy livestock network analysis into risk of introduction and spread, build and update national risk maps for FMD and discuss the results of the regional risk maps.

Recently, 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 expected use of the study results are to a) Improve knowledge of FMD spatio-temporal dynamics (pathway of disease introduction and spread; b) Develop an integrated FMD risk map based on animal mobility and qualitative risk assessment in order to optimizing of risk-based surveillance protocols and Risk based control measures ; c) Target the areas of high probability of disease occurrence.

The proposal is under revision by EuFMD and CIRAD experts to agree on the objectives, design, methodology and the potential support is required.

A virtual workshop on Risk-mapping and animal mobility for the Anglophones countries of the Middle East (Egypt, Libya and Sudan) is proposed to be organized in December 2020 with a suggestion to extend the activity to include Jordan and Lebanon

- Identification of potential hotspots for Rift Valley Fever vector amplification in North Africa

In coordination with the emergency center in FAO (EMC) and GLEWS, and following the outbreaks of RVF reported, a study was conducted on the identification of suitable areas for vector amplification on North Africa considering vegetation and rainfall of past three months. The maps developed with risk hotspots included other risk information such as roads connections, animal movements, animal and human populations. A meeting was held with Libyan colleagues in order to define i) intensified surveillance for RVF cases in areas identified as climatically suitable and 2) vector studies in selected locations identified as suitable for vector amplification and where risk of infected animals being brought in.

- **North Africa**

- Virtual WS (in French) on Risk-mapping and animal mobility for North African and West-Central African countries with cross border animal movements, in French.

In the LoA with CIRAD, developed to improve the capacities of national veterinary authorities in risk analysis and mapping, and their ability to design risk-based surveillance and control plans for FAST diseases, an induction phase on Qualitative analysis and risk mapping (AQCR) was held from 17 August to 14 September 2020 (over four weeks, one to two hours of work per week). It was followed by a six-day virtual workshop from 28 September to 12 October 2020 (six sessions of three hours spread over two weeks) in French for 13 participants nominated from North and West Africa (Algeria, Tunisia, Morocco, Mauritania, Chad, and Senegal) with the following main expected outcomes:

- Update and improve the datasets of national/transboundary animal movement data;
- Maps of the risk of introduction and risk of spread and plans for surveillance for foot-and-mouth disease (FMD) case-study (during pre-requisite learning);
- Produce national maps of the risk of introduction and risk of spread and plans for risk-based surveillance.

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

South East European Neighbourhood (SEEN)

- Improving surveillance and early detection of FAST animal diseases

A virtual workshop on improving surveillance and early detection of FAST animal diseases in the South-East European Neighbourhood countries, was held in April. During the workshop, a summary analysis of the surveillance for FAST diseases in the SEEN countries and areas identified to improve surveillance was obtained, and opportunities and options for regular reporting of the surveillance of FAST diseases in the SEEN countries discussed. Also, a Group for Vaccination Advice, Guidance and Consultation (GVA) for the SEEN countries was proposed and further activities (in 2020) of the West Eurasia networks (WeiNet, EpiNet) in the SEEN countries were agreed. Twenty-four participants from SEEN countries as well as representatives from regional and sub-regional FAO offices and from OIE participated. The workshop was followed up by three country cluster meetings: in June for the Transcaucasus countries and Iran/Turkey and in July for Iraq/Pakistan. During the cluster meetings, practical implementation of the workshop outputs, especially the incorporation in the SOI database were discussed.

Middle East

- Virtual workshop on Surveillance for FAST early detection in Middle East

EuFMD proposed a virtual-workshop to improve the surveillance of FAST in the Middle East (see component 2.2).

The virtual workshop was conducted over a three-week period (March and April), with a new format using a dedicated area created on the EuFMD e-learning platform, online meeting with participants, providing recorded presentations and support materials, working groups carried out in the form of assignments provided to countries and discussion forum. At the end of this v-workshop, each country will elaborate and present a draft integrated surveillance system able to address main objectives (early detection, case finding, demonstration of freedom,) according to the current situation of the FAST diseases and the control strategies in place.

The workshop was also aimed at identifying common regional priorities within the epidemiology and laboratory networks and mechanisms to facilitate regular mutual exchange of experience and expertise.

Following this virtual workshop on Surveillance for FAST early detection in Middle East, two meetings were organized with Libya and Egypt:

- 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 has been launched in four sites Al Kufra in Southeast, Ubari in Southwest, Tobruk in East and Regdali in Northwest. The AHW involved in the surveillance were trained by the EuFMD national experts on the methods and types of data to be collected using the Kobotoolbox. A team has been appointed at the central level to be responsible for data management, analysis and providing feedback reports to the stakeholders. For ensuring the sustainability of the surveillance the NCAH will provide the AHW with smart phones, regular internet connection, and advanced training as incentives.

- 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.

The project consists of three main components: a) Training and awareness; b) Identification of hotspots areas (risk factors: suitable areas, vector abundance seasonality through entomological survey, animal movements, etc.); and c) 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, para-veterinarians, 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) Take some of the mystery out of the laboratory procedures to give the field workers greater insight into what happens to the samples after they are submitted.

In coordination with the Office of the Food and Agriculture Organization of the United Nations, Libya (FAOLY); Sub-Regional Office of the Food and Agriculture Organization of the United Nations for North Africa (FAOSNE) and European Commission for the Control of FMD and Similar Transboundary Animal Diseases at the FAO (EuFMD) the NCAH and the EuFMD national experts have organized an awareness campaign on Foot-and-Mouth Disease for 5 days (16/09 – 21/10/2020) targeting all vets (public and private) through webinars covering: Introduction on FMD and Lesion ageing; FMD Diagnosis and Sampling; FMD Epidemiology; Biosecurity and FMD and FMD Outbreak Investigation.

- 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 potentially 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.

During the course, five modules were delivered over four weeks covering collection methods for mosquitoes, and most used trapping systems; management of the entomological samples; taxonomy and identification of the most important genera of vectors; identification, within the genera, of the most important vectors at species level; pool sorting and analysis for virus detection. The fifth module is to follow up assessing the in-field work carried out during summer 2020, and the perceived potential impact of the training.

➤ Egypt

The main objectives of the meeting were to discuss the surveillance options that were defined during the virtual workshop according the surveillance objectives were identified and to identify the potential support from EuFMD to support improving surveillance for FAST diseases in Egypt.

GOVS has launched syndromic surveillance and hazard specific surveillance in the high risk areas for the FAST diseases. As identified by GOVS, the most important areas addressed that could be supported by EuFMD include: animal mobility study; EPI-training programs supported by MPI- New Zealand; analysis of the data from syndromic surveillance; and vaccination and post vaccination monitoring. The latter seemed to be one of the priorities of GOVS and this area need to be supported technically by EuFMD in terms of study design, sample size and analysis.

➤ Surveillance studies in Egypt, Lebanon, Syria

Egypt: the Veterinary services in Egypt requested the support of EuFMD to conduct active surveillance (Sero- and clinical surveillance) at international border areas. The objectives of this surveillance is to estimate the sero-prevalence of FMD among the large and small ruminants and between villages in the targeted governorates and to detect the serotypes and topotypes of FMD virus in the targeted areas. This plan will be modified according the current situation of the diseases. The diagnostic kits were delivered through FAO office in Cairo and the surveillance will be launched later this year.

Lebanon: A FMD sero-surveillance in production systems and geographical areas identified at risk has been 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 although due to the political and financial situation in Lebanon, the veterinary services are not currently able to secure logistical support to conduct the surveillance. In response, EuFMD have provided the VS with these logistics through the FAO office in Beirut and the surveillance will be launched soon.

Syria: FMD sero-surveillance in targeting cattle farming systems has been designed with the assistance of the EuFMD targeted at commercial and household farms. Another survey for sheep was put forth, targeting areas with high density of fattening farms. The main objective is to estimate FMD sero-prevalence in the different targeted sectors to identify the high risk farming system(s) and high risk areas. The diagnostic kits have been delivered through the FAO office. Samples were collected according to the design and submitted to the national laboratory to be analyzed. The results of this surveillance will be discussed in the proposed virtual workshop on development of RBSP in Lebanon and Syria in October 2020.

