



101st

Report

Executive Committee

of the European Commission for the control of footand-mouth disease (EuFMD)

08 March 2023 Online



EuFMD's programme, tools and initiatives







microLearning
EUFMD microl learning

Tom

EuFMD training management system **SimExOn**

Simulation exercises online

KnowBank

EuFMD knowledge bank

GetPrepared

Emergency preparedness toolbox

RiskComms

EuFMD risk communications

SORA

A method for spatial qualitative risk analysis applied to FMD.

Pragmatist
Prioritization of antigen management with international surveillance tool

EuFMDiS

European foot-and-mouth disease spread model

RMT-FAST

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

Vademos

FMD vaccine demand estimation model

GVS Global vaccine

POV Vaccine prequalification

PCP
Progressive control pathway

PSO Pcp practicioner officers PPP
Public private partnership

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















Together against wasting resources, think twice before printing.

Report

101st MEETING OF THE EXECUTIVE COMMITTEE OF THE EuFMD COMMISSION

Contents

Conclusions	İV
REPORT OF THE 101 SESSION OF THE EXECUTIVE COMMITTEE	1
Item 1. Adoption of the Agenda	2
Item 2. Six-monthly report of actions and significant achievements	3
Item 3. FMD global and regional situation and risk for Europe	8
Item 4. EURL-FMD activities and priorities identified	11
Item 5. Assessment FAST threats for Europe and FAST prioritization proposal	13
Item 6. New EuFMD Strategy 2023-2027 - for endorsement at the 45th EuFMD General Session	15
Item 7. Training Credits system	18
Item 8. Programme of upcoming EuFMD General Session and Committees proposed	20
Item 9. Proposal Member Nation Contributions Biennium 2024-2025	22
Item 10. Update on progress of work programme 2019-2023	24
Item 11. Financial and administrative report	30
Item 12. Any other business	32

Appendices (available upon request)

Appendix 1 Agenda

Appendix 2 Six-monthly report of actions and significant achievements

Appendix 3 FMD Global and Regional Situation and risk for Europe - update from WRL-FMD

Appendix 4 New strategy 2023-2027

Appendix 5 Training Credits system

Appendix 6 New MNs Financial contribution proposal 2024-2025

Appendix 7, 8, 9 Update on progress of work programme 2019-2023

Appendix 10 EuFMD Secretariat Financial and Administrative overview

Conclusions

Item 1

1. The Chairperson will inform members of the Executive Committee on the outcomes of the selection procedure for the election of the Executive Secretary. Upon clarification with the FAO Legal office, a virtual or in presence meeting of the Executive Committee will be organized to approve the proposal for the selected candidate for such position.

Item 2

2. The Executive Committee endorsed the report on the actions since the previous Executive Committee meeting, with an appreciation for the volume of actions completed with success.

Item 3

- 3. The issues affecting sample shipment should be investigated and assistance needed to address these should be defined.
- 4. Trainings for sample collection and shipments to International Reference Laboratories for FMD (see also item 4) should be developed.
- 5. The SAP institute and EuFMD should highlight the new arrangements for early detection and sample shipment by road in West Eurasia at the upcoming FMD roadmap meeting for the region.
- 6. The dashboards delivered in collaboration with WRL-FMD should be linked to other FAO digital platform such as EMPRES-i.
- 7. A technical meeting with SOI (Statement of Intention agreement) signatory countries should be organized at the margins of the WOAH General Session 2023 to foster information sharing among participating countries.
- 8. The update of PRAGMATIST is encouraged, following the evolution of the SAT2 situation in the EU neighbourhood, with the use of the updated outputs of the EuFMD risk monitoring tool.

Item 4

N/A

Item 5

9. The outcomes of the prioritization exercise for TADs similar to FMD will be presented at the 45th General Session for discussion. It should inform the actions of the Commission for prioritization of resources according to the threats posed to Europe.

Item 6

- 10. The EuFMD could offer the TOM system to MNs to facilitate the nomination process from national Veterinary Services.
- 11. The EuFMD should focus laboratory training to testing methods that are in use in various laboratories taking into consideration overall outcomes of PTs.
- 12. The EuFMD should identify solutions to ensure combination of virtual Learning and physical laboratory trainings, taking into consideration the limitations in organizing residential training (cost and limited number of participants).
- 13. The Executive Committee agreed on the Training Credits system that will be proposed at the 45th EuFMD General Session.

Item 7

- 14. EuFMD could propose the TOM system in MNs to facilitate the nomination process from national Veterinary Services;
- 15. The EuFMD should investigate how to develop laboratory training to testing methods that are actually in use in different laboratories taking into consideration overall outcomes of PTs;
- 16. EuFMD should identify solutions to ensure the combination of eLearning and physical laboratory trainings taking into consideration the limitations in organizing residential training (cost and limited number of participants);
- 17. The Executive Committee agreed on the next TC system that will be proposed at the 45th EuFMD General Session.

Item 8

- 18. The Commission should consider the possibility to include the joint center FAO/IAEA as an observer in the SCRISAR.
- 19. The Commission should consider the possibility to include the Etlic Veterinary institute (Türkiye) as a member in the SCRISAR.

Item 9

- 20. To propose for adoption at the 45th EuFMD General Session the proposal on the administrative budget for the Trust Fund, and contribution for the biennium 2024-2025.
- 21. Endorsement of the Executive Committee was given to the financial report provided.

Item 10

- 22. The Thrace programme is fundamental and needs to be maintained, with possibility to include other defined risk areas, possibly Eastern Anatolia.
- 23. The Executive Committee acknowledged the work of the PII team which has committed in the past weeks to provide technical guidance for the control and surveillance of the SAT2 situation, and to facilitate the provision of diagnostic kits and reagents to countries.
- 24. Innovative approaches such as genomic dashboards, should be developed and implemented considering with the inter-operability with existing FAO platform.

Item 11

- 25. Acceptance to propose for 45th GS endorsement extension of MUL004 to 31 December 2025.
- 26. Endorsement of the Executive Committee was given to the financial report provided.

Item 12

- 27. The mechanisms to strengthen communication and collaboration among MNs during emergencies should be improved, making the best use of the functions of the EuFMD Commission.
- 28. The Secretariat is to organize a coordination meeting with non-EU MNs to facilitate the candidature for the Executive Committee membership from representative of non-EU countries.

REPORT OF THE 101 SESSION OF THE EXECUTIVE COMMITTEE

Dr Lajos Bognár, Chairperson of the Commission, opened the Session and welcomed all the participants¹.

Officers of the Commission participating in the Session were: Dr <u>Lajos Bognár</u> (LB, Hungary, Chairperson) and Dr <u>Susana Guedes Pombo</u> (SGP, Portugal, Vice-Chairperson). Hendrick-Jan Roest (The Netherlands) could not attend due to a previous engagement.

Executive Committee members Drs Hele-Mai Sammel (HMS, Estonia), Christodoulos Pipis (CP, Cyprus), Taina Aaltonen (TA, Finland), Matjaž Guček (MG, Slovenia), <u>Durali Koçak</u> (DK, Türkiye) and Christine Middlemiss (CM, UK).

Executive Committee observers <u>Spiridon Doudounakis</u> (SD, Greece and Saša Boškovic (BiH). Dr Cristina Bungardean-Armas (RO) sent her apologies.

International organizations observers were Drs Francesco Berlingieri (FB, DG SANTE, Directorate-General for Health and Food Safety of the European Commission), Moritz Klemm (MK, DG SANTE, Directorate-General for Health and Food Safety of the European Commission), Ludovic Plee (LP, FAO Emergency Management Center EMC-FAO), Néo Mapitse (MA, NM, The World Organisation for Animal Health, WOAH). The fifth official observer organization, the Organisation for Economic Co-operation and Development (OECD) was not present. Reference Centres were represented by Drs Donald King for the World Reference Laboratory for Foot-and-Mouth Disease (WRL-FMD) at The Pirbright Institute (DK, TPI), Labib Bakkali-Kassimi (LBK, ANSES) and Nick De Regge (NdR, SCIENSANO) for the European Union Reference Laboratories for Foot-and-Mouth disease (EURL-FMD); Dr Stephan Zientara (SZ), participated as Chair of the Standing Technical Committee.

Secretariat for the 101st Executive Committee Session comprised, <u>Fabrizio Rosso</u> (FR, Deputy Executive Secretary), Tsviatko Alexandrov (TA, Pillar I coordinator), Francesca Ambrosini (FA, Pillar II coordinator), Wilmot Chikurunhe (WC, Pillar III co-coordinator), Cornelis Van Maanen (CvM, Pillar III co-coordinator), <u>Etienne Chevanne</u> (EC, FMD risk management specialist), <u>Marcello Nardi</u> (MN, Programme Learning Manager), <u>Cécile Carraz</u> (CC, Budget and Procurement) and <u>Nadia Rumich</u> (NR, Programme Implementation Manager).

