



Food and Agriculture  
Organization of the  
United Nations



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



# Three pillars

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## Report

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April 2023 - September 2023



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## The EuFMD Pillars

### Pillar I

The **Strategic Output**, or Pillar I of the Phase V EuFMD workplan (2022-2023) focuses on **Improving preparedness** for management of FMD and similar TADS ('FAST diseases') crises by Member Nations and across Europe as a whole.

### Pillar II

The **Strategic Output**, or Pillar II of the Phase V EuFMD workplan (2022-2023) focuses on **Reduced risk** to Members from the FAST disease (FMD and similar TADS) situation in the European neighbourhood.

### Pillar III

The **Strategic Output**, or Pillar, III of the Phase V EuFMD workplan (2022-2023) 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.

## Pillar I

### Who we are

Pillar I / Component	Objective	Manager (s)
	Improved preparedness for management of FMD and similar TADs ('FAST diseases') crises by Members and across Europe as a whole.	T. Alexandrov
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.	R. Nova
Sub-activity level manager		1.1.1 / 1.1.3 M. Nardi 1.1.2 R. Nova / G. Filipovic
1.2 Emergency Preparedness	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.	K. Gibson
Sub-activity level manager		1.2.1/ 1.2.3 K. Gibson, Z. Mehmedbasic 1.2.2 S. Yadav K. Mintiens 1.2.4 K. Mintiens
1.3 Emergency Vaccination		K. Gibson
Sub-activity level manager	the constraints to use vaccination and through the establishment of new system to increase FMD vaccine security.	1.3.1 K. Gibson / D. Mackay 1.3.2 D. Mackay 1.3.3 M. Ilott
1.4 South Eastern Europe	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.	T. Alexandrov
Sub-activity level manager		1.4.1 G. Filipovic / M. Sabirovic 1.4.2 G. Filipovic / K. Krstevski 1.4.3 G. Filipovic / K. Krstevski 1.4.4 G. Filipovic / K. Krstevski
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).	E. Chevanne
Sub-activity level manager		
1.6 Proficiency Test Services	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 candidate states.	K. Krstevski
Sub-activity level manager		
1.7 Disease risk assessment and forecasting	Improved global and neighborhood FAST disease risk assessment and forecasting, with information to Member Nations and the public made available on a regular basis.	M. McLaws
Sub-activity level manager		1.7.1 R. Condoleo / M. McLaws 1.7.2 B. Armson / M. McLaws 1.7.3 E. Chevanne / K. Van Maanen

## Component 1.1 Training for Member Nations

### a) Background information

At the beginning of each biennium, a **training menu** is developed and offered to the 39 EuFMD Member Nations (MNs). Regular communication with the 39 Training Focal Points (TFP) is kept during the biennia to ensure the activities included in the training menu consider the training needs of MNs. This should ensure the correct implementation of the program by the end of each biennium (2020-2021 and 2022-2023).

The training menu includes online training (multi-country and national tailored courses) and face-to-face courses (i.e. workshops, Real-Time Trainings and laboratory training). Support for **regional initiatives** and assistance with **national training** are also included and encouraged as potential activities. The current training menu includes a number of topics related to foot-and-mouth and similar transboundary animal diseases (FAST). It focuses on providing MNs with practical knowledge to deal with challenges related to disease detection, response (control) and the recovery phase after an outbreak. The current training program considers the risk that FAST diseases pose in the various MNs.

In Phase V, an additional effort is being made to support **capacity development** at national level. To achieve this, the EuFMD training support services include training resources and materials that can be used by the trainees who participated in EuFMD courses, and by national education institutions, at national level to cascade knowledge. The number of these **open-access resources** and their visibility and accessibility has increased.

To train swiftly a large number of veterinarians involved in emergency response, 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 MNs in the event of a **FAST disease incursion**.

In Phase V, to promote the **engagement of the private sector** in the prevention and control of FAST diseases, training opportunities have been opened for this sector (e.g. livestock industries and associated with livestock value chains), in addition to official veterinary services.

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

Moreover, during this Phase, work is being carried out under component 1.1. to **achieve accreditation** of EuFMD courses as Continuing Professional Development (CPD) and / or part of a wider, European system for the recognition of training for achievement of competencies by veterinary authority personnel.

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 1.1.

The direct beneficiaries of this component are the 39 EuFMD MNs.

Communication with representatives of the **EU initiative Better Training for Safer Food (BTSF)** took place during the current workplan to guarantee training complementarity.

## **b) Updates on Component Sub-Activities**

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

#### **Training infrastructure and human resources**

*Note this activity is also reported under components 2.3 and 3.3.*

Following the migration to a new hosting provider, the EuFMD virtual learning platform (<https://eufmdlearning.works/>) has been fully functional for the reporting period. The platform has currently 26 938 registered users, of which 10 190 accessed during the reporting period. A technical upgrade of the platform, to enhance the functionalities offered to learners and ensuring a more efficient use of the tool, is expected to take place during the next reporting period. The support to capacity development and delivery activities continues to be coordinated respectively by Valentina Busin and Elena Flores Ruiz, EuFMD.

#### **Introduction to animal health surveillance**

The need to further improve the capacity development activities to increase the likelihood of reporting suspicion of FAST diseases among veterinarians and veterinary paraprofessionals was outlined. The EuFMD therefore developed and published a new open-access course “Introduction to animal health surveillance”, which provides an overview of the importance and key activities of surveillance within the overall context of animal health. The one-hour interactive module focuses on explaining the importance of animal health surveillance, defining the role and responsibilities of different stakeholders in contributing to surveillance and categorizing surveillance activities, with particular focus on passive surveillance. The course was opened in June 2023 and will form the basis for a further, in-depth course on passive surveillance, with the overall aim to improve understanding and awareness of passive surveillance as early detection system for FAST diseases outbreaks, enhancing the effectiveness of passive surveillance and improving diagnostic sample collection

#### **Translation in local languages of the microlearning package for field veterinarians in East and Southern-East Europe**

The EuFMD has developed a set of microlearning resources to provide job aids to veterinarians in the field on FMD clinical signs, including outbreak investigation, lesions ageing, collection and shipment of samples and biosecurity. With the support of DG-SANTE, the EuFMD translated the learnings into Albanian, Bosnian, Bulgarian, Croatian, Greek, Hungarian, Macedonian, Montenegrin, Romanian, Serbian and Slovenian. This ensures veterinarians in those countries closer to the borders of Europe affected by SAT2 have access to FMD preparedness tools.

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

The following courses of the training menu 2022-2023 were delivered during the reporting period:

- Foot-and-mouth emergency preparation course (FEPC) for Spain: the sixth edition of the FEPC ran for four weeks (April-May 2023). Over a hundred nominees registered and 88% completed it.

- Foot-and-mouth emergency preparation course for Germany: the FEPC Germany was delivered between May and June 2023, in partnership with Friedrich-Loeffler-Institut (FLI). A total of 81% of the nominees completed the course.
- Online workshop “Organizing simulation exercises for animal disease emergencies” (multi-country): this is the second edition of this course during the current biennium and was held from May to June 2023. Fourteen participants from six MNs took part in this activity and 79% completed it.
- Foot-and-mouth disease laboratory training: this was a two-week face-to-face course delivered in May 2023 in Pirbright. Three participants from three MNs (Georgia, Germany and Portugal) attended.
- France in-country mission: EuFMD supported a training activity organized by France (in-country mission). This was a two- and half-day workshop, focusing on FMD training. EuFMD support consisted in providing EuFMD and Anses experts for the activity, as well as contributing towards the logistics of the training.
- Online workshop “Depopulation, disposal and cleaning and disinfection - From Theory to Practice”: the course was delivered between June and July 2023. Twenty-one participants from 15 MNs took part (71% completion). This course included self-directed modules produced in collaboration with FAO REU.
- Lumpy skin disease (LSD) preparation course for Belgium. This is the first national lumpy skin disease preparation course delivered by EuFMD. The course was run in partnership with Sciensano, in Dutch and French, in July 2023.
- The Real-Time Training (RTT) course is a four-day face-to-face activity delivered in Nakuru, Kenya. A new version of the course was delivered in July 2023, with by ten participants from seven MNs.

A Training needs assessment of the capacity development needs among Member Nations was conducted in April and May 2023, to identify key areas for fine-tuning of the training menu for upcoming phase. Training Focal Points filled in a survey and 33 out of 39 countries provided feedback, indicating their priorities in six main areas:

- Biosecurity
- Emergency preparedness
- Contingency planning and operational procedures
- Conduct outbreak investigations
- Plan, implement, monitor and evaluate control strategies
- Identification of risk hotspots and conduct integrated risk-based surveillance.

Following the identification of these areas, the EuFMD has highlighted gaps and proposed capacity development actions for the next training menu, to be presented at the Training Focal Points meeting in September 2023.

A Real-time training cascading refresher meeting was organized during the reporting period for all participants of Real-time training courses held in 2022 and 2023. The objective was to share updates for learners and collect ideas on how to improve EuFMD cascading methodologies.

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

A review of the Training Quality Management System (TQMS) was finalized during the reporting period. It aimed to identify progress of the quality management of the capacity development activities, and was conducted through a mix of quantitative and qualitative data, identifying the outcomes from April 2021, when the last review was conducted, until March 2023. The report outlined further development areas and suggestions for improving the impact of the EuFMD capacity development actions:

- Focusing the analysis of impact on the positive changes that are archived at individual and organizational levels by the Veterinary Services;
- Establishing regional knowledge networks that could foster the participation of learners within countries;
- Further tailoring the assessment of capacity needs of the countries, which would ultimately support showing impact of actions;
- Identifying further ways to engage and motivate learners to complete training activities.

A virtual focus group was organized with participants of the RTTs held in June and November 2022 and in February 2023, to identify how participants cascaded their learning and to discuss how the EuFMD could further improve its support. The feedback indicated that RTT participants were active in cascading and at least one out of three indicated they had presented their learning to colleagues, for instance. The focus group also suggested potential ways to improve the cascading methodologies.

*Note this activity is also reported under components 2.3 and 3.3.*

The Lumpy Skin Disease preparedness course for Belgian veterinarians was accredited to the *Ordre des Médecins Vétérinaires (CRFOMV)* and the *Agence Fédérale pour la Sécurité de la Chaîne Alimentaire (AFSCA)* for Continuous Professional Development (CPD) credits. The FMD Emergency Preparedness course, delivered over the same period for the German veterinary services, has been accredited to ATF-Anerkennung.

#### **Implementation of a Training Management System**

The Training Management System (TOM) has been piloted in Switzerland during the reporting period. A combination of official, central and cantonal veterinarians were targeted during a pilot that started in May. The first phase of the pilot indicated positive outcome and the tool will continue supporting the country after the expected end in July.

The Swiss veterinary service training department were the first to pilot the map function of the tool, which will allow them to identify which region has veterinarians who need support for FMD and similar transboundary animal diseases response preparation, and to plan for improvements. The tool will, according to the feedback received, allow to programme capacity development and the allocation of training credits for the next biennium.

A second meeting of the TOM Steering Committee (SCTOM) was organized in July 2023 to identify how to enhance the use of competency-based education and assess the competence of learners. The suggested improvements aim at improving the ability of countries to identify their current capacity



level and existing gaps. The committee advised on methodologies to assess the learner competence to ensure countries may better identify how to improve their capacity. The committee supports the improvement of the current competency framework to ensure it incentivizes veterinary services and veterinarians to use the tool.

The EuFMD is developing a new version of the tool that will allow all the Training Focal Points in MNs to monitor the capacity, identify gaps and monitor Training Credits expenditure across the biennium. This new version will be released during the next reporting period.

### **c) Main points of interest for the Executive Committee**

Some MNs could improve communication with the end-users of the courses to improve participation rate, particularly related to online trainings.

Continued demand for virtual training as well as in-presence training programmes should be managed with attention to the prioritization of training development. The rate of completion of learners in virtual learning activities has at times been lower than expected. Further analysis should be carried out to understand the factors which affect negatively course completion. This could help EuFMD and MNs to explore potential interventions that could result in increasing participant engagement.

A TOM pilot in Switzerland indicated positive outcomes in enhancing the capacity to monitor the FMD preparedness via maps and planning the capacity development.

### **d) Priorities for the next six months**

#### **• Capacity development**

The focus for the capacity development activities will be on finalizing:

-Open-access virtual learning course giving an overview of Sheep pox and Goat pox (SPGP) diseases (English), aiming at building the capacity of first response of field veterinarians and veterinary professionals.

-Tutored virtual course and face-to-face workshops to improve the understanding, development and implementation of passive surveillance programmes in MNs.

#### **• Enhancing the quality of virtual training programmes**

The EuFMD has identified an inconsistent response in terms of participation/completion of learners in the virtual activities delivered. This has had an impact on the number of people trained, but ultimately also on the improvement of capacity. The EuFMD is investigating methodologies to analyze the trends, identify root causes and propose improvements of the programme, to offer new capacity development solutions during the next phase of the workplan.

- **Training programme**

Planned activities:

- FMD Emergency preparedness online course for Malta (September-October 2023).
- FMD Emergency preparedness online course for the UK (September-October 2023).
- Virtual workshop: Putting vaccination into practice (October 2023)
- Virtual workshop: FAST diseases crisis management: dealing with psychological aspects and public perceptions (October 2023).
- FMD laboratory training (November 2023)
- RTT course (November 2023)
- Germany in-country mission (December 2023).

- **TOM Training Management System**

The EuFMD priority in the management of the TOM project will be the focus on granting a wider access to the tool, develop new assessment methodologies and refine existing competency frameworks to incentivize veterinarians and veterinary services to continue using it. Proving the long-term impact of the tool via the feedback received from the ongoing and upcoming pilots will also be a priority.

- **TQMS Impact of the training programme**

Implementing an action plan of the suggested areas of improvement after the TQMS evaluation in 2023.

**e) Of note**

Activities linked to more than 80% of the training credits for this biennium have been delivered.

Introduction to animal health surveillance open-access course has been published as a part of long-term actions addressing the capacity development of veterinary services on this topic.

## Component 1.2 Emergency Preparedness

### a) Background information

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. The tool is illustrated as a wall of bricks, divided into foundation, alert, emergency and reconstruction, and each brick is populated with guidance documents, assessment tools and best practices. It was presented during the 43<sup>rd</sup> General Session of the EuFMD (April 2019) and received support from the Member Nations (MN). During the second biennium of phase V, updating of the design and usability of the interface was conducted and development of GET Prepared continued with the addition of more components in the “wall” and updating the existing bricks with more contents. The latest version was presented at the 45<sup>th</sup> General Session of the EuFMD (May 2023).

**EuFMDiS:** EuFMDiS is now available for use in fourteen countries. Discussion is ongoing with other countries (Belgium, the Netherlands, and France) for an adaptation. EuFMD is working with Sweden on model development. The user group has been expanded to include Baltic and North-West European countries. Work is in progress to include new functionalities such as the wildlife component. ‘Shared pastures’ are planned to include as additional transmission pathways in the model. Farm-level biosecurity as a component of disease management will be further developed. The EuFMDiS model has been adapted for other FAST diseases such as sheep pox and goat pox in Spain and Bulgaria, and PPR in Bulgaria. It is planned to adapt this model for Lumpy Skin Disease in the coming months.

**Emergency Preparedness Network:** During the first biennium of phase V, the Emergency Preparedness Network (EPN) was created from the previous Modelling, Vaccination and Contingency Planning Networks. While the combined group is provided access to up-to-date information on different topics related to FAST disease Emergency Preparedness (EP), in this format, it has not proved useful in acting as a forum for EP experts. EuFMD will instead form ad hoc groups when seeking MN input on aspects of emergency preparedness.

**Public-Private Partnership (PPP) for Anticipating FAST- Disease Outbreaks:** During the last biennium, work to increase **collaboration and engagement of the private sector** in the prevention and control of FAST diseases started, and a public-private partnership network was created. The private partners have developed a workplan for the second biennium of Phase V. Activities in the workplan have been partly achieved, with some delays. A webinar on ‘Including disposal capacities in contingency plans for FAST disease outbreaks’ took place in February 2023. A workshop addressing the areas of concern that are listed in the PPP Initiative workplan is scheduled for later this year. EuFMD will continue to include the PPP group in broader emergency preparedness activities including workshops and simulation exercises.

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

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

The work done under this component requires the collaboration of the MN and different technical partners in the EU Commission, particularly EFSA (EuFMDiS) and Directorate F of DG-SANTE (Get Prepared). Cooperation will also be maintained with the World Organisation for Animal Health (WOAH) and the FAO Emergency Management Center (EMC), to guarantee complementarity of work on emergency preparedness by the different organizations. The work involves representatives of European private sector organizations to increase collaboration and engagement of the private sector in the prevention and control of FAST diseases, addressing public and private concerns and challenges of disease control.

## **b) Updates on Component Sub-Activities**

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

#### **Get Prepared**

The appearance of the Get Prepared Wall interface is restructured and migrated to the Trello™ board which addresses end users' needs and allows easier maintenance. Screening existing resources and resource development continues, with a focus on priority areas for emergency response, to create components of a complete wall protecting against incursions of FAST diseases, including the foundation as well as for alert, emergency and reconstruction.

#### **Development of resources**

New resources are developed for the twelve bricks (Disposal, Humane killing, Sampling, Vaccination, Laboratory, Clinical examination, Communication, Training, Awareness, Epidemiological investigation, Assessment and Models). Eleven are edited and uploaded to the Trello for open access, together with the Simulation Exercise brick. The Assessment brick is under review by the internal peer review group and external reviewers. Further bricks have been identified and are under development. Updating of the existing bricks with new resources is ongoing. Progress is in line with the updated indicator for at least 30% of the components of emergency preparedness ('bricks in the wall') will contain assessment resources and examples of good practice by the fourth year of phase V.

### **1.2.2. FAST disease modelling for Europe**

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

The EuFMDiS model is operational in 14 countries. The model development is also planned in Sweden, The Netherlands, Belgium, and France. New features and concepts such as post-outbreak management (POM), wildlife component, the rendering plants/carcass disposal in the EuFMDiS model were further developed.

The model has been adapted for new FAST diseases such as sheep pox and goat pox (Spain and Bulgaria) and PPR in Bulgaria. Rendering capacity/carcass disposal and biosecurity components are included in the model, and shared pasture is planned to be included in the model. In addition, market and post outbreak management components are already included in the modeling platform. A regional model for Baltic countries is under development.

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

#### Online network

During the reporting period, the “Emergency Preparedness Network” has not been active as a forum for engaging emergency preparedness, and EuFMD will review its purpose.

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

#### Public-private partnership Initiative for anticipating FAST disease outbreaks

The private partners of the PPP Initiative, or their nominated representatives, took part in a webinar on Resourcing for emergency response (including vaccination), and modelling of post-vaccination surveillance strategies to prove freedom following use of vaccination in previously free livestock populations, held in May 2023.

#### c) Main points of interest for the Executive Committee

**Get Prepared** : The development of the Get Prepared wall components and publication of additional bricks in the restructured Wall, is ongoing, as well as the identification and collection of the most relevant and recent material to be included. Resource constraints have been addressed and increased rate of progress has occurred.

**PPP** : The PPP needs to be promoted to create a structured and open discussion in the prevention and control of FAST diseases. The collaboration between public and private stakeholders is an opportunity to improve FAST disease control measures so they have minimal impact on animal health and welfare, and business continuity. This will allow best support to FAST by supported by all stakeholders involved.

#### d) Priorities for the next six months

- **GET Prepared and development of resources**
  - Ongoing development of new components (bricks) according to availability of suitable, peer-reviewed resources;
  - Prioritize new components (bricks) to be drafted;
  - Obtain feedback from (selected) MNs to improve the GET Prepared wall;
  - Continue identification of relevant resources and information exchange;
  - Update the existing Get Prepared components with new resources where relevant.
- **EuFMDiS**
  - Develop the EuFMDiS model for new countries such as Belgium, Sweden, the Netherlands, and France.
  - Develop a regional model for Baltic countries including Latvia, Lithuania, and Estonia.
  - Include shared pasture in the modeling platform.
  - Develop the EuFMDiS for other FAST diseases such as Lumpy skin disease.
  - User-support activities such as webinar, country support training.

## Component 1.3 Emergency Vaccination

### a) Background information

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 use regularly the PRAGMATIST to provide information of the FMD risks and the relative value of the antigens available for use in European emergency reserves.

A **Multi-stakeholder platform (MSP) for FAST disease vaccine security** has been established. In 2020 a multistakeholder platform on vaccine security was created and brought together experts from all of key stakeholder groups involved in vaccine security including vaccine manufacturers of FAST vaccines, reference laboratories, international animal health organisations including the FAO and WOA, NGOs, regulatory authorities, national animal disease control authorities, and animal disease risk managers. These relations need to be further developed to generate information, to improve understanding of the issues impacting vaccine security and to identify pathways or actions to improve the availability of vaccines suitable for use by Member Nations in disease emergencies. MSP meetings have been held in Rome in 2020, and virtually in 2022 and 2023.

A new system to improve vaccine quality and availability has been established:

- A **prequalification system for FAST vaccines (PQv)**, has been implemented with an initial focus on FMD vaccines, to provide assurance on the quality and key characteristics of vaccines procured for vaccination against FAST diseases. PQv at Stage 1 is a voluntary scheme for FMD manufacturers with the aim to further develop the scheme at Stage 2 to include independent testing and links to procurement. PQv can be integrated within the procurement system of an organization, including FAO/EuFMD, subject to an appropriate mandate from the respective organization;
- PQv can facilitate a move from ad hoc tender procurements towards establishing long-term supply arrangements (LTAs) that promote the sustained use of high-quality vaccines and creates a platform that indirectly supports manufacturers to invest in their development and production capacity;
- PQv can form one element of a future system for assured emergency supply options (AESOPs) for FMD vaccines by FAO/EuFMD. AESOPs aim to assure the supply of FMD vaccines of defined quality and characteristics when needed through contractual arrangements between manufacturers and purchasers, thereby contributing to vaccine security by promoting predictability for both parties. Once established, PQv could form an important element of AESOP that has the potential to supplement existing vaccine and antigen banks by creating long-term supply arrangements for FAST vaccines of assured quality in emergency and endemic situations.

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 prequalification of vaccines AESOP systems 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.

The direct beneficiaries of this component are the 39 Member Nations of EuFMD. Cooperation is established with the World Organisation for Animal Health (WOAH) and the Emergency

Management Center (EMC) of FAO, GF-TADS for the development of most of the sub-activities under this component.

## **b) Updates on Component Sub-Activities**

### **1.3.1. Sub-activities to better support the use emergency vaccination for FAST diseases in Member Nations**

Following the online workshops held in 2022 with contingency planners/risk managers and the PPP group on decision criteria for implementing emergency vaccination, and modelling (using EuFMDiS) of vaccination and other control measures for FMD scenarios in different countries, a two-day online workshop was held in May 2023. It focused on resourcing for emergency response (including vaccination), and modelling of post-vaccination surveillance strategies to prove freedom following use of vaccination in previously free livestock populations.