North Africa

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

As stated in the previous report, during the REPIVET-RELABSA workshop 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 promoting 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.

The follow-up to specific in-country planned activities are on hold due to COVID-19 restrictions with virtual activities being currently considered.

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. In early 2020, the Russian Federation begun reporting according to the SOI (according to the agreement, on a six-monthly basis).

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.

- Involvement of Iran, Iraq and Pakistan in SOI activities

Meetings reported in Component 2.1 with Iran, Iraq, Pakistan were aimed in particular to improve risk mapping, surveillance and risk information sharing. Iraq has already reported outbreaks to the database. Pakistan is currently collating the geographical, as well as vaccination and outbreak data for the high-risk areas of FMD introduction to Iran, i.e. the bordering districts of Baluchistan with mainly small ruminants, and the districts from where cattle usually originate which are transported informally to Iran. Iran has until now only reported some outbreaks from 2017 but no vaccination.

It was also agreed with Iran, Iraq and Pakistan that 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.

North Africa

Regular meetings with epi and lab networks in the region, future launch of activities under the group for FAST vaccination advice, guidance and consultation in the next few month (core group is designated by countries in 21 July 2020 and first meeting expected for October 2020) associated with collaborative updates of information through the country cards are cornerstones to regular multicounty risk information sharing 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 of risk hot-spots for FAST diseases and development of updated risk maps based on animal mobility and other risk factors.	Virtual workshop on risk mapping and animal mobility for SEEN countries with CIRAD. Following the RVF outbreaks in Libya, a study was conducted with EMC and GLEWS for the identification of potential hotspots for Rift Valley fever vector amplification in North Africa. In REPIVET-RELABSA workshop, high-risk locations were identified, shared and risk factors discussed. 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.	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 on-going.
	2. Implementation of regular risk-based surveillance (RBS) for multiple diseases in hot spot locations	Virtual workshops on Risk based surveillance in SEEN countries and in Middle East in March and April aimed at developing assessment of FAST diseases, identify risk hotspots and implement and report risk-based surveillance. EuFMD provided technical assistance and diagnostic support for designing and implementing sero-surveillance in Egypt, Lebanon and Syria. A plan has been defined to assist surveillance for RVF cases in areas identified as climatically suitable (in the last 3 months) in Libya and 2) vector studies in selected locations of Libya identified as suitable for vector amplification and where risk of infected animals being brought in. During REPIVET-RELABSA workshop, the plans were developed for FAST risk-based surveillance for early detection / case finding, including the identification of high-risk areas, design and implementation of targeted surveillance, promote the role of key stakeholders (private vets, paravets and farmers representatives) in passive and syndromic surveillance.	Design and diagnostic support provided for surveillance in Egypt, Lebanon and Syria. Targeted surveillance in high risk areas planned in North Africa – to be followed up with national meetings.
	3. Regular participation of countries in multi-country risk information sharing system for FAST diseases.	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.	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 group activities launch is expected from October 2020 and on. Country cards were developed for the pillar II countries to monitor the FAST risk situation in the countries within the three regions.

7. Issues for the Executive Committee attention

EuFMD is trying to replace the upcoming planned face-to-face activities with online meetings or virtual workshops, with a revision of objectives and expected outcomes. Despite the difficulties, there is an opportunity of developing 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.

The agreement with CIRAD for the assistance on the identification of risk locations in European neighbourhood considering animal mobility and other risk factors, is taking longer than expected due to late response to our call for proposals. The proposal from CIRAD was received recently and discussion is ongoing to define better objectives and activities according to the budget available.

8. Priorities for the next six months

Promote the finalization of the regional group for vaccination advice, guidance and consultation in North Africa and other European neighbouring regions. The concept-note has been finalized within the RELABSA-REPIVET workshop in North Africa, core group national experts have been designated by countries and it is expected to organize the initial activities by the first meeting in the upcoming months.

Run in collaboration with CIRAD the virtual workshops on animal mobility and risk mapping and the development of national roadmaps for further steps to be implemented for improved risk based FAST surveillance and early detection for North Africa and connected countries in West Africa (28 sept – 12 Oct 2020) with a forecast to organize similar workshop for **Middle east** countries by the end of 2020.

Promotion of the creation of a regional group for FAST vaccination advice, guidance and consultation (GVA) in the Middle East,

Promotion of the creation of multi-country risk information sharing system for FAST diseases in the Middle East in collaboration with AOAD.

Use the results of the workshops and trainings of the April-September reporting period to improve the understanding and mitigation of regional risks of FAST diseases.

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).

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, Morocco implemented vaccination of small ruminants in risk locations, Libya started a study on animal mobility, Egypt implemented a 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.

Countries in North Africa finalized the terms of reference of the group for FAST vaccination advice, guidance and consultation and designated national experts to be part of the core group. REPIVET and REABSA focal points will join

the group as observers and Libya is requested to join the group for North Africa with the possibility to be represented in the group for southeast Mediterranean region (Middle East) as well.

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 Youusif)
- 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 Arsevska)

10. Budget (€) COMP. 2.2

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
Component 2.2	12.498	6.757	5.741
<u>Consultancy Operational</u>			
Component 2.2	67.672	53.138	14.534
<u>Consultancy Technical</u>			
Component 2.2	100.000	100.762	- 762
<u>Travel</u>			
Component 2.2	85.000	17.784	67.216
<u>Training</u>			
Component 2.2	45.000	13.442	31.558
<u>Contracts</u>			
Component 2.2	130.000	9.745	120.255
<u>Procurement</u>			
Component 2.2	35.000	6.225	28.775
<u>General Operating Expenses</u>			
Component 2.2	4.998	3.186	1.812
Total Direct Eligible Cost	480.168	211.040	269.128

Component 2.3 (Activity 2.3)

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
Management of programme	C. Pöttsch - N.Lyons	S. Baiomy - N.Lyons	A. Bakkouri - N.Lyons
Standing technical Committee	G. Caceres Garrido		
Executive Committee			
FAO	E. Raizman	F. Mayen	M. Bengoumi
OIE	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
Six monthly report to ExCom	Component managers for the three sub-regions	Written report and presentation	ExCom, STC	
Every two years report to MN	Component managers for the three sub-regions in co-ordination with oversight board	Written report and presentation	General Session	
Workshop reports	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).

Component (Activity)	Objective	Narrative	Expected result	Monitoring	Evaluation	Assumptions and risks
2.3 Capacity development for surveillance and improved control programmes	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)

- Laboratory capacity assessment

As part of the WelNet workplan and to improve the diagnostic preparedness and provide an overview of the laboratories main strengths and weaknesses regarding the detection of FAST diseases, a laboratory assessment and identification of gaps and needs in SEEN was conducted by ANSES in May-June 2020. Nine SEEN laboratories took part in this study and answered an online questionnaire of 100 questions. A preliminary report has been submitted. The results will enable the EuFMD to define priorities and improve the diagnostic capacities of the SEEN laboratories for FAST diseases. The same process has been implemented in North Africa and Middle East.

- 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, supported by EuFMD (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.

It would seem all the countries are monitoring FMD, and the situation varies from country to country concerning the other TADs, except for BEF which is currently less monitored in all countries. At least three countries have no cell-culture capability and low expertise in virology. The situation is less marked with the immune-serology, as this a routine activity for every country. Concerning molecular biology, the main issue is the maintenance of the PCR equipment as this is irregular and externalized. The general training of laboratory staff, and the biosafety and biosecurity levels have emerged as a main concern for the participants. Indeed, the staff skills for diagnostics and biosafety vary from country to country and the need for training was expressed with a strong interest in sequencing and data analysis, biosafety/biosecurity, in addition to the harmonization of practices with regard to quality management. Finally, the procurement of reagents and their management was identified as a potential obstacle for an efficient regional network surveillance.

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 is under development.