Drs Abdulnaci Bulut (Türkiye), Roberto Condoleo (IZSLT), also participated.

_

¹ Underlined names were present physically.

Item 1. Adoption of the Agenda

The Chairperson opened the meeting, and shared the agenda which was adopted without changes (**Appendix 1**). The best practices for holding a hybrid meeting were reiterated, thus with a specific attention to include online participants in the discussions.

The Chairperson updated the Committee on the selection of the EuFMD Executive Secretary (vacancy issued in 2022) indicating that eleven candidates had been interviewed and three will be shortlisted for nomination by the Director General of FAO. Representatives of the Executive Committee are part of the selection panel, and the Executive Committee has the right to approve the selection of the candidate proposed by the Director General.

KS suggested the Executive Committee hold an extraordinary executive committee meeting (virtual or inperson) to review the interview report and discuss the proposal for the candidate with approval by quorum. and mentioned asking the FAO Legal office if a virtual meeting of the Executive Committee would be suitable for the approval of the Executive Secretary appointment.

Conclusion

 The Chairperson will inform members of the Executive Committee on the outcomes of the selection procedure for the election of the Executive Secretary. Upon clarification with the FAO Legal office, a virtual or in presence meeting of the Executive Committee will be organized to approve the proposal for the selected candidate for such position.

Item 2. Six-monthly report of actions and significant achievements

Presenter: Fabrizio Rosso

Key Messages

- The proposed amendments to **EuFMD Constitution** have been approved by the FAO Council.
- The semester was characterized by occurrence of FAST outbreaks in Europe (SGP in Spain) and neighbourhood (FMDV SAT2 in Iraq), highlighting the constant risk of introduction of FMD and similar TADs into Member Nations.
- The regular assistance provided to countries in the neighbourhood ensured constant monitoring of risk - one of the main priorities of the Commission -.
- The modelling tools such as EuFMDis, Risk Monitoring Tool, PRAGMATIST, and the emergency preparedness tools Get Prepared Wall and the digital platform for emergency/awareness material are constantly updated.
- The **real-time trainings** in Kenya started again, marking an important step in the work programme.
- The **PQv procedure** has progressed significantly, with technical and administrative procedures defined and agreed. Applications should be provided in the first semester of 2023.
- The establishment of regional **Groups for Vaccination Advice, Guidance and Consultation (GVA)** was particularly well-received by neighbouring countries. GVAs assist in the design and implementation of post-vaccination monitoring activities, and act as a platform to exchange regional and international experience and expertise on vaccination for FAST diseases.
- Support to the GF-TADs FMD Working Group continued, through the efforts of the EuFMD Support
 Unit, providing essential technical and administrative assistance to the FMD-WG and through
 revision of the Plans/programmes submitted by countries engaged in the PCP-FMD, PCP-FMD
 support officer system and associated trainings, the organization of Roadmap meetings, and other
 activities.
- The **Phoenix simulation exercise** was delivered as part of the WOAH/FAO project aimed at building resilience against agro-terrorism and agro-crime. The exercise was an international simulation exercise held concurrently in North Africa, the Middle East and South East Asia regions.

Summary

The Report (**Appendix 2**) was provided by FR, who outlined actions taken since the 100th Executive Committee Session. He started by mentioning that the 8 March is international women's day and stressed the significant role of women and girls in advancing technologies and digital education.

Over the past semester, the proposed amendments to **EuFMD Constitution**, which were proposed and endorsed by Member Nations (MNs) at the Special Session of the Commission in April 2022, have been approved by the FAO Council. This was the last legal step for the amended text to become effective and applicable by Members. The change of the Constitution is an important achievement that allows the Commission to build on good principles, tools and trainings developed for improved FMD preparedness, and control and extend them to similar transboundary animal diseases (TADs) threatening Europe, ensuring a **cost-effective combination of actions**. The EuFMD Secretariat particularly acknowledges the

work done by members of the Executive Committee (current and past) for having assisted all the technical discussions and the legal process.

Considering the expanded mandate of the Commission to TADs similar to FMD (referred as FAST), which remains its' core business, a **prioritization exercise** is being carried out with consultative meetings and expert opinions to prioritize FAST and geographical areas according to the risk posed to Europe, in order to improve efficiency of actions. The results of the exercise - which takes into consideration specific indicators (e.g. likelihood of incursion, impact on animal health and production, impact on human health and wellbeing, indirect economic impact - trade and control costs, current preparedness to control the disease in EuFMD MNs, stakeholder perception) - will be presented and validated at the 45th General Session as defined by the 'Criteria for review and prioritization of FAST diseases', endorsed by the Commission in 2022.

The latest outbreaks occurred in Europe and its neighbourhood highlighted the constant risk of introduction of FMD and similar TADs into MN. In September 2022, **Sheep Pox** occurred in Spain causing 27 outbreaks in the south of the country. The disease, which seemed to be introduced from North Africa, was controlled by veterinary services but the occurrence provided evidence of the vulnerability of borders to FAST diseases and the need to ensure constant monitoring of risk and early detection capacity.

The occurrence of **FMD serotype SAT2** in Iraq and Jordan in February 2023, with severe clinical outbreaks, alerted countries in the region and beyond, including EuFMD MNs, to the risk of further spread connected to animal movement (pasture, religious fests, trade) and reduced availability of vaccines (the SAT2 strain is not included in vaccine formulation used in many countries of South East European Neighbourhood (SEEN) and the Middle East (ME) regions. Some of the ripple effects of the devastating earthquake in Türkiye and Syria meant that preventive actions and early detection surveillance, which were immediately established in border provinces of Türkiye, were harder to implement. The **consolidated networks** facilitated by the EuFMD with centers of expertise and neighbouring countries of the affected regions, enabled the immediate implementation of coordination and consultation mechanisms to

- a) maintain coordination/information mechanisms with countries through regular meeting to update the situation and risk information;
- b) organize informative event/webinars for wider audience on clinical investigation, sampling and FMD control options;
- c) provide diagnostic kits for initial emergency needs; and,
- d) assisted the shipment of samples to regional/international laboratories.

The regular assistance provided to countries in the **neighbourhood** for the implementation and improvement of their surveillance and control strategies, ensures constant **monitoring of risk** - one of the main priorities of the Commission -, and quarterly FMD and FAST reports are regularly produced and distributed. Modelling tools such as **EuFMDiS**, **Risk Monitoring Tool**, and **PRAGMATIST** are kept up to date (e.g. PRAGMATIST for SAT2) and adapted (e.g. EuFMDiS for SGP) to different FAST threatening Europe. The availability of the digital emergency toolbox provided easily accessible awareness and micro-learning material to countries, and included RVF, SPGP, and LSD materials. The **Get Prepared Wall** interface has been restructured and migrated to a Trello® board to better address the user needs and facilitate maintenance. The rate of progress has significantly improved, with seven new bricks developed.

Furthermore, the regular implementation of the **surveillance in Thrace** (THRACE programme) provides high confidence of FAST disease freedom and early detection in an area considered at high risk for Europe.

A <u>digital platform</u> has been used (Trello® board) to store and **make emergency training/awareness material** swiftly available, in a number of languages, for external users. Considering that the risk of introduction/spread of FAST diseases in MNs and neighbouring countries remains high, new awareness material has been developed for RVF, SPGP and LSD and added to the digital toolbox. The platform has been beneficial also to facilitate and improve the communication among the team with availability of technical, operational material and Standard Operation Procedures (SOPs).

During the semester, considerable efforts have been dedicated to the implementation of **face-to-face trainings** that had been delayed due to the COVID-19 pandemic. Thirty percent of Training Credits (TCs) were carried over from previous biennium. The **real-time trainings** (RTT) in Kenya started again and this was certainly very relevant. Good results were obtained thanks to the dedication of the Secretariat team and the Programme Implementation Officer.

The EuFMD **Quality Management System** regularly checks the training programme and provides particular attention to the impact of the programme and **cascading activities**. A good average application score has been identified in a survey conducted with trainees, indicating the learning material produced was cascaded to, on average, 30 people per trainee. The delivery of EuFMD courses, in particular during FMD emergencies (e.g., South Africa and Indonesia), via the FAO Virtual Learning Centres, boosted cascading opportunities.

The movement of FMD virus (FMDV) strains has impacted livestock and livelihood (e.g. SAT2/XIV in ME, O-Ind2001 in Indonesia, O/EA2 in Southern Africa), but also highlighted again the important issue of availability of quality vaccines to be used for emergency and prophylactic vaccination. The Prequalification of vaccines (PQv) procedure has progressed significantly, with technical and administrative procedures defined and agreed. Applications are expected to be provided in the first semester of 2023. The system can provide an independent evaluation of FMD vaccines (quality, safety, and efficacy) ahead of their use and can be the basis to the establishment of long-term agreements with international organizations and emergency supply options.