#### **Development of a multi-stakeholder platform (MSP) for FAST disease vaccination security**

The third MSP vaccine security meeting, following meetings in 2020 and 2022, was held on the 29 March 2023 to discuss the challenges that have arisen since the implementation of the Nagoya Protocol (NP) of the Convention on Biological Diversity (CBD) in relation to sharing of strains of FMD virus for the purpose of surveillance, research and the development of new vaccine strains. This MSP meeting followed on from a NP working group meeting held on 31 January 2023 formed from experts in the NP from the FAO, WOAHA, the Pirbright Institute, FMD manufacturers, legal companies, NGOs and the Secretariat of the CBD. The MSP endorsed 'The impact of the Nagoya Protocol on Foot-and-Mouth Disease' report, published by the last quarter of 2023.

The EuFMD MSP report identifies the practical impacts of the Nagoya Protocol and related ABS frameworks on FMD research and development, presents a problem statement, provides an assessment of options for possible solutions, and proposes an approach for the involved parties to develop a preferred solution for FMD. Through engaging key stakeholders including provider countries, national laboratories, FMD reference laboratories and their sponsoring international organizations (FAO and WOAHA), EuFMD seeks to raise awareness within the wider FMD community and to foster solutions to the problems identified on behalf of MNs.

A paper drafted with the FAO/WOAHA reference laboratory network and other key stakeholders aims to promote wider awareness of the Nagoya Protocol, and to highlight its impacts on the regular exchange and use of biological materials collected from clinical cases, which underpin FMD research activities, and work to develop new epidemiologically relevant vaccines and other diagnostic tools to control the disease.

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

During the reporting period, the prequalification scheme for FAST vaccines has moved into the operational phase. Following publication of the PQv policy, administrative procedure and technical guidance in Q4 2022, expressions of interest were sought from FMD vaccine manufacturers for submission of PQv applications in 2023 at PQv Stage 1.

Six expressions of interest (EoI) were received by the closing date in January 2023 from FMD manufacturers based in South and North America, Europe, Africa and Asia demonstrating global

interest in the PQv scheme. Three formal PQv applications have been submitted and evaluated by expert teams at three appointed independent agencies under Letters of Agreement. It is expected that the first PQv applications will be considered by the Standing Committee for vaccines against FAST diseases (SCPQv) in September 2023. PQv applications have been received for fixed formulation FMD vaccines containing several FMD vaccine strains and multi-strain FMD dossier containing up to 17 antigens.

To ensure the PQv procedure is secure for managing PQv applications and holding commercially confidential data, the EuFMD is working with FAO and the United Nations International Computing Centre (UNICC) to implement a SharePoint database running in the UNICC data center that meets FAO requirements. Using this platform will enable reports to be generated and audits to be conducted that can provide insights about the platform usage and access to monitor the security of the system. All experts and members of the SCPQv that have access to commercially confidential data will need to sign a declaration on conflicts of interest and an agreement on confidentiality.

The EuFMD PQv Team is working towards implementing Stage 2, with a key element linking PQv with FAO procurements to facilitate a move from ad-hoc tender procurements towards establishing long-term supply arrangements (LTA) that promote the sustained use of high-quality vaccines and that creates a platform that indirectly supports manufacturers to invest in their development and production capacity. The PQv Team is also developing a future system for assured emergency supply options (AESOP) for FMD vaccines by FAO/EuFMD. AESOP aim to assure the supply of FMD vaccines of defined quality and characteristics when needed through contractual arrangements between manufacturers and purchasers, thereby contributing to vaccine security by promoting predictability for both parties

Once sufficient PQv applications for FMD vaccines have been evaluated at Stage 1, a review of the procedure will be carried out and appropriate changes made, potentially increasing the scope to include vaccines against other FAST diseases if appropriate.

### **Assured emergency Supply Options for FMD vaccines**

The work on developing a PQv 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 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 PQv 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. Work will therefore be phased and specific actions to achieve AESOP will start once the PQv project is sufficiently developed. The PQv Team is working with FAO procurement experts on how best to integrate PQv into FAO procurement procedures as part of establishing LTAs that can supplement existing arrangement for national and international vaccine banks. It is envisaged that PQv will enable eligibility for access to restricted tender procedures as part of AESOP.

### **Vaccine value chain**

An analysis of the technical and policy issues and constraints limiting access to foot-and-mouth disease vaccine supply was conducted, followed by discussion during the vaccine security workshop at the



2022 Open Session of the EuFMD. As a result of these exercises, an online workshop was convened on the FMD vaccine value chain on 26-27 June 2023.

The workshop focused on vaccine delivery and demand for vaccine estimation to enhance vaccine security. These factors have been identified as essential components to ensuring that availability of sufficient amounts of a suitable vaccine are available when needed. Vaccine delivery must be cost-effective, appropriate, timely and well-managed for disease control to be achieved. There are a range of common policy and technical constraints that exist for FMD vaccination, especially in endemic settings. Addressing these as part of EuFMD's vaccine security work is important to ensure that resources invested into ensuring that high quality vaccine is manufactured in sufficient volumes are optimized. In addition, estimation of current and future vaccine dose demand is required at both national and regional levels, to support decision-making in both public and private sectors. VADEMOS is a tool developed by EuFMD that aims to bridge the gap between FAST disease vaccine demand and vaccine production/supply in endemic countries.

Key recommendations included to:

- Continue to share expertise and experiences about vaccine value chains across sectors, through a community of practice approach;
- Identify suitable case studies to support building an evidence-base for vaccine value chain strengthening across global contexts, using systems approached;
- Develop opportunities to strengthen vaccine value chain in existing frameworks e.g. PCP-FMD.

**c) Main points of interest for the Executive Committee**

N/A

**d) Priorities for the next six months**

Following the publication of the key documents supporting the implementation and operation of the prequalification system, six expressions of interest have been received from FMD manufacturers intent on submitting PQv applications in 2023. The focus over the next six months will be to support manufacturers assembling their applications and managing the PQv evaluation procedure within the appointed agencies and referral to the SCQPv. There will also be a need to ensure the IT database and systems to hold confidential data are sufficiently secure and the identified risks are adequately managed. A sustainable business model for the long-term operation of the PQv scheme will be developed. The format and content of the FAO/EuFMD PQv website will be further developed along with the PQv listing and Public Summary Report (PSR).

**e) Of Note**

The work on the state of preparedness for emergency vaccination for FAST diseases engages MN in understanding the constraints for implementing emergency vaccination and the potential role for emergency vaccination in contingency planning. By combining this work with tools such as EuFMDiS and Get Prepared and platforms such as PPP and MPS, the leverage of any actions or recommendations can be enhanced.

The document 'Post Consultation document for the establishment of a pre-qualification procedure for vaccines against FAST diseases' is available on the EuFMD website [here](#).

## Component 1.4 South Eastern Europe

### a) Background Information

Activities in this component are provided specifically to the following eight countries: Albania, Bosnia and Herzegovina, Bulgaria, Greece, Montenegro, North Macedonia, Serbia and Türkiye. Moldova and Ukraine could be included in activities organized under this component.

Historically, the Thrace region of Greece, Bulgaria and Türkiye has been a high-risk area for the introduction of FMD and other transboundary animal diseases into Europe. Coordinated activities and risk-based surveillance system, established during phase IV of the programme, 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. During the first biennium of phase V, a new database to register active surveillance information was developed for Thrace, and the FMD model to estimate the confidence of disease freedom based on the surveillance information was adapted to two FAST diseases (PPR, SPGP). In the other countries of SEE, it was concluded that the support in the region in relation to LSD and PPR is already covered by other partners/projects working in the region and countries agreed on activities for the second biennium aiming to transfer the knowledge and methodologies for various surveillance options available, including improving passive surveillance through the identification and collection of individual and population health indicators and its impact on early detection of FAST diseases. In phase V, the work **to improve emergency preparedness** against FAST diseases in the region will remain a priority using different tools such as GET Prepared, adaptation of EuFMDiS to countries in the region, workshops, simulation exercises, and in-country support. During the first biennium of phase V, multiple simulation exercises were supported in SEE, using an innovative approach to online simulation exercises with the assistance of a crisis simulation software. Activities to transfer knowledge and skills to improve emergency preparedness were organized (e.g. workshop on simulation exercise organization and FAST disease laboratory detection and laboratory contingency planning). Specific in-country support to improve SEE countries preparedness work for TADs and other similar FAST diseases management, was provided to the countries, based on request and priorities.

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. During the first biennium of phase V, the diagnostic bank of reagents was established for FMD in the first year, broadening some of its reagents to other FAST diseases from the second year of this biennium.

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. During the first biennium of phase V, regular SEE Management meetings took place, two a year, to define priorities in the region and follow up the outcomes of the activities carried out involving all the countries, beneficiaries of the Component.

In this phase, support is given to the establishment of **national stakeholder networks** to connect veterinary services, laboratories, research institutions and universities in order to guarantee a transfer of knowledge from research institutions to decision-makers and that research is orientated to generate evidence to fill knowledge gaps identified by national competent veterinary services. Support was given for the establishment of national networks to connect veterinary services, laboratories, research institutions and universities to guarantee a transfer of knowledge from research institutions to decision-makers and that research is oriented to fill knowledge gaps identified by veterinary services. A draft Guide and a Checklist for stakeholders' networks engagement has been developed and approved by the countries. A call for research studies with the aim to promote the creation of stakeholder networks between veterinary services and research institutions and research based on policy needs, led to the selection and funding of five projects in SEE.

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 and Türkiye 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 into the model.

The direct beneficiaries of this component are Albania, Bosnia and Herzegovina, Bulgaria, Greece, Montenegro, North Macedonia, Serbia and Türkiye. Croatia and Romania will be considered for some of the activities under this component.

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

## **b) Updates on Component Sub-Activities**

### **1.4.1 Risk-Based Surveillance 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**

Surveillance data concerning FASTs (FMD, LSD, PPR, SPGP) are regularly submitted and uploaded in the THRACE database. The 2<sup>nd</sup> cycle reports for 2023 are created and shared. The new cycle report template development and data processing for the 3<sup>rd</sup> cycle reports in progress.

No FAST disease cases were detected in this period and the confidence of freedom of FMD, LSD, PPR, and SPGP in Thrace region presents a stable trend. However, recent introduction of SAT2 FMDV (March 2023) and spread through the Anatolia region (Türkiye) raises concern and increases risk of disease occurrence in Thrace region. However, NFP from Türkiye assured that these outbreaks do not jeopardize RBS activities for FAST diseases in Thrace region.

The EuFMD and EMPRES have conducted a rapid risk assessment for SAT2 risk of introduction and spread in the Middle East and West Eurasia, including Bulgaria and Greece in the assessment.

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

The most recent South Eastern Europe management meeting under the phase V was held online, on 14<sup>th</sup> July 2023, to present progress and agree on additional areas of interest where further support is

required, to improve emergency preparedness and coordination across the region. Comprehensive summary of activities implemented during Phase V under all components of Pillar I have been presented, with particular focus on South Eastern Europe programme achievements and results. Updates are provided on recent FAST disease outbreak of concern (SAT2, FMDV in Türkiye) and implementation of AH surveillance systems and emergency control measures. Current global epidemiological situation and the risk of introduction and transmission of LSD and SPGP presentation was delivered by Sciensano Institute representative, including update on the recent SPGP outbreak in Spain, concluding that there is a constant risk of introduction of these diseases and highlighting the need of high surveillance efforts to supplement LSD vaccination. Results of the supported field study and possibilities for further regional approach were presented by project leader (FVM, University in Skopje), providing basis for the further governmental initiatives and support in relation to biosecurity improvement. Montenegro and Bulgaria requested support in organizing simulation exercises (RVF tabletop and multi-country FMD drill). A representative of DG SANTE participated.

Following the 2<sup>nd</sup> SEE FAR call for field studies proposals (2022), for policy and stakeholder networks engagement to generate evidence for national competent veterinary authorities policy needs, three out of four selected projects were endorsed and implemented in the SEE region:

- “Evaluation of feasibility of improving passive surveillance through the identification and collection of individual and population health indicators and its impact on early detection of FAST and other relevant diseases in Bosnia and Herzegovina”, implemented in cooperation between Center for interdisciplinary studies, University in Sarajevo and National Veterinary Office.
- “Evaluation of diagnostic specificity of commercial Elisa kits for FAST diseases in wild animals”, implemented in cooperation between Scientific Veterinary Institute, Novi Sad; Faculty of Veterinary Medicine (FVM), University in Belgrade; “Vojvodina šume” (public enterprise); Specialistic Veterinary Institute Kraljevo.
- “Biosecurity Assessment and Scoring in Cows (BASIC) – Regional Approach”, implemented in cooperation between: Department of Animal Hygiene and Environmental Protection, FVM, University in Skopje; Food and Veterinary Agency, North Macedonia; Directorate for Food Safety, Veterinary and Phytosanitary Affairs and Veterinary Chamber of Montenegro.

Interim reports were provided. The projects are fully implemented in accordance with LoA, or in the final phase. Progress is monitored.

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

Six simulation exercises have been supported and delivered in the last six months in SEE region: multi-country simulation exercise Montenegro-North Macedonia, in Skopje (in cooperation with the Faculty of Veterinary Medicine, University in Skopje); four national multiregional drills in the Republic of Serbia (in Šabac, Zrenjanin, Pirot and Kraljevo) and national simulation exercise in Banja Luka - Bosnia and Herzegovina, in coordination with the relevant regional Veterinary Institutes and FMD NRL. Support in organization of the simulation exercises was requested and agreed during SEE management meetings, to follow the outcomes and recommendations of the previously organized regional multi-country laboratory simulation exercise. The aim of the exercises was to test preselected standard operational procedures (SOPs) of the national contingency plans for FMD, simulate their execution after suspicion

of a FMD outbreak, evaluate their appropriateness and provide feedback for their further improvement. Specific objectives of the exercises included implementation of the biosecurity protocol during visit and leaving the animal holding, clinical exam, epidemiological examination, sampling, and samples packaging. Exercise objectives have been achieved. Exercises gathered more than 120 participants, mostly official vets, and veterinary practitioners. Evaluation phase in progress. Areas of possible improvements should include awareness raising and additional trainings, particularly for the field staff, standardization and simplification of the relevant reporting templates and definition of the clear procedures and working instructions, rather than references. Similar crisis management systems in all countries in the region, particularly regarding the roles and responsibilities in FAST emergency management open the possibility for a regional approach, common work, and increased collaboration.

In-country support will be provided to Montenegro in planning and conduction of a tabletop exercise and in analyses of existing legislation and operational documents for RVF crisis management, involving staff from the national Institute for Public Health. Bosnia Herzegovina and Serbia requested specific support in FAST surveillance and emergency procedures development, but the concrete topics are still to be confirmed and agreed, due to unavailability of national technical staff, occupied with current ASF epidemiological situation in the region.

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

Activities related to the maintenance of the diagnostic bank continued as defined in the Letter of Agreement with IZLSER. National laboratories from nine SEE countries received support in reagents from the diagnostic bank to ensure continuous availability of the FMD diagnostic procedures, and an annual external quality control through the Proficiency Testing organized by the EU Reference Laboratory for FMD.

The concept of the SEE diagnostic bank, as well as the three-year experience with its implementation, have been incorporated in the feasibility study for a wider European bank of reagents, prepared by the assigned Working group.

##### **c) Main points of interest for the Executive Committee**

n/a

##### **d) Priorities for the next six months**

-Continue to work on the RBS programme adaptation, evolution, and application, with the aim to extend and improve FAST diseases surveillance systems in the region and collaboration between countries.

-Support organization of National and multi-country simulation exercises based on the expressed interest and priorities.

-Monitor the implementation of the 2<sup>nd</sup> SEE-FAR successful projects through interim and final reporting.

-Update a Guide and a Checklist for policy and stakeholders' engagement to incorporate lessons learned from implementation of the 1<sup>st</sup> and 2<sup>nd</sup> SEE-FAR projects.

-Prepare a new plan for maintenance of the diagnostic bank in the next Phase, based on existing experience and taking into consideration the objectives of the new EuFMD Programme.

**e) Of note**

Preparing the second survey to measure SEE component programme impact on level of preparedness in process, to be conducted until the end of biennium of the phase V.

## Component 1.5 Applied Research

### a) Background information

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

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

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

**Applications** are welcome from any source and are not limited by geographical origin and the proposals will be assessed in two stages. Firstly by external referees (Referee Panel), secondly 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 a 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 meetings on FMD to be held on a regular basis, with participants, drawn mainly from the public sector, scientific institutions and regulators, academia and private sector. In the new phase, the Open Sessions may have a broader scope covering FAST diseases.

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.

## **b) Updates on Component Sub-Activities**

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

During the reporting period, action was taken either on the implementation or follow-up of the following applications awarded under the Fund for Applied Research (FAR).

#### *Eighth competitive call for application (2020)*

The final report of the “evaluation of the performance and the use of active clinical surveillance for detecting clinical cases of FMD among small ruminants at some high-risk areas in Egypt” (AHRI) was received and processed by ECTAD Egypt and EuFMD. The EuFMD provided comments and proposed scientific collaboration for publication in May 2023.

The study "*Etude sur la compréhension et corrélation de la surveillance clinique et prévalence de la fièvre pahteuse chez les petits ruminants au Cameroun*" (LANAVET) is delayed and the final report still pending despite reminders and involvement of FAO ECTAD and FAO Cameroon.

#### *Ninth competitive call for application (2021)*

During the reporting period, technical review of two manuscripts for scientific publication was carried out: (i) “Characterizing foot-and-mouth disease virus strains circulating in Cameroon using environmental sampling at livestock markets and abattoirs” by TPI, as a follow-up of the FAR-study “Optimizing environmental surveillance for FAST diseases”, and (ii) “Evaluation of economic impact of different transboundary animal diseases affecting ruminant using OutCosT-Rum” by UAB.

#### *Tenth competitive call for application (2022)*

The interim reports of “Immunogenicity study of Rift Valley Fever Vaccine (RIFTOVAX-LR)” (Center For Health Research in Underserved Communities and Developing Countries, Dalhousie Univ.) in Rwanda, “Immunogenicity following simultaneous vaccination of FMD and LSD in indigenous cattle in Nigeria” (NVRI), “Development of an Analytical and Data Processing Tool for EuFMDiS Model Output to Support FMD Contingency Planning” (Univ. Vienna); “Validation of Lateral Flow Devices (LFD) for detection and serotyping of FMDV and antigenic detection of LSDV” (IZSLER) were positively reviewed, and installments released accordingly.

The proposed amendment to the LoA with TPI was cleared by FAO relevant offices (communication, intellectual property and statistics) and TPI in July 2023, to allow the implementation of “Open-FMD: a data sharing portal to enhance FMD surveillance” (*see component 3.2*) with Epi-Interactive.

The evaluation for the Applied research programme (ARP) is ongoing, with technical involvement of STC and SCSAR members. This exercise aims to respond to what are the outputs and outcomes that can be attributed to activities supported by the ARP during Phase V, thereby demonstrating impact (How well did the Secretariat's internal processes operate in executing the ARP/ FAR; How did the ARP support the development of external/ academic collaborations and relationships). This exercise should be completed by August 2023 and discussed/endorsed at the STC meeting in September.

### **1.5.2. EuFMD Open Session 2024**

Initial discussions are led by the Secretariat to start planning the EuFMD Open Session 2024, tentatively planned in October 2024 in Spain, as a face-to-face event.



### 1.5.3. Committees

The STC virtual meeting will be held on 20 September 2023. The composition of the STC, as well as the SCBRM and SCPQv were kept, as agreed during the 45<sup>th</sup> EuFMD General Session in May 2023. The name of Special Committee for Surveillance and Applied Research (SCSAR) was modified and endorsed at the 45<sup>th</sup> EuFMD General Session. This committee is now the Special Committee for Risk monitoring, Integrated Surveillance and Applied Research (SCRISAR).

#### c) Main points of interest for the Executive Committee

There are issues related to the follow-up of the implementation of the study in Cameroon, and efforts are made by the EuFMD to receive assistance from FAO local office to better monitor the study completion and issuance of final report.

An evaluation of the ARP for Phase V will be completed by August 2023, and conclusions discussed with the STC and SCRISAR.

#### d) Priorities for the next six months

Increase visibility of FAR-funded research projects on the EuFMD website, improve networking and sharing of results among research institutions, and assess the impact of the Applied Research Programme.

#### e) Of note

Five projects have been selected under the 10<sup>th</sup> FAR call and projects are well on track (expected delivery of the final reports by October 2023).

A methodology to assess the EuFMD Applied Research Programme impact in Phase V was developed, and conclusions will be available by the end of this Phase.

## Component 1.6 Proficiency Test Services

### a) Background information

**Component 6** of Pillar I continues to have the same objective as in the previous phase. It is managed through a LoA with the EU Reference Laboratory (EU-RL), who administers the PTS and facilitates 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.

The Countries or partner organizations involved are 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.

### b) Updates on Component Sub-Activities

#### 1.6.1. Support to eligible countries

##### To participate in PTS for FMD NRL

Five eligible countries were invited to participate in the PTS for FMD organized by EU-RL for FMD (ANSES). These countries received their PTS panels in June, and all reported to the EU-RL the PT results they obtained. As in 2022, it was not possible to deliver the PTS parcels to Ukraine and Belarus.

##### To participate in the annual EU-RL meeting

The annual workshop of the EU-RL network is scheduled for 24 and 25 October in Ghent, Belgium. Laboratory representatives from the eligible countries have been invited by EU-RL to participate the workshop.

### c) Main points of interest for the Executive Committee

The ongoing conflict in Ukraine did not allow for the participation of Ukraine and Belarus in the annual PTS and annual EURL workshop, for the second year in a row.

### d) Priorities for the next six months

Strengthen the coordination with the EU-RL to deliver follow-up support based on the outcomes of the last PT. Discuss with EU-RL about the possibility of virtual participation at the EU-RL workshop for participants from Ukraine.

## Component 1.7 Disease risk assessment and forecasting

### a) Background information

Under this Component, work has continued to improve the quality, usefulness and availability of information that is intended to be used by Member Nations to assess and monitor the risk of FAST diseases. To accomplish this, information and data are gathered and compiled from other areas of the work program as well as through collaboration with the World Reference Laboratory. The EuFMD's Global Monthly Report has become the Quarterly FMD Report, produced jointly with the World Reference Laboratory. A prototype, proof-of-concept [FMD surveillance dashboard](#) was developed and a FAR project awarded to The Pirbright Institute to fully develop the FMD surveillance dashboard. Discussions are ongoing to guide the further evolution of this report to a dashboard, that would enable the user to access up-to-date information and tailor the analysis to needs and ensure the sustainability of the surveillance dashboard and ensure inter-operability with EMPRES-i. The PRAGMATIST tool is increasingly used by antigen-bank managers around the world to inform their vaccine bank selections. A peer-reviewed publication describing the PRAGMATIST has been published in collaboration with the Pirbright Institute and as well as other institutions. A risk monitoring tool for FAST diseases (RMT-FAST) that will assist EuFMD Member Nations to regularly assess the risk of incursion of FAST diseases is under development. This tool will build on previous work by EuFMD and G-RAID has been piloted by three EuFMD MNs (Spain, Bulgaria and Austria) as well as in Pillar II countries (Libya and Mali). The tool was presented at the EuFMD Open Session. The results from the pilot phase are very positive.

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 WOAHA 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.