Within the collaboration with ANSES, and as mentioned below (2.3.5), a mid-term laboratory training plan to improve FAST capacity diagnostic should be finalized and delivered within the current EuFMD workplan. In parallel and to address the specific needs identified through the above-mentioned laboratory survey, a virtual training session is under preparation for October or November 2020 in French to francophone countries in North Africa. The virtual training session includes two modules, namely emergency laboratory diagnostic and post vaccination serology monitoring. The training material that is developed should be later be made available to other regions such Middle-East and South-East European countries after this project is completed. Support has been provided to Libya with diagnostic kits for FMD (15 kits: 5 NSP, 5 SP O, 5 SP A) and to PPR Secretariat for the shipment of vaccines to Georgia and Palestine.

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. A GVA meeting with SEEN countries is planned for November.

Middle East

- Immunogenicity studies

Jordan: Following the post vaccination workshops and e-learning that EuFMD has delivered in the region (online course, sub-regional meeting and in-country workshop), a small PVM trial has been designed to be carried out on a governmental sheep farm. It should evaluate the FMD vaccine by quantifying antibody titres in susceptible species under field conditions.

Two groups of animals were identified (55 heads per group). The first group received one dose of FMD vaccine, blood samples were collected at day 0, day 14, day 28, day 56, day 168). The second group received two doses of FMD vaccine, the first dose at day 0, the second dose at day 28, blood sample are collected at day 0, day 14, day 28, day 56, day 168.

The EuFMD will provide the diagnostic kits through the FAO office in Amman for ELISA testing. There is an ongoing discussion with the Veterinary Services concerning the opportunity to involve an international laboratory for Virus Neutralization Test (VNT). Two employees from the national lab in Jordan could be invited to be trained on VNT in an international reference lab and carry out the test on the collected samples to correlate the results with the results ELISA test.

North Africa

- Regional group for FAST vaccination advice, guidance and consultation

Countries in North Africa finalized the terms of reference of the group for FAST vaccination advice, guidance and consultation and designated national experts for the core group. REPIVET and REABSA focal points will join the group as observers and Libya is requested to join the group for North Africa with the possibility to be represented in the group for southeast Mediterranean region (Middle East) as well.

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 participated in the following courses:

- In-depth course on Applying Public-Private Partnerships in the Progressive Control of FAST Diseases in English, June-July 2020;
- In-depth course on LSD Preparedness in English, July-August 2020, for Pillar I and II countries;
- FMD Investigation course in Turkish, May-June 2020, approx. 350 participants from Turkey, Iran and Azerbaijan, this course achieved an exceptional overall course completion rate of 93%;
- FMD Investigation course in Russian, September-October 2020, approx. 200 participants from 12 countries.

The following courses and trainings are planned until the end of 2020:

- In-depth course on Socio-Economic Impact Assessment in English, October-November;
- In-depth course on LSD Preparedness in Russian, October-November;
- FMD Laboratory Investigation Training Course in English for Pillar II and III countries, November December; Training modules on Post-vaccination Monitoring for Iran and Iraq, November.

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

An in-depth v-learning course on livestock vaccines, vaccination and post vaccination monitoring was launched in March 2020. This course was designed to build advanced skills in investigating livestock vaccination programs and efficacy of vaccines and will link government veterinarians with researchers in order to promote improved policy and research. Participants from SEEN (40 from Armenia, Azerbaijan, Georgia, Iran, Iraq, Russian Federation, Turkey),

Middle East (26 from Egypt, Jordan, Libya and Palestine) and North Africa (19 from Algeria Morocco, Tunisia) are participating.

Two webinars of the FMD Practical Management Series in Russian (December 2019 and March 2020) were held on surveillance and regional cooperation of FAST diseases in the Russian Federation.

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) 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 (a concept note is being finalized, a pilot competency for Disease control Framework Map and a survey is being developed in parallel with as web based survey is being prepared to better tailor the training material and organize training events that better suits the needs of the targeted audience (public and private veterinarians and animal health workers who are providing services in the field).

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. The North Africa results of the study has been shared with the participants and discussed during the REPIVET-RELABSA workshop in Marrakech. A workplan to address the priorities have been identified. Within the LoA with ANSES, a mid-term laboratory training is being developed for north Africa and a virtual laboratory training (4 sessions for diagnostic capacity building training) is being planned for October or November 2020 for the region.	Baseline of laboratory capacities and capabilities has been established in North Africa and Middle East.
	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.	Sera from the 2019 FMD small scale immunogenicity studies (SSIG) in Armenia and Georgia sent to IZSLER Brescia, testing is partially pending due to the Covid-19 situation. Recommendations were provided to Georgia according to the results obtained. EuFMD provided technical assistance in designing PVM trail in Jordan and kits and training will be provided. The concept-note of the regional group for vaccination advice, guidance and consultation group has been finalized by the focal points of the REPIVET-RELABSA networks for North Africa, core group members have been designated, Libya should be invited to join the group and the launch of the group activities is expected for October 2020 starting with first dedicating meeting and development of the group workplan.	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. New studies are designed and implemented (e.g. Jordan) The regional group for vaccination advise, guidance and consultation can facilitate implementation and interpretation of PVM.

<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 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 (a concept note is being finalized).</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 Russian, LSD investigation training course</p>	<p>RAVC delivered to 75 participants from 18 neighbouring countries</p> <p>FITC Russian delivered to 190 participants from 14 countries (not only neighbours)</p> <p>PPP delivered to 118 participants from 17 neighbouring countries</p> <p>LSD course delivered to 93 participants from 18 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 analysing results of post vaccination monitoring activities and for exchanging experience and expertise on vaccination for FAST diseases. A standard procedure to assist and support Immunogenicity and Post vaccination studies should be defined with co-sharing of costs with countries and better use of results obtained (e.g. how to incorporate results in new tenders). Procedures should be also defined to share the results of field trials with neighbouring countries.

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 of workplan for the group on vaccination advice, guidance and consultation (GVA) for the three regions.

Analysis of the laboratory capacity assessment in SEEN and identification of needs of laboratory training and support.

To remain: continue to identify and offer topics of importance and interest for webinars of the FMD Practical Management Series in Russian.

To remain: plan to implement immunogenicity studies as part of PVM in other countries of Pillar II with the utilisation of TCC expertise, with a special focus on Iran.

9. Success stories and outputs

A great participation has been obtained from National Reference laboratories for FAST diseases in the EU Neighbourhood for the assessment of capacities supported by EuFMD (small research grant) across the REMESA region. The level of participation shows a high interest in the capacity building programme for the laboratories.

The training on PVM carried out in the recent period and the technical assistance provided have facilitated the implementation of different immunogenicity studies in countries of the EU neighbourhood (Morocco, Algeria, Tunisia, Jordan, Georgia, Armenia and Azerbaijan) and results obtained 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>			
Component 2.3	10.498	5.792	4.706
<u>Consultancy Operational</u>			
Component 2.3	67.672	53.138	14.534
<u>Consultancy Technical</u>			
Component 2.3	155.000	154.364	636
<u>Travel</u>			
Component 2.3	55.000	11.816	43.184
<u>Training</u>			
Component 2.3	50.000	25.860	24.140
<u>Contracts</u>			
Component 2.3	65.000	37.763	27.237
<u>Procurement</u>			
Component 2.3	25.000	-	25.000
<u>General Operating Expenses</u>			
Component 2.3	12.000	2.944	9.056
Total Direct Eligible Cost	440.170	291.677	148.493

Pillar III (Output II)

Pillar Objective

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

Pillar Co-ordinator

Paolo Motta

Component 3.1 (Activity 3.1)

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>
Component supervisor	Paolo Motta	Pillar III co-ordinator
Component manager	Etienne Chevanne	FMD Risk Management Specialist
Training and networking	Nadia Rumich	Training and Networking
GF-TADs-FMD WG	The members of the GF-TADs-FMD WG are key partners in the activities of this component.	n/a
ExCom oversight	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 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 in co-ordination with FAO colleagues GF-TADs FMD Working Group	Written report and presentation	General Session	
Workshop reports	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
3.1 Global Strategy Implementation	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, there are 32 countries in PCP-FMD provisional stages (15 in provisional stage 1, 15 in provisional stage 2 and 1 in provisional stage 3) and the GF-TADs WG has officially assigned a PCP-FMD Support Officer (PSO) to 13 of these countries. Additional PSO nominations has been discussed with the GF-TADs FMD WG and agreed for Palestine and Azerbaijan. Particular PSO support was given to the Veterinary Services of Burkina Faso (in provisional PCP-FMD Stage 1) in developing a Risk Assessment Plan, to be ready for submission to the WG by the end of 2020.