The establishment of regional **Groups for Vaccination Advice, Guidance and Consultation** (GVA) was particularly well-received by neighbouring countries to assist in the design and implementation of post-vaccination monitoring activities, and act as a platform to exchange regional and international experience and expertise on vaccination for FAST diseases. The WRL-FMD and EURL-FMD contributions to these groups are well recognized. Within Pillar II activities, PRAGMATIST is being adapted for its use in endemic countries, to assess the suitability of vaccines to provide protection against the circulating strains. A **Risk Mapping Community of Practice** supported by AviaGIS, and made up by national trainees, should be consolidated in the next months, in addition to the studies and trainings undertaken with the French agricultural research and cooperation organization (CIRAD), which will continue in selected countries.

Support to the GF-TADs Foot-and-Mouth disease Working Group (FMD-WG) continued through the efforts of the Support Unit, who delivered an essential technical and administrative assistance to the WG. Regular support was also provided through revision of the PCP-FMD support officer (PSO) system and **planning of**

PSO trainings with FAO-EMPRES, the organization of FMD Roadmap meetings, technical evaluation of plan/programme submitted, update of Progressive Control Pathway for Foot-and-Mouth Disease (PCP-FMD) tools, the development of vaccine demand estimation model (<u>VADEMOS</u>), and templates and additional resources to the PCP-FMD toolkit.

The **Open Session 2022** was held in Marseille, France, in October 2022. Eighty-eight abstracts were submitted to the scientific committee, reviewed and clustered into the **six main technical Sessions**. Fifty-six presenters were invited to showcase their work -including 16 keynotes presenters- and participate in 12 panel discussions. Overall, 150 participants attended the OS22 in person, while over 600 colleagues worldwide were given the opportunity to participate online, give presentations and interact with the panellists through an online forum. Of relevance were two workshops focused on two of the key areas/priorities of the EuFMD workplan:

- 1- Current practices and tools to assess and monitor the risk of incursion of FAST diseases,
- 2- FAST vaccines availability: improving vaccine security through long term supply options.

The **Phoenix simulation exercise** was delivered (after postponements due to COVID-19) as part of the WOAH/FAO project aimed at building resilience against agro-terrorism and agro-crime. The exercise, delivered for 12 countries, was an international simulation exercise held concurrently in North Africa, the Middle East and South East Asia regions. It provided participants the opportunity to respond to a fictious scenario affecting animal health and food security and requiring cooperation between law enforcement and veterinary services in joint investigation and response. The exercise included actions at the country, regional and international level.

Additional programmes non funded by the European Commission DG SANTE (EC) were delivered, such as an FMD investigation training course for the Canadian Food Inspection Agency, virtual RTTs for the USA and Australia, veterinary paraprofessionals (VPPs) training funded by the Bill and Melinda Gates Foundation, a system for prequalification of veterinary medicines (PQm) under USAID's Bureau for Humanitarian Assistance (BHA-USAID) funding – although some delays are associated with the recruitment of the project leader. The VPP project will progressively be transferred under the NSAH unit considering its objectives are not completely falling under the EuFMD Strategy and the know-how for the definition of competency framework and for the development of v-learning has been already transferred to the VPP and VLC team.

The number of physical meetings among the EuFMD Secretariat team has increased, with more opportunities to reflect and revise internal communication, well-being policy as well as to build the next strategy with identification of good results, critical issues, and priorities.

Recommendations from 100th Executive Committee meeting where largely addressed and reference is available in the documentation (item 2) provided for the meeting.

Discussion

FR stressed that the support provided by Pillar II in the neighborhood was particularly recognized in light of the **SAT2** current situation. The monitoring of livestock mobility and retail prices is relevant for risk assessment of FMDV spread within the region, and towards EuFMD Member Nations.

NB added that there are some live animal exports from Armenia and Georgia to Iraq. The meat price is currently higher in Iraq and Türkiye, and this may fuel illegal movements to these two countries, posing a risk for SAT2 introduction into Türkiye. The start of the grazing seasonal movements in Armenia and the Kurban festival - planned for the end of June 2023 - are additional risk factors for FMDV spread. The established protocol between Iraq and Türkiye for clinical sample shipment, supported by the EuFMD, was a very relevant mechanism to prompt the characterization of SAT2/XIV, and the contribution of the WRLFMD was acknowledged. PRAGMATIST was updated for SAT2.

FB confirmed the EC will provide support for the SAT2 situation to the region, despite the limited resources available: 1.5 million doses was requested from Türkiye and 500 000 doses are provided to vaccinate animals in six provinces at the border. NB acknowledge the support received from EC and informed that the SAP Institute started the production of vaccine using local SAT2 seeds; the preliminary results are promising. NB highlighted the challenges for the Veterinary Services to carry out FMD vaccination with multiple strains. The tetravalent vaccines including serotypes O, A and Asia1 last year were administered in late August — early September. In addition, part of the territories where vaccination is planned have been recently affected by an earthquake.

FAST surveillance in Thrace region will be continued, and a similar approach to THRACE programme may be implemented in other risk areas for Europe, such as eastern Anatolia.

FR mentioned the external evaluation of the work programme implementation that will be carried out over summer 2023, with findings used to refine the new strategy.

Conclusion

2. The Executive Committee endorsed the report on the actions since the previous Executive Committee meeting, with an appreciation for the volume of actions completed with success.

Item 3. FMD global and regional situation and risk for Europe

Presenter: Donald King (WRLFMD)

Key Messages

- Reduction in number of samples shipped has been reported in 2022, with an increase of sequence data exchange between laboratories.
- FMDV SAT2 topotype XIV has been detected for the first time in Iraq and Jordan with sequences in the two countries showing identity >99 percent and most closely related to sequences recovered from samples collected in Ethiopia in 2022.
- There is a risk of very rapid spread of SAT 2/XIV in the ME and WEA regions similar to other lineages such as A/ASIA/G-VII in the past.
- Vaccine matching with samples received from Iraq is underway and r1 value of vaccine matching of SAT2 Eritrea 98 and SAT2 ZIM 7/83 vaccine antigen with samples received in 2022 from Ethiopia is >0.3.
- Specific RT-PCR for SAT2/XIV has been developed by the Kimron Veterinary Institute (Israel) and WRL-FMD and data from the SAP institute indicate that SAT2 Ag-ELISA produced by IZSLER is able to detect this lineage.
- PRAGMATIST has been updated taking into consideration SAT2 risk for Europe, and the situation needs to be monitored closely.
- Four interactive dashboards have been developed, or are under development, to facilitate access of data on FMDV sequences, vaccine matching, and surveillance.
- Other WRL-FMD activities have been reported: proficiency test (PT) scheme, e-learning, WOAH/FAO reference laboratory network annual meeting, and the WOAH twinning project with FMD Laboratory Embakasi.

<u>Summary</u>

Don King presented an update (**Appendix 3**) from the World Reference Laboratory for FMD (WRL-FMD). He reported on the biological sample submission for virological testing, and that the WRL-FMD is receiving more serological samples to assess FMD vaccine efficacy in various settings.

DK outlined an increasing logistical challenge in sample shipment to international Reference laboratories for FMD, with reduced sample submission in 2022. He also mentioned specific procedures for shipment from the WRL-FMD as an export license from the UK government is needed for every shipment out of the UK.

Concerns were raised on ELISA cross-reactivity issues with SAT2. DK mentioned a recent publication assessing performance of SP serological tests relevant for the ME where serotype O, A, Asia1 and SAT2 are circulating.

He reported that SAT2/XIV is an emerging topotype that represents an unexpected new variant. The way it has been introduced in Iraq and Jordan should be studied; hypothesis include livestock trade routes from the Horn of Africa to the Middle East, and through the Arabian Peninsula. In-vitro vaccine matching testing is underway for SAT2/XIV Iraqi isolates. Biopharma and BVI sample sera will be tested to see whether these vaccines are suitable for the region. DK stated that SAT2 lineage-specific RT-PCR has been developed. Full sequence for SAT2 ETH/2/2022 was generated and made publicly available to allow other laboratories to perform molecular testing.

Among other significant FMDV events, the case of O/ME-SA/Ind-2001e was mentioned, and its movements towards Russia, and Indonesia.

DK told the Committee that a <u>publication</u> on PRAGMATIST is available in *Frontiers*. PRAGMATIST has been updated in light of the SAT2 situation with an increased risk of SAT2 for Europe, and a warning that any additional events in the EU neighborhood will drastically increase the risk estimate for Europe.

The Pirbright Institute is now hosting a new webserver that is fully integrated in the IT network structure and properly backed-up, ensuring high level of cybersecurity

Discussion

FB acknowledged the prompt reaction of the WRL-FMD to perform tests and share results.