### b) Updates on Component Sub-Activities

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

##### Disease risk assessment and forecasting

In the reporting period, a qualitative risk assessment was implemented to assess the likelihood and consequences of further spread of FMD serotype SAT-2 to countries bordering those affected within the Middle East and West Eurasia. EuFMD MNs included in the analysis were Armenia, Bulgaria, Cyprus, Georgia, Greece, Israel and Türkiye. This work was undertaken in collaboration with FAO Empress and the World Reference Laboratory. The risk assessment was externally reviewed by international experts and is now going through the FAO publication process.

The RMT-FAST was adapted to inform the prioritization of regions outside of EuFMD MNs for consideration in activities in the next biennium and the work was presented at the EuFMD General Session.

### **On-line reporting tool**

The FMD quarterly report continues to be produced jointly with the WRL. Information gathered from EuFMD's activities in Pillar II is included in this report.

A detailed concept note describing the dashboard has been developed. The Pirbright Institute and Epi-Interactive have been awarded funds under the FAR call (*component 1.5*) to develop a database of FMD surveillance data and a dashboard that will enable users to access and visualize the data. Discussions are underway with the WRL and FAO (Empres-i) ensure that the tools are inter-operable, build on synergies and avoid duplication with other initiatives.

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

##### **Prioritization of Antigen Management with International Surveillance Tool (PRAGMATIST)**

The information required to update PRAGMATIST is included in the FMD quarterly report. A paper describing the PRAGMATIST has been published in *Frontiers in Veterinary Science*, in collaboration with the Pirbright Institute, the University of Surrey and Epi-Interactive. The Pirbright Institute is developing an online PRAGMATOST app, in collaboration with Epi-Interactive and EuFMD. A framework to adapt it to endemic countries has been developed. Specific data on vaccine performance are required to parameterize it.

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

*See activities under components 3.1 and 3.2.*

##### **c) Main points of interest for the Executive Committee**

Development of the FMD surveillance dashboard (FAR fund) has been delayed due to administrative issues.

##### **d) Priorities for the next six months**

Continue to progress with technical improvements to the Risk Monitoring Tool for FAST diseases (RMT-FAST) including further development of the data flow system required to regularly update the RMT-FAST. Activities to familiarize MN with the RMT-FAST and encourage its use. Collation of data to pilot PRAGMATIST endemic.

##### **e) Of note**

A qualitative risk assessment to estimate the likelihood and consequences of further spread of FMD serotype SAT-2 to countries bordering those affected within the Middle East and West Eurasia has been undertaken, in collaboration with FAO Empres and the World Reference Laboratory.

The RMT-FAST was adapted to inform the prioritization of regions outside of EuFMD MN for consideration in activities in the next biennium.

**Appendix 1 Component- Objectives, tables, budget**

**Component 1.1 Objectives, activities, budget**

The **objective** of 1.1 is

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.

<b>Narrative</b>	<b>Expected result</b>	<b>Monitoring</b>	<b>Assumptions and risks</b>
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	Assumes commitment from MN to develop and implement national trainings on FAST diseases and demand to use EuFMD training support services

**Sub-activities**

<b>1.1.1. Training support services</b>			
<b>Sub-activity level</b>	<b>Description</b>	<b>Progress in biennium</b>	<b>Progress overall</b>
Training support services: Training infrastructure.	Maintenance and improvement of the training infrastructure, including online platform.	EuFMD online platform was regularly functioning	EuFMD online platform upgraded and outage time reduced to minimum.
Training support services: open-access resources.	Availability of the existing open-access resources and generation of new training materials and job aids that can be used by MN in their trainings at national level. Development of new open-access courses. Whenever possible, the development of new resources will be done using material developed under 1.1.2. Some of the new resources developed under this sub-activity will be linked to the GET Prepared toolbox, as relevant.	New Introduction to animal health surveillance course published	Two new open-access online course added and additional open access cascade material available.

<b>1.1.2. Training programme</b>			
<b>Sub-activity level</b>	<b>Description</b>	<b>Progress in biennium</b>	<b>Progress overall</b>
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.	implementation of the training programme is ongoing, adapting the trainings planned to the current situation through the conversion of workshops to online solutions.	Implementation of the training menu is on-going.  All training credits allocated. A total of 45 (8.7%) were donated.
<b>1.2.1 TQMS</b>			
<b>Sub-activity level</b>	<b>Description</b>	<b>Progress in biennium</b>	<b>Progress overall</b>
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.	A second TQMS review has been finalized in the reporting period	Development of a TQMS finalized in first half of 2020. A training Impact evaluation framework for regular analysis has been created.
1.1.3.2. Accreditation of EuFMD training courses.	Accreditation of EuFMD training courses as continuing professional development (CPD) and/or part of a wider system for recognition of training for achievement of competences by veterinary authority personnel. Participation in the working group to define requirements for a post graduate training programme in the field of veterinary public health (VPH), within the framework of a <b>VetCEE</b> dossier of competence.	Accreditation for Continuous Professional Development (CPD) bodies in Germany and Belgium for two tutored virtual courses	The EuFMD is liaising with countries where course delivery is planned before the end of the biennium to explore accreditation to CPD options.

## Budget (€) COMP. 1.1

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance	
<b><u>Salaries (Professional)</u></b>				
Component 1.1	45,797	51,423	-	5,626
<b><u>Consultancy Operational</u></b>				
Component 1.1	91,131	88,098		3,033
<b><u>Consultancy Technical</u></b>				
Component 1.1	621,700	557,874		63,826
<b><u>Travel</u></b>				
Component 1.1	111,320	185,898	-	74,578
<b><u>Training</u></b>				
Component 1.1	88,660	120,221	-	31,561
<b><u>Contracts</u></b>				
Component 1.1	56,000	93,157	-	37,157
<b><u>Procurement</u></b>				
Component 1.1	20,000	26,344	-	6,344
<b><u>General Operating Expenses</u></b>				
Component 1.1	76,250	162,927	-	86,677
<b>Total Direct Eligible Cost</b>	<b>1,238,012</b>	<b>1,285,942</b>	-	<b>175,084</b>



**Component 1.2 Objectives, activities, budget**

The **objective** of 1.2 is

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.

Narrative	Expected results	Monitoring	Assumptions and risks
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 developed.	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.	Assumes commitment from MN to contribute to their development and use. Assumes engagement of members of the networks.

**Sub-activities**

Tools for Contingency			
Sub-activity level	Description	Progress in biennium	Progress overall
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 and other resources. Existing resources identified for many of the GET Prepared components and new resources being developed for several components. The toolbox interface is restructured and migrated to Trello from the EuFMD-info website, to make it more user-friendly and enable easier publication and updating of resources. Twelve bricks are available for online access. Additional bricks under development to be added soon.	a) Progress is delayed for identification and compilation of examples of good practice in EP during the first year of phase V. b) Progress is delayed for indicator for the online GET Prepared tool to be available by the end of the first biennium. However, the GET Prepared Wall interface is restructured and has been moved from the EuFMD-info website to Trello, to make it more user-friendly and enable quicker publication of resources. c) Progress is in line with the updated indicator for at least 30% of the components of emergency preparedness (‘bricks in the wall’) will contain assessment resources and examples of good practice by the fourth year of phase V. Priority for bricks are given according to needs.
1.2.1.2 Development 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, risk communication, and emergency vaccination	Progress is in line for the indicator for two new resources developed per biennium, if a need is identified.

<b>FAST disease modelling</b>			
<b>Sub-activity level</b>	<b>Description</b>	<b>Progress in biennium</b>	<b>Progress overall</b>
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 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.	Model has been developed for Latvia Discussion is underway with Belgium, Sweden, the Netherlands, and France to join the modeling project soon. Work is underway to include the new model components and additional diseases. Users are supported through webinars, online and face-to-face meetings. Model advocacy is being done through oral and poster presentations and online meetings.	All activities are achievable within the given timeline: EuFMDiS models for Denmark, Estonia, Lithuania, and Latvia are available and are operational. Model development is in progress for Sweden. Development of the model for PPR model for Bulgaria is done. The sheep/goat pox models have been developed for Spain and Bulgaria. Post-outbreak management, carcass disposal, and Market feature is already included in the model. Pastures pathway will be available in the model in the next months. Seventeen user-support activities have been provided since the beginning of phase V: Eight webinars, eight exercises with instructions to complete them and one face-to-face meeting.
<b>Emergency Preparation network</b>			
<b>Sub-activity level</b>	<b>Description</b>	<b>Progress in biennium</b>	<b>Progress overall</b>
1.2.3.1. <b>Online network</b>	Development of an online page to host the new Emergency Preparedness Network, integrating the previous Modelling, Vaccination and Contingency Planning networks. Provide opportunities for members to interact and learn through webinars or other resources related to contingency planning, emergency vaccination and disease modelling. Provide a forum to increase sharing of good practices in emergency preparedness.	Network used in 2021 for online survey and online meeting on emergency vaccination for FAST diseases (comp 1.3.1), and for notification of open access webinars	Online site developed and participants enrolled with four months of delay in relation to indicator. The result of the scoping work on preparedness for emergency vaccination for FAST diseases (comp 1.3.1) was made available through the network in the last reporting period. However, there has been little further activity involving the EPN and its purpose is being reconsidered.
1.2.3.2. Working groups and meetings	Organization of working groups and meetings to reinforce the discussion forum provided by the online network. Joint TFP/EP preparedness experts meetings may be considered.	No activities planned for this period	EuFMD will consider the formation of ad-hoc groups as needed to progress discussions or conduct peer review of emergency preparedness activities.

PPP			
Sub-activity level	Description	Progress in biennium	Progress overall
1.2.4.1. Public-private partnership Initiative for anticipating FAST disease outbreaks	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.	A webinar on 'Including disposal capacities in contingency plans for FAST disease outbreaks' took place in February 2023.	The PPP Initiative had met monthly, but there has been a hiatus in meetings due to unavailability of staff.

## Budget (€) COMP. 1.2

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance
<b><u>Salaries (Professional)</u></b>			
Component 1.2	24,425	27,689	- 3,265
<b><u>Consultancy Operational</u></b>			
Component 1.2	91,131	88,098	3,033
<b><u>Consultancy Technical</u></b>			
Component 1.2	391,860	550,518	- 158,658
<b><u>Travel</u></b>			
Component 1.2	30,360	28,963	1,397
<b><u>Training</u></b>			
Component 1.2	44,330	36,541	7,789
<b><u>Contracts</u></b>			
Component 1.2	80,000	81,225	- 1,225
<b><u>Procurement</u></b>			
Component 1.2	-	-	-
<b><u>General Operating Expenses</u></b>			
Component 1.2	26,130	18,526	7,604
<b>Total Direct Eligible Cost</b>	<b>688,236</b>	<b>831,561</b>	<b>- 143,325</b>

### Component 1.3 Objectives, activities, budget

The **objective** of 1.3 is

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.

Narrative	Expected result	Monitoring	Assumptions and risks
Development of a multi-stakeholder platform for FAST disease vaccination security and work to improve the level of preparedness to use emergency vaccination for FAST diseases 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.	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 Risk of lack of interest from manufacturers in submitting their vaccines for prequalification and/or involvement in long term supply arrangements.

#### Sub-activities

1.3.1 Preparedness for Emergency vaccination			
Sub-activity level	Description	Progress in biennium	Progress overall
Improve the level of preparedness to use emergency vaccination for FAST diseases in MN by addressing the constraints identified through the scoping work conducted by EuFMD.	Work to improve the state of preparedness for emergency vaccination in the plans of the MN and on the issues that constrain them from inclusion of vaccination in their plans. This work will be done in close collaboration with components 1.2 and 1.4 of pillar I. EuFMDs will be used to assess emergency vaccination needs for FAST diseases and GET prepared to guide the solutions.	A workshop series to discuss implementing vaccination was held in March and June 2022 and will continue in 2023	On track towards achieving the indicator.
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 MSP, 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.	Report MSP meeting has been made available online and shared with the MN.	MSP meeting report has been sent out and made available according to what was established in the workplan.
1.3.2 PPSP			

Sub-activity level	Description	Progress in biennium	Progress overall
1.3.2.1. MSP regular meetings	Development of the Multi-stakeholder platform for FAST (disease vaccination security) that will meet regularly to share information and opinions in order to improve understanding of issues and to identify pathways or actions to improve the availability of vaccines suitable for use by Member Nations in disease emergencies.	The Third MSP meeting 'The impact of the Nagoya Protocol on vaccine security for Foot-and-Mouth Disease research and development: options for a solution' was held virtually on the 29 March	The third MSP vaccine security meeting, following meetings in 2020 and 2022, to discuss the challenges that have arisen since the implementation of the Nagoya Protocol (NP) of the Convention on Biological Diversity (CBD) in relation to sharing of strains of FMD virus for the purpose of surveillance, research and the development of new vaccine strains.
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 MSP meetings.	The policy and strategy for the prequalification of FAST vaccines has been published on the FAO/EuFMD website along with the Administrative procedure and Technical guidance for FMD vaccines following consultation with stakeholders.	
<b>1.3.3 System for vaccine security</b>			
Sub-activity level	Description	Progress in biennium	Progress overall
1.3.3.1. Pre qualification system for the immediate procurement of vaccines meeting pre-agreed quality criteria for use in MN.	Establishment of a prequalification system for the immediate procurement of vaccines meeting pre-agreed quality criteria for use in MN. Once established, PQv could form an important element of a system of Assured Emergency Supply Options (AESOPS) that have the potential to supplement existing vaccine and antigen banks by creating long-term supply arrangements for FAST vaccines of assured quality in emergency and endemic situations.	A strategy and plan for the implementation of the PQv system has been developed and a team recruited within EuFMD for its operation. A Standing Committee for Pre-Qualification of FAST Vaccines (SCPQv) has been established that will act as the decision making and governance committee for PQv.	The PQv scheme at Stage 1 has been implemented. Six Eols have been received from FMD manufacturers based in South and North America, Europe, Africa and Asia. Three formal PQv applications have been submitted. It is expected that the first PQv applications will be considered by the SCPQv in September 2023

1.3.3.2. Assured emergency Supply Options (AESOP) for FMD vaccines.	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.	FAO procurement division is involved in the discussion of the PQv system	The project plan envisages establishing the PQv system as first step in the development of LTA & AESOP. EuFMD is working with FAO procurement to link PQv with FAO tenders (restricted tenders)
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**Budget (€) COMP. 1.3**

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance
<b><u>Salaries (Professional)</u></b>			
Component 1.3	45,798	51,423	- 5,626
<b><u>Consultancy Operational</u></b>			
Component 1.3	91,131	88,098	3,033
<b><u>Consultancy Technical</u></b>			
Component 1.3	194,920	193,530	1,390
<b><u>Travel</u></b>			
Component 1.3	20,240	9,054	11,186
<b><u>Training</u></b>			
Component 1.3	25,773	-	25,773
<b><u>Contracts</u></b>			
Component 1.3	80,000	92,116	- 12,116
<b><u>Procurement</u></b>			
Component 1.3	-	-	-
<b><u>General Operating Expenses</u></b>			
Component 1.3	12,440	9,845	2,595
<b>Total Direct Eligible Cost</b>	<b>470,302</b>	<b>444,065</b>	<b>26,237</b>

**Component 1.4 South Eastern Europe Objectives, activities, budget**

The **objective** of 1.4 is

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.

Narrative	Expected result	Monitoring	Assumptions and risks
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 on a 0 to 7 scale).	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.	Assumes commitment from MN to participate actively in the various activities organized or supported by EuFMD.

#### Sub-activities

1.4.1 RBS			
Sub-activity level	Description	Progress in biennium	Progress overall
1.4.1.1. RBS in Thrace	Support to Greece, Bulgaria and Türkiye to maintain and improve the RBS established in Thrace. This will include the revision of the Cameron model, as necessary.	THRACE programme extended to other FAST (LSD, PPR, SPGP). A scientific poster was developed to present updates to the Thrace risk-based surveillance programme and presented at the 30 <sup>th</sup> WOA Regional Conference in Catania, Italy in October 2022.	THRACE programme upgraded with dedicated database and extended to other FAST diseases, maintained and functional. Three-monthly based cycle reports showing confidence of freedom above 90%, regularly produced and sent.
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.	THRACE programme dedicated meetings integrated in SEE management meetings allowing reporting on national surveillance programs on FAST diseases. Report template developed to assure consistency in data. The guide "THRACE risk-based surveillance system. Countries' data requirements and database user manual" developed and available to describe the programme functionalities and promote its adoption by other SEE countries, has been developed.	Western Balkan countries confirmed an interest in taking an active part in meetings related to RBS in Thrace. Scoping work and data collection in progress. THRACE database upgraded with the three risk-based levels, ready to be implemented in different capacities in the region based on risk and priorities.
1.4.2 Coordination activities			

Sub-activity level	Description	Progress in biennium	Progress overall
1.4.2.1. Improve regional co-ordination	Management meetings will be organized regularly 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.	Four SEE Management Meetings to present the progress of workplan implementation, agree on additional areas of interest where further support is required to improve emergency preparedness and agree on next steps for different activities to be implemented, have been held during the second biennium of the phase V.	SEE programme Management Meetings are held on a six- monthly basis. Representatives from EC (DG Sante), WOA, FAO REU, and EU funded regional projects are regularly invited to attend these meetings, to assure coordination and avoid overlapping in similar activities. Regular and yearly SEE NRL network meetings have been established and integrated in SEE Management meetings
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.	As a result of the 2 <sup>nd</sup> SEE FAR call three small research studies, endorsed by relevant competent authorities are supported and fully implemented, other two in the final phase. One of them has regional initiative involving stakeholders from two countries of the region. Outcomes and results of the studies were presented in SEE management meetings. Meeting with principal investigators from the SEE FAR calls held online to discuss results, progress and lessons learned, and next steps to facilitate transfer of knowledge at a national and a regional level.	Following the 1 <sup>st</sup> and the 2 <sup>nd</sup> SEE FAR calls for field studies proposals, to create AH stakeholders' networks in order to generate evidence for national competent veterinary authorities' policy needs are implemented in the region. All studies are unique, covering wide range of topics and activities for relevant FAST diseases. A "Guide and Checklist for stakeholders and policy makers engagement" was developed, providing a standardized framework for stakeholders' engagement with flexibility to adopt the Guide's principles according to the SEE member nations regulatory and policy requirements.
<b>1.4.3 Emergency preparedness</b>			
Sub-activity level	Description	Progress in biennium	Progress overall
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-	Workshop on indirect surveillance systems developed for the region and delivered	Indicators achieved. Two specific laboratory trainings on FMDV fenotyping and contingency planning, and workshop on indirect



	<p>Eastern Europe will be offered to attend workshops organized under component 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>with support of SAFOSO in July 2022. Foot-and-mouth emergency preparation courses (FEPC) for Bosnia Herzegovina and North Macedonia in national languages have been organized and in progress. FAST disease wildlife surveillance course organized in Spain for MNs gathered 9 participants from SEE countries, while 4 participants from this region completed RTT on FMD.</p>	<p>surveillance systems developed based on the interest and priorities. More than 1200 participants from the SEE region successfully attended in learning events organized under component 1.1 programme.</p>
<p>1.4.3.2. Simulation exercises</p>	<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 (Labs, Veterinary services, Universities, Industry...).</p>	<p>Two multi-country and five national simulation exercises planning and delivery in the region supported in close cooperation and coordination with the relevant national scientific and research institutions and competent authorities during the second biennium of the Phase V.</p>	<p>Indicators achieved. Support provided in organization and delivery of ten national and four multi-country simulation exercises. Strengths and weaknesses in contingency plans and operational procedures identified and recommendation for improvement provided, with significant positive impact on relevant stakeholders cooperation, understanding roles and responsibilities in emergency management and good practices sharing.</p>
<p>1.4.3.3. In-country assistance</p>	<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>GET Prepared toolbox presented and its application exercised. PPEP tool developed by FAO’s EMC-AH piloted with Bosnia &amp; Herzegovina, Bulgaria, and Serbia. To rise awareness on FAST diseases in the region, targeting particular small backyard animal holdings and veterinary practices, over 20 publications (posters, leaflets and animated video), have been developed, translated in SEE</p>	<p>Indicators achieved. Specific technical support provided in planning and evaluation phases of simulation exercises and other areas based on interest and requests.</p>

		languages and available.	
<b>1.4.4 Diagnostic Bank of reagents</b>			
<b>Sub-activity level</b>	<b>Description</b>	<b>Progress in biennium</b>	<b>Progress overall</b>
1.4.4.1 Development and maintenance of a diagnostic bank of reagents for FAST available for countries in the region.	Establishment of a diagnostic bank of reagents for FAST diseases available for the countries in the region.	Diagnostic bank actual capacity revised and regular maintenance activities agreed for first half of 2023	Regional diagnostic bank of FMD reagents established during the first year of the programme, available and maintained as planned. Additionally, reagents for PPR, LSD, SPGP diagnosis (PCR) are included in the re-stocking plan.

**Budget (€) COMP. 1.4**

<b>BUDGET CATEGORIES</b>	<b>Budget 4 years</b>	<b>Expenses</b>	<b>Balance</b>
<b><u>Salaries (Professional)</u></b>			
Component 1.4	56,415	63,290	- 6,875
<b><u>Consultancy Operational</u></b>			
Component 1.4	91,131	88,098	3,033
<b><u>Consultancy Technical</u></b>			
Component 1.4	871,663	551,563	320,100
<b><u>Travel</u></b>			
Component 1.4	42,500	31,877	10,623
<b><u>Training</u></b>			
Component 1.4	89,690	37,242	52,448
<b><u>Contracts</u></b>			
Component 1.4	185,000	125,614	59,386
<b><u>Procurement</u></b>			
Component 1.4	127,000	114,704	12,296
<b><u>General Operating Expenses</u></b>			
Component 1.4	72,170	79,267	- 7,097
<b>Total Direct Eligible Cost</b>	<b>1,535,569</b>	<b>1,091,654</b>	<b>443,915</b>

**Component 1.5 Applied Research Objectives, activities, budget**

The **objective** of the component is

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).

Narrative	Expected result	Monitoring	Assumptions and risks
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.	Assumes the generated knowledge and tools will have high impact and MN will make use of them.

**Sub-activities**

1.5.1 Funded research projects			
Sub-activity level	Description	Progress in biennium	Progress overall
1.5.1.1. Call for research proposals	Following advice received by the STC, the SCSAR, and the SCBRM, a call for research proposals will be released and widely circulated on a regular basis. Research applications will be reviewed in a two stage process, first by external referees (Referee Panel) then by the STC (acting as the Grant Review Board). Successful applications will be contracted through LoAs.	A FAR call for 5 applications submitted in 2021-2022 were retained for funding. Studies are currently implemented and well on track.	11 studies have been awarded under three FAR Calls.
1.5.1.2. 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 and technical follow-up for the retained proposals are ongoing.	All LoAs are signed and studies ongoing or completed by the end of this phase.