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.

The PSO Network has been regularly updated on the relevant EuFMD and GF-TADs FMD WG activities through PSO online meetings in May 2020 and July 2020 (respectively the 9th and the 10th online meeting - Minutes of the meetings are shared with the GF-TADs FMD WG within two weeks of the meeting). The PSO network has also been regularly involved in gathering information from the PSO on their assigned countries, including sharing successes and challenges in collaborating with assigned countries.

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 and English and validated by the GF-TADs FMD WG during the reporting period. These new templates have also been made available on the EuFMD and GF-TADs websites.

During the reporting period, the list and required levels of OIE PVS **Critical Competencies** to be aligned with the PCP-FMD Stages and Guidelines was updated and agreed between the GF-TADs FMD WG and the OIE PVS experts in consistency with the latest 2019 version of the OIE PVS tool.

A concept note for the **PSO Training Development Framework** has been further developed, describing a three-step progression process for PSO including training and mentoring activities. This framework is being developed in collaboration and coordination with Component 3.3 and the EuFMD Chief Learning Officer to ensure alignment of the PSO Training Development Framework, with the component 3.3 priorities #5 and #6. During the reporting phase, PSOs were involved in the Risk Analysis along the Value Chain in-depth course (component 3.3.). Also, a particular emphasis was put on the development of an **RBSP open access virtual learning course** during this period. This course, composed of six modules, aims at providing central level veterinarians with the basic knowledge to initiate the drafting of an RBSP. The content was reviewed by the GF-TADs FMD WG and will be delivered on the EuFMD virtual learning platform ahead of the virtual RM for SADC region (2-5 November 2020).

Direct and tailored support was provided to Uganda in the revision and update of the RBSP. A series of virtual meetings were held between May and July 2020 to assist the creation of a FMD Technical Group within the national veterinary authority to conduct the revision of the plan, and currently a workplan for providing online virtual support to this technical group is under definition.

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. Nevertheless, a request from FAO Southern Africa (SFS) was received to support the Comoros Veterinary Services in the field activities for FMD post-vaccination monitoring and FMD national strategy development. Three experts from the EuFMD are foreseen to provide assistance either through physical and virtual means (Etienne Chevanne, Nick Lyons, Abdenacer Bakkouri).

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;

Due to the SARS-CoV-2 pandemic, the organization of the SAARC RM was postponed, to no set date. The EuFMD has proposed to the WG a new **virtual format for RM**, composed of a four-week preparatory phase and a four-half day virtual RM. The aim of this new format is to improve the engagement with country focal points for the preparation and follow-up actions for RMs, through virtual technical support to national and regional stakeholders; enabling future face to face sessions to focus on validation of regional strategies and on the implementation and adoption of country strategies. A proposed agenda for v-RM (virtual roadmap) was discussed with the WG and agreed. The first v-RM will be piloted in SADC region in November 2020 and in collaboration with the Virtual Learning Center in Southern Africa - VLC SADC (see Comp. 3.3).

Following the request from the WG, the EuFMD has developed a concept note for **online meetings with the Regional Advisory Groups (RAGs)** to update the RAGs on recent development of the PCP Toolkit and procedures and receive updates from the RAGs regarding regional FMD control strategy and the acceptance of plans that received a favorable feedback from the WG (cf. PCP-FMD review support system). Two online meetings with RAGs Eastern Africa and West Eurasia have been held in September 2020, and two online meetings with Middle East and SADC RAGs will be held in October 2020.

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

During the reporting period, the EuFMD delivered, in collaboration with the **Intergovernmental Authority on Development (IGAD) Center for Pastoral Areas & Livestock Development (ICPALD)** in Eastern Africa, a six-month training course on “**Risk Analysis to support safe and FMD control**”. The main objective was to establish a critical mass of experts working in the livestock public sector in the region trained in risk analysis, so that this tool is applied to support safe trade and disease control in East Africa. An integrated training approach, including online e-learning, face-to-face sessions (Kenya, 27-31 January 2020) and application and reporting phases, was developed to assist participants from Kenya, Uganda and Ethiopia. As part of the integrated training approach, a close follow-up of participants was provided during the application phase (February- June 2020, including nine online meetings with all participants and tutors to share progress and identify needs for support). Due to the SARS-CoV-2 pandemic, the second workshop, initially planned in Ethiopia, was organized virtually in June 2020, with the expert contribution of the OIE sub-regional representation for Eastern Africa. Following the completion of the training, 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’.

Support to regional networks has also been provided and coordinated via the establishment of Virtual Learning Centres (VLCs) in Southern Africa and Asia and the Pacific, and in the development of proposal for a similar approach in East Africa (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 reporting period in an expert knowledge exercise involving experienced PSOs and led by IZSLT, to review the tool, weight the 93 statements and design an output to assess the level of ‘hazard reduction’ based on the country answers to the SAT, as per the request from the STC. The SAT has also been translated in French and Russian during the reporting period.

A PCP-FMD Review Support System has been established by the EuFMD during the reporting period to support the roll-out of the WG actions and pending activities. This system was established with the support of expert PSOs and led by Melissa McLaws. The system has allowed to organize circa 20 weekly meetings with the WG, to further support the WG in the reviewing process of nine pending country strategic plans, and the revitalization of discussions on national FMD control strategies with other specific countries, and the alignment of the PCP-FMD Guidelines with the 2019 PVS tool.

EuFMD has facilitated the organization of a **Working Group monthly virtual meeting**, in May 2020, to address priority issues, including the follow-up of additional PSO nominations for countries in need of PSO System, and the proposal for an innovative and more resilient approach to Roadmap meetings (RM) (see Section 3.1.2).

The Tool for Review and Communication (TRAC) has been further elaborated, internal procedures were updated, taking into account the standard communication of the GF-TADS FMD WG with countries embarked in the PCP-FMD, validated during the reporting period. TRAC will be piloted during the v-RM in SADC region.

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 novel PCP-FMD related documents and meetings reports and improve consistency in the communication strategies.

During the reporting period, assistance was given to the Pirbright Institute in the collection of information on historical PCP-FMD statuses of countries embarked in their FMD Proficiency Testing Scheme between 2012 and 2018 (see Comp. 3.2). Assistance was also provided to the WRLFMD in the design of the static dashboard including updated data on PCP-FMD current statuses.

Other activities (in coordination with Component 3.2):

Support was given to FAO Rwanda to ship FMD samples to the WRLFMD following an official report to the OIE of FMD outbreak in Kayonza district in June 2020.

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 distributed in 10 countries of West and Central Africa during the first semester of 2019, and their deployment and use has been closely monitored by the ECTAD regional and country offices. 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 are liaising with a FMD reference laboratory to ship the positive and inactivated LFDs for virus characterization (following the protocol developed by ANSES).