The PRAGMATIST is updated every quarter and the group considered the frequency of updates. The PRAGMATIST version to be shared in the next <u>Quarterly report</u> is still under discussion, and in particular which relative prevalence of SAT2/XIV in the EU neighborhood to consider as it may impact the risk level. Lineage distribution scores are reviewed at the annual network meetings. PRAGMATIST is designed to be a flexible tool that can be tailored to one's understanding of risk; the version published in the quarterly report is the result of an agreement between WRL-FMD and EuFMD experts.

LP (FAO-EMC) highlighted an excellent collaboration between EuFMD and the FAO EMC in response to the SAT2 situation in the EU neighborhood. He reported that the joint meeting delivered in August 2022 in FAO-HQ was the first ever UN meeting bringing Jordan, Palestine and Israel together. The EuFMD technical support provided for FMD global surveillance and progressive control is well recognized within FAO.

FR noted the importance of finding out what are the barriers for sample shipment and the need to develop training for sample collection and shipment. DK indicated there had been an increase in the number of sequence data exchange. NB shared the experience of the SAP Institute - leading the West Eurasia Laboratory Network (WELNET)-, stressing the importance of supporting timely sample shipment, for swift testing and response. The delays and challenges for sample shipment from countries to the WRL-FMD could be one of the reasons national laboratories are reluctant to share biological material. To address this issue in the region, the SAP institute -in collaboration with the EuFMD-, prepared a protocol for sample shipment by road, and this could be shared during the upcoming West Eurasia FMD Roadmap meeting (25-27 April 2023). As an update of the ME situation from EuFMD, FR acknowledged the good work made by the Veterinary Services in Jordan; 200 000 doses of FMD vaccine were procured by Jordan to vaccinate 70 000 heads of cattle twice. FR further reported that 400 000 vaccine doses will be procured by Israel and Palestine, and vaccination is about to start. The National Laboratory in Syria has very limited resources; currently, there is no official notifications of FMD outbreaks, and vaccine is not available. The EuFMD is following this situation carefully.

Regarding the online FMD dashboards, FR reiterated the importance of having these IT solutions linked with other FAO digital platforms such as Empres-i.

NM reminded the Committee that Iraq will be invited to the upcoming West Eurasia roadmap meeting, and this will be opportunity for information sharing on SAT2 situation. WOAH recognizes the critical importance of exchange of information of SAT2 issue and will ask WOAH Delegates and CVOs to notify FMD suspicions

as soon as possible. FR proposed to organize a side-meeting with countries members of the Statement of Intention² (SOI) agreement, in the margin of the WOAH General Session 2023.

Concerning the regional networks, which have been strengthened during Roadmap meetings, NB called for more support to the WELNET, and formalization of functioning and mechanisms.

Conclusions

- 3. The issues affecting sample shipment should be investigated and assistance needed to address these should be defined.
- 4. Trainings for sample collection and shipments to International Reference Laboratories for FMD (see also item 4) should be developed.
- 5. The SAP institute and EuFMD should highlight the new arrangements for early detection and sample shipment by road in West Eurasia at the upcoming FMD roadmap meeting for the region.
- 6. The dashboards delivered in collaboration with WRL-FMD should be linked to other FAO digital platform such as EMPRES-i.
- 7. A technical meeting with SOI (Statement of Intention agreement) signatory countries should be organized at the margins of the WOAH General Session 2023 to foster information sharing among participating countries.
- 8. The update of PRAGMATIST is encouraged, following the evolution of the SAT2 situation in the EU neighbourhood, with the use of the updated outputs of the EuFMD risk monitoring tool.

² SOI: a statement of intentions agreement established between Transcaucasus and neighboring countries for improved collaboration and coordination in the control of FMD and similar TADs.

Item 4. EURL-FMD activities and priorities identified

Presenter: Labib Bakkali-Kassimi (ANSES, on behalf of EURLs-FMD)

<u>Summary</u>

LBK provided a brief overview of the EURL-FMD activities for FMDV and SVDV. Highlights of his presentation include the following:

- 41 laboratories were invited from 40 countries; 39 laboratories registered for PT schemes in January-February 2023 including 33 supported by the EC, and six by EuFMD through a LoA with ANSES. Sample analyses will be carried out in June 2023 over four weeks.
- The EURL workshop will be organized in face-face format in Belgium in October 2023.
- Significant work has been done to characterize FMD in the Sultanate of Oman on samples collected from March 2018 to January 2022, in collaboration with a PhD student: 85 isolates were obtained and characterized, A/Africa/G-I was identified in 2018-2020-2021, O/ME-SA/Ind-2001^e in 2018, O/EA-3 in 2020, O/ME-SA/PanAsia-2^{ANT-10} in 2020 and 2021 and finally O/ME-SA/SA-2018 in 2021 and 2022. Further samples collected from February 2022 to February 2023 were received. Virus isolation and strain characterization are in progress.
- FMD characterization in Niger between 2021 and 2022 was carried out, on 125 samples received, revealing O/EA-3 and A/Africa/G-IV.
- FMD outbreaks in Comoros were notified in December 2022 in Grande Comore, and related to
 importation of live animals from Kenya and Tanzania. Samples collected between December 2022
 and February 2023 were received in ANSES with some delays due to lack of dry ice and suitable
 packages, the quality of samples has been impacted. Few positives were detected by rtRT-PCR and
 NSP ELISA. Transfection is underway but SAT1 is suspected.
- A training on molecular, virological, and serological diagnostic techniques for LSD virus and FMDV was delivered between January and March 2023 with two participants from Algeria funded by IAEA.
- EURL-FMD provided trainers for the following trainings: the EuFMD FMD Laboratory Investigation Training Course (FLITC4-online) between November and December 2022, and the Phoenix Exercise: a joint WOAH, FAO and INTERPOL international agro-terrorism simulation exercise (Tunisia) in February 2023.
- Upcoming trainings are as follows: three face-to-face training courses at ANSES on molecular diagnosis of FMD (detection, sequencing and sequence analyses) for North African countries (June 2023), for Middle East countries (June 2023) and for SEEN countries (July 2023); on-line training for the Middle East in May 2023.
- Among the priorities identified:
 - Improve sample collection, storage and shipment: provide training and procedures, encourage countries to find a way to have quick access to dry ice and packaging at all times, encourage countries to establish an agreement with a carrier in advance, promote the use of inactivated LFDs.
 - Encourage national reference/official laboratories to maintain a minimum stock of reagents for emergency diagnostics.
 - Evaluate the performance of ELISA kits used for post-vaccination monitoring (PVM).

Discussion

FB asked LBK on the next steps with Comoros and ANSES informed that it will continue the sequencing of samples and ask the Comoros Veterinary Services to send the list of animals sampled - specifying with age − and will encourage them to collect more samples. FR updated that ten antigen-detection Lateral Flow Devices for FMD (LFD) should be provided to Comoros by the EuFMD, and a WhatsApp™ group has been established - upon their request- to share training material and provide expert support. LBK reported that Comoros and the Indian Ocean Commission requested a training on sample collection and shipment to ANSES, but the lack of feedback from the Comoros did not allow further progress.

With reference to the improvement of sample collection, storage, and shipment, LBK asked if a relevant framework had been established by the EuFMD. FR underlined the need to develop training material on sample collection and shipment, and the possibility to include it in the framework of the passive surveillance course which is under development. He added that the EuFMD is looking at opportunities to expand the training provided by EURL-FMD, possibly through exchange of laboratory personnel between MNs.

Item 5. Assessment FAST threats for Europe and FAST prioritization proposal

Presented by F. Rosso, EuFMD

Key messages

- At the Special Session in April 2022, MNs endorsed the amendment of the EuFMD Constitution extending the mandate of the Commission to undertake preparedness and risk reduction activities regarding other TADs similar to FMD which pose an immediate threat to territories of MNs.
- MNs agreed that the diseases included in the preparedness and risk reduction activities of the Commission should be prioritized based on the disease threats, with a report submitted by the Secretariat to the Commission at each General Session for review and endorsement.
- A multi-criteria decision analysis (MCDA) exercise has been launched, to provide a framework to assist discussions at the EuFMD Executive Committee and General Sessions regarding the prioritization of FAST diseases and regions outside of Europe for next EuFMD Strategy.
- The four diseases considered in the analysis (RVF, PPR, SGP, LSD) showed high scores indicating that all of them are relevant and need to be prioritized. The exercise provided the following scores: 1.RVF 2.LSD 3.SGP and PPR. Further considerations are needed by the Session in consideration of the level of preparedness of MNs and the presence of other initiatives to control FAST diseases.
- The prioritization exercise was also carried out to identify regions outside Europe considered at risk for FAST introduction into Europe. The risk monitoring tool (RMT-FAST) is a generic risk assessment framework developed by EuFMD that scores the likelihood of FAST-diseases entry in a "target country" from several "source countries" through different pathways of introduction. The tool was adapted for this specific exercise.
- The prioritization of regions showed that in general, SEEN and ME regions seem of most concern for FAST diseases with reference to FMD, PPR, and SGP, whereas the ME and NA are of most concern for FMD and RVF.