1.5.2 Meetings			
Sub-activity level	Description	Progress in biennium	Progress overall
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 and SCBRM meetings planned in September 2023. The SCSAR was restructured as SCRISAR.	Meetings of STC, SCBRM and SCSAR were organized regularly so that to ensure these committees provide the expected technical guidance to the Secretariat and Member nations.
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.	Final reports of the plenary sessions, two workshops were published online as well as the book of abstracts Discussions on the OS24 started.	The Open sessions 2020 and 2022 were successfully delivered, in virtual and hybrid format respectively

## Budget (€) COMP. 1.5

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance
<b><u>Salaries (Professional)</u></b>			
Component 1.5	38,170	43,512	- 5,342
<b><u>Consultancy Operational</u></b>			
Component 1.5	91,131	88,098	3,033
<b><u>Consultancy Technical</u></b>			
Component 1.5	-	-	-
<b><u>Travel</u></b>			
Component 1.5	36,430	38,640	- 2,210
<b><u>Training</u></b>			
Component 1.5	41,237	29,519	11,718
<b><u>Contracts</u></b>			
Component 1.5	400,000	257,945	142,055
<b><u>Procurement</u></b>			
Component 1.5	-	17,077	- 17,077
<b><u>General Operating Expenses</u></b>			
Component 1.5	31,110	35,240	- 4,130
<b>Total Direct Eligible Cost</b>	<b>638,078</b>	<b>510,031</b>	<b>128,047</b>

**Component 1.6 Proficiency Test Services Objectives, activities, budget**

The **objective** of the component is

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 candidate states.

<i>Narrative</i>	<i>Expected result</i>	<i>Monitoring</i>	<i>Assumptions and risks</i>
Non-EU countries that are EuFMD MN are able to participate in PTS on an annual basis.	Seven eligible countries to participate each year in the PTS and attend the annual EU- RL meeting.	LoA interim and final reports	Assumes commitment from the beneficiary countries to participate in the mentioned activities.

**Sub-activities**

<b>Sub-activity level</b>	<b>Progress in biennium</b>	<b>Progress overall</b>
1.6.1.1. Support to eligible countries to participate in PTS for FMD NRL	All beneficiary countries, except Ukraine and Belarus, participated in the PTS.	Five out of seven countries participated the PT
1.6.1.2. Support to eligible countries to assist the annual EU-RL meetings	All beneficiary countries, except Ukraine and Belarus, participated at the annual meeting.	Five out of seven countries participated the EURL annual meeting

**Budget (€) COMP. 1.6**

<b>BUDGET CATEGORIES</b>	<b>Budget 4 years</b>	<b>Expenses</b>	<b>Balance</b>
<b><u>Salaries (Professional)</u></b>			
Component 1.6	4,580	3,956	625
<b><u>Consultancy Operational</u></b>			
Component 1.6	91,131	88,098	3,033
<b><u>Consultancy Technical</u></b>			
Component 1.6	-	-	-
<b><u>Travel</u></b>			
Component 1.6	-	-	-
<b><u>Training</u></b>			
Component 1.6	-	-	-
<b><u>Contracts</u></b>			
Component 1.6	70,000	69,859	141
<b><u>Procurement</u></b>			
Component 1.6	-	-	-
<b><u>General Operating Expenses</u></b>			
Component 1.6	-	-	-
<b>Total Direct Eligible Cost</b>	<b>165,711</b>	<b>161,913</b>	<b>3,799</b>

**Component 1.7 Disease risk assessment and forecasting Objectives, activities, budget**

The objective of the component is

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

<i><b>Narrative</b></i>	<i><b>Expected result</b></i>	<i><b>Monitoring</b></i>	<i><b>Assumptions and risks</b></i>
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 accessible 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.)	Assumes enough information will be available to assess the risk and forecast important changes in risk and/or disease outbreaks.

**Sub-activities**

<b>1.7.1</b>			
<b>Sub-activity level</b>	<b>Description</b>	<b>Progress in biennium</b>	<b>Progress overall</b>
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.	Global FMD Quarterly reports published regularly in collaboration with the WRL. Information from the FAST disease report was included in the FMD quarterly report	Progress is aligned with the biennium indicators
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 qualitative risk assessment on the likelihood and consequences of further spread of SAT2 in W. Eurasia and Middle East was performed. Further development of the <i>Risk Monitoring Tool (RMT-FAST)</i> : RMT-FAST was adapted to prioritize regions outside of MN for EuFMD activities based on risk. This work was presented at the General Session	Progress is aligned with the biennium indicators
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	Proof-of-concept dashboards for FMD surveillance data and PCP stages are available, developed using an 'off-the-shelf' free product	Good progress, further effort needed develop a system to maintain the data going forwards

	information available through the tool.	(Tableau Public). The Pirbright Institute and Epi-Interactive will develop an FMD surveillance database and dashboard (project awarded under FAR call).	and ensure operability with EMPRES-i.
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).	Work has been undertaken in Pillar II.	N/A
1.7.2.1. Prioritization 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 is being done to make the PRAGMATIST tool more flexible and increase its availability, adapting it to endemic countries	Vaccine matching and risk information required to update PRAGMATIST is included in the FMD quarterly report. A framework to adapt PRAGMATIST to endemic countries has been developed. Data are required to parameterize this.	Good progress although improved sharing of vaccine performance or matching data would improve the flexibility of the tool in different regions.
1.7.3.1. Procurement of sampling and/or diagnostic	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.	See components 3.1 and 3.2	
1.7.3.2. Training for sampling		See components 3.1 and 3.2	

## Budget (€) COMP. 1.7

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance
<b><u>Salaries (Professional)</u></b>			
Component 1.7	22,910	23,734	- 824
<b><u>Consultancy Operational</u></b>			
Component 1.7	91,134	80,089	11,045
<b><u>Consultancy Technical</u></b>			
Component 1.7	233,900	130,438	103,462
<b><u>Travel</u></b>			
Component 1.7	13,150	944	12,206
<b><u>Training</u></b>			
Component 1.7	10,310	9,252	1,058
<b><u>Contracts</u></b>			
Component 1.7	68,000	73,677	(5,677)
<b><u>Procurement</u></b>			
Component 1.7	18,000	385	17,615
<b><u>General Operating Expenses</u></b>			
Component 1.7	12,450	159	12,291
<b>Total Direct Eligible Cost</b>	<b>469,854</b>	<b>318,678</b>	<b>151,176</b>



## Phase V - PILLAR I – Expenditures at 31-08-2023 - Budget 4 years (2019-2023) in EUR

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance	% Spent
<b>Salaries (Professional)</b>				
Component 1.1	45,797	51,423	- 5,626	112%
Component 1.2	24,425	27,689	- 3,265	113%
Component 1.3	45,798	51,423	- 5,626	112%
Component 1.4	56,415	63,290	- 6,875	112%
Component 1.5	38,170	43,512	- 5,342	114%
Component 1.6	4,580	3,956	625	86%
Component 1.7	22,910	23,734	- 824	104%
<b>Salaries (Professional) Sub-Total</b>	<b>238,095</b>	<b>265,028</b>	<b>- 26,933</b>	<b>111%</b>
<b>Consultancy Operational</b>				
Component 1.1	91,131	88,098	3,033	97%
Component 1.2	91,131	88,098	3,033	97%
Component 1.3	91,131	88,098	3,033	97%
Component 1.4	91,131	88,098	3,033	97%
Component 1.5	91,131	88,098	3,033	97%
Component 1.6	91,131	88,098	3,033	97%
Component 1.7	91,134	80,089	11,045	88%
<b>Consultancy OPS Sub-Total</b>	<b>637,920</b>	<b>608,675</b>	<b>29,244</b>	<b>95%</b>
<b>Consultancy Technical</b>				
Component 1.1	621,700	557,874	63,826	90%
Component 1.2	391,860	550,518	- 158,658	140%
Component 1.3	194,920	193,530	1,390	99%
Component 1.4	871,663	551,563	320,100	63%
Component 1.5		-	-	
Component 1.6		-	-	
Component 1.7	233,900	130,438	103,462	56%
<b>Consultancy TECHS Sub-Total</b>	<b>2,314,043</b>	<b>1,983,923</b>	<b>330,120</b>	<b>86%</b>
<b>Travel</b>				
Component 1.1	111,320	185,898	- 74,578	167%
Component 1.2	30,360	28,963	1,397	95%
Component 1.3	20,240	9,054	11,186	45%
Component 1.4	42,500	31,877	10,623	75%
Component 1.5	36,430	38,640	- 2,210	106%
Component 1.6		-	-	
Component 1.7	13,150	944	12,206	7%
<b>Travel Sub-Total</b>	<b>254,000</b>	<b>295,376</b>	<b>- 41,376</b>	<b>116%</b>
<b>Training</b>				
Component 1.1	88,660	120,221	- 31,561	136%
Component 1.2	44,330	36,541	7,789	82%
Component 1.3	25,773	-	25,773	0%
Component 1.4	89,690	37,242	52,448	42%

Component 1.5	41,237	29,519	11,718	72%
Component 1.6		-	-	
Component 1.7	10,310	9,252	1,058	90%
<b>Training Sub-Total</b>	<b>300,000</b>	<b>232,775</b>	<b>67,225</b>	<b>78%</b>
<b>Contracts</b>				
Component 1.1	56,000	93,157	- 37,157	166%
Component 1.2	80,000	81,225	- 1,225	102%
Component 1.3	80,000	92,116	- 12,116	115%
Component 1.4	185,000	125,614	59,386	68%
Component 1.5	400,000	257,945	142,055	64%
Component 1.6	70,000	69,859	141	100%
Component 1.7	68,000	73,677	- 5,677	108%
<b>Contract Sub-Total</b>	<b>939,000</b>	<b>793,592</b>	<b>145,408</b>	<b>85%</b>
<b>Procurement</b>				
Component 1.1	20,000	26,344	- 6,344	132%
Component 1.2		-	-	
Component 1.3		-	-	
Component 1.4	127,000	114,704	12,296	90%
Component 1.5		17,077	- 17,077	
Component 1.6		-	-	
Component 1.7	18,000	385	17,615	2%
<b>Procurement Sub-Total</b>	<b>165,000</b>	<b>158,510</b>	<b>6,490</b>	<b>96%</b>
<b>General Operating Expenses</b>				
Component 1.1	76,250	162,927	- 86,677	214%
Component 1.2	26,130	18,526	7,604	71%
Component 1.3	12,440	9,845	2,595	79%
Component 1.4	72,170	79,267	- 7,097	110%
Component 1.5	31,110	35,240	- 4,130	113%
Component 1.6		-	-	
Component 1.7	12,450	159	12,291	1%
<b>GOE Sub-Total</b>	<b>230,550</b>	<b>305,963</b>	<b>- 75,413</b>	<b>133%</b>
<b>Report Cost Pillar I</b>	1,996		1,996	0%
<b>Project Evaluation Pillar I</b>	15,000		15,000	0%
<b>Total Direct Eligible Cost</b>	<b>5,095,603</b>	<b>4,643,843</b>	<b>451,760</b>	<b>91%</b>

## Pillar II

### Who we are

Pillar II / Component	Objective	Manager(s)
	Reduced risk to EuFMD Members from the European neighbourhood (progressive control of FAST diseases in EU neighbouring regions).	F. Ambrosini
2.1 Reduced risk to EuFMD Members from the European neighbourhood	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.	South-East Europe European Neighbourhood C. Potzsch  South-East Mediterranean Neighbourhood S. Baiomy
2.2 Improved early warning for FAST diseases	Develop and implement integrated disease surveillance programme focused on specific risk hubs, to provide updated risk information, optimize the veterinary service resources and improve the effectiveness of control measures implemented.	North Africa K. Ouali  FMD laboratory and epidemio-surveillance expert: T. Trogu
2.3 Capacity development for surveillance and improved control programmes	Develop and implement a programme 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 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 (Türkiye, Georgia).

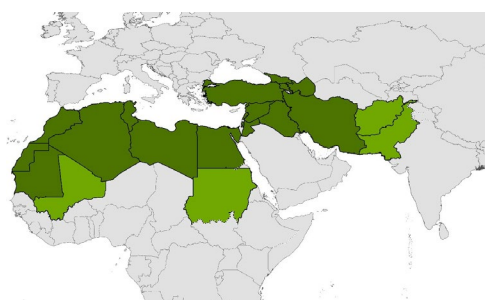
#### Specifically:

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

Having land-borders with EuFMD Member Nations: Armenia, Azerbaijan, IR 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

### a) Background information

Various 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 European Union (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 stepwise) 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 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 regarding surveillance of diseases, emergency preparedness and availability of vaccines.

Direct beneficiaries of this component are the EuFMD Member Nations, Türkiye 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, WOA (Regional and Sub-regional offices), the EU Commission, regional organizations active in agricultural sector such as the Arab Organization for Agricultural Development, regional economic and trade unions such as the Arab Maghreb Union, the Economic Cooperation Organization (ECO) and others, in addition to networks established under GF-TADs such as REMESA and signatories of the Statement of Intentions (SOI). The FAO/WOA reference laboratories, international centers of expertise and European reference laboratories will be involved in the activities according to the different expertise available and required. Training opportunities and other activities developed and delivered might be extended to countries in the regions, which are significant for epidemic spread of FAST diseases to the above countries such as Sudan, Mali, Afghanistan, and Pakistan.

## b) Updates on Component Sub-Activities

### 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

All meetings held during the reporting period were online.

#### Southeast European Neighbourhood (SEEN)

The FAST situation and control strategies adopted in SEEN countries are monitored and reported through the three-monthly FAST Reports (*see 2.2.*) and the online meetings with focal points in SEEN countries, which also include updating and monitoring progress in the implementation of national FMD control plans (OCP, RBSP) in the region.

The following activities and meetings were conducted against the framework of the Statement of Intentions agreement for cooperation between Transcaucasus and neighbouring countries for the control of FAST diseases and the SEEN workplan.

- Regular monthly reporting of FMD vaccination and outbreaks to highlight the regional FMD risk situation. The Republic of Türkiye, I.R. Iran, Iraq and the Transcaucasus countries (TCC) Armenia, Azerbaijan, Georgia, and the Russian Federation sent in their reports. Although the I.R. Pakistan has reiterated its willingness to contribute to the database, no progress was made during the reporting period.
- Quarterly reports on the price for livestock (large and small ruminants, pigs) and their meat in the region are sent and the results presented.
- The IZSLT, Italy, continues to host the SOI platform, via a Letter of Agreement and progress has been made in populating the database.
- Improved risk information sharing
  - Regular meetings were carried out to improve risk information sharing between EuFMD, Istituto Zooprofilattico Sperimentale delle Regioni Lazio e Toscana (IZSLT) and the SOI country focal points.
  - The SOI technical meeting was carried out in Baku (Azerbaijan) as a side-event of the FMD Roadmap Meeting, held in April 2023. Database improvements were discussed and agreed. All the future reporting of FMD vaccinations was proposed to be quarterly instead of monthly.
  - The 6<sup>th</sup> JPC Meeting was held as a side-event of the WOA 90<sup>th</sup> Annual General Session of the World Assembly of Delegates, Paris on 22 May 2023. The Chief Veterinary Officers and representatives of five SOI countries participated and updates of the FAST risk situation in the countries and the region were shared. The main focus was on the national and regional FMD SAT2 situation and the use of the EC donated SAT2 vaccines to EuFMD Member Nations, Türkiye (0.5 M doses) and Georgia (350k doses). The countries appreciated the regional cooperation under the SOI, especially the reporting platform for outbreaks and vaccination and market prices. It was agreed to hold the next JPC meeting in 2024; formally agree the membership of Iraq and Pakistan in the SOI at the next face-to-face JPC meeting, in 2024; and report national FMD vaccination progress in the SOI platform on quarterly basis.
- The contributions from the SEEN region provided information for the FAST Report European neighbourhood EuFMD Pillar II – on significant FAST disease events and information; and Foot-and-Mouth Disease Quarterly Report (EuFMD, WRL), which are published.
- Use of EuFMD tools (Risk Monitoring Tool, Pragmatist, VADEMOS) for improved risk assessment and vaccine strains selection:
  - Risk Monitoring Tool (RMT): data and information from the SEEN countries on all FAST diseases have contributed to regional risk scores.
  - Pragmatist: a version for the application in FMD endemic countries is being developed by the EuFMD/WRL to determine the suitability (fitness for purpose) of the vaccines they purchase

and to interpret the results of post vaccination monitoring in the field. A pilot testing in the SEEN or other countries is planned in the next six months.

- Surveillance evaluation tool: under development to assess surveillance in endemic countries, based on indicators to evaluate how the requirements for each PCP stage are met. A pilot testing in the SEEN countries is planned in the next six months.
- Meetings between the Republic of Türkiye, I.R. Iran, Iraq, Pakistan and EuFMD.
- The meetings were held within the Regional Roadmap Meeting in Baku, Azerbaijan, in April. Quarterly quadripartite meetings are organized by EuFMD in which the four countries give updates against the agreed framework for regular sharing of risk information from bordering areas on the occurrence of outbreaks, vaccination programmes, animal movements, surveillance results and control measures implementations, vaccine and vaccination effectiveness and capacity building. During the reporting period, meetings were held in June 2023. Coordination of activities related to FAST diseases with FAO and WOA. The quarterly coordination meeting between EuFMD, Sub-Regional Office for Central Asia of the Food and Agriculture Organization of the United Nations (FAO SEC), Regional Office for Europe and Central Asia (FAO REU), FAO Regional Office for Asia and the Pacific (FAO RAP) and WOA on FAST diseases programmes in the European neighbourhood and West Eurasian region, was held in June 2023. It was agreed with the partners that the FMD roadmap meeting in Baku is considered to be one of quarterly coordination meetings.
- PPR Blueprint Consultation and FMD Roadmap meeting for Economic Cooperation Organisation (ECO)/West Eurasia countries, 25 – 27 April 2023. The EuFMD supported this event which was attended by five SOI countries: Azerbaijan, Georgia, Türkiye, Republic of Iran and the Russian Federation. Items in the FMD part of the roadmap meeting and of particular importance for the EuFMD workplan and with its contributions were: support to the FMD epidemiology and laboratory network workplans: no election was held for the leaders of the FMD epidemiology and laboratory networks; Global perspective of FMD Control FMD virus situation at global level and vaccine matching for FMD (by World Reference Laboratory for FMD); Activities of the Regional Reference Laboratory for FMD (Federal Centre for Animal Health of Rosselkhoznadzor, ARRIAH); presentations summarizing the FMD vaccine and vaccination questionnaire and how to improve FMD vaccine security; SAT2 situation in Türkiye and Iraq and preparedness activities in Azerbaijan; results for the FMD Self-Assessment Tool (SAT); support on development and implementation of national FMD control strategies.

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

- Regular tripartite meeting held with North African countries between EuFMD, FAO and WOA. Over the reporting period, two coordination meetings were convened with FAO and WOA representatives in the Middle East. Participants shared updates on the implementation of each organization's respective work programme. EuFMD's new strategy for the upcoming phase was presented and discussed at the latest meeting.
- The 26<sup>th</sup> Meeting of the Joint Permanent Committee (JPC) of the Mediterranean Animal Health Network (MAHN/REMESA) was held in Ioannina -Greece from 22 to 23 June 2023, to debate the priority transboundary animal diseases, initiatives and projects in the Mediterranean region, and related common topics. Over 50 attendees participated from the FAO, WOA, AU IBAR, and the WOA subregional office in Abu Dhabi, IZS Teramo, Portugal, Morocco, Italy, France, Malta, Algeria, Spain, Tunisia, Greece, Lebanon, and the PPR Secretariat. The EuFMD "Move FAST-Get prepared strategy" was presented, highlighting the seven key action areas of relevance for the REMESA countries in the south and East Mediterranean where FAST diseases are endemic. The new elements incorporated into the strategy to support the diagnostic reserve system, enhanced passive surveillance, diagnostic capacity, biorisk standard implementation, and FAST control, as well as in investment plans, were underlined. An update was presented on the PROVNA project, which aims to define ecoregions and pilot an Earth Observation-based Vector-borne Disease Surveillance System for North Africa. The project was funded by WOA and was developed in

collaboration with the Mediterranean Animal Health Network (REMESA). REMESA identified vector-borne diseases as a priority topic for the Mediterranean region and WOAHA designated the Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale" in Teramo as the WOAHA Reference Center in several domains to implement the project, in partnership with the University of Tennessee, Knoxville, United States. The project's main objective is to support the local competent authorities in North Africa (Mauritania, Morocco, Algeria, Tunisia, Libya and Egypt) in identifying specific areas (ecoregions) to carry out entomological/serological surveillance for vector-borne diseases. The first disease to be targeted for the project is Rift Valley Fever. The activities conducted by REMESA STOR in 2023 included eight webinars, one training workshop, one online intensive workshop, four scholarships, and one conference. REMESA STOR also presented two project proposals on animal movement and vector-borne diseases.

- The tripartite meeting between Israel, Jordan and Palestine was established as a collaboration between EMC-AH and EuFMD and takes place every three months to enhance cooperation between the three countries, and to establish a sub-regional coordination mechanism, particularly for sharing technical information. Following the containment of the SAT2 outbreak in Jordan, and during the reporting period, a meeting was held to update on the epidemiological status of FMD in the three countries and to discuss the planned vaccination programmes.

### **2.1.2 Revision of national FAST strategic plans according to updated risk assessment, socioeconomic analysis, monitoring and evaluation results**

#### **SouthEast European Neighbourhood (SEEN)**

No updates in the reporting period on PCP progress.

EuFMD assistance continued to:

- support to the Official Control Programme (OCP) of Georgia and Risk-Based Strategic Plan (RBSP) for FMD control of Republic of Türkiye, I.R. Iran, Iraq, Azerbaijan, and Armenia.
- Iraq and Türkiye for improved FMD SAT2 control and surveillance, and to SEEN countries for improved preparedness.
- The SEEN component manager is also part of the PCP-Support Officer (PSO) (*see component 3.1*) and against this framework, provided assistance to the countries in Central Asia, Central and West Africa in the development of FMD control plans.
- The SEEN countries were supported during the SAT2 occurrence in the region with the following activities:
  - Organization of regular coordination meetings for SouthEast European Neighbourhood and international and regional reference laboratories
  - Sample shipment from Iraq to Türkiye and testing through Protocol for sample submission EuFMD/Sap Institute;
  - Coordination with European Commission for vaccine donations to Türkiye and Georgia;
  - Diagnostic support to SEEN countries (reagents for adapted PCR, Ag ELISAs, field testing of newly developed SAT1 & 2 and pan FMD rapid test (lateral flow device) in Iraq);
  - Laboratory trainings (IZSLER, ANSES), *see 2.3*;
  - Contributions to FAO EMPRES SAT2 Risk assessment;
  - Contribution to EMC mission in Iraq- Implementation of recommendations.

#### **Middle East**

##### Libya

Following the online workshop organized on the development of the FMD Risk Assessment Plan in Libya on 16-17 January 2023, the FMD task force group worked on developing the Risk Assessment Plan using the 102 Executive Committee of the EuFMD, 28 September 2023

provided template as a guide, as well as consulting with the PCP Support Officers (PSO) participating in the workshop. The first draft has been developed and will be reviewed by the assigned PSO.

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

#### **SouthEast European Neighbourhood (SEEN)**

##### Epi-lab network

The EPINET meeting was held within the WestEurasia FMD Roadmap Meeting (RMM), in April 2023. In Baku, Azerbaijan. The EuFMD assisted both the networks of epidemiologists and of laboratories and the workplan implementation in the SEEN countries. Sharing of data and information on FMD through the SOI and the quarterly Pillar II FAST Report are of particular interest for improved risk information sharing in the WestEurasian region. The EuFMD financially supports the network leaders acting as EuFMD consultants from the SEEN countries.

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

EuFMD has developed, within the current workplan, a series of virtual learning courses, which aim to build the skills needed to develop and implement FMD control strategies under the PCP-FMD.