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 PCP-FMD implementation	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	Training and mentorship scheme for PSOs has been drafted in collaboration with Comp. 3.3. Nine strategic plans have been reviewed by the FMD WG and two new strategic plans have been submitted. The RAP, RBSP and OCP templates were finalized in French and English. An RBSP open access course was finalized.	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.	A request for support to the Comoros was received by the EuFMD and plan for providing assistance developed	a) At least three EuFMD experts participate in team missions by Sept 2021.
3.1.2. Support GF-TADS Regional Roadmaps, 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 developed a proposal for virtual RMs which has been endorsed by the WG; currently ongoing support the organization of the virtual SADC RMM (November 2020). Development of format for online meetings with the Regional Advisory Groups (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 activities of the PSO mentoring and training network to be linked to the training development and delivery under component 3.3.	Collaboration with IGAD in Eastern Africa established on training Risk Analysis to support safe trade and FMD control training programme. Consultation and definition of procedures to support and coordinate actions for building PCP-FMD capacities conducted with Regional partners in Eastern and Western Africa. Support to regional networks via the establishment of Virtual Training Centres (VLCs) (see Comp. 3.3).	a) Support and co-ordination mechanism developed and established in at least 2 Roadmap regions by Sept 2021. b) Collaboration agreement achieved and implemented with regional bodies in at least 1 Roadmap region and by Sept 2021
3.1.3. Application tools to	3.1.3.1. Support the GF-TADS Working Group in improving the timing and efficiency of review	Provision and improvement of tools and guidance documents to (i) facilitate and assist country ability to develop nat. strategic plans for PCP	TRAC system has been refined and will be piloted. A PCP-FMD Review Support System was further implemented, and	a) Improved and uniformed guidance documents and tool to assist the development and review process of

of national control plans	progression and (ii) assist the GF-TADs WG documents assessment and review mechanism	weekly meetings re-conducted.	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.	A static dashboard has been developed by WRLFMD with inputs from the EuFMD.	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 impacted some of the activities under Component 3.1 during the reporting period, and in particular has led to the postponement of the SAARC RMM and the cancelation of the 37th GF-TADs FMD Working Group face-to-face meeting. 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.

- Revise and submit the PSO Training Development Framework proposal to the PSO network and progress 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 (priorities for the EuFMD are PSO nominations in Pools 2, 3, 4, 5);
- 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;
- Revise and update regional strategy for West and Central Africa and to establish partnerships with regional bodies to mutualize and coordinate efforts (coordination with Components 3.2 and 3.3).

3.1.2.

- Support the Comp. 3.3 in the establishment of Virtual Learning Centers in Asia and 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 the first virtual RMM, in SADC region, with the GF-TADs FMD WG and SADC secretariat and mechanism for the regular meetings with the RAGs with the GF-TADs FMD WG.

3.1.3.

- Assess options for establishment of a confidentiality agreement between FAO and IZSLT with regards to the operationalization of the TRAC. Further strengthen the PCP Review Support System and the regular meetings with the GF-TADs FMD WG.

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 virtual Roadmap Meetings (upcoming v-RM in SADC in November 2020) and virtual meetings with Regional Advisory Groups (RAGs).

The establishment of the PCP Review Support System has proven instrumental in supporting the GF-TADs FMD WG and progress in reviewing all the pending plans and strengthening expert collaboration with the GF-TADs FMD WG.

The RAP, RBSP and OCP templates in French and English have been endorsed and made publicly available, and the TRAC will be piloted for the first virtual Regional Roadmap meeting, for the SADC region.

Establishment of a solid collaboration with Intergovernmental Authority for Development (IGAD) Center for Pastoral Areas and Livestock Development (ICPALD) in Eastern Africa for the development of an integrated training programme on Risk Analysis to support safe trade and FMD Control. This collaboration led to the development of three national risk assessment for FAST spread in Kenya, Ethiopia and Uganda. In Uganda, in particular, the risk assessment for FMD spread from has been integrated in the revision of the RBSP leading to update some of the risk-based approaches for surveillance and has also been submitted in a scientific manuscript format for publication.

10. Budget (€) COMP. 3.1

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
Component 3.1	4.752	2.896	1.856
<u>Consultancy Operational</u>			
Component 3.1	48.180	42.510	5.670
<u>Consultancy Technical</u>			
Component 3.1	130.000	89.742	40.258
<u>Travel</u>			
Component 3.1	70.000	11.817	58.183
<u>Training</u>			
Component 3.1	46.000	3.085	42.915
<u>Contracts</u>			
Component 3.1	30.000	17.074	12.926
<u>Procurement</u>			
Component 3.1	-	-	-
<u>General Operating Expenses</u>			
Component 3.1	20.000	1.837	18.163
Total Direct Eligible Cost	348.932	168.961	179.971

Component 3.2 (Activity 3.2)

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
Component supervisor	Paolo Motta	Pillar III Co-ordinator
Component manager	Kees van Maanen	
Training and networking	Nadia Rumich	Training and Networking
Partner organisations	WRLFMD and the FAO/OIE FMD Reference Laboratory Network are key technical partners. The OIE a funding partner through funding of twinning programmes	
ExCom oversight	TBC	
FAO	TBC	
OIE	TBC	
EU Commission	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	Sent out by
Six monthly report to ExCom	Head of WRL	Written report and presentation	ExCom, STC	Network and Training Support Officer
Yearly	WRL	Annual network report from head of the WRL	ExCom, STC	
Every two years report to MN	Component manager	Written report and presentation	General Session	
Report on workshop or e-learning course	Component manager or lead facilitator	Written report		

5. Objective of the component

Strengthened global laboratory surveillance support and improved FMD virus intelligence to guide regional 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
3.2 Improvement of global laboratory support	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 b 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 of the global OIE/FAO FMD Reference Laboratory network. Regular collection of information through established procedure 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 **annual meeting of the OIE/FAO FMD Laboratory Network** will be organised as a virtual session, this meeting will be planned late November or early December.

In the current semester the WRLFMD and EuFMD have reviewed and improved the contents of a series of e-learning modules (FMD Diagnostics) for the delivery of FMD laboratory surveillance training course (FLITC) in all Roadmap regions. The next FLITC course is planned to be conducted for the period November 5th – December 3rd 2020.

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 6 virus Pools

Quarterly reports summarizing WRLFMD activities are available <https://www.wrlfmd.org/ref-lab-reports>. A new format for a joint quarterly global report (accommodating input from EuFMD GMR) has been prepared and reports are available for the first two quarters of 2020 <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 and of the 30 countries 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 have been 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.

In order to improve virological surveillance and identify current gaps and priorities in surveillance, since April 2020 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 2018. This work will contribute significantly to discussions between EuFMD, WRLFMD and the OIE/FAO FMD reference laboratories network for more targeted virological surveillance and the identification of follow up actions needed to achieve this.

Support to the use of rapid diagnostic tests for FMDV detection (Lateral Flow Devices, LFD) has continued for West and Central African countries in coordination with FAO ECTAD West Africa. As mentioned above the SARS-CoV-2 pandemic has negatively impacted sample submission also due to travel restrictions, nevertheless during the reporting period LFD have been used in the field during outbreak investigations Burkina Faso and Niger and positive and inactivated LFDs are expected to be shipped to Reference Laboratories. Although this approach shows considerable promise to enhance FMD surveillance, there are still difficulties to procure the FMDV LFDs from commercial sources.

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 it is expected that new results will be produced in Q4 2020 for the O-Campos vaccine from this supplier. An **immunogenicity study** has been 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.

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 for evaluating the quality and suitability of FMD vaccines intended for use in Africa.

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 co-ordination and activities of the **OIE/FAO FMD Reference Laboratory Network** to ensure better technical expertise development and networking at regional levels.

Sub-activity level	Description	Progress in the current period	Biennium indicator	
3.2.1 OIE/FAO FMD 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 meeting of OIE/FAO reference laboratory network has been planned for end of November or early December 2020	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
	3.2.1.2 Delivery of FMD laboratory surveillance training in all 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 reviewed and updated a series of e-learning modules (FMD Diagnostics) with the view to deliver these modules as the main content of the third FLITC course (November 5 th – December 3 rd 2020)	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 summarising WRLFMD activities available: http://www.fao.org/eufmd/resources/reports/quarterlyreport/en/ And https://www.wrlfmd.org/ref-lab-reports . New format for quarterly global report (accommodating input from EuFMD GMR) has been prepared and the first two quarterly reports of 2020 have been published	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 awaiting for shipment to the EU-RL.	a) Adequate number of antigen ELISA kits and PCR reagents provided for surveillance
3.2.3 Vaccine selection and performance summary*	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

3.2.3.2 Progressively support advancement towards validation of new tests for vaccine matching and measures of protection *	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.	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;
* 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.		

7. Issues for the Executive Committee attention

Impact of COVID-19

The residential FMD diagnostics training course at WRLFMD planned for May 2020, has been postponed due to 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 been very low (only 122 samples [received from 4 countries] since January 2020 which is <50% of normal submissions during a typical six-month period).