Summary

FR introduced the concept and diseases considered, indicating that FMD was excluded from this exercise, as it remains the core priority of EuFMD. Rinderpest was also excluded due to the limited activities foreseen connected to preparedness and awareness in Member Nations. This approach (and the associated tool) will be used every two years and outcomes presented at the General Sessions to inform discussion between MNs.

He presented the scores assessed through expert elicitation and the variability of the responses; the Secretariat made efforts to make more use of available data instead of relying solely on expert opinion. The exercise outputs indicated that RVF has highest score due to human health impact and low level of preparedness; LSD has the second highest score due to high perceived importance, cost of control and eradication and global incidence trend; SGP and PPR have the third highest score due to PPR impact on production and lower level of preparedness for SGP and absence of global/regional control/eradication strategy. FR indicated that the overall the assessment showed that the four diseases are all relevant and that the low preparedness for some of them (i.e. RVF and SGP) together with the presence of global/regional initiatives for others (i.e. PPR and LSD) might be overall consideration for directing the EuFMD priorities with regards to TADs similar to FMD, reinforcing the concept that FMD remains the first priority of the Commission. The regional prioritization showed that ME, SEEN and NA remain regions

considered at high risk for introduction of FAST into Europe with some differences of disease scores between them.

Discussion

FB noted that an increased awareness of RVF would be positive also as climate change is affecting the pattern of the disease, and its progression in NA.

MK reminded that the expansion of the EuFMD mandate to other FAST diseases was initially seen as complementary activity to FMD, and this should be taken into account in the prioritization exercise. FR replied that all the diseases included in the extended mandate of the commission and their control options have elements of complementarity and that the Commission explicitly excluded FMD in the disease prioritization exercise, considering it remains the highest priority. FMD has been indeed considered for prioritization of EU neighboring regions and this is accounted for critical to identify best combination of actions at regional level in areas considered at risk for Europe.

Conclusion

9. The outcomes of the prioritization exercise for TADs similar to FMD will be presented at the 45th General Session for discussion. It should inform the actions of the Commission for prioritization of resources according to the threats posed to Europe.

Item 6. New EuFMD Strategy 2023-2027 - for endorsement at the 45th EuFMD General Session

Presenter: F. Rosso, EuFMD

Key messages

- The Phase V of the EuFMD workplan (2019-2023) will end in September 2023 and a strategy to guide the work of the Commission in the period 2023-2027 has been drafted.
- The strategy paper will be presented at the 45th EuFMD General Session for endorsement and has been circulated within the Executive Committee members, for comments.
- The 'Move FAST GET prepared' strategy is based on three focus objectives: 1- Protect livestock sector in MNs from FAST; 2- Ensure adequate capacities to respond to crises in MNs and 3-Sustain FMD and similar TADs control in risk areas.
- The draft strategy is articulated in **seven key action areas** with specific outputs aimed to ensure risk monitoring, risk mitigation, capacity development, enhanced response, sustain to FMD control strategy, improved FAST control in risk areas, and vaccine security.

Summary

FR introduced the proposed EuFMD new strategy that will be presented to the MNs for endorsement at the 45th EuFMD General Session (4-5 May 2023).

The **Vision** of the draft new strategy (**Appendix 4**) is to ensure a safer Europe from FMD and similar transboundary animal diseases. The **proposed mission** for the Commission is to maintain, rapidly regain or achieve freedom from FAST in MNs with prevention, risk reduction and control as core principles extended to FAST. He noted that EuFMD is internationally recognized in capacity development activities and that it contributed significantly to preparedness and risk reduction in MNs through the **Three Pillar Strategy**. The EuFMD, with the proposed new strategy can move from a Pillar organization - that is mostly geographically focused - to an organization following three focus objectives and seven key action areas, considering that many activities are horizontal (across Pillars). Such organization may allow greater flexibility and cost-efficient use of the available resources.

The strategy builds upon the:

- a) successful EuFMD training initiatives and virtual learning platform;
- b) availability of adaptable systems/tools to improve preparedness (e.g., EuFMDiS, Get prepared, PRAGMATIST, emergency toolkits);
- c) established network with experts, reference centers, regional and international organizations and neighboring countries;
- d) early warning systems established in high-risk hot spots of the neighborhood area;
- e) FMDV intelligence to anticipate threats to Europe; and
- f) Phase 1 of the PQv implementation.

The EuFMD, as a specialized commission of FAO, will align fully with the UN Sustainable Livestock transformation initiative and GF-TADs priorities (i.e. prioritization of diseases, capacity development, and partnering).

The focus of the proposed new strategy will be as follows: (i) maintaining effective risk monitoring; (ii) reinforcing early warning system in FAST risk areas within the 39 MNs and other regions; (iii) ensuring high level of preparedness for FAST incursion in MNs; (iv) improving efficiency of surveillance and control programmes in risk areas to MNs and (v) enhancing vaccine security.

The principles driving the next strategy are proposed as follows: coordination, collaboration and communication with Member Nations, GF-TADs partners and Centers of expertise, resource mobilization that will allow the Commission to seek contributions from other development partners, partnering, digitalization, science and innovation and efficiency.

In more details, the seven key areas will aim to:

- protect livestock from MNs from introduction and spread of FAST diseases through (1) **risk monitoring** and (2) **risk mitigation**;
- ensure adequate capacities to respond to crises in MNs and improve resilience of the livestock sector through (3) **capacity development** and (4) **enhanced response** (tools and resources);
- sustain control of FAST in risk areas to reduce the spread and impact on livestock sector through (5) support to the **global FMD control**, (6) support to **FAST control** and (7) activities towards **vaccine security**.

New elements include support to passive surveillance, diagnostic bank, implementation of biorisk management standards, assistance to investment plans in countries, and prioritization of EuFMD interventions to the main threats considered for Europe and risk areas.

Discussion

KS stated that FAO is in support of the EuFMD Strategy draft document, as presented. He called for particular attention of the Secretariat for areas not being funded by the EC but still of priority for FAO. He suggested that item 2.1 could be discussed with FAO-EMPRES (PMP-B pathway); item 3.3 could be delivered jointly with FAO-EMC (joint product, joint actions, and new synergies), that the PQv system is an extremely significant new element and a strategy to run this system shall be identified. He encouraged the Executive Committee to consider what to keep in the Strategy as priorities, considering that other partners (apart from EC) could cover these portions. FAO encourages the Secretariat in seeking other funding opportunities.

FB welcomed the EuFMD work to adapt the strategy to new context (both financially and technically) and to take on board the EC request for a more structured presentation. The EC considered the proposed strategy is going in the direction they hope. The coordination with GF-TADs is well appreciated. The EC indicated that the following comments should not be seen in a negative way but rather as a call to fine-tune the layout of the Strategy. As editorial comments, the EC suggested to merge table 1 and 2 to facilitate the reading. With regards to the collaboration with EFSA, it is mentioned inter alia in the draft document, FB reminded that EFSA operates in a defined legal framework and on issuance of defined mandates. Therefore, room for coordination and information exchange should not be excluded, but this should be related to specific needs rather than tabled down by default in the Strategy. The EC encouraged clear mention of the support of EuRLs for FAST diseases. With regards to the PQv, planned to expand to all FAST diseases, it is rather suggested to well understand impact, lessons learnt and sustainability of the PQv system developed for FMD vaccines before expanding it to other FAST vaccines. The EC stressed the needs to coordinate with Global Burden of Animal Diseases (GBAD) activities for the point 6.2.1. Prioritization of activities in a context of limited funds are very relevant. Training activities are one of the highest priorities, and the assessment of past successes of EuFMD training should be further expanded upon. The reinforced surveillance in Thrace is a very good example of targeted resources dedicated to hotspots with higher risks for the EU. FB also requested to redirect some of the resources associated to the support of the PCP-FMD (5.1.1 and 5.1.3.) to other activities with higher priority. The EC recognized the value of developing and improving digital tools, but it is encouraged to make use and optimizing existing tools before investing in new solutions. Finally, FB announced EC budget availability to 1.8 million euros/year for 2024, 2025, 2026, and 2027.

FR reminded that there is ongoing LoA with ANSES, SCIENSANO and other EU reference centers (discussion started with ISZAM) to assist EuFMD on various capacity development and diagnostic support initiatives, and that it will proceed in the next phase and will underline this in the strategy paper. FR agreed to make a reference to GBAD in the Strategy; he stressed that the proposed budget to support the FMD Global Control Strategy was already half of the previous phase. He described how the allocation of costs for training was calculated, but agreed this could be reworked. FR highlighted the importance of keeping the innovative spirit of the EuFMD workplan, developing proof-of-concept for other international organizations. The draft strategy cannot be considered as a financial document, and budget indications included in the document are tentative and for discussion. Final budget allocation for different activities will be included in the grant agreements with different donors, and particularly with EC.