#### **SouthEast European Neighbourhood (SEEN)**

A pilot project on PPP for improved PVM in the dairy sector was implemented with EuFMD support in I.R of Iran. Until the reporting date, no permission was given by the Iranian Veterinary Organisation (IVO) to share the outcomes of the study.

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

The collaboration with AOAD continues and the PPP models are under development, following the workshops held in the previous reporting period.

#### **c) Main points of interest for the Executive Committee**

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

#### **d) Priorities for the next six months**

- The information sharing with the neighborhood will continue, as a priority, through:
  - the production of the FAST reports and FAST diseases trends through a data flow platform in support of the reports, for an improved way to present data to the Member Nations and share with the neighborhood.
  - the organization of the coordination meetings between EuFMD, FAO and WOA in SEEN, ME and NA on FAST diseases programmes to improve cooperation and use synergy effects between different national and regional FAST related activities.
  - the sharing of data and information on FMD and other FAST diseases against the framework of the SOI and implement changes and improvements agreed during the SOI Joint Permanent Committee meeting and the technical meetings. Continue to develop database solutions to link the SOI database with other EuFMD FAST data collection (incl. country cards, risk monitoring



tool, Pragmatist). The SOI has been made public through a short video presentation (<https://youtu.be/Zyv46eBh2yY>), which was shown at the OS 2022. Replicate the SOI Model for the ME region and organize regular sub-regional meetings involving Israel, Jordan, and Palestine for the purpose of sharing risk information and improving risk management.

- Continue to support countries with FMD SAT2 outbreaks in their control and surveillance and others in the region to improve preparedness. Continue support to SEEN countries on the progression along the PCP, especially Türkiye, Armenia, and Azerbaijan to stage 3. Also continued support to I.R of Iran, Iraq, Pakistan, Libya and Sudan. Follow-up the EuFMD proposal to the REMESA secretariat to organize a back-to-back meeting with the upcoming JPC meetings for North African countries to discuss the implementation of FMD control strategies and the potential support from international organizations to serve as the roadmap meeting organized by the Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs).
- Continue the collaboration with the Arab Organization for Agricultural Development (AOAD) and the Memorandum of Understanding preparation.
- Strengthen the epi-lab networks in designing and implementing their workplans.
- Follow up to the PPP and SEI v-learning courses through liaising with relevant stakeholders from various countries.

**e) Of note**

EuFMD assistance continue to the neighboring countries in the containment of FMD SAT2 and the other FAST diseases encompassed in the new EuFMD Constitution and their outbreaks (e.g. LSD in Libya) to reduce the risk of spread to European countries.

## Component 2.2 Improved early warning for FAST disease

### a) Background information

The European neighbouring sub-regions of the Maghreb, SouthEast Mediterranean and SouthEast Europe are key areas for several emerging risks for Europe. A better knowledge of the **livestock flows** in these regions would be an 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 programme**.

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** programme focused **on specific risk hubs**, to optimize the veterinary service resources deployed in the field and improve the effectiveness of control measures implemented.

Direct beneficiaries of this component are the EuFMD Member Nations Türkiye 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, WOA (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. The training programme on risk mapping for the countries of the European neighborhood was delivered in the framework of an 18-month long partnership with the French agricultural research and international cooperation organization (CIRAD) and has continued with Avia-GIS Company.

FAO/WOAH reference laboratories, international centres of expertise and European reference laboratories are 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 such as Sudan, Mali, Afghanistan, and Pakistan.

### b) Updates on Component Sub-Activities

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

The GIS and spatial analysis for beginners started in May 2023, implemented by Avia-GIS. Neighboring countries (list in the AVIA GIS report) could participate in the online sessions and complete their assignments and exercises by elaborating maps for their own country, on a basic level.

Algeria, Mali, Morocco, and Tunisia completed the basic level course in French. Mauritanian participants attended but did not complete the training. Azerbaijan, Georgia, Iran, Iraq, Jordan, Libya, Palestine and Turkey participants completed the course in English. Armenia, Lebanon, and Pakistan participated, but did not complete the course.

The intermediate course started in July 2023 and the participants in the beginner's course could continue their progressive training. This course will continue until August 2023 when the advanced level will allow the completion of the training for all the participants that followed the three levels delivered. As a follow-up, a community of practice could be established with the participants who have cumulated experience in spatial analysis and risk mapping models' development and who are able to generate maps for the

identification of risk hot spots based on animal mobility and other risk factors. EuFMD staff also participated in these courses to establish an EuFMD help desk, which would continue the assistance to the countries on GIS and spatial analysis following the completion of the training.

Risk-mapping for improved FAST surveillance and early detection is in use in the SEEN, ME and NA countries. In the SEEN, they are regularly used by the SOI countries, including on the SOI platform maps on FMD vaccination and outbreaks, national reporting, national diseases control plans and PCP-FMD control plans. Since the start of the SAT2 outbreaks in the SEEN region, the SOI database and mapping were also adopted to present data on SAT2 outbreaks and vaccination. The national consultant from Georgia assists the coordination of GIS and risk mapping activities in the SEEN region.

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

#### **SouthEast European Neighbourhood (SEEN)**

- Risk-based surveillance is regularly conducted in all SEEN countries for FAST diseases. All SEEN countries are in PCP stage 2 or 3 and risk-based FMD vaccination and control are implemented and linked with risk-based surveillance. The RBSP and OCP serve as templates for risk-based control and surveillance for other FAST diseases especially in Republic of Türkiye, the TCC and the IR of Iran. The results of the FMD small-scale immunogenicity studies in the TCC have been finalized for publication. Surveillance and control for other FAST diseases are reported on a quarterly basis to the EuFMD.
- Türkiye, the TCC and IR of Iran have conducted or plan to conduct serological surveys in 2023 to estimate the levels of NSP and SP antibodies in different sub-populations, including large and small ruminants. Risk hot spots and gaps in national control are identified through surveys and addressed. The SEEN countries and the EuFMD also contributed to the FAO-EMPRES-led risk assessment technical paper concerning FMD SAT2 introduction and spread in the region.
- The EuFMD assisted the SEEN countries to select and order suitable SAT2 vaccine (Armenia, Azerbaijan, Iraq) and facilitated the EC donation of vaccine to the Member Nations Türkiye and Georgia.
- During the current FMD SAT2 situation, the Republic of Türkiye has continued to report outbreaks in the border regions, immediately after laboratory confirmation, facilitating the timely vaccination campaigns and increasing awareness in the neighboring Armenia and Georgia. EuFMD and Türkiye have sent regular updates on the SAT2 situation in the country.
- Under the Protocol for the submission of FMD samples to the Sap Institute, Iraq could send FMD samples to the Sap Institute for serotyping, sequencing, and vaccine matching.

#### **Middle East**

- Syndromic Surveillance

An innovative approach to surveillance has been introduced through the collaboration with SAFOSO on syndromic surveillance to improve early detection in the context of the EuFMD HOLD-FAST strategy. A three-phase project is being carried out as follows:

-a literature review has been conducted to provide an overview of current global veterinary SyS initiatives in settings ranging from basic infrastructure for health data collection to highly specialized systems;

-a regional workshop was held in Beirut, Lebanon, in May-June 2023 to seek the minimal requirements to design and implement SyS, define FAST disease priorities in interested countries and related data management and analysis capabilities to implement and operate a SyS, as well as the training requirements. Participants were from Jordan, Lebanon, Libya, Palestine, and the Syrian Arab Republic. Jordan was

identified as the suitable candidate pilot country, meeting the minimum requirements to store and manage collected data electronically in a standardized format, through the use of ‘real-time’ or ‘near real-time’ data, and providing a timely warning of infectious disease outbreaks and epidemics before cases are laboratory confirmed.

-A workshop is held in Jordan, to identify SyS surveillance objectives, syndromes, data source(s), data collection techniques, and data analysis approaches. The pilot country will also receive SyS-specific training to develop a SyS design and implementation concept. A field mission in Jordan was carried out in August 2023 to support the pilot country in the design of a tailored SyS.

- Libya

In response to the recent FMD outbreak in Libya, EuFMD assisted the National Centre for Animal Health (NCAH) in submitting virological samples to *the Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna* (IZSLER), in Brescia-Italy, where the samples were analyzed and the virus identified as O/EA-3 topotype.

### North Africa

EuFMD is establishing a collaboration with the *Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale"* (IZSAM), the European Union Reference Laboratory for RVF to enhance RVF management capacity of NA countries. Four countries (Algeria, Tunisia, Mauritania, and Morocco) will benefit of the RVF training workshop to be organized in September 2023, in French, to acquire competencies on RVF surveillance (active/passive/entomological); Risk monitoring and identification risk areas; Control options and preparedness; Connection with Public health; Integration of ecoregions concept connected to animal mobility and GIS; Countries able to identify risk areas and to manage RVF outbreaks; Four preliminary country Action Plans to improve awareness, surveillance, and preparedness of RVF will be drafted (one for each country) to be reviewed and finalized by the country.

#### c) Main points of interest for the Executive Committee

The partnerships with private Service Providers Avia-GIS on GIS and Spatial analysis and with SAFOSO on Syndromic Surveillance have introduced new concepts and competencies in the countries and EuFMD team for risk hot-spot identification and risk-based surveillance.

The partnership with IZSAM will allow to draft action plans for Algeria, Mauritania, Morocco, and Tunisia for the management of RVF.

#### d) Priorities for the next six months

- Continue the information sharing meetings with international partner organizations (WOAH, GF-TADs, and others). Put in place a GIS Community of Practice of spatial analysts for FAST diseases control supported by a EuFMD Help Desk of experts who will assist in the design of predictive and control models.
- Test and pilot the tools under development within Pillar I such as Vaccination Estimation Model (VADEMOS), and Risk Monitoring Tool. The Prioritization of Antigen Management with International Surveillance Tool (PRAGMATIST) to be tested for use in endemic countries. Start developing a common platform or dashboard for collection, storage and analysis of data on FAST diseases, including the epidemiological situation, outbreaks, control measures and vaccination, surveillance. This data could be used in the quarterly FAST reports, the quarterly FMD report, the SOI FAST diseases reports, the country cards and the risk monitoring tool.
- Develop the Syndromic Surveillance Model in ME and replicate in the neighborhood for innovative

FAST control diseases methodologies.

- For RVF, implement the collaboration with IZSAM for the management of the diseases in Algeria, Mauritania, Morocco, Tunisia and consider further expansion of the entomological surveillance building on the experience of implementing this activity in Libya.
- Continue to strengthen the collaboration with AOAD to engage its member countries.
- Develop the data flow platform for the reporting of FAST diseases trends for the EU member countries.
- Publish results of activities and produce visibility material.

**e) Of note**

The SOI agreement has shown its relevance for regional exchange of data and risk information during the current FMD SAT2 situation.

Within the specific protocol, Iraq could send FMD samples to the Sap Institute in the Republic of Türkiye for serotyping, sequencing, and vaccine matching.

The regular reporting of the Republic of Türkiye of the SAT2 situation allows prompt vaccination in the neighborhood and prevent virus risk spread towards Member Nations.

The collaboration with Israel, Jordan and Palestine continues with the aim to establish a similar SOI platform for ME.

A similar concept of risk information sharing has been discussed in North Africa and agreed with REPIVET-RELABSA participants.

## Component 2.3 Capacity development for surveillance and improved control programmes

### a) Background information

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) to improve knowledge on FMD surveillance and control, and guarantee sustainability of the achievement reached in different countries. **Face-to-face training** and **virtual learning** has allowed national veterinary services to establish 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. **Socioeconomic and cost benefit analysis** for FAST control can be promoted through specific training opportunities aimed at assisting policy makers in defining better 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.

Direct beneficiaries of this component are the EuFMD Member Nations Türkiye 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, WOA (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/WOA 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.

### b) Updates on Component Sub-Activities

#### 2.3.1 Training infrastructure and quality assurance system across the training programme

The EuFMD Virtual Learning platform (<https://eufmdlearning.works/>) has been fully functional for the reporting period. *Please refer to 1.1.*

#### 2.3.2 Improvement of national laboratories capacity for FAST diagnosis.

Letters of Agreement are signed with:

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- the *Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna* (IZSLER), residential trainings for laboratory experts from Middle East countries have been held to enhance capacity in serology analysis, in particular participants from Jordan and Iraq, in response to the FMD SAT2 situation.
- The French Agency for Food, Environmental and Occupational Health and Safety (ANSES), training for laboratory experts has been carried out to enhance the capacity of molecular diagnosis in the SEEN, NA and ME countries.
- All SEEN countries participate in the PTS of the FMD World Reference Laboratory. The Turkish, Azeri and Georgian veterinary laboratories also participate in PPR international PTS. Support for Armenia to participate in PPR International PTS was facilitated by EuFMD through inclusion in an ongoing FAO TCP.

### 2.3.3 Implementation of studies on vaccine efficacy and vaccination effectiveness and sharing of results

- Studies on vaccine efficacy, vaccination effectiveness, Post Vaccination Monitoring and Small-Scale Immunogenicity studies (SSIS) in selected countries in ME and SEEN are ongoing with the technical support of the established GVA groups in the three regions.  
In the SEEN region, the 4<sup>th</sup> GVA Meeting was held in April 2023 in Baku; the main topics included small-scale immunogenicity studies; the TCC and Iraq are interested to implement a new SSIS with EuFMD assistance; combined vaccinations (FMD together with other diseases for ruminants) and a literature review will be conducted and cooperation with WOAHA assessed; FMD SAT2 situation and EuFMD assistance to SEEN countries.
- The core group of experts is actively overseeing the implementation of PVM studies in the Middle East region. A total of five PVM studies were carried out in the Northwestern region of Syria, Jordan, Libya, Lebanon, and Egypt. Samples collected from Jordan and Libya were sent to the *Istituto Zooprofilattico Sperimentale delle Regioni Lombardia and Emilia Romagna* (IZSLER) for further analysis, while the remaining samples are scheduled to be sent soon. Furthermore, a PVM study is scheduled to take place in Palestine shortly.

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

The EuFMD focused on developing new approaches for existing courses and exploring the development of new areas of capacity development intervention. During the reporting period, the following training programmes were organized:

- Vaccines, Vaccination and Post-Vaccination Monitoring: the fifth edition of the virtual in-depth course addressed veterinarians from countries in FMD Progressive control pathway (FMD-PCP) stages 1, 2 and 3, decision-makers and their advisors (policy writers), epidemiologists involved in design and evaluation of vaccination programmes, laboratory staff involved in study design and test selection/interpretation for vaccine selection and monitoring, researchers at universities and veterinary institutes and field veterinarians involved in advising on local strategies for delivering and monitoring vaccination programmes. The 24-hour course was revised and participants from over than 60 countries successfully completed it.
- An edition of the Laboratory Training on FMD diagnosis was organized in collaboration with IZSLER during the reporting period. The 10-day residential training was offered to national laboratories in the area of neighbouring countries and completed by four participants from Iraq and Jordan.
- An online edition of the improving diagnostic capacity for FAST diseases course in laboratories of Europe's neighbouring countries was organized in collaboration with ANSES. The course has improved capacity of participants in Middle East countries.
- Three in-presence trainings were organized in collaboration with ANSES during the reporting period. The three 5-day courses were aimed at staff from national laboratories from eight countries

in North Africa, Middle East and South East Europe, aiming to improve the capacity of FMD diagnosis.

- An in-presence workshop to improve the capacity of countries in North Africa against Rift-Valley fever is currently in preparation together with IZSAM. The course will be held at the end of the reporting period at IZSAM, in French and focused on RVF surveillance, risk monitoring and preparedness.

*Note this activity is also reported under component 3.3.*

### **SouthEast European Neighbourhood (SEEN)**

FAST Practical Management Series (in Russian): Progressive Pathway for FMD Control: Approaches, Actions, Challenges and Achievements. Two webinars on a FAST disease topic were held in April and June 2023, with a focus on FMD SAT2. The webinar series will be held every three months.

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

**Introduction to Rift Valley Fever – Arabic and French.** This course, which was released in July 2021 for an English-speaking audience, is currently undergoing a content review by experts of the Istituto IZSAM. The review has updated the course content and a new version will be published before the start of the next reporting period. The translation of the same course in French and in Arabic, to allow meeting veterinarians and paraveterinarians in the European neighbourhood and sub-Saharan Africa, will be among the priorities of the next reporting period.

### **North Africa**

The TOM Training Management System has been piloted in Tunisia during the reporting period. A combination of official veterinarians in central and regional offices, for a total of 35 veterinarians, were targeted during a pilot that ended in July. Twenty of 35 users accessed the tool and the feedback provided indicated that the tool was appreciated and provided further areas of improvement of the user interface and process. A plan for increasing the size of the audience is currently under discussion with the country through a participatory approach, with the aim to identify drivers and enhance the stakeholder basis for further adoption of TOM.

*This activity is also reported under 1.1 and 3.3.*

### **c) Main points of interest for the Executive Committee**

EuFMD assisted the countries in linking field with laboratories activities and trainings face to face and on-line allowed the enhancement of the diagnostic capacity of the laboratories of the neighborhood.

### **d) Priorities for the next six months**

- Continue the socioeconomic studies in the neighbouring countries while designing models of Public Private Partnerships starting from Sudan and expand to other Arab Organization for Agricultural Development member countries.
- Continue to strengthen the laboratory capacities in the neighbouring countries and the shipment of samples to reference laboratories.
- Continue the training in risk-based surveillance both in Francophone and English-speaking countries.
- Publish results of activities and produce visibility material.



- Identify new priorities in the region to update existing prioritization and plan new capacity development activities according to next phase of the workplan;
- Develop best practices for the cascading mechanism and promotion of training to national level and improved monitoring of cascade.
- Development of an action plan following the TQMS review to identify how to enhance the quality of the capacity development. In combination with these activities, the commission will focus also on methodologies to improve usability of the virtual capacity development activities, with the objective to increase the completion rate of the courses.

**In particular:**

The endorsement of the group for vaccination advice, guidance and consultation (GVA) by CVOs is strategic to assist countries in analyzing and implementing results of post-vaccination monitoring activities and to exchange expertise. Guidance will be needed from EuFMD and international partners to assess the results of PVM, including small scale immunogenicity studies with the adoption of TCC expertise and PPP support, with a special focus on I.R. of Iran. The results will allow to understand vaccine tender requirements. EuFMD is assisting the GVA in the definition and implementation of the workplans for each region.

Based on the results assessment of national laboratory for FAST diagnoses capacities across the SEEN region, specific technical assistance of international references laboratories (IZSLER, ANSES) is necessary to improve the capacity of the national laboratories for FAST diagnosis and PVM, including small scale immunogenicity studies. 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 FAST diseases).

In NA and ME countries, continue to build expertise on entomology through specific training modality on vectors assessment for LSD and RVF.

**e) Of Note**

The TOM pilot in Tunisia has been completed and the EuFMD is currently in participatory discussions with the veterinary service for extending the use of the tool to an increased number of veterinarians. This experience can be replicated in other countries of the neighborhood.

**Appendix 2 Objectives, tables and budget**

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 increasing awareness of 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, and festivities, as well as 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, IR Iran, Iraq, Jordan, Lebanon, Libya, Mauritania, Morocco, Palestine, Syria, Tunisia, and Türkiye) in three sub-regions (SouthEast 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's needs and to the different contexts, in order to improve impact and achieved significant results.

Considering 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.

## Component 2.1 Objectives, tables and budget

The **objective** of 2.1 is

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

The activities within this component will contribute to or ensure:

- 1) Co-ordination with the GF-TADs partners (FAO, WOA), with other international agencies providing technical support to countries (e.g. AOAD), achieving a jointly agreed workplan, with close regular interaction in the implementation and reporting to the regional steering committees and Joint Permanent Committee (JPC) of REMESA and the SOI. This should ensure:
  - an agreed basis for delivery of national support to FMD and FAST disease surveillance and control with the National Competent Authorities;
  - an established framework for regular monitoring and reporting of the FAST situation, response to emergency events, and prioritization of efforts to promote surveillance and control in the European neighbourhood.
- 2) Improved implementation of strategic plans for FAST control at national level, based on 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, SCIENSANO), to achieve improved laboratory and epidemiology networking in the European neighbourhood for better early warning and support to risk-based control strategies, with increased efficacy and improved guidance to the countries of the sub-regional epidemiology and laboratory networks of the PCP roadmaps.
- 4) Improved engagement with private sector (including private sector veterinarians, education and training providers and vaccine producers) in line with PCP and PPP principles.

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

- a) progress in cooperation with regionally coordinated GF-TADs programmes and roadmaps;
- b) regular reporting to Member Nations and partners of the FAST situation and national progression on the PCP in the EU neighborhood;
- c) sharing of data and information on FMD and other FAST diseases in Transcaucasia and neighbouring countries in the frame of the Statement of Intentions (SOI) agreement;
- d) implementation of the epi-lab networks workplans and enhancements of regional networks;
- e) clear roles and active collaboration between public and private sectors in national control strategies (PCP implementation) in the neighbouring region.

## Summary Tables

Narrative	Expected result	Monitoring	Assumptions and risks
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 reinforced in PCP Stage 2 or 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.	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.

## Sub-activities

Regular monitoring and reporting of FAST situation and control strategies adopted in European neighborhood and regular co-ordination with GF-TADs and other partners			
Sub-activity level	Description	Progress in biennium	Progress overall
2.1.1 Improved national FAST control plans, networks and regular co-ordination with Gf-TADs partners and international agencies	Co-ordination with the GF-TADs partners (FAO, WOA), 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).	EuFMD is supporting the GF-TADS Secretariat. FAO and WOA sub-regional offices of North Africa, Middle East and Europe/SouthEast Europe, Central Asia and Asia-Pacific involved in the planning of the six-month activities, and regularly invited to events. Coordination meetings with WOA and FAO sub-regional offices, REMESA, AOAD, SOI, Tripartite SEEN, ME, GVA. Within the framework of the SOI agreement, meetings have taken place on risk information sharing and database improvements. A SOI between EuFMD and AOAD is in progress and collaboration continues. Regular online meetings were organized with focal points in SEEN countries to monitor progress in the implementation of national FMD control plans (OCP, RBSP). Use/adaption of EuFMD tools on risk monitoring and vaccine assessment	Data and information from the SOI database and the FAST quarterly reports were used for improved monitoring of the FAST risk situation in the countries and improved regional risk assessments and modelling of potential spread. The implementation of the SOI with AOAD is leading to the design of a Memorandum of Understanding between EuFMD and AOAD, under development to assist the Middle East and North Africa country members. Strengthened collaboration with Iraq to control the SAT2 emergency and participation of Iraq in the quadripartite meeting with the Republic of Turkey, Iran, Pakistan. Regular meetings with Israel, Jordan, Palestine with EMC to control the SAT2 emergency.