The 2020 annual meeting of the OIE/FAO FMD reference laboratories Network will not be organised on a physical location, but will be replaced by a virtual event in November or December 2020.

Samples panels for a new proficiency testing scheme (Phase XXXII) have been prepared and samples dispatched to the participating laboratories in 17/30 countries supported in the WRLFMD LoA. Shipments to eight further countries are in progress. Two countries have declined to participate, and three countries have not responded to the invitation.

8. Priorities for the next six months

- Organize the annual global online training in FMD laboratory surveillance in English (November 5th – December 3rd 2020);
- Strengthen the coordination and collaboration with the WRLFMD in identifying virological surveillance gaps and develop resources for guiding further collaboration, including a report on historical surveillance trends and gaps to better define follow-up actions and intervention, and coordination for development of tailored online visualization tools;

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. The next FLITC course is planned for the period November 5th – December 3rd 2020.

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 2018. These results have been discussed with the WRLFMD (and the OIE/FAO FMD reference laboratories Network) in order to prepare a report to improve virological surveillance and identify current gaps and priorities in surveillance and better define follow up actions and interventions. 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 are expected to be shipped to Reference Laboratories shortly together with samples previously collected in Niger.

10. Budget (€) COMP. 3.2

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
Component 3.2	8.944	4.827	4.117
<u>Consultancy Operational</u>			
Component 3.2	48.180	42.510	5.670
<u>Consultancy Technical</u>			
Component 3.2	16.000	14.750	1.250
<u>Travel</u>			
Component 3.2	17.000	-	17.000
<u>Training</u>			
Component 3.2	14.000	20	13.980
<u>Contracts</u>			
Component 3.2	400.000	387.332	12.668
<u>Procurement</u>			
Component 3.2	18.000	-	18.000
<u>General Operating Expenses</u>			
Component 3.2	22.000	-	22.000
Total Direct Eligible Cost	544.124	449.439	94.685

Component 3.3 (Activity 3.3)

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, Chiara Addari

3.3.2 Marcello Nardi, Jenny Maud

3.3.3 Jenny Maud, Chiara Addari

3.3.4 Jenny Maud, Maria de la Puente Arevalo

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>
Component supervisor	Paolo Motta	Pillar III Co-ordinator
Component manager	Jenny Maud	Training Programme
Training and networking	Nadia Rumich	Training and Networking
Partner organizations	Training activities carried out in collaboration with regional partners and organizations in support of the GF-TADs Global Strategy for FMD control.	
ExCom oversight	TBC	
FAO	TBC	
OIE	TBC	
EU Commission	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>
6 monthly report to ExCom	Component manager/supervisor	Written report and presentation	ExCom, STC	
Every 2 years report to MN	Component manager	Written report and presentation	General Session	
Report on workshop or e-learning course	Component manager or lead facilitator	Written report		
Report on training quality and impact		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
3.3 Better training for progressive control	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 e-learning course.	Regular collection of data through EuFMD e-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 EuFMD v-learning platform (<https://eufmdlearning.works/>) has been maintained, with over 14000 users now registered with the platform. The COVID-19 pandemic led to a rapid increase in the number and variety of training courses and resources which EuFMD is making available in an online format. To support this, additional personnel have been recruited to the virtual learning operational team, and a number of training materials developed to assist rapid up-skilling of the EuFMD team in the development and delivery of online training.

In addition, following consultation, an **upgrade has been scheduled** to the EuFMD Virtual Learning platform software. This transition, to Moodle Workplace™, will take place in the last quarter of 2020 and will bring new functionality that is required for the implementation of the Training Management System (see below). 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 development has continued during the current semester and will now be fully implemented for all training courses delivered from September 2020 onwards. For further details of this initiative, please see activity 1.1.3.

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

Consultation and prioritization for training development

Improvements to procedures to identify training gaps and needs have been made, to integrate information from multiple sources (key informants, trainee feedback, national focal points, regional advisory groups, capacity assessment tools and GFTADs partners) in order to guide the development and delivery of training. This system has also been adapted for use under the VLC for Southern Africa.

Development of new training courses

Two **new training courses** have been developed for Pillar II and III countries in the April to September 2020 period:

Applying Public-Private Partnerships to the Control of FMD and Similar Transboundary Animal Diseases (FAST)

This course was developed in partnership with the OIE and built on the earlier collaboration to develop a short open access course on Public-Private Partnerships (PPP). It applied PPP specifically to control of FAST. A series of five new virtual learning modules were developed, and then utilised in two ways:

- a) As a standalone virtual learning course hosted on the OIE's platform;
- b) As a tutored online course, in which the modules were combined with webinars and assignments to create a tutored online course.

The learning objectives of the tutored course are that participants would be able to:

- conduct an analysis of opportunities for PPP for FAST control in your country, in which existing PPPs, stakeholders, and demands from the public and private sectors are mapped;
- develop the outline of a business case for establishment of a PPP to address a FAST disease priority in your country;
- apply a framework to conduct an initial evaluation of a business case for a PPP;
- develop a national or sectoral action plan for the establishment of an enabling environment for public and private sector collaboration in FAST control.

Open-Access Risk Based Strategic Plan

Following the revision of the template for the Risk-Based Strategic Plan (RBSP) it was necessary to update and build upon previous training materials. A new short course has been developed which will be made available on an open-access basis and also used to support training workshops and regional roadmap meetings as preparatory training material.

The learning objectives of the course are that participants will be able to:

- explain the importance of the Risk Based Strategic Plan (RBSP) within the PCP-FMD;
- describe criteria that can be used to assess if developing an RBSP would be recommended for a country;
- describe the content that should be included within an RBSP;
- initiate or assist with the development of an RBSP;
- describe the expertise needed to contribute to the RBSP, the stakeholder consultation required and some approaches to engage stakeholders;
- identify and combine additional resources available to assist with the development of an RBSP.

Delivery of training courses

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

FMD Investigation Training Course for Southern Africa

This was the first course organized through the Southern Africa VLC (see below). The course was tutored by a combination of EuFMD international experts and experts from the Southern African region. Over 350 participants were enrolled from 13 countries in Southern Africa with strong engagement on the discussion forums. and a survey is currently underway which aims to understand the reasons why some participants did not complete the course, with the aim of improving completion rates in future.

FMD Risk Analysis Along the Value Chain

The 3rd edition of the in-depth virtual learning course “FMD Risk Analysis Along the Value Chain” was organized during July and August. This course applies a step-by-step approach to mapping value chains, analysing risk, identifying risk hotspots and proposing interventions to improve disease control. The course was reviewed ahead of delivery and changes made to further emphasize the importance of integrating the approach learned during the course into countries’ existing control plans. All participants were asked to produce an action plan for implementation of the course learnings, which will be shared with their CVO and nominating officers after the course, and followed up periodically, including through PSO support where applicable. All pillar II countries together with PIII countries from South Asia, West, Central and Southern Africa were asked to nominate up to four participants for the course. PCP Support Officer candidates were also asked to complete the course.

3.3.4 Implementation of system for cascade trainingSupport the development of virtual learning centres (VLCs)*Southern Africa*

The VLC for Southern Africa was established in February 2020 in partnership with the FAO Sub-Regional Office for Southern Africa (FAO-SFS). A full-time VLC manager was recruited (Wilmot Chikurunhe) with additional operational support staffing provided by FAO-SFS. The VLC team have each been mentored by an EuFMD counterpart.

The activities of the SFS-VLC team to date have included:

- Establishment of a network of training focal points who nominate participants for training courses, join virtual meetings and have completed a training needs assessment survey.
- Delivery of one region specific virtual learning course (see above), and contribution of participants to four other virtual learning courses. A total of 205 participants have so far completed virtual learning courses organized through the VLC.
- Meetings with external partners with a view to identifying routes to long-term sustainability of the VLC. To date these meetings have included meetings with the South African Veterinary Council, the University of Pretoria, the OIE and the Southern African Centre for Infectious Disease (SACIDs).