NB asked for updates on the implementation of MBRMS at the laboratory level and whether it is envisaged to expand these standards to other diseases. FR replied that it had been initially discussed by the SCBRM, and it was decided to keep the focus on FMD. A survey to assess laboratory (tiers A and B) needs and main gaps was prepared in February 2023 by the SCBRM to all laboratories (private and public) of the EU neighborhood. FR added that there is no consensus within the SCBRM to start reflecting on other diseases, as the EuFMD Constitution refers to FMD Minimum Biorisk Standards.

NM noted that EuFMD was a good partner, especially in building capacities of the Veterinary Services, and in Public-Private Partnering. The new EuFMD strategy looks to 2027 and is therefore aligned with the end of the current phase of the Global FMD Control Strategy. WOAH assured its support to the EuFMD new strategy going forward.

LB recognized that training and surveillance are core activities of the EuFMD, and that the draft strategy as proposed needs only fine-tuning. He agreed with KS on the relevance of the PQv programme and suggested this be kept in the Strategy but encouraged to adopt a stepwise approach considering only FMD at the moment.

Conclusions

- 14. The EuFMD could offer the TOM system to MNs to facilitate the nomination process from national Veterinary Services.
- 15. The EuFMD should focus laboratory training to testing methods that are in use in various laboratories taking into consideration overall outcomes of PTs.
- 16. The EuFMD should identify solutions to ensure combination of virtual Learning and physical laboratory trainings, taking into consideration the limitations in organizing residential training (cost and limited number of participants).
- 17. The Executive Committee agreed on the Training Credits system that will be proposed at the 45th EuFMD General Session.

Item 7. Training Credits system

Presenter: M. Nardi, EuFMD

Key messages

- The EuFMD training programme is demand-led, taking into account trainee feedback and the requests made by the EuFMD Training Focal Points.
- The overall objective of the upcoming training menu is to improve preparedness for management of FMD and similar TADs (crises by EuFMD MNs and across Europe as a whole.
- Each MN receives training credits (TCs) every biennium and can decide how to spend them, by selecting activities offered in the training menu that best suit their needs.
- The EuFMD Secretariat conducts a training needs assessment every two years to tailor the training offer to the identified priorities.
- A new TC system is proposed.

Summary

MN started by introducing the current TC system and noted that the EuFMD training programme is demandled, considering the requests made by the EuFMD Training Focal Points in every Member Nation. Member Nations receive TCs to spend every biennium and decide how to spend them, by selecting activities offered in the EuFMD training menu. At the previous Executive Committee, it was suggested to review allocation mechanism of TCs and include training cascade options in next EuFMD Training menu.

The new TC proposal (Appendix 5) includes the following:

- MNs are divided in four tiers according to their livestock populations (large and small ruminants, pigs);
- Total number of TCs will vary depending on the MN tier, ranging from 9 to 12 TCs per biennium;
- Cascading training opportunities are included in the Training menu;
- Countries must allocate at least 30 percent of the TCs on cascading;
- Countries must allocate at least 20 percent on virtual training activities;

A review of the TC allocations for the two biennia of phase V was provided.

Discussion

Concerning the 30 percent of TCs to be allocated to cascade opportunities, NB asked how this will be assessed and was told that specific attention to cascading approaches will be given to the participants attending inperson training. To assess such approaches, either virtual training workshops or in-person missions would be organized, to assist participant in cascading and ensure that training is translated into local languages. Overall, the country will need to decide what cascading approach to take.

FB asked to assess the TCs demands to evaluate the needs to provide more training credits or better populate the training menu. FR indicated that a survey will be circulated before the EuFMD General Session to understand training priorities from countries and MN added that there may be the possibility to combine TCs between countries belonging to the same region, and sharing similar needs (e.g. Thrace).

DK added that for practical laboratory training, and considering biosafety issues at the hosting laboratory, only small cohorts could be trained (residential training). He encouraged the EuFMD Training Team to reflect on eLearning solutions that could bridge this gap.

LBK suggested to focus on improving capacities of the laboratories on diagnostic methods that are routinely using (for the latter data from PTS could be used) instead of providing training on molecular techniques or any other techniques that may not be implemented at the laboratory.

MN informed that in the next strategy training will be proposed following a Disease Control and Emergency Management competency framework.

It was reiterated that it is the CVO's responsibility to nominate participants to the EuFMD training from the National Services. However, the Secretariat may propose a system (e.g. TOM) to facilitate the process, considering the EuFMD MNs' CVO remains the final decision-maker.

Conclusions

- 10. EuFMD could propose the TOM system in MNs to facilitate the nomination process from National Veterinary Services;
- 11. The EuFMD should investigate how to develop laboratory training to testing methods that are actually in use in different laboratories taking into consideration overall outcomes of PTs;
- 12. EuFMD should identify solutions to ensure the combination of eLearning and physical laboratory trainings taking into consideration the limitations in organizing residential training (cost and limited number of participants);
- 13. The Executive Committee agreed on the next TC system that will be proposed at the 45th EuFMD General Session.

Item 8. Programme of upcoming EuFMD General Session and Committees proposed

Presenters: S. Zientara, and F. Rosso

Key Messages

- The agenda of the 45th EuFMD General Session was presented with the items for decisions: endorsement of the strategy, MBRMS, technical Committees (see below), administrative budget and elections of Executive Committee members.
- The technical Committees that will be proposed at the 45th EuFMD General Session will be the Standing Technical Committee (STC), the Special Committee on Biorisk Management (SCBRM), Standing Committee on PQv (SCPQv), and the Special Committee on Risk Monitoring, Integrated Surveillance and Applied Research (SCRISAR).

Summary

SZ and FR presented the provisional agenda for the EuFMD 45th General Session. The items for decision were listed as follows: on Day 1, proposed strategic plans for 2023-27; on day 2: MBRMS for laboratory containment of FMDV (proposed updating), proposed technical Committees and their functions in the upcoming biennium (2023-2025), membership administrative budget and contributions for 2024-2025, and elections of the new Executive Committee members. Two technical items will be addressed: (i) improved availability of quality FAST vaccines for emergency use. Issues and way forward; and (ii) passive surveillance, assessing and improving surveillance sensitivity for an enhanced early detection. SZ reported that the STC is meeting regularly, with a good work atmosphere, and all the team is working hard. All current members agreed to continue working as STC members. SCBRM and the SCPQv will meet at the end of March 2023, and more information will follow.

The SCSAR met on 28 February 2023, and new composition for the Special Committee on Risk Monitoring, Integrated Surveillance and Applied Research (SCRISAR) was introduced. It will build on activities of the SCSAR with a reduced membership and additional focus on monitoring of FAST risk for MNs.

<u>Discussions</u>

Regarding the SCRISAR, NB proposed to include the Etlic Veterinary Institute in Türkiye in charge of RVF and PPR. FR acknowledged the possibility to include a representative from Etlic, considering the different expertise between Etlic and Pendik (also member of the SCRISAR) institutes but did remind all to keep in mind the reduced number of members and focus on laboratory competences for FAST. He also underlined that Balkan representatives may be missing in the current SCRISAR composition, and Türkiye (with two institutes) could also stand for the Balkan territory. KS encouraged EuFMD MNs representation be considered across the various technical committees. He reminded all of Switzerland's interest on laboratory and integrated surveillance and encouraged to integrate the joint center FAO/IAEA based in Vienna as observer to the SCRISAR.

Conclusions

- 18. The Commission should consider the possibility to include the joint center FAO/IAEA as an observer in the SCRISAR.
- 19. The Commission should consider the possibility to include the Etlic Veterinary institute (Türkiye) as a member in the SCRISAR.

Item 9. Proposal Member Nation Contributions Biennium 2024-205

Presenter: C. Carraz, EuFMD

Key messages

- Proposal to the MNs on the Budget and contributions 2024-2025 (USD) of the administrative activities of the Secretariat of the EuFMD Commission Trust Fund (TF/INT/011/MUL), for decision by the 45th General Session.
 - Proposal of review, to be presented for endorsement at the 45th General Session in May 2023, of the threshold of categorization scale in which EuFMD MNs are placed for contributions.
- The categorization was adopted at the 41st General Session in 2015, with five categories, based on a formula for classification agreed by the Commission in 1997, which used two equal criteria, a) the UN contribution and b) livestock population (formula 1 for cattle, 0.5 for pigs, 0.2 for sheep and goats).
- Considering the increase of the livestock unit in Europe by 3.3 percent, and the decrease of the EuFMD MNs INDEX in the European area by 8.37 percent from 2015 to 2023, the thresholds for entry into a category have been lowered by 10 percent from the value adopted in 2015.
- Following the endorsement at 43rd General Session to index the biennial budget contributions of MNs, for each category level of contributions to a standard measure of inflation, applying the midpoint between the consumer price index (CPI) for the Eurozone countries and that of the European countries, as recorded by the Organisation for Economic Cooperation and Development (OECD) Using the OECD data for the CPI change in the two-year period of the previous two full calendar years before each Session, thus 2021-2022 for the 45th General Session in May 2023.
- Contributions proposal for biennium 2024-2025 for each EuFMD Member Nation for a total annual Contribution of USD 731 393, based on 2023 five categories revised threshold and 9.57 percent CPI rise over the two past years.