		(Risk- Monitoring tool, Pragmatist, Surveillance Evaluation Tool). Regular SAT2 SEEN countries meetings organized by EuFMD in collaboration with EMC. The implementation of the protocol with the SAP Institute, Türkiye, allowed sharing of information on the SAT2 situation in the country to prevent incursions in MN.	
2.1.2 Revision of national FAST strategic plans according to updated risk assessment, socio-economic analysis, monitoring, and evaluation results	Provide technical assistance for implementation of strategic plans for FAST control at national level on the basis of PCP principles, availability of resources and results of control strategies already in place. Tools already developed by FAO (LMT, SET, EMAI) and results of their implementation will be considered for enhancing the assistance provided according to needs.	Support to SEEN countries to develop OCPs (Armenia). RAG in the ME approved RBSP of Jordan RBSP of Sudan submitted to the FMD-WG. RBSP support to Lebanon and Syrian Arab republic. 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.	Progress in the finalization of RBSP in Sudan, OCP in Jordan and strategic plan in Morocco. <b>Advancement in PCP</b> Kyrgyzstan advancing to PCP stage 3 Palestine and Jordan to PCP stage 2. Six countries in PCP stage 2 providing FMD serosurveillance data (two from Middle East Egypt, Lebanon); four from the South-East European neighborhood (Armenia, Azerbaijan, Georgia, Türkiye).
2.1.3. Implementation of laboratory and epidemiology network work plans in the European neighbourhood with development of best practices promoted in Roadmap regions.	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.	Support to Epi and lab networks of the WestEurasia Roadmap	Epi-lab networks meetings and GVA meetings in NA. REPIVET and RELABSA are meeting regularly and being involved in the GVA activities. In the SEEN, support of the workplan of the West Eurasian networks (WelNet, EpiNet) through SOI activities and coordination meetings. Virtual laboratory training course has been conducted by ANSES for SEEN and NA countries following a previous assessment of National Reference Laboratory capacities across the REMESA region. Residential <u>training</u> at ANSES and IZSLER on molecular and serology laboratory diagnosis. Online <u>training</u> with Sciensano on LSD. Training with IZSAM on RVF for NA countries. Biorisk and biosecurity survey to identify the capacity and needs of the laboratories.

2.1.4. Promotion of public-private partnerships (PPP) for FAST monitoring and control and development of new partnerships.	Improved engagement with private sector (including private veterinarians, training providers and vaccine producers) in line with PCP and PPP principles.	PPP project on improved PVM in the dairy sector of I.R. Iran with EuFMD support completed. Consultation meetings with AOAD and veterinary services of Sudan. Meetings on potential PPP for FAST diseases in Sudan and follow up PPP meetings- a) livestock and animal products export from Sudan; b) vaccine security; c) PPP and pastoralists systems. Models of PPPs designed for implementation with selected countries.	Role of private sector in surveillance has been studied and collaborative models of PPP identified to enhance sensitivity of surveillance.
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## Budget (€) COMP. 2.1

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance
<b><u>Salaries (Professional)</u></b>			
Component 2.1	30,040	35,601	- 5,561
<b><u>Consultancy Operational</u></b>			
Component 2.1	160,860	160,178	682
<b><u>Consultancy Technical</u></b>			
Component 2.1	399,090	394,408	4,682
<b><u>Travel</u></b>			
Component 2.1	39,390	31,358	8,032
<b><u>Training</u></b>			
Component 2.1	64,212	61,191	3,021
<b><u>Contracts</u></b>			
Component 2.1	92,065	102,487	- 10,422
<b><u>Procurement</u></b>			
Component 2.1	20,000	13,975	6,025
<b><u>General Operating Expenses</u></b>			
Component 2.1	29,580	12,854	16,726
<b>Total Direct Eligible Cost</b>	<b>835,237</b>	<b>812,051</b>	<b>23,185</b>

## Component 2.2 Objectives, tables and budget

The **objective** of 2.2 is

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

The activities will mainly implement the workplans agreed at the co-ordination level (comp 2.1) and will take place in the countries, 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, socioeconomic 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.

### Summary tables

Narrative	Expected results	Monitoring	Assumptions and risks
Identification of risk hotspots in the European neighbourhood and develop disease surveillance programme focused on specific risk hubs, 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 six EU neighbouring countries and risk maps regularly updated Regular risk- based surveillance for multiple diseases implemented for 12 months in two in the EU neighbourhood hot spot locations At least seven countries regularly participating in multi-country risk information sharing system	Six- month progress report and official reported data.	Country commitments and interest on implementing regular integrated surveillance in risk hotspots and sharing of information.



## Sub-activities

2.2.1 Identification of risk hot spots for FAST diseases and implementation of regular risk-based surveillance			
Sub-activity level	Description	Progress in biennium	Progress overall
2.2.1.1 Identification risk hot-spots for FAST diseases and development of updated risk maps based on animal mobility and other risk factors.	Identification of risk hot spots for FAST diseases considering animal movements, wildlife, presence and circulation of animal diseases, efficacy of control programmes, socio-economic situation and other risk factors.	Contract Service with AVIA-GIS Company, Belgium, to continue the enhancement of the capacity of the countries in risk mapping and spatial analysis and training courses implemented.	<b>Risk hotspots identification and risk maps</b> <ul style="list-style-type: none"> <li>•Risk hotspots identified in 16 European neighboring countries through risk maps (Middle East: Egypt, Jordan, Libya, Sudan; North/Central/West Africa: Algeria, Chad, Mauritania, Morocco, Senegal and Tunisia; SEEN: Armenia, Azerbaijan, Georgia, Iraq, I.R. Iran and Republic of Türkiye).</li> <li>•Risk mapping through GIS training in progress: Armenia, Azerbaijan, Iran, Iraq, Syria, Lebanon, Palestine, Jordan, Egypt, Libya, Tunisia, Algeria, Morocco, Mauritania, Sudan, Mali, Afghanistan and Pakistan.</li> </ul>
2.2.1.2 Implementation of regular risk-based surveillance (RBS) for multiple diseases in hot spot locations	Implementation of risk-based surveillance for multiple diseases in risk hot-spot locations of neighbouring region on a regular or continuous basis for detection of FAST virus circulation and early warning of FAST unusual epidemiological events.	EuFMD provided technical assistance and diagnostic support for designing and implementing surveillance in Jordan, Egypt and Palestine, and assistance in planning and evaluation for Türkiye, the TCC and IR of Iran. To continue the activities implemented under REPIVET-RELABSA networks, including the plans developed for FAST risk-based surveillance for early detection/case finding, contract with SAFOSO to elaborate a Model of Syndromic Surveillance in ME.	Risk-based surveillance carried out in Egypt, Jordan, NW Syria, Lebanon, Libya, Palestine, Sudan, Armenia, Azerbaijan, Georgia, Iraq, and Republic of Türkiye. Syndromic Surveillance model for Jordan as pilot country.
2.2.1.3 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 Türkiye, I.R. Iran, TCC and Iraq (outbreaks), and six-monthly by the Russian Federation. 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 SOI database is hosted at the IZSLT, Italy.	SOI system for data sharing continued and improved in SEEN. <ul style="list-style-type: none"> <li>•Regular contributions to the SOI platform (Statement of Intention: Armenia, Azerbaijan, Georgia, I. R. Iran, Republic of Türkiye, Russian Federation)</li> <li>•Regular sharing of risk information through focal points in ME and NA</li> <li>•Tripartite meetings with Israel, Jordan and Palestine for ME and Republic of Türkiye, I.R. Iran and Pakistan for SEEN (with involvement of Iraq in 2023).</li> </ul>

## Budget (€) COMP. 2.2

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance
<b><u>Salaries (Professional)</u></b>			
Component 2.2	24,996	27,689	- 2,693
<b><u>Consultancy Operational</u></b>			
Component 2.2	160,860	160,178	682
<b><u>Consultancy Technical</u></b>			
Component 2.2	285,066	304,130	- 19,064
<b><u>Travel</u></b>			
Component 2.2	41,440	60,986	- 19,546
<b><u>Training</u></b>			
Component 2.2	52,508	56,920	- 4,412
<b><u>Contracts</u></b>			
Component 2.2	341,955	372,588	- 30,633
<b><u>Procurement</u></b>			
Component 2.2	38,750	19,961	18,789
<b><u>General Operating Expenses</u></b>			
Component 2.2	9,235	11,189	- 1,954
<b>Total Direct Eligible Cost</b>	<b>954,810</b>	<b>1,013,641</b>	<b>- 58,831</b>

### Component 2.3 Objectives, tables and budget

The **objective** of 2.3 is to:

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).

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 overall capacity.

The activities within this component will contribute to or ensure the development and implementation of a programme 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:

- 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 programme (including the scheduling of FAST vaccination).
- Building international awareness and understanding among public and private veterinarians and paraprofessionals in the EU neighbouring region on FAST disease recognition, surveillance and control through v-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.

## Summary tables

Narrative	Expected result	Monitoring	Assumptions and risks
Develop and implement a programme 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 three countries, and two new training course schemes developed to assist FAST control and early warning system.	Six-month progress report and official reported data.	Identification of participants to training with active role in control and surveillance programmes and interest in the topics proposed.

## Sub-activities

2.3.1 Develop			
Sub-activity level	Description	Progress in biennium	Progress overall
2.3.1.1 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) to ensure high quality across the training programme ( <i>this sub-activity is coordinated with Pillar I/ III</i> ).	A second review of the TQMS has been finalized.	Training Quality Management System (TQMS) implemented Training Management System (TOM) piloted.
2.3.1.2 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.	All SEEN countries annually participate in the PTS of the FMD World Reference Laboratory.	All SEEN countries annually participate in the PTS of the FMD World Reference Laboratory. The Turkish, Azeri and Georgian veterinary laboratory also annually participate in PPR international PTS. Laboratories of Egypt, Sudan, Jordan, Libya, Palestine, Lebanon can perform Elisa Ab and Ag and Real Time PCR <ul style="list-style-type: none"> <li>•National lab of Egypt can perform virus neutralization test VNT, gene sequencing and molecular typing.</li> <li>•Laboratory capacity of ME and SEEN countries reinforced with evidence of capacities to detect circulation of new strains (i.e. SAT2).</li> <li>•Laboratory capacity assessment in REMESA countries.</li> <li>•PTs revision exercise will provide additional evidence of the achievements</li> </ul>

			•Biorisk and biosecurity laboratory survey.
2.3.1.3 Implementation of studies on vaccine efficacy and vaccination effectiveness and sharing of results	Assist 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.	EuFMD provided technical assistance in assessment of PVM studies (serological NSP & SP) in NA, ME, SEEN, SSIS in TCC of the SEEN region in Türkiye. Meetings held regularly with GVA SEEN, GVA NA and GVA ME. acting as consultative groups for EuFMD.	Establishment of GVAs groups functioning and meeting regularly in ME, NA and SEEN. The regional group for vaccination advice, guidance and consultation provides support in the design, implementation and/or the interpretation of PVM studies and results. Provision of serological kits and technical support for immunogenicity studies: Armenia, Azerbaijan, Georgia, Morocco, Jordan, Libya, Palestine; PVM studies: Egypt, Jordan, Lebanon, Libya, NW Syria, Algeria, Tunisia, Republic of Türkiye, I.R. Iran, and Pakistan. Immunogenicity studies in Azerbaijan, Georgia and Morocco implemented and shared. SSIS undergoing in Sudan.
2.3.1.4 Development and delivery of training course schemes to assist FAST control and Early Warning System.	Organization of v-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, socioeconomic 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.	ANSES online courses. IZSLER and ANSES residential trainings. FLITC course reviewed and delivered. Short training on FMD diagnosis for North West Syria by IZSLER. Risk analysis along the value chain Post vaccination monitoring Passive surveillance Socioeconomic impact GIS and spatial analysis Syndromic Surveillance.	V-learning and virtual workshop on risk mapping and surveillance can be progressively expanded in training schemes. An EuFMD Risk Mapping Help Desk supported by GIS Community of Practice to be set up to guide training and individual country support and following up on risk mapping.
2.3.1.5 Delivery of learning courses to an audience of vets and para-professionals to promote awareness of FAST diseases and national cascade of	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	FMD Investigation Trainings for North and Central West Africa, FMD Lab. investigation, Risk Analysis along the value chain and FMD Investigation training for Turkish-speaking participants were held. Introduction to RVF open access	Calendar of virtual trainings currently on track as planned.

training and resources.	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.	course in French currently published. TOM pilot completed in Tunisia and planned in Armenia.	
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**Budget (€) COMP. 2.3**

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance
<b><u>Salaries (Professional)</u></b>			
Component 2.3	20,996	23,734	- 2,738
<b><u>Consultancy Operational</u></b>			
Component 2.3	160,860	160,178	682
<b><u>Consultancy Technical</u></b>			
Component 2.3	441,854	376,128	65,726
<b><u>Travel</u></b>			
Component 2.3	29,170	13,137	16,033
<b><u>Training</u></b>			
Component 2.3	58,344	56,375	1,969
<b><u>Contracts</u></b>			
Component 2.3	170,980	51,856	119,125
<b><u>Procurement</u></b>			
Component 2.3	21,250	5,388	15,862
<b><u>General Operating Expenses</u></b>			
Component 2.3	22,180	18,206	3,974
<b>Total Direct Eligible Cost</b>	<b>925,634</b>	<b>705,001</b>	<b>220,634</b>

**Phase V - PILLAR II – Expenditures at 31-08-2023 - Budget 4 years (2019-2023) in EUR**

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance	% Spent
<b><u>Salaries (Professional)</u></b>				
Component 2.1	30,040	35,601	- 5,561	119%
Component 2.2	24,996	27,689	- 2,693	111%
Component 2.3	20,996	23,734	- 2,738	113%
<b>Salaries (Professional) Sub-Total</b>	<b>76,032</b>	<b>87,024</b>	<b>- 10,992</b>	<b>114%</b>
<b><u>Consultancy Operational</u></b>				
Component 2.1	160,860	160,178	682	100%
Component 2.2	160,860	160,178	682	100%
Component 2.3	160,860	160,178	682	100%
<b>Consultancy OPS Sub-Total</b>	<b>482,580</b>	<b>480,533</b>	<b>2,047</b>	<b>100%</b>
<b><u>Consultancy Technical</u></b>				
Component 2.1	399,090	394,408	4,682	99%
Component 2.2	315,066	304,130	10,936	97%
Component 2.3	411,854	376,128	35,726	91%
<b>Consultancy TECHS Sub-Total</b>	<b>1,126,010</b>	<b>1,074,666</b>	<b>51,344</b>	<b>95%</b>
<b><u>Travel</u></b>				
Component 2.1	39,390	31,358	8,032	80%
Component 2.2	41,440	60,986	- 19,546	147%
Component 2.3	29,170	13,137	16,033	45%
<b>Travel Sub-Total</b>	<b>110,000</b>	<b>105,481</b>	<b>4,519</b>	<b>96%</b>
<b><u>Training</u></b>				
Component 2.1	64,212	61,191	3,021	95%
Component 2.2	52,508	56,920	- 4,412	108%
Component 2.3	58,344	56,375	1,969	97%
<b>Training Sub-Total</b>	<b>175,064</b>	<b>174,485</b>	<b>579</b>	<b>100%</b>
<b><u>Contracts</u></b>				
Component 2.1	92,065	102,487	- 10,422	111%
Component 2.2	341,955	372,588	- 30,633	109%
Component 2.3	170,980	51,856	119,125	30%
<b>Contracts Sub-Total</b>	<b>605,000</b>	<b>526,930</b>	<b>78,071</b>	<b>87%</b>
<b><u>Procurement</u></b>				
Component 2.1	20,000	13,975	6,025	70%
Component 2.2	38,750	19,961	18,789	52%
Component 2.3	21,250	5,388	15,862	25%
<b>Procurement Sub-Total</b>	<b>80,000</b>	<b>39,324</b>	<b>40,676</b>	<b>49%</b>
<b><u>General Operating Expenses</u></b>				
Component 2.1	29,580	12,854	16,726	43%
Component 2.2	9,235	11,189	- 1,954	121%
Component 2.3	22,180	18,206	3,974	82%
<b>GOE Sub-Total</b>	<b>60,995</b>	<b>42,249</b>	<b>18,746</b>	<b>69%</b>
<b><u>Report Cost</u></b>				
Pillar II	1,996		1,996	0%
<b><u>Project Evaluation</u></b>				
Pillar II	15,000		15,000	0%
<b>Total Direct Eligible Cost</b>	<b>2,732,677</b>	<b>2,530,693</b>	<b>201,984</b>	<b>93%</b>

## Pillar III

### Who we are

Pillar III / Component	Objective	Manager (s)
	Sustained Global Strategy, Cascading capacity building for FAST control, Laboratory networking for surveillance	C. van Maanen and W. Chikurunhe
3.1 Global FMD Control Strategy	Sustained and effective implementation of the Global FMD Control Strategy achieved through improved technical guidance to countries and assistance to GF-TADs Regional Roadmaps meetings.	3.1.1 ; 3.1.3 E. Chevanne, M. Mclaws 3.1.2 E. Chevanne, W. Chikurunhe
3.2 Improved Global Laboratory Support	Strengthened global laboratory surveillance support and improved FMD virus intelligence to guide regional and national implementation of the GF- TADs Strategy	3.2.1; 3.2.2 C. van Maanen 3.2.3 C. van Maanen, E. Chevanne
3.3 Better Training for progressive Control	Improved national and regional capacity for progressive control of FMD through delivery of high impact training in at least six roadmap regions.	3.2.1; 3.2.2 M. Nardi 3.3.3; 3.3.4 W. Chikurunhe; M. Nardi
3.4 Improved security in FMD vaccine supply	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.	1.4.1 B. Vosough Ahmadi



## Component 3.1 Global FMD Control Strategy

### a) Background information

The overall aim of this component for Phase V is to sustain further the effective implementation of the GF-TADs Global FMD Control 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/WOAH Working Group** on FMD control for regionally coordinated and targeted national assistance to countries for the effective implementation of the Progressive Control Pathway for FMD (**PCP-FMD**). The achievement of the GF-TADs Working Group action plan at global and regional levels will also be supported, considering the requests from the Working Group. Cooperation will also be co-ordinated with the FAO/WOAH PPR Global Eradication Programme (GEP) Secretariat.

Tailored **PCP-FMD 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-FMD 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-FMD 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).

This component involves collection of data at global level from countries working through the PCP-FMD and benefitting from support through regional roadmap meetings and Epidemiology and Laboratory Networks meetings, and which are indicated as priorities for PCP-FMD progress in the GF-TADs Global Strategy. Currently, these are about 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 this component are carried-out to assist the activities of the GF-TADs FMD Working Group and co-operation is foreseen with the World Organisation for Animal Health (WOAH), and with FAO/WOAH PPR GEP Secretariat through the GF-TADs Global Secretariat coordination.

### b) Updates on Component 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, over 80 countries are engaged in the PCP-FMD and, from 2019, the GF-TADs WG has officially assigned PCP-FMD Support Officers (PSO) to 33 of these countries (for instance Liberia, in February 2023, upon request). Specific PSO support was provided by the Support Unit team to the Veterinary Services of Togo during this reporting period. Similarly, PSO type of support was provided also to Pillar II countries (see

*Component 2.1 for more details).*

The EuFMD, in coordination with FAO EMPRES (under DTRA funding) and regional VLCs, is delivering **PSO virtual induction workshops** (Anglophone and francophone sessions are planned, in September and October 2023 respectively). These trainings will involve senior PSOs and will aim at expanding the PSO roster, and regional PCP expertise in North Africa, West, Central and Eastern Africa, the Near East and South Asia, regions where needs for PSO support were identified.

Within the framework of the **PSO Training Development Framework**, a series of short open-access virtual learning courses providing guidance on the PCP-FMD national strategies for each PCP-FMD Stage were developed, under the umbrella of the GF-TADs, with the technical involvement of the PSOs network (*collaboration with Comp. 3.3*). In particular, the course 'Introduction to the OCP' has been published on the EuFMD virtual learning website in May 2023 and the 'Introduction to the RAP' is being translated into French (translation should be completed in August 2023). The series of open-access courses has been promoted in a WOAHA training on risk assessment in Africa and will form the induction material of the above-mentioned PSO virtual induction workshops.

### **3.1.2 Collaborate with FAO and WOAHA to support expert team missions in assisting countries.**

EuFMD experts (Pillar II and III) collaborated with FAO EMPRES to issue a qualitative risk assessment of FMD SAT2 spread in Near East and West Eurasia during the reporting period.

### **3.1.3 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

The ECO/West Eurasia roadmap meeting took place in Azerbaijan (April 2023), and the first South Asia TADs coordination event in Bhutan (May 2023), as a joint FMD, LSD (for South Asia) and PPR back-to-back event with support from FAO and WOAHA regional representations, during the reporting period. As per the FMD-WG workplan, assistance from the EuFMD Support Unit was requested to organize Regional Advisory Group (RAG) meetings in the reporting period with ASDC, Eastern Africa and Central Africa. Virtual roadmap meetings for West Africa and the Middle East, as well as RAG meetings for South Asia, Middle East and West Africa are planned up to the end of 2023.

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

Through the Support Unit, the EuFMD has been providing technical and operational support to the organization of the third meeting of the Global Coordination Committee for FMD (GCC-FMD) and the production of the final report, including the draft action plan for GCC-FMD Standing members.

### **3.1.4 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)** technical review has been completed. The SAT should become more concise, user-friendly and a useful tool to identify country needs that could be addressed via training. The SAT-v2 has been piloted in West Eurasia and South Asia (the latter during the reporting period). An online feedback survey has been conducted and feedback used to consolidate the version that

will be presented at the PSO virtual induction workshop. The French version of the SAT-v2 has been issued. Video tutorials have been recorded and a dedicated Trello™ board is being developed.

**The PCP-FMD Review Support System**, supported by the EuFMD, has been further mobilized during the reporting period to review the Risk-Based Strategic Plan (RBSP) of Zambia in the reporting period; Niger has been accepted in full Stage 1 by the RAG West Africa following the technical recommendation of the FMD-WG. Bi-weekly and monthly meetings with the GF-TADs FMD WG have been organized.

The value of the Support Unit is recognized by GF-TADs partners, and these are encouraged to engage operational and technical resources into the Support Unit. Considering the budget available to support the Global FMD Control Strategy implementation in Phase VI, the Support Unit has reviewed its terms of reference to accommodate a junior technical aid from FAO.

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

The communication officer of the GF-TADs Global Secretariat in FAO, the FAO regional and country communication officers and the EuFMD communication team have worked together (communication hub) during the reporting period, to ensure the timely publication of the PCP-FMD related documents and meeting reports, and to coordinate social media campaigns around regional GF-TADs events. An open call for expression of interest to become a PSO was issued by FAO, the PCP-FMD dashboard was published on the GF-TADs website and discussions were held to identify communications that would be jointly delivered under the GF-TADs.

**c) Main points of interest for the Executive Committee**

The challenges related to the in-person organization of FMD roadmap meetings in West Eurasia and South Asia highlighted the value of regional virtual events allowing the best use of available resources.

Given the reduced budget in Phase VI to support the FMD Global control strategy, the EuFMD will focus its support to the FMD-WG to target areas and activities.

**d) Priorities for the next six months**

**3.1.1.**

Expand the PSO roster in target regions of North Africa, West, Central and Eastern Africa, the Near East and South Asia following the PSO induction virtual workshops, establishing a mentor-mentee scheme and reconvening with regular meetings of the PSO network. Keep refining and extending the PCP-FMD Toolkit and explore its development on Trello platform.

**3.1.2.**

Support the organization of the other (virtual) RMMs and RAG meetings as per the GF-TADs FMD WG action plan for 2023-2024.

**3.1.3.**

Focus the EuFMD support provided to the FMD-WG, through its Support Unit, to improve collaboration with GF-TADs partners and match with the EuFMD priorities for the next phase.