Asia and the Pacific

South Asia has been identified as a priority area for Pillar III training activities under both the Phase IV and V work Programmes and this region was therefore selected as the second region in which a VLC approach would bring greatest benefit and impact for the EuFMD Programme. Following discussions with colleagues at the FAO Regional Office for Asia and the Pacific (FAO-RAP) a joint proposal was developed for the establishment of a VLC to cover the Asia-Pacific region. The proposal for collaboration has subsequently received approval from FAO AGA and the establishment of the VLC in Asia and the Pacific has started in August 2020. An interim VLC Manager (Corissa Miller) has been recruited in September 2020. The establishment of the VLC-RAP will follow similar processes applied for the VLC-SFS, with each VLC team member mentored by a counterpart within the EuFMD team.

To date the activities of the VLC-RAP have focused on the development of a work-plan with activities for the first months, including the recruitment of human resources, establishment of advisory and governance mechanisms, establishment of a network of national training focal points, design of a training needs assessment and delivery of a first VLC-specific course.

Eastern Africa

In support of the Comp. 3.1 programme, and in particular for the strengthening of the collaboration with regional Organizations and technical networks, during the current semester technical discussions have been held with FAO colleagues in the Eastern Africa and other potential partners (IGAD) for the establishment of a VLC in the region. A proposal is under development and would be finalized during the upcoming semester.

Development of resources for cascade training, including for veterinary paraprofessionals

The activities to support training for veterinary paraprofessional will benefit of additional funds made available for a project (BMGF) focused on training of veterinary paraprofessional. The training resources developed will be leveraged for use under the Pillar III programme. The initial phase of countries selection is starting, with the development of training resources expected to occur in 2021

Develop system for monitoring of national training of veterinary service staff

A competency framework has been completed for FMD free countries (see Component 1.1). This work will be extended to non-free countries.

An upgrade to the software used for the EuFMD Virtual Learning platform will take place in the last quarter of 2020 and will facilitate the functionality required for the pilot of the Training Management System.

	<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 Training infrastructure	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 Quality assurance across the training programme and assessment of its impact	Development of a TQMN in 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.	A Training Quality Management System has been developed and is currently being implemented for all courses organized.	Development and full implementation of the TQMS by June 2020.
3.3.3 Development and delivery of training	3.3.3.1 Consultation and prioritization for training development and delivery	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 framework has been developed and will be implemented to target training activities for 2021.	Update on training development and delivery prioritization available for EuFMD Executive Committee and GFTADS partners every six months.
	3.3.3.2 Development of new courses	Based on the priorities identified in 3.3.3.1, new courses will be developed, suitable for delivery in multiple regions and translation into regional languages.	New training course on Public Private Partnerships delivered as a tutored course on the EuFMD e-Learning platform in June 2020. New open access course on Risk Based Strategic Plans developed and to made available in October 2020.	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).	398 individuals from the target countries* have completed at least one EuFMD training course between 1 September 2019 and 31 September 2020.	At least 2500 individuals from the target countries* have completed at least one EuFMD course by Sept 2021.
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 in the long term.	Virtual Learning Centre has been established in Southern Africa and participants from Southern Africa enrolled in five virtual learning courses. 205 participants from Southern African countries have completed a virtual learning course so far. Virtual Learning Centre for Asia Pacific has been approved and an interim manager (Corissa Miller) recruited. The first virtual learning courses are anticipated to be organized through the	a) At least two regions with VLCs established and supported by EuFMD by Sept 2021.

		VLC in the next four months. Discussions underway for similar partnership in East Africa.	
3.3.4.2 Development of resources for cascade training, including for veterinary paraprofessionals	Based on the priorities identified in 3.3.3.1, resources and tools suitable for countries to provide training at national level will be developed. Resources will be developed in a variety of modalities including those suitable for provision of training by mobile phone, and those suitable for training of VPPs.	The activities to support training for veterinary paraprofessional will benefit of resources developed by EuFMD within a dedicated project on VPP with additional funds made available	At least 15 of the target countries using EuFMD resources or courses for training of national staff by Sept 2021.
3.3.4.3 Develop system for monitoring of national training of veterinary service staff	Develop system which will allow national veterinary services and individual training participants to record and monitor the training undertaken, promoting continuing professional development and allowing countries to assess capacity building priorities for their veterinary service.	A competency framework has been completed for FMD free countries (see component 1.1). This work will now be extended to non-free countries. An upgrade to the software used for the EuFMD Virtual Learning platform will take place in the last quarter of 2020 and will facilitate the functionality required for the pilot of the Training Management System.	System for national training monitoring dev. and piloted in four of the target countries by Sept. 2021.

7. Issues for the Executive Committee attention

EuFMD has received growing interest from a number of global and regional levels projects at FAO with proposals for coordination and collaboration to develop and deliver virtual training courses and resources. This is partly due to the COVID-19 pandemic and to the recent activities for the establishment of VLCs. 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

- Upgrade of the EuFMD Virtual Learning platform to new software;
- Development 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;
- Delivery of planned virtual learning courses including Socio-Economic Impact Assessment (October 2020), Lumpy Skin Disease courses for Southern Africa (November 2020) and the FMD Laboratory Investigation Training Course (November 2020);
- Finalize the training needs assessment process and use this to design an updated program for training development and delivery for 2020, in which the implications of ongoing restrictions due to COVID-19 are considered;
- Work with partners in Southern Africa VLC to continue to deliver the planned virtual learning courses and to develop plans for future sustainability, including identification of potential new resource streams, and to support regional networking through the VLC, including the planned virtual FMD Regional Roadmap Meeting;
- Work with partners in the Asia-Pacific VLC to recruit and train the necessary human resources, conduct a training needs assessment, develop a plan for training delivery, deliver the first training courses and begin exploration of routes for long-term sustainability;
- 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;
- Develop the Training Management System for Pillar III countries, including pilot of some parts of the system with target countries.

9. Success stories and outputs

The design and implementation of the VLC approach for establishment of regional virtual training centers has been well received by FAO colleagues and has shown strong potential to improve the regional roll-out of EuFMD virtual learning courses to wider audiences. In its first eight months, the VLC for Southern Africa has supported the involvement of more than 200 participants completing five virtual learning courses. The VLC for Asia-Pacific has received strong endorsement and the planning phase is well underway for establishment before the end of 2020.

Two new virtual courses have been developed during the reporting period, specifically supporting the progress along the FMD PCP (Risk Based Strategic Plan Course) and establishment of public-private partnerships for improving FAST disease control (Applying Public-Private Partnerships). Further courses have been designed and are in the pipeline for development. It is anticipated that the COVID-19 pandemic will lead to the development of additional virtual learning courses.

The TQMS has been developed and is now implemented for all training events.

10. Budget (€) COMP. 3.3

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
Component 3.3	3.914	1.931	1.983
<u>Consultancy Operational</u>			
Component 3.3	48.180	42.510	5.670
<u>Consultancy Technical</u>			
Component 3.3	168.000	58.901	109.099
<u>Travel</u>			
Component 3.3	18.000	5.254	12.746
<u>Training</u>			
Component 3.3	10.000	-	10.000
<u>Contracts</u>			
Component 3.3	30.000	-	30.000
<u>Procurement</u>			
Component 3.3	-	-	-
<u>General Operating Expenses</u>			
Component 3.3	45.000	422	44.578
Total Direct Eligible Cost	323.094	109.018	214.076

Component 3.4 (Activity 3.4)

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

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. They wanted 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 form of partnership 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 43rd 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>
Component supervisor	Paolo Motta	Pillar III Co-ordinator
Component manager	Bouda Vosough Ahmadi	
Training and networking	Nadia Rumich	Training and Networking
Member State partners		n/a
ExCom oversight		
FAO officer	TBD	
OIE		
EU Commission		

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>
Six monthly report to ExCom	Component manager	Written report and presentation	ExCom, STC	EuFMD Secretariat
Every two years report to MN	Component manager	Written report and presentation	General Session	EuFMD Secretariat
Every two years Evaluation report	Component manager	Guidance papers and/or studies to be available	EuFMD, NSAH, and EuFMD partners if required	EuFMD Secretariat
Mission/Meeting reports	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.