The General Session in 2023 will be asked to:

- Endorse the categorization of MNs, which was adopted at the 41st General Session in 2015, with five categories, based on a formula for classification agreed by the Commission in 1997, which used two equal criteria: the UN contribution and livestock population.
- Adopt the five categories threshold, considering the updated Livestock Population (2023), the changes in livestock unit and UN contributions in the European area and the adjusted thresholds for entry into a category.
- Endorse Contributions proposal for biennium 2024-2025 for each EuFMD MN for a total annual contribution of USD 731 393, based on 2023 five categories revised threshold and on a mid-way point between Eurozone 19, EU27 2020-2022, with an index of 115.73, representing a 9.57 percent rise over the two past years applying the policy endorsed at the 43rd General Session in April 2019, for biennium increase in contributions, based upon change in the Consumer Price Index (CPI), for the previous full two years preceding the Session.

Summary

CC presented the revision of Member Nations yearly contributions to be presented for endorsement at 45th General Session in May 2023 (**Appendix 6**). The proposal is to maintain the five categories and revise threshold for contribution endorsed at the 41st General Session based on a formula for classification agreed by the Commission in 1997, which used two equal criteria, the UN contribution and livestock population.

The comparison included the updated data of livestock populations available in FAOSTAT and most recent figures on contribution to the UN and FAO from FAO Council Reports, and all countries, including non-member nations in Eastern Europe.

Considering the increase of the livestock unit in Europe by 3.3 percent, the increase in UN contribution (in particular for non EuFMD MNs), and the decrease of the EuFMD Member Nations index in the European area by 8.37 percent from 2015 to 2023, the thresholds for entry into a category has been lowered by 10 percent from the value adopted in 2015.

Applying the 2023 index, the five categories thresholds were defined, highlighting changes of categories for six Member Nations: Spain from category 2 to 1, Ireland from category 3 to 2; Sweden from category 2 to 3, Romania and Greece from category 3 to 4 and Slovakia from category 4 to 5.

Contributions proposal for biennium 2024-2025 for each EuFMD Member Nation for a total annual Contribution of **USD 731 393**, based on 2023 five categories threshold and on a mid-way point between Eurozone 19, EU27 2020-2022, with an index of 115.73, representing a 9.57 percent rise over the two past year, as per policy endorsed at 43rd GS to index biennial budget contribution MNs to a standard measure of inflation.

Discussion

For the MNs whose categories changed, LB asked if pre-consultations to the EuFMD General Session will be carried out. FR replied that this calculation for MNs contributions are for the first time shown to the Executive Committee, and encouraged the Executive Committee chairperson to approach the interested countries (Spain and Ireland in particular) so that CVOs are aware and consulted.

KS reminded the use of OECD inflation rate was agreed several years ago, this has been approved and should not be re-discussed. FR stressed the consistency of the process with previous calculation indicating that that the same parameters for MN contribution were used in the 2015.

LB ask if anyone was against the submission of this document for the 45th EuFMD General Session adoption The document was accepted.

Conclusions

- 20. To propose for adoption at the 45th EuFMD General Session the proposal on the administrative budget for the Trust Fund, and contribution for the biennium 2024-2025.
- 21. Endorsement of the Executive Committee was given to the financial report provided.

Item 10. Update on progress of work programme 2019-2023

<u>Pillar I – Improved Preparedness of EuFMD Member Nations</u>

FR introduced the item and stated the Secretariat prepared short videos summarizing progress along the Pillars, to be followed by discussion. The Pillar Managers presented the issues and highlights of their components. The Pillar I manager is Tsviatko Alexandrov.

Key Messages

- Real-time trainings have been resumed in Kenya end of 2022 early 2023.
- A new course of MBRMS has been developed and published.
- An information webinar for SPGP to all MNs and addressing the emergency in Spain has been conducted with over 400 participants.
- EuFMDis has been adapted for SPGP and PPR.
- The technical guidance for FMD vaccines and administrative procedures for PQv is published.
- The THRACE programme continues and has proven to be a successful project that can be adapted for other risk areas for FAST.
- Four projects have been selected to be awarded for funding under the 10th Fund for Applied Research call and LoAs were finalized.
- The Get Prepared wall is now functioning and opened for access.
- RMT-FAST is further refined and outcomes of the prioritization exercise presented at the SCSAR meeting (February 2023) and at the 101st Executive Committee meeting.

<u>Summary</u>

A video presented the activities under Pillar I in the last six months on improving preparedness for management of FAST crises by Members and across Europe as a whole (**Appendix 7**). The Pillar I has seven components which include Training for Member Nations; Emergency preparedness; Emergency Vaccination; South-Eastern Europe; Applied research; Proficiency Test Services and Disease risk assessment and forecasting. With regards to training, the EuFMD Virtual Learning platform has continued to be fully functional with over 24 450 registered users and around 3 200 learners. Eight courses were delivered and completed by 350 trainees. These included two real time training courses, with by 26 participants from 18 MNs. A new course on FMD MBRMS has been developed and published. In response to the Sheep pox and Goat pox (SPGP) emergency in Spain, an online information meeting was held and attended by over 400 participants.

The Get Prepared Wall interface has been restructured and migrated to a Trello board to better address users needs and facilitate maintenance. Seven new bricks have been developed. The European FMD spread model (EuFMDiS) is available for 14 countries and has been adapted for new FAST diseases such as Sheep pox and goat pox (for Spain and Bulgaria) and PPR for Bulgaria. Under the PPP initiative a webinar on 'Including disposal capacities in contingency plans for FAST disease outbreaks', took place in February 2023.

In the Emergency vaccination component, EuFMD has established the SCPQv. The technical guidance for FMD vaccines and administrative procedures for PQv is published and contracts with three institutions to evaluate PQv applications have been issued.

For South Eastern Europe, current surveillance activities have ensured a confidence level on FAST diseases freedom maintained over 90 percent in the Thrace region. The management meeting of Thrace and SEE was held online in early March, to discuss the progress of the workplan for the region and to agree on the next steps for different activities to be organized by the end of the Phase. Three SEE FAR call projects linking policy and stakeholder networks have been endorsed for implementation until the end of the biennium. The actual capacity of the diagnostic bank was revised. The new activities have been confirmed with IZSLER and cover the regular renewal of reagents stocks and provision of the core set of reagents to the national laboratories in SEE to ensure continuous availability of the standard FMD laboratory diagnostics.

Under the Applied research programme, four projects have been selected to be awarded for funding under the 10th FAR call and LoAs were finalized. In addition, four high-scored applications submitted to previous FAR calls were retained for funding up to the end of this Phase.

The registration for the new PTS (PTS-2023) is now open. National laboratories of the seven beneficiary countries were informed on the registration for the PTS with costs covered by the EC through EuFMD.

In disease risk assessment and forecasting, the Global FMD Quarterly reports are published regularly in collaboration with the WRL. Vaccine matching and risk information required to update PRAGMATIST is included in the FMD quarterly report. Further development of RMT-FAST is in progress. The tool was presented at and discussed during a workshop at the Open Session 2022 with favorable feedback, and also discussed during the latest SCSAR meeting.

Discussion

The benefits and successful achievements of the THRACE programme, following a cost-benefit analysis using estimates of outbreaks costs in Thrace region with the newly developed OutCost-RUM Tool, were underlined.

NB emphasized that for EU to properly anticipate risks associated to FMD, Eastern Anatolia should be considered as a risk area where to implement targeted surveillance activities. He mentioned that in 2013, AUSVET identified Istanbul as a risk area and further mentioned that dossiers for zonal recognition in PPR and SPGP freedom in Thrace region will be submitted to WOAH by Türkiye. The high level of Turkish investment for the control of FAST was acknowledged. FR stressed that possible expansion of the THRACE programme to Eastern Anatolia should be considered with the available budget.

Conclusion

22. The Thrace programme is fundamental and needs to be maintained, with possibility to include other defined risk areas, possibly Eastern Anatolia.

Pillar II - Risk Reduction Programme in the European neighbouring countries.

The Pillar Manager is Francesca Ambrosini.