**e) Of note**

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.

The PSO restructuring proposal has been accepted by the GF-TADs partners to support more efficiently national authorities and progress in the PCP-FMD. Virtual PSO induction workshops are planned in the reporting period to allow the sustainable expansion of the PSO system.

The RAP open-access course, considered as one of the most needed open-access courses on plan development, targeting countries in PCP-FMD Stage 0 or provisional Stage 1, will be translated into French during the reporting period. This is expected to improve PCP uptake in West and Central Africa in particular.

## Component 3.2 Improved Global Laboratory Support

### a) Background information

Support to the global FMD laboratory network was implemented as part of the joint FAO/WOAH 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 WOA /FAO Laboratory Network, including associated surveillance and training for all the Roadmap regions (mainly through online programmes). Component 3.2 will aim to improve 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 WOA /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 WOA /FAO FMD Laboratory 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. Support will be tailored for **diagnostic services** to improve the sample collection and typing and address surveillance gaps in regions identified by the WOA and FAO Reference Centres as priorities. This will include laboratory typing of FMD samples from the six virus Pools by WOA /FAO Reference Centres, aimed at reaching 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 WOA /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.

Close collaboration is foreseen with WOA /FAO Reference Centres and Regional Support Laboratories (RSLs) in Africa and Asia, and work will be implemented also in support of the global WOA /FAO FMD Reference Laboratory network. This component will work closely with the World Reference Laboratory-FMD at The Pirbright Institute in particular, as well as with the European Reference Laboratory-FMD at ANSES and other relevant RSLs partners. 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.

## b) Updates on Component Sub-Activities

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

An interactive genotyping dashboard was developed and shown to EuFMD and to the FAO/WOAH laboratory network. The dashboard will soon be shared with the wider FMD community. A surveillance dashboard - FMD Watch - is being developed in a collaboration between TPI and Epi Interactive supported by EuFMD (*FAR supported project, see component 1.5*). The overarching aim of this dashboard is to improve timely communication on virological surveillance results, complement genotyping data with relevant epidemiological data on outbreaks and finally allow end-users to collaboratively enrich the dataset. For this purpose, an amendment to the LoA between FAO and TPI has recently been signed. The approval process for the amendment has caused some delay, but the project is ongoing since end of July 2023. FMD Watch will also include PCP plots/maps and vaccine matching info (plots) for country/regions.

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

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

Quarterly reports summarizing WRLFMD activities are available both on the WRL and EuFMD websites. The joint quarterly global reports (including input from EuFMD GMR) have been prepared and reports are available for Q1 and Q2 of 2023.

In the reporting period samples were received from Bahrain, Nepal and Uganda and samples are expected from Botswana, Israel, Pakistan, Brazil, DRC, Ghana, Kenya, Malawi, Mozambique, Myanmar, Namibia, Qatar, South Korea, Sri Lanka, Türkiye, Yemen and Zimbabwe. However, many of these shipments in the pipeline are uncertain. Several issues persist (e.g., difficulties in collecting samples at central level, maintenance of cold chain, funds for shipping to the World Reference Laboratory, local availability of dry ice etc.).

The WRLFMD proficiency testing scheme phase XXXIV has been concluded. The results have been sent, feedback to the participating laboratories is underway and the final report is being prepared. For phase XXXV the samples have been identified, and the format was agreed with the steering committee. Invitation letters have been sent out and the first shipments are expected in August/September 2023.

#### Improve the sample collection and typing from regions identified by the WOA/FAO Reference Centres as priorities and in countries identified as priorities for more targeted surveillance

To improve virological surveillance and identify current gaps and priorities in surveillance, the EuFMD led a **comprehensive historical analysis** of all virological data available from the WOA/FAO FMD Reference Laboratories Network reports published between 2012 and 2020. This work has contributed significantly to discussions between EuFMD, WRLFMD and the WOA/FAO FMD reference laboratories network for more targeted virological surveillance and is currently used and incorporated in the development of the FMD Watch surveillance dashboard.

Kits and reagents have been provided on request and a EuFMD diagnostic bank concept note was developed and is currently discussed in more detail by a diagnostic bank working group. Effective collaboration and interactions with WRLFMD, ANSES, IZSLER, EuFMD in the support to countries under pillar II and pillar III regarding sample collection, shipment, data analysis and advice was achieved. LoAs with all these institutes are currently operational.

The EuFMD will continue the support to the WRLFMD and the WOA/FAO FMD reference laboratory network to improve virological surveillance. This includes a new mechanism supporting more targeted virological surveillance and better characterizing the technical, logistical, capacity hurdles limiting the surveillance and diagnostics capacities and the further development of the interoperable digital repository and online dashboard for virological and risk information launched during the current reporting period. In the upcoming EuFMD course Passive surveillance for FAST diseases, planned for February 2024, a survey will be included to get more insight into the hurdles and barriers limiting passive surveillance for FMD and other FAST diseases.

In coordination with component 1.5, a project submitted by IZSLER - with foreseen collaboration with IZSAM, TPI and FLI - and aiming at validation of Lateral Flow Devices (LFDs for detection and serotyping of Foot-and-Mouth Disease Virus (FMDV) and antigenic detection of Lumpy Skin Disease Virus (LSDV), has been selected for funding in 2022-2023. This project is particularly relevant as the pan-FMD LFD previously produced and marketed by Svanova is no longer available, and there is only one alternative produced in South Korea. This project is building upon a previous project between IZSLER, the University of Turin and In3Diagnostic for the development of two LFD prototypes to detect and type FMDV (Multiplex-LFD) and one to detect LSDV. Project outputs would be as follows: an LFD for detection and serotyping of FMDV O, A, Asia 1 and Pan FMD; an LFD for detection and serotyping of FMDV SAT 1, SAT2 and Pan FMD; and an LFD for detection of LSD and eventually other Capripoxviruses. This project is in progress now and prototype LFDs will be tested in the field initially in Kenya, Uganda, Türkiye and TPI. LFD-FMD type I and II were also procured to Iraq and the Comoros upon request of EuFMD, however these LFDs will not be used for the validation (as no concurrent Ag-ELISA data will be collected).

### **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 WOA/FAO Reference Centres and Regional Support Laboratories in Africa and Asia, including to better define regional risks and the specific aspect of regional reference antigens for vaccine selection*

Reference antigen panels, that can be used to evaluate the serological responses of FMDV vaccines against their suitability, have been developed for use in eastern African countries. This approach has been discussed in the various GVA groups and during roadmap meetings and could be extended to other regions. In the current reporting period, no progress has been made, but this topic will be discussed on September 7<sup>th</sup> in a FAO/WOA/FAO FMD reference laboratories network working group meeting on the use of virus panels for PVM.

PVM/SSIS studies were supported in Uganda, Jordan, Palestine, and the SEEN countries. Publication of the SSIS studies in Armenia, Azerbaijan and Georgia is ready and has been submitted during this reporting period. A publication on an SSIS study performed in Jordan is in progress with the intention to submit this paper during this reporting period.

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

#### **WOAH**

The support to vaccine matching tests and VNTs and the development and validation of new tests for vaccine matching and measures of protection will be continued.

There are no immediate plans to update the vaccine matching method. However, there is an increased move towards using heterologous titres based on reference field viruses and the vaccines that are being used in the field. A VNT harmonization final workshop was held with Ref. Labs (*see comp 1.5*) and discussions should have continued in third semester of 2022 but were delayed. At the annual meeting of the 102 Executive Committee of the EuFMD, 28 September 2023

WOAH/FAO reference laboratories in December 2022, it was decided that a serology working group led by Anna Ludi would meet on September 7 2023.

**c) Main points of interest for the Executive Committee**

Characterization of FMDV from at least 30 different outbreaks across six different countries, and 100 FMD viruses per pool cannot be reached without targeted sample shipments/collaboration of specific countries.

A survey into the barriers for sample collection, transport and shipping to international laboratories is planned in the context of a training course on passive surveillance of FAST diseases, starting in February 2024. Management of dashboards (server capacity, cyber security issues, Empres-i) remains a point of attention now that several dashboards are being developed.

The project for development of an FMD surveillance dashboard (FMD Watch) has restarted as the LoA has been signed, and the dashboard is expected to be delivered before the end of the year.

**d) priorities for the next six months**

- Discuss with TPI, IZSLER and ANSES possibilities and contributions to improved sample collection, shipment and analysis under the LoAs signed with these institutes. Identify important gaps and targeted support needed with the intention to include prioritization mechanisms in FMD Watch. Development, integration and management of molecular, surveillance, vaccine matching/pragmatist dashboards: progress with the collaboration and coordination with the WRLFMD and Epi Interactive or the development of tailored online “interactive dashboards” that can be used to display vaccine matching/Pragmatist data (first priority) as well as risk and epidemiological data. Develop a well-designed survey to get a better understanding of the barriers for sample collection and include this survey in the upcoming Passive Surveillance of FAST diseases course.
- Continue discussion about harmonization and reporting of vaccine matching methods and results and the development of reference antigen panels and define the desired outcomes

**e) Of note**

Development of an interactive genomics dashboard that has been demonstrated to EuFMD and the FAO/WOAH FMD reference laboratories network will soon be made available to the wider FMD community after resolving some issues related to server capacity and cyber security.

Development of FMD Watch, an FMD surveillance dashboard

Effective collaboration and interactions with WRLFMD, ANSES, IZSLER, EuFMD in the support to countries under pillar II and pillar III regarding sample collection, shipment, data analysis and advice.

An EuFMD diagnostic bank concept note was developed and is currently used to facilitate more in-depth discussion in a diagnostic bank working group.



## Component 3.3 Better Training for Progressive Control

### a) Background information

Under Components 2.4 and 3.4 of the EuFMD Phase IV workplan (2015-19), a series of **virtual 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, 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 built 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 should 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-FMD 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 v-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, Eastern 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 paraprofessionals (VPPs). To promote this at national level, EuFMD will support regional GF-TADs partners, technical networks and institutional bodies in the development of **Virtual Learning Centres (VLCs)**.

Close collaboration is foreseen with regional FAO or WOAHA offices. Additionally, roll-out may make use of collaboration 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, Eastern 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.

## b) Updates on Component Sub-Activities

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

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

*Note that this is an activity shared across 1.1, 2.3 and 3.3; please refer to activity 1.1 for detailed reporting.*

A review of the Training Quality Management System (TQMS) has been finalized during the reporting period. The review, which aimed at identifying the progresses of the quality management of the capacity development activities, was finalized in May 2023 by two external evaluators. The evaluation was conducted through a mix of quantitative and qualitative data, identifying the outcomes from April 2021, when the last review was conducted, up to March 2023.

#### 2. Development and delivery of v-learning courses in support of progressive control

##### Strategic prioritization of new courses

During the reporting period, the following training programmes were implemented:

**Vaccines, Vaccination and Post-Vaccination Monitoring:** the fifth edition of the virtual in-depth course has addressed veterinarians from countries in FMD Progressive control pathway (FMD-PCP) stages 1, 2 and 3, decision-makers and their advisors (policy writers), epidemiologists involved in design and evaluation of vaccination programmes, laboratory staff involved in study design and test selection/interpretation for vaccine selection and monitoring, researchers at universities and veterinary institutes and field veterinarians involved in advising on local strategies for delivering and monitoring vaccination programmes. The 24-hour course has been offered following a revision of the content, and participants from over 60 countries have taken it, out of which 101 have successfully completed it.

*This activity is reported also under 2.3.*

##### Development of new courses

**Introduction to the Official Control Plans:** the open-access course, under the GF-TADs umbrella, targets mainly government veterinarians from countries in PCP-FMD Stage 2 or provisional Stage 3 and is also a relevant course for FMD-PCP Senior Officers (PSOs). The course is part of a trilogy on the PCP-FMD application together with Introduction to the RBSP, released in 2021, and Introduction to the RAP released in 2022.

**Introduction to Risk Assessment Plan:** this course has been translated into French, more specifically for the learners involved in the Progressive Control Pathway for Foot-and-Mouth Disease (PCP-FMD) Support Officer (PSO) induction training, scheduled for September and October 2023 for veterinarians with relevant experience in ruminant disease control in Eastern Africa, Central Africa, West Africa, North Africa, South Asia.

#### 3. Implementation of system for cascade training

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

The support to the establishment of **Virtual Learning Centers (VLC)** ended in the month of June 2023, with the closure of the second year support to the third VLC for Eastern Africa. Virtual Learning Centers for the Regional Office for Asia and the Pacific (VLC-RAP) and Southern Africa (VLC-SFS) no longer receive financial support from EuFMD, although constant alignment continue to be provided by EuFMD together with the FAO-MDF project.

Virtual Learning Centers for the Regional Office for Asia and the Pacific (VLC-RAP) and Southern Africa (VLC-SFS) no longer receive financial support from EuFMD, although occasional support continues to be provided by EuFMD and the FAO-MDF project. The support EuFMD provided to establishment of Virtual Learning Centers in South Africa, Asia and the Pacific and East Africa regions has benefitted over 600 individuals who have completed at least one course in the VLC virtual learning platform related to FAST diseases.

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

The Training Management System (TOM) has been piloted in Tunisia and Switzerland during the reporting period. A second meeting of the TOM Steering Committee (**SCTOM**) has been organized to identify how to enhance the use of competency-based education and assessment of the competence of learners.

A revision of the TOM's FAST Disease Control and Emergency Management competency framework has been proposed to an external partner to adapt it for the use of countries relevant in component 3.3 area. More specifically, the novel competency framework will focus on the veterinary capacity of those countries at PCP-FMD Stage 0, 1 and 2 and on the expected outcomes indicated in the PCP-FMD guidelines. Texas AM, which has an extensive experience in developing competency frameworks, has been proposed for the activity, although this is currently blocked due to administrative processes. The documental revision, which should involve only Senior PSOs now, is expected to take place before the start of next reporting period.

Zimbabwe has shown interest in progressing ahead with a TOM pilot and a pilot is currently under evaluation, potentially to be launched by the end of the year, to target mainly veterinarians in one or more counties.

*This activity is reported also under 1.1 and 2.3.*

**c) Main points of interest for the Executive Committee**

Continued demand for virtual training as well as in-presence training programmes should be managed with careful attention to the prioritization of training development. The rate of participation of learners to virtual learning activities has sometimes been low and further analysis should be developed to understand how to improve it.

**d) Priorities for the next six months**

- Update the strategic prioritization and develop a new calendar of priorities for courses development. Specific attention will be on the development of training programmes that will focus on enhancing passive surveillance of the veterinary services and cost benefit analysis of surveillance programmes;
- Explore improved methodologies to promote cascade training to national level and improved monitoring of cascading activities.
- Finalization of the Socioeconomic Impact open-access course. The course will be developed based on the existing in-depth one, with the objective to offer learners from countries in stage 1 to 3 of the FMD-PCP the basis to develop analysis of the socioeconomic impact of FMD and similar transboundary animal diseases. The open-access short course will be provided in combination with the in-depth course.
- Training Management System: adaptation of TOM's FAST Disease Control and Emergency Management competency Framework to countries in PCP-FMD stage 0 to 2. Engaging the countries with a participatory approach to assess the need that might lead to adaptation of TOM

to local needs will be pivotal to ensure progress of the adoption of the tool. TOM pilots will run in parallel in countries in the Pillars, I, II and III.

**e) Of Note**

The finalization of the Introduction to the Official Control Plans has concluded the trilogy of open-access courses to support PSOs in the advancement of countries from FMD-PCP Stage 0 to 3.

## Component 3.4 Improved security in FMD vaccine supply

### a) Background Information

Component 3.4 aims to provide support to Public Private Sector Platform (**PPSP**) for vaccine security established under Component 1.3 of Pillar I. It aims to identify and promote solutions to improve security in accessing effective FAST diseases vaccines particularly 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 for vaccine production. In multiple regions, the lack of confidence in supply of available vaccines is a major issue affecting PCP-FMD 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 FMD 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.

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. It is foreseen that the activities will involve countries in PCP-FMD 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 to complement the activities under Component 1.3 of Pillar I and support the PPSP, and cooperation is planned with the World Organisation for Animal Health, the GF-TADs FMD Working Group and other GF-TADs disease working groups as needed.

### b) Updates on Component Sub-Activities

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

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

The main activities related to development of the VADEMOS-FMD model (Vaccine Demand Estimation Models) have been finalized. Activities related to refining the input parameters and data, as well as seeking feedback and validation of the generated results are ongoing. The model and its online interface are available to be used as a decision-support tool by national veterinary authorities and other interested

parties for informing control plans. The model can also be used by vaccine manufacturers and related stakeholders for supporting investment decisions for vaccine production.

The PQv procedure has progressed significantly, with technical and administrative procedures defined and agreed. Applications have been received in the first semester of 2023.

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

#### Regular co-ordination with the PPSP

The model was presented to the GF-TADs FMD Working group and to the FMD Roadmap meeting of the West Eurasian countries in 2023.

The model, its assumptions and usage were also discussed in a dedicated side workshop entitled "Vaccine Supply and Vaccine Value Chain ". Overall, experts and audience found the model a useful tool and showed great interest in having access to the tool and using it.

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

A comprehensive descriptive paper "A vaccine dose prediction model for countries with endemic foot-and-mouth disease" has been submitted to the Journal Preventive Veterinary Medicine.

A workshop report from the vaccine delivery and demand workshop held in June 2023 contains specific recommendations for the future of the VADEMOS project and details about the engagement of national veterinary services in its future development.

The EuFMD has provided scientific expertise in calculating the cost of implementation of the PPR Global Eradication programme Phase II and III (GEP II & III). This work has been included in the GEP II Blueprint document and in an overview document (<https://www.fao.org/documents/card/en/c/cc2759en>).

### **c) Main points of interest for the Executive Committee**

The model has entered its operational phase. As such, it was presented to the GF-TADs FMD Working Group and considered by the FMD working group to be included in global and regional events and meetings in the PCP toolkit. These activities will be focused on introducing the tool to countries to be used as a decision support tool for their planning to secure budget for supplying the required doses of vaccine. In doing so, the EuFMD team provided a regional training and feedback workshop in the context of the FMD roadmap meeting for West Eurasia that was held in April 2023 in Azerbaijan. In addition, the EuFMD team adapted the model to PPR and LSD and it is expected that the prototype versions of these models are to be further developed in the next phase of the EuFMD programme. In addition, two meetings were held to evaluate possible synergies between VADEMOS and PRAGMATIST as well as with GBADs tools. The VADEMOS team has also started to create a unified database for EuFMD and associated data that could be used in VADEMOS and other tools across the programme. Data, for example, will be collected from roadmaps meetings and other routes such as surveys and be stored in an integrated database. A map has been added to the VADEMOS web interface, reflecting PCP-FMD stages, serotypes and vaccines needed per country.

### **d) Priorities for the next six months**

- To improve the adaptation of the VADEMOS model to the other FAST diseases such as PPR and LSD.
- As a result of the Vaccine Supply and Vaccine Value chain workshop, four countries have been

highlighted to work with.

- To continue to work with countries to provide country-specific input data (e.g. on population, outbreaks, vaccination coverage and efficacy) so that the model can be tailored to their specific conditions.
- Finalize a report on “the current unmet demand and future growth” based on the results of the model (September 2023)” to produce stakeholder-specific reports (e.g., for manufacturers, for national public veterinary authorities, etc..
- Continue to strengthen coordination with the PPSP and the collaboration for vaccine demand estimation (*Comp. 1.3*);
- Public-private vaccine security platform: a) problem definition and explore options and their feasibility; b) liaise with private sector, experts and economists in FAO and other institutes to describe the best analytical frameworks to be developed and identify and locate relevant datasets to be used; c) report the findings and plan for implementation.
- Further development of vaccine PPSP liaising with partners.
- Strengthen the coordination with the PPSP and the collaboration for vaccine demand estimation (*Comp. 1.3*).

**e) Of note**

Presenting the model to various audience and stakeholders through workshops and collecting feedback from them via a number of platforms such as RMM for West Eurasia. A platform that will enable the extension of VADEMOS to other FAST diseases has been developed.

**Appendix 3 Objectives, tables and budget**



### Component 3.1 Global Strategy Implementation - Objectives, tables and budget

The **objective** of 3.1 is

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

#### Summary table

Narrative	Expected result	Monitoring	Assumptions and risks
Significant improvement in quality, rate of approval and national implementation of FMD Control plans is supported by the enhancement of the PCP-FMD 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-FMD 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.	Assumes collaboration and request for EuFMD support from target countries Risk that institutional procedures (FAO/WOAH) change the scope or do not accept EuFMD expertise and input.