Component (Activity)	Objective	Narrative	Expected result	Monitoring	Evaluation	Assumptions and risks
3.4 Improved security in FMD vaccine supply	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

A joint study with the Global Academy of the Food Security at the University of Edinburgh was defined during the previous Semester through a research project focusing on quantifying the future demand for vaccine based on livestock populations. The aim of this study is to project and estimate the growth of livestock populations as an indicator of increasing demand for vaccine and consider the progress of countries along the PCP-FMD and the stages they are committed to achieve by 2030 (including surveys conducted at Regional Roadmap meetings; reported vaccination coverage from the OIE WAHIS database; and expert opinion).

The official arrangements for the study defined between the EuFMD and the University of Edinburgh did not progress due to COVID-19 pandemic, therefore we initiated the development of the vaccine demand model hiring a home-based veterinary graduate and Masters student as an intern (Sarah Watson) to be assisted by Bouda Vosough Ahmadi, Nick Lyons and Paolo Motta. This current work is aiming at developing a robust quantification model of the size of the global FAST disease vaccine market (i.e. demand for vaccine) with particular reference made to system dynamics modelling. A deterministic Excel spreadsheet model (and also equivalent R scripts) has been created considering FMD vaccine demand in endemic settings. 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. Next the model will be converted to a stochastic version to incorporate uncertainty in the various parameters. The next step of the project will involve estimating the demand in free settings incorporating the following additional parameters in the model framework:

- Probability of FMD outbreaks (based on a review of previous FMD outbreaks in free settings over time)
- Probability that vaccines will be used (i.e. uptake by farmers/producers) based on known contingency plans or expert opinion.
- Likely quantities of FMD vaccines used if a country experiences an outbreak (based on livestock populations). Delphi approach is being used now to gather expert opinion on determining expected reduction proportions for each PCP stage for vaccine coverage and outbreak reduction.

The model development has started in June 2020 and at the time of reporting the codes are under fine-tuning and input data under validation. Results will be presented in Open Session 2020 that will be held in December 2020 and also in a workshop that will be followed in January 2021.

3.4.2. Development of guidance and advice to the PPSP

Regular co-ordination with the PPSP

Consultation with the public-private sector Platform (PPSP) has been held to help prioritizing actions and initiatives. Closely linked to the PPSP and joined by the OIE and CIRAD, EuFMD developed and ran a v-learning course entitled “Applying public-private partnerships to FAST disease control (APPP-FAST)” in June-July 2020 (see Comp. 3.3). In total, 225 participants from 29 countries (from European Neighboring countries, East and Southern African countries) registered in the course. Experts on PPP and vaccine development and delivery projects, PPSP/vaccine value chains and on PVS Pathways were involved, including GALVmed (Nina Henning) and the OIE (Francois Caya, Isabelle Dieuzy-Labayé), BMFG (Sam Thevasagayam) and the University of Edinburgh (Prof Andy Peters), and CIRAD (Marisa Payer). Course was finalized by evaluation of PPP business cases that were submitted by participants. We have planned to follow up and support further development and implementation of these PPP proposals in the regional virtual workshops (for South Eastern Europe Neighboring Countries (SEEN), Middle East and North Africa) which will be held in October and November 2020 (under Pillar II and III).

Produce technical and policy study reports and guidance papers

Technical support was provided to one of the participants of EuFMD’s socioeconomic impact assessment course in 2019 with conducting a desk-based analysis that was focused on comparing two vaccination regimes in bordering provinces of Turkey. Results were presented in a paper that has been just accepted for publication: (N. Ozturk, O. Kocak and B. Vosough Ahmadi. Economic analysis of increasing Foot-and-Mouth Disease vaccination frequency: the case of biannual mass vaccination strategy. *Frontiers in Veterinary Science*. DOI: 10.3389/fvets.2020.557190).

	<i>Sub-activity level</i>	<i>Description</i>	<i>Progress in period</i>	<i>Progress overall towards biennium indicator</i>
3.4.1. Advanced understanding	3.4.1.1. Understand the barriers and drivers for adoption and factors influencing the supply	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).	a) Report on current unmet demand and future growth presented at 44 General Session (April 2021) b) One PPSP meeting report produced per year	1) A research study on quantifying vaccine demand (reflecting supply) has started and results will be presented in OS20 in December 2020; 2) Two follow up workshops will be held in Dec 2020 and January 2021 to discuss the progress of the action points; 3) One peer-reviewed paper published; 3) APPP-FAST course developed and delivered in June 2020; three regional workshops will be held (linked to Pillar II)
	3.4.2.1. Regular co-ordination with the PPSP	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 Stage 1 to 3	a) Two PPSP face-to-face meetings per annum b) One PPSP meeting report produced per year	1) Following consultations with FAO economists during the previous semester conversations are ongoing for possible collaborations about aspects of projection of vaccine demand and also economics of diseases and control strategies; These are now followed up by socioeconomics course/workshops planned in October 2020 and collaborating with GF-TADs in their upcoming West African socio-economic studies under the DTRA funded GF-TADs project. 2) Two joint proposals on burden of diseases and economic justification of vaccination strategies developed during the previous semester and submitted to potential funders namely IDRC of Canada and USAID were not successful; as stated above these proposals will be used in the new potential collaboration with GF-TADs under DTRA project.
3.4.2. Guidance to the PPSP	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	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.	a) Three guidance papers and/or studies to be available by Sept 2021 b) Satisfactory review of PPSP members	1) Results of a desk-based economic analysis of comparing two vaccination regimes in bordering provinces of Turkey were published (N. Ozturk, O. Kocak and B. Vosough Ahmadi. Economic analysis of increasing Foot-and-Mouth Disease vaccination frequency: the case of biannual mass vaccination strategy. <i>Frontiers in Veterinary Science</i> . DOI: 10.3389/fvets.2020.557190); 2) Socioeconomic guidelines for FMD is under writing that includes aspects to be considered for vaccination strategy. Slow progress on finalizing the SE guidelines; discussions are in progress with GF-TADs and FMD-WG on (financial and technical) arrangements and timetable of making this ready.

7. Issues for the Executive Committee attention

Vaccine demand modelling has now been completed by the EuFMD (Sarah Watson assisted by Bouda Vosough Ahmadi, Nick Lyons and Paolo Motta). Collaboration with the University of Edinburgh on PhD studentship that was also on vaccine demand is on hold (could be possibly pursued after the ongoing modeling has been finalized in January 2021).

8. Priorities for the next six months

- 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 the vaccine demand model and publish results/report;
- Further development of vaccine PPVP liaising with partners;
- Follow up on PPP business cases gathered in the APPP-FAST course;
- Planning and finalizing SE guidelines.

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 started in the current semester aiming at estimate the growth of livestock populations as an indicator of increasing demand for vaccine in combination with projected progress of countries along the PCP-FMD by 2030. The initial results of this project will be presented during the OS20.

As part of the APPP Course PPP business cases were submitted, including on improved systems for vaccine delivery in endemic countries at the frontline level and the potential for development and implementation of these PPP proposals will be discussed in regional virtual workshops during the next semester (for South Eastern Europe Neighboring Countries (SEEN), Middle East and North Africa).

10. Budget (€) COMP. 3.4

BUDGET CATEGORIES	Budget 1st Biennium	Expenses	Balance
<u>Salaries (Professional)</u>			
Component 3.4	1.398	965	433
<u>Consultancy Operational</u>			
Component 3.4	48.180	42.510	5.670
<u>Consultancy Technical</u>			
Component 3.4	19.400	21.757	-2.357
<u>Travel</u>			
Component 3.4	15.000	-	15.000
<u>Training</u>			
Component 3.4	5.000	-	5.000
<u>Contracts</u>			
Component 3.4	15.000	-	15.000
<u>Procurement</u>			
Component 3.4	-	-	-
<u>General Operating Expenses</u>			
Component 3.4	5.000	702	4.298
Total Direct Eligible Cost	108.978	65.934	43.044



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