#### Sub-activities

3.1 Global Strategy Implementation			
3.1.1 Improved technical guidance and support to PCP-FMD implementation			
Sub-activity level	Description	Progress in biennium	Progress overall
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.	a) The OCP course has been released, completing the trilogy of PCP open access course. PSO induction workshops are delivered in English and French during the reporting period. 5 new PSO appointments for 4 new countries since Sept 2021 b) 2021: 6 plans reviewed 2022: 7 plans reviewed, 2023: 2 plans reviewed so far.	The Training development framework (TDF) for PSOs was developed in collaboration with Comp. 3.3 and approved by the GF-TADs FMD WG. Two PSO virtual induction workshops are delivered with FAO EMPRES, and at least 25 new PSOs have been certified, and mentors identified. 11 plans /programmes reviewed by the WG, with the assistance of a Review Support Team between 2020 and Q1 2021. Additional 15 plans /programmes were reviewed by the FMD-WG, with the assistance of a Review Support Team made up of Senior EuFMD PSOs and the Support Unit, between 2021 and Q1 2023.
3.1.1.2. Collaborate with FAO and WOAH to	Provide technical assistance and support EuFMD experts to respond	EuFMD experts collaborated with FAO EMPRES to	Despite the SARS-CoV-2 crisis and travel restrictions during the first biennium, remote support was

support expert team missions in assisting countries according to WG Requests.	to emerging FMD, and FAST diseases situations, for progressive control at regional or national levels.	issue a qualitative risk assessment of FMD SAT2 spread in Near East and WestEurasia.	provided to the Comoros and Mauritius in collaboration with regional partners. EuFMD experts were involved in an emergency mission in Indonesia in 2022, in Iraq in 2023, and the EuFMD PII and PIII team heavily mobilized for the FMDV SAT2 response in the EU neighborhood late 2022 and early 2023. In response to the harmonized control plan developed by the SADC Secretariat in response to the Serotype O introduction, the EuFMD has developed a concrete response plan, including capacity building opportunities, in collaboration with the FAO Virtual Learning Center for Southern Africa.
<b>3.1 Global Strategy Implementation</b>			
<b>3.1.2 Support GF-TADS regional roadmaps, networks and bodies</b>			
<b>Sub-activity level</b>	<b>Description</b>	<b>Progress in biennium</b>	<b>Progress overall</b>
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 (through its Support Unit) has provided operational and technical assistance for the organization of the South Asian TADs event and the FMD/PPR West Eurasia meeting.	Despite the SARS-CoV-2 crisis and travel restrictions during the reporting period, virtual solutions were proposed by the EuFMD and adopted by the FMD-WG, allowing the delivery of 8 roadmap meetings (including 5 in virtual formats) over Phase V, as well as RAG and Epi and Lab network meetings
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 nat. 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 PSO mentoring and training network to be linked to the training dev and delivery under comp. 3.3.	Discussions with Univ. Warwick and FMD modelling project in EA (Uganda, Tanzania, Kenya) during the Open Session 2022.  The organization of the 3 <sup>rd</sup> meeting of the GCC-FMD was supported by the Support Unit.	Achieved in West Eurasia region, in collaboration with Pillar II. Additional support was provided to the regional Epi and Lab networks through active collaborations with the FAO Virtual Learning Centres (VLCs) (see Comp. 3.3) in SADC, Near East, West Eurasia, Eastern Africa and South Asia regions. Collaboration with IGAD in Eastern Africa established for the development of an integrated programme on Risk Analysis to support safe trade and FMD Control in the region. Consultations were run, and procedures defined to support and coordinate actions for fostering PCP-FMD progression, building laboratory capacities with Regional partners in Western, Central and Eastern Africa and to address gaps in virological surveillance with the FMD laboratory network (in coordination with comp 3.2). Discussions with ECTAD team in Eastern Africa (Kenya, Uganda) allowed the delivery of an in-person PCP-FMD workshop for the county Veterinary Directors in February 2023, in the margin of the

			Real-time trainings organized under a MoU with Kenya (see Pillar I, and Component 3.3) and the revitalization of FMD control planning in Uganda.
<b>3.1 Global Strategy Implementation</b>			
<b>3.1.3 Application tools</b>			
<b>Sub-activity level</b>	<b>Description</b>	<b>Progress in biennium</b>	<b>Progress overall</b>
3.1.3.1. Support the GF-TADs Working Group in improving the timing and efficiency of review of national control plans	Provision and improvement of tools and guidance documents to (i) facilitate and assist country ability to develop national strategic plans for PCP progression and (ii) assist the GF-TADs WG documents assessment and review mechanism.	SU & EuFMD experts (as members of RST) engaged in all plan/programme reviews	The Support Unit has operationalized a monitoring system for PCP progression and tracking of submission of strategic documentation. during Phase V. Templates for national strategic documents have been developed in various languages (including Portuguese). A trilogy of open-access virtual learning courses on RAP, RBSP and OCP has been published in collaboration with the EuFMD training Team. The SAT has undergone further simplification to make it more user-friendly to countries and this latest version has been tested, and consolidated. The Review Support Team made up of EuFMD senior PSOs and the Support Unit were involved in all Plans/ Programmes technical revisions. Since the PCP-FMD Review Support Team has been established, time between plan/programme submission and delivery of the FMD-WG feedback has been reduced below two months.
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.	Support for the dashboard refinement. Strong liaison with GF-TADS communications.	The PCP-FMD and FMD surveillance dashboards have been published in coordination with Comp. 1.7, the PCP dashboard is regularly updated. Regular coordination and consultation were also held with WRL-FMD for synergy and technical engagement. The FAR was mobilized to progress on the FMD surveillance dashboard, which inter- operability with FAO EMPRES IT solutions is carefully considered. EuFMD websites and GF-TADs websites have been regularly updated, the latter with continued support from EuFMD staff.

## Budget (€) COMP. 3.1

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance
<b><u>Salaries (Professional)</u></b>			
Component 3.1	12,003	11,867	136
<b><u>Consultancy Operational</u></b>			
Component 3.1	109,950	128,142	- 18,192
<b><u>Consultancy Technical</u></b>			
Component 3.1	340,810	230,363	110,447
<b><u>Travel</u></b>			
Component 3.1	40,830	30,709	10,121
<b><u>Training</u></b>			
Component 3.1	30,665	30,798	- 133
<b><u>Contracts</u></b>			
Component 3.1	58,000	15,352	42,648
<b><u>Procurement</u></b>			
Component 3.1	-	1,056	- 1,056
<b><u>General Operating Expenses</u></b>			
Component 3.1	13,185	3,886	9,299
<b>Total Direct Eligible Cost</b>	<b>605,443</b>	<b>452,173</b>	<b>153,270</b>

### Component 3.2 Objectives, tables and budget

The **objective** of 3.2 is

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

#### Summary tables

Narrative	Expected results	Monitoring	Assumptions and risks
Surveillance targets by WOA/FAO FMD RLN and Reg. Support Labs for each pool required for guidance to Regional Roadmaps will be supported through improved diagnostic services and system for vaccine performance and matching.	Enhanced level and quality of surveillance information FMD Reference Laboratory Network with an increase in the virus Pool achieving sampling targets for laboratory surveillance (from 1 to 4 out of 6).	Annual Reports the global WOA/FAO FMD Ref. Lab. network. Regular collection of information through procedure established and Quarterly reports of the WRLFMD and EuFMD.	Relies on the functioning and commitment of global WOA/FAO FMD Ref. Lab. network, and the engagement of countries to attain surveillance targets in each pool.

#### Sub-activities

3.2.1 WOA/FAO FMD laboratory network			
Sub-activity level	Description	Progress in biennium	Progress overall
3.2.1.1 Co-ordination support for the WOA/FAO FMD Reference Laboratory network	Provide direct support to the annual workplan co-ordination and activities of the WOA/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. Development of an interactive online dashboard and a maintenance system for the integration and communication of relevant surveillance information.	Hybrid meeting of WOA/FAO reference laboratory network has taken place 29 November – 1 December 2022 A FMD genomics dashboard has been developed in collaboration with WRLFMD and Epi Interactive and has been demonstrated to EuFMD and to the WOA/FAO FMD Reference Laboratory network and will soon be shared with the wider FMD research community. A FMD surveillance dashboard – FMD Watch – is under development.	a) Every year an annual meeting was organized, either in virtual or in hybrid form. b) Two FMD genomics dashboards – FMD base and FMD type – have been developed and were demonstrated to EuFMD and to the WOA/FAO FMD Reference laboratories network c) A FMD surveillance dashboard – FMD Watch is under development in collaboration with WRLFMD and Epi Interactive.
3.2.1.2 Delivery of FMD laboratory surveillance training in	Develop and conduct a global (online) bilingual training in FMD laboratory surveillance in English and in French.	Two editions of the FMD laboratory surveillance training course (FLITC) have been organized, the second including French speaking audiences, and the course has been completed by	Two editions of the FMD laboratory surveillance training course (FLITC) have been organized, the second including French speaking audiences, and

all Roadmap regions		161 attendees.	the course has been completed by 161 attendees.
3.2.2.1 Support diagnostic services by WOA/FAO Ref. 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 WOA/FAO FMD Reference Laboratory Network with WRL support and supervision.	Quarterly reports summarizing WRLFMD activities are available: <a href="http://www.fao.org/eufmd/resources/reports/quarterlyreport/en/">http://www.fao.org/eufmd/resources/reports/quarterlyreport/en/</a> and <a href="https://www.wrlfmd.org/ref-lab-reports">https://www.wrlfmd.org/ref-lab-reports</a> . During phase V less samples were submitted to the WOA/FAO FMD Reference Laboratories network for antigen detection and serotyping, but more sequences were shared and analyzed and more sera were submitted in the context of PVM studies and analyzed.	During phase V less samples were submitted to the WOA/FAO FMD Reference Laboratories network for antigen detection and serotyping, but more sequences were shared and analyzed and more sera were submitted in the context of PVM studies and analyzed.
3.2.2.2 Improve the sample collection and typing from regions identified by the WOA/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 Ref Labs. Develop further investigations to better characterize technical, logistical, capacity hurdles limiting the surveillance and diagnostics capacities.	However, the submission of samples to the FMD World Reference Laboratory has improved in 2022 and also many laboratories have shared sequences with WRLFMD for advanced phylogenetic analysis, but several issues persist (e.g., difficulties in collecting samples at central level, maintenance of cold chain, funds for shipping to the World Reference Laboratory)	Adequate number of antigen ELISA kits and PCR reagents were provided for surveillance. A survey into the hurdles limiting surveillance and diagnostics capacity is planned in the context of an EuFMD training course for passive surveillance of FAST diseases planned for January 2024.

**3.2.3 Vaccine selection and performance support**

Sub-activity level	Description	Progress in biennium	Progress overall
3.2.3.1 Improve uptake and accurate application of test system by WOA/FAO Reference Centers and Regional Support Laboratories in Africa and Asia, including to better define regional risks and the specific aspect of regional reference antigens for vaccine selection	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. Support better definition of regional risks in priority regions, including the specific aspect of regional reference antigens for vaccine selection - both their selection and communication of the approach. This includes support to the establishment of a regional advisory group in	Effective collaboration and interactions with WRLFMD, ANSES, IZSLER, EuFMD in the support to countries under pillar II and pillar III regarding sample collection, shipment, data analysis and advice.	PVM/SSIS studies were supported in Uganda, Jordan, Palestine, and the SEEN countries. Publication of the SSIS studies in Armenia, Azerbaijan and Georgia is ready and has been submitted for publication.  Regional advisory group established in East Africa

	East Africa.		
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.	No immediate plans to update the vaccine matching method. However, moving more and more towards using heterologous titres based on reference field viruses and the vaccines that are being used in the field. PVM/SSIS studies were supported in several countries. Analysis and publications are underway.	a) Outcomes of ongoing studies for novel methods were reviewed, no new methods for vaccine matching were implemented b) Collaboration with Regional Laboratories in pool 4 to cover reference viruses and vaccine strains has been established

**Budget (€) COMP. 3.2**

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance
<b><u>Salaries (Professional)</u></b>			
Component 3.2	22,593	19,778	2,815
<b><u>Consultancy Operational</u></b>			
Component 3.2	109,950	128,142	- 18,192
<b><u>Consultancy Technical</u></b>			
Component 3.2	49,980	106,707	- 56,727
<b><u>Travel</u></b>			
Component 3.2	9,920	4,235	5,685
<b><u>Training</u></b>			
Component 3.2	9,335	8,064	1,271
<b><u>Contracts</u></b>			
Component 3.2	845,000	922,587	- 77,587
<b><u>Procurement</u></b>			
Component 3.2	30,000	21,856	8,144
<b><u>General Operating Expenses</u></b>			
Component 3.2	14,505	12,615	1,890
<b>Total Direct Eligible Cost</b>	<b>1,091,283</b>	<b>1,223,985</b>	<b>- 132,702</b>

**Component 3.3 Better training for Progressive Control - Objectives, tables and budget**

The **objective** of 3.3 is

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

**Summary tables**

Narrative	Expected result	Monitoring	Assumptions and risks
The training provided will link to real-world outcomes in the development and implementation of FMD control strategies. This will be achieved through synergy with the PSO system and regional partnerships in order to strengthen the available training and develop new resources, ensuring quality management and cascading to national level.	At least 2500 individuals from the target countries* have completed at least one EuFMD v-learning course.	Regular collection of data through EuFMD v-Learning platform and procedure established in the training quality management system.	Relies on the commitment of nat. vet. services and individuals to participate in and complete v- learning courses.

**Sub-activities**

<b>3.3.1 Training infrastructure</b>			
Sub-activity level	Description	Progress in biennium	Progress overall
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% from Apr 2023 to Sep 2023.	a) EuFMD online platform upgraded and outage time reduced to minimum b) Training data platform finalized and operative
<b>3.3.2 TQMN</b>			
Sub-activity level	Description	Progress in biennium	Progress overall
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 dev. 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	Second TQMS evaluation finalized	a) Development of a TQMS finalized in first half of 2020. Two evaluation follow-up visits finalized in 2021 and 2023. b) A training Impact evaluation framework for regular analysis has been created. Regular analysis of training impact in place, reports finalized for courses until 2021, currently in progress for 2022



<b>3.3.3 Development and Delivery of Training</b>			
<b>Sub-activity level</b>	<b>Description</b>	<b>Progress in biennium</b>	<b>Progress overall</b>
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.	Vaccines, Post-Vaccination monitoring course finalized.	Completion of a strategic prioritization of capacity development actions in the region and delivery of virtually tutored courses
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.	Intro to OCP finalized, completed the trilogy with OCP and RBSP. Intro to RAP currently in translation in French.	Development of six new open-access courses: on applying public private partnerships, socioeconomic impact and cost-benefit analysis, on Passive surveillance for FAST diseases, on introduction to the RAP, RBSP and OCP.
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).	Vaccines, Post-Vaccination monitoring course finalized, more than 100 participants completed it. 1 456 unique learners from the target countries have completed at least one course on the EuFMD platform. Additionally, more than 600 learners have completed FAST related training activities through the VLCs established by EuFMD	A total of 1,456 single individuals and 2 321 considering multiple completions, have successfully completed courses from target countries in Eastern, West, Central and Southern Africa and South Asia during Phase V. More than 600 learners have been trained on FAST diseases by Virtual Learning Centers. The support to the launch of Virtual Learning Centers contributed to reach nearly 4 000 learners.
<b>3.3.4 Implementation of a system for cascade training</b>			
<b>Sub-activity level</b>	<b>Description</b>	<b>Progress in biennium</b>	<b>Progress overall</b>
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.	The support to the establishment of Virtual Learning Centers (VLC) has ended in the month of June 2023, with the closure of the second year support to the third VLC for Eastern Africa	Three VLCs were established in Southern Africa and Asia and the Pacific in 2020, and a third for Eastern Africa in 2021
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	A further analysis for evaluating the cascading of learners who attended courses in 2022 and early 2023 will be launched and finalized before the start of next reporting	Updates for 2021-23 EuFMD training resources have been used for cascading activities by learners in 30 target countries between September 2019 and December 2021. A further analysis about courses in 2022 will be completed before

	of modalities including those suitable for provision of training by mobile phone, and those suitable for training of VPPs.	period.	September 2023. Training for veterinary paraprofessionals has benefited from additional funding from the Bill and Melinda Gates Foundation, with a focus on South Africa, Nigeria, and Uganda.
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.	TOM Training Management System web app has been finalized. A Steering Committee has been identified during the reporting period	TOM Training Management System has been developed for piloting. A Steering Committee has been formed to identify future developments. Consultative meetings have been held to identify countries where to progress with piloting.

**Budget (€) COMP. 3.3**

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance
<b><u>Salaries (Professional)</u></b>			
Component 3.3	9,887	7,911	1,976
<b><u>Consultancy Operational</u></b>			
Component 3.3	109,950	128,142	- 18,192
<b><u>Consultancy Technical</u></b>			
Component 3.3	524,805	436,165	88,640
<b><u>Travel</u></b>			
Component 3.3	10,500	8,409	2,091
<b><u>Training</u></b>			
Component 3.3	6,665	9,139	- 2,474
<b><u>Contracts</u></b>			
Component 3.3	30,000	7,302	22,698
<b><u>Procurement</u></b>			
Component 3.3	-	-	-
<b><u>General Operating Expenses</u></b>			
Component 3.3	29,010	19,937	9,073
<b>Total Direct Eligible Cost</b>	<b>720,817</b>	<b>617,006</b>	<b>103,811</b>

### Component 3.4 Improved security in FMD vaccine supply - Objectives, tables and budget

The **objective** of 3.4 is

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.

#### Summary tables

Narrative	Expected result	Monitoring	Assumptions and risks
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 four 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 info through contacts with the working groups.	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.

#### Sub-activities

3.4.1 Advanced understanding			
Sub-activity level	Description	Progress in biennium	Progress overall
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 Comp 1.7 of Pillar I (through the key informants established under that Component) and Component 3.1 of Pillar III (PSOs system).	<ul style="list-style-type: none"> <li>a) Development of the VADEMOS-FMD model &amp; its web interface finalized.</li> <li>b) Development of VADEMOS – PPR and LSD has started to be continued in 2023.</li> <li>c) One workshop held; Held and the model and results were communicated to manufacturers and other stakeholders as the side workshop to Open Session 2022.</li> <li>d) A peer-reviewed paper drafted that is under final review; an oral presentation delivered in the Open Session 2022.</li> <li>e) The model was presented in the GVA of Middle East meeting.</li> </ul>	<p>The VADEMOS-FMD model and its web interface are operational with features that include maps, and a cost calculator.</p> <p>VADEMOS – PPR and LSD is operational and can be accessed online.</p> <p>A Vaccine Delivery and demand workshop was held In June 2023 and the model and results were communicated to manufacturers and other stakeholders.</p> <p>The model was presented in the RMM in West Eurasia April 2023.</p>

<b>3.4.2 Guidance to the PPSP</b>			
<b>Sub-activity level</b>	<b>Description</b>	<b>Progress in biennium</b>	<b>Progress overall</b>
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-FMD Stage 1 to 3.	a) Meetings to be held in the next 4 years, more integration between VADEMOS and other tools such as PRAGMATIST, EuFMDiS (for endemic countries) as well as external initiatives such as GBADs b) Reports of the yearly meetings are expected.	A meeting between PRAGMATIST and VADEMOS has been held in 2023 to identify synergies and opportunities. A concept note for collaboration with GBADs has been developed and is currently under review.
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 conference presentations produced plus a descriptive manuscript of the model (policy brief pending as the model was under development) b) three conference presentations produced (including one poster) plus a descriptive manuscript of the model (policy brief pending as the model was under development) c) PPSP members reviewed publications.	VADEMOS has entered into its operational phase, and is ready to be introduced to the FMD- Working Group and presented at relevant global and regional meetings such as Roadmaps, GVA, etc.

**Budget (€) COMP. 3.4**

<b>BUDGET CATEGORIES</b>	<b>Budget 4 years</b>	<b>Expenses</b>	<b>Balance</b>
<b><u>Salaries (Professional)</u></b>			
Component 3.4	3,532	3,956	- 423
<b><u>Consultancy Operational</u></b>			
Component 3.4	109,950	128,142	- 18,192
<b><u>Consultancy Technical</u></b>			
Component 3.4	60,605	82,008	- 21,403
<b><u>Travel</u></b>			
Component 3.4	8,750	1,429	7,321
<b><u>Training</u></b>			
Component 3.4	3,335	-	3,335
<b><u>Contracts</u></b>			
Component 3.4	15,000	-	15,000
<b><u>Procurement</u></b>			
Component 3.4	-	-	-
<b><u>General Operating Expenses</u></b>			
Component 3.4	3,300	930	2,370
<b>Total Direct Eligible Cost</b>	<b>204,472</b>	<b>216,464</b>	<b>- 11,992</b>

**Phase V - PILLAR III– Expenditures at 31-08-2023 - Budget 4 years (2019-2023) in EUR**

BUDGET CATEGORIES	Budget 4 years	Expenses	Balance	% Spent
<b><u>Salaries (Professional)</u></b>				
Component 3.1	12,003	11,867	136	99%
Component 3.2	22,593	19,778	2,815	88%
Component 3.3	9,887	7,911	1,976	80%
Component 3.4	3,532	3,956	- 423	112%
<b>Salaries (Professional) Sub-Total</b>	<b>48,015</b>	<b>43,512</b>	<b>4,503</b>	<b>91%</b>
<b><u>Consultancy Operational</u></b>				
Component 3.1	109,950	128,142	- 18,192	117%
Component 3.2	109,950	128,142	- 18,192	117%
Component 3.3	109,950	128,142	- 18,192	117%
Component 3.4	109,950	128,142	- 18,192	117%
<b>Consultancy OPS Sub-Total</b>	<b>439,800</b>	<b>512,569</b>	<b>- 72,769</b>	<b>117%</b>
<b><u>Consultancy Technical</u></b>				
Component 3.1	320,810	230,363	90,447	72%
Component 3.2	89,980	106,707	- 16,727	119%
Component 3.3	504,805	436,165	68,640	86%
Component 3.4	60,605	82,008	- 21,403	135%
<b>Consultancy TECHS Sub-Total</b>	<b>976,200</b>	<b>855,243</b>	<b>120,957</b>	<b>88%</b>
<b><u>Travel</u></b>				
Component 3.1	40,830	30,709	10,121	75%
Component 3.2	9,920	4,235	5,685	43%
Component 3.3	10,500	8,409	2,091	80%
Component 3.4	8,750	1,429	7,321	16%
<b>Travel Sub-Total</b>	<b>70,000</b>	<b>44,782</b>	<b>25,218</b>	<b>64%</b>
<b><u>Training</u></b>				
Component 3.1	30,665	30,798	- 133	100%
Component 3.2	9,335	8,064	1,271	86%
Component 3.3	6,665	9,139	- 2,474	137%
Component 3.4	3,335	-	3,335	0%
<b>Training Sub-Total</b>	<b>50,000</b>	<b>48,001</b>	<b>1,999</b>	<b>96%</b>
<b><u>Contracts</u></b>				
Component 3.1	58,000	15,352	42,648	26%
Component 3.2	845,000	922,587	- 77,587	109%
Component 3.3	30,000	7,302	22,698	24%
Component 3.4	15,000	-	15,000	0%
<b>Contract Sub-Total</b>	<b>948,000</b>	<b>945,241</b>	<b>2,759</b>	<b>100%</b>
<b><u>Procurement</u></b>				
Component 3.1	-	1,056		
Component 3.2	30,000	21,856	8,144	73%
Component 3.3	-	-		
Component 3.4	-	-		
<b>Procurement Sub-Total</b>	<b>30,000</b>	<b>22,912</b>	<b>8,144</b>	<b>76%</b>
<b><u>General Operating Expenses</u></b>				
Component 3.1	13,185	3,886	9,299	29%
Component 3.2	14,505	12,615	1,890	87%
Component 3.3	29,010	19,937	9,073	69%
Component 3.4	3,300	930	2,370	28%
<b>GOE Sub-Total</b>	<b>60,000</b>	<b>37,368</b>	<b>22,632</b>	<b>62%</b>
<b><u>Report Cost</u></b>				
Pillar III	1,996		1,996	0%
<b><u>Project Evaluation</u></b>				
Pillar III	15,000		15,000	0%
<b>Total Direct Eligible Cost</b>	<b>2,639,011</b>	<b>2,509,628</b>	<b>130,438</b>	<b>95%</b>



FAO Four Better's. Better life, Better environment,  
Better nutrition, Better production.

## EuFMD's programme, tools and initiatives

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### **FAST**

Foot-and-mouth And  
Similar Transboundary  
animal diseases

### **Dt**

EuFMD digital  
transformation

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### **Tom**

EuFMD training  
management system

### **Micro learning**

EuFMD micro learning

### **Vlearning**

EuFMD virtual learning

### **SimExOn**

Simulation exercises  
online

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### **Get prepared**

Emergency preparedness toolbox

### **Risk Comms**

EuFMD risk communications

### **RMT-FAST**

Risk monitoring tool for foot-and-mouth  
and similar transboundary animal diseases

### **Pragmatist**

Prioritization of antigen management  
with international surveillance tool

### **EuFMDiS**

European foot-and-mouth disease  
spread model

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### **Vademos**

FMD vaccine demand  
estimation model

### **GVS**

Global vaccine  
security

### **PQv**

Vaccine  
prequalification

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### **PCP**

Progressive control  
pathway

### **PSO**

Pcp practitioner  
officers

### **PPP**

Public private  
partnership

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# PROTECT RESPOND CONTROL

## MOVE FAST

FAST, Foot-mouth  
And Similar Transboundary  
animal diseases.

## EuFMD Committees

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

## EuFMD Secretariat

Animal Production and Health Division,  
NSHA / European Commission for the  
Control of Foot-and-Mouth Disease  
(EuFMD)

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of the United Nations  
Rome, Italy



Thinking of the  
environmental  
footprint

Together against  
wasting resources,  
think twice before printing



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