Key Messages

- Regular coordination meetings have been held with GF-TADs partners and regional organizations.
- FAST quarterly reports have been regularly published.
- Technical assistance is provided to PII countries in the development of their FMD national control strategy, as per the recommendations formulated at GF-TADs regional roadmaps.
- Risk mapping training activities have started again with AviaGIS.
- Residential laboratory trainings are organized at ANSES and IZSLER on molecular and serological diagnosis for the PII laboratory staff.
- Israel, Jordan, Palestine representatives, as well as representatives from SEEN countries, are meeting regularly to share information on the SAT2 situation.

<u>Summary</u>

<u>Pillar II</u> programme focusses on the progressive control of FAST diseases in the neighboring regions, reducing the risk of FAST diseases to EuFMD Members (**Appendix 8**).

The national capacity for improved FAST surveillance and early detection is enhanced through risk information sharing, risk management and risk mapping.

Concerning co-ordination and FAST control framework (comp. 2.1):

Assistance has been provided to Armenia, Azerbaijan, Georgia, Türkiye in the development of their Official Control Programmes (OCP); technical assistance provided to Jordan, Palestine, Egypt to monitor the implementation of their Risk-Based Surveillance Plan and finally, technical assistance to the development of the Risk Assessment Plan of Libya, newly engaged in the PCP-FMD.

The Group for Vaccination Advice meetings are held regularly in the three regions of the ME, SEEN and NA.

The Public Private Partnerships model on livestock and animal products exports with AOAD in Sudan is in progress.

The quarterly FAST Report has been regularly published and the coordination meetings with FAO and WOAH regularly held.

Concerning improved early warning for FAST diseases (comp 2.2):

Trainings are organized with AVIA-GIS for risk hot spots identification.

Regional and national workshops are planned in the ME on Syndromic Surveillance with SAFOSO.

Risk based surveillance for FAST diseases is conducted and reported in SEEN; it has been requested by Egypt in risk hot spots and it is undertaken on RVF in Libya.

The Statement of Intention (SOI) agreement allowed regular sharing of risk information, including on the SAT2 and on vaccination in Transcaucasus and neighbouring countries.

FMD subregional meetings were organized with FAO-EMC, Jordan, Palestine, and Israel.

Concerning capacity development for surveillance and improved control programmes (component 2.3):

The capacity of the countries for surveillance, improved control and laboratory diagnosis is progressing. The biosecurity and biosafety survey have been launched to assess the laboratory capacity. Residential laboratory trainings are organized at ANSES and IZSLER on molecular and serological diagnosis.

Among the training activities delivered for the PII region in the past six months, the following update can be provided:

- The pilot of the Training Quality Management System (TOM) is continuing in Armenia and Tunisia,
- The FMD Investigation Training Course in Türkiye (Turkish language) has been delivered,
- The introduction to RVF open access course translated in Arabic and French, in collaboration with IZSAM,
- The FMD Investigation training for North and Western Central Africa has been delivered in English and French,
- The FMD Risk Analysis along the Value Chain (RAVC4) has been delivered,
- The FMD Laboratory Investigation training for PII and PIII countries has been delivered with technical contributions from WRL-FMD and EURLs-FMD,
- In addition, the Post Vaccination Monitoring Course is under revision and the Cascading model under design.

Studies on vaccine efficacy and vaccination effectiveness are in progress. Small-scale immunogenicity and Post-Vaccination Monitoring studies are in progress in Jordan, Libya, Lebanon, Egypt, and Sudan and follow-up assistance to Northwest Syria is provided. Finally, the shipment of biological samples from Iraq to the SAP Institute in Türkiye was possible thanks to the agreed Protocol.

Overall, the SAT2 FMD emergency and EuFMD response to contain the crises in the Middle East and SEEN countries is in progress. This emergency poses a severe threat to neighboring countries and highlighted their lack of resources for the implementation of appropriate control measures.

Discussion

FA highlighted the swift and efficient response from the PII team to the SAT2 crisis in coordination with FAO EMC, in Jordan, Israel, Palestine and SEEN area in particular, and also for provision of diagnostic kits and reagents to countries. She added that an amendment to the LoA with IZSLER was proposed to improve laboratory competencies of countries in the EU neighborhood.

Conclusion

23. The Executive Committee acknowledged the work of the PII team which has committed in the past weeks to provide technical guidance for the control and surveillance of the SAT2 situation, and to facilitate the provision of diagnostic kits and reagents to countries.

Pillar III – Supporting the Global Strategy for FMD control

The Pillar co-managers are Wilmot Chikurunhe and Cornelis Van Maanen.

Key Messages

- GF-TADs FMD Working Group, FAO and WOAH regional representations and the PPR Global Secretariat agreed to organize back-to-back West Eurasia and South Asia FMD/PPR regional events in the first semester of 2023.
- The EuFMD is leading the development of a new PSO system, with training to be jointly led between FAO EMPRES and EuFMD to further expand the PSO network.
- New open-access courses were developed by the EuFMD: Introduction to the Risk Assessment Plan, Introduction to the Official Control Programme, and the course on Socio-economic Impact Assessment.
- An interactive FMD genomics dashboard has been developed in collaboration with WRL-FMD and will soon be made available.
- The development of Vaccine Demand Estimation Model for FMD (VADEMOS) and its web-based interface has been finalized and the model enters its operational phase.

Summary

<u>Pillar III</u> has four components, each with a different sub-objective. These include sustained and effective implementation of the FMD Global Strategy, strengthened global laboratory surveillance support and improved FMD virus intelligence to guide regional and national implementation of the GF-TADs Strategy, improved national and regional capacity for progressive control of FMD through delivery of high impact training in at least six roadmap regions, and improved security in FMD vaccine supply.

A presentation covered the work of PIII for the six months from October 2022 to March 2023 (**Appendix 9**).

The GF-TADs FMD Working Group, FAO and WOAH regional representations and the PPR Global Secretariat agreed to organize back-to-back West Eurasia and South Asia FMD/PPR regional events in the first semester of 2023. Through its Support Unit, the EuFMD has provided operational and technical assistance to the GF-TADs FMD WG for the organization of both events, expected to be in a face-to-face format.

The PCP-FMD Review Support System, supported by the EuFMD, reviewed the Risk Assessment Plans of Guinea Bissau and Niger in the reporting period, bringing to eight the total number of control plans reviewed since the beginning of 2022.

The PCP-FMD Support Officer system has proven good value over the past years in supporting countries developing FMD Control Strategy. The EuFMD is planning to deliver virtual PSO induction workshops with GF-TADs partners in the first semester of 2023, to further expand the global PSO roster.

An interactive FMD genomics dashboard has been developed and will soon be made available whereas an FMD surveillance dashboard is under development. Productive collaboration and interactions with WRLFMD,

ANSES, IZSLER were intensified and formalized in the support to countries under pillar II and pillar III regarding sample collection, shipment, data analysis and advice. Nevertheless, several issues and gaps in virological surveillance persist related to outbreak investigations, sample collection and transport.

A series of short open-access virtual learning courses providing guidance on the development of FMD control strategies are in process such as Introduction to the Risk Assessment Plan, Introduction to the Official Control Programme and the course on Socio-economic Impact Assessment. The EuFMD delivered the FMD Investigation training for North and West Central Africa and the FMD Laboratory Investigation training course in coordination with WRLFMD, with the participation of ANSES and SCIENSANO. Overall, 1 388 individuals from West, Central, Eastern and Southern Africa and South Asia have completed at least one EuFMD course from September 2019 to date.

The development of Vaccine Demand Estimation Model for FMD (VADEMOS) and its web-based interface has been finalized and the model enters its operational phase. It provides an estimation of the number of FMD vaccine doses needed for both prophylactic and emergency vaccinations at national and regional level. It is expected that the results will support the decision-making processes to develop FMD control plans in endemic countries as well as assisting the vaccine producing industry and manufacturers with their investment decisions.

Discussion

CvM raised the following issues for the attention of the Executive Committee:

- The PCP-FMD Self-assessment tool under current revision with the involvement of Senior PSOs
- Consistent commitment of GF-TADs partners is needed for the PSO network's sustainable expansion.
- An external evaluation of the implementation of the Global FMD control Strategy is ongoing.
- A survey to explore barriers for sample collection, transport and shipment to international reference laboratories should be considered.
- Management of dashboards remains a point of attention.
- Demand for virtual training is expected to rise, requiring prioritization of training development and sufficient human resources to support the training programme.
- Engagement of Veterinary Services in all three pillars will be important to validate usability of the TOM.

Conclusion

24. Innovative approaches such as genomic dashboards, should be developed and implemented considering with the inter-operability with existing FAO platform.

Item 11. Financial and administrative report

Presenter: C. Carraz, EuFMD

Key messages

- Contributions proposal for biennium 2024-2025 for each EuFMD Member Nation for a total annual Contribution of USD 731 393, based on 2023 five categories threshold and 9.57 percent CPI rise over the two past years, as per policy endorsed at 43rd GS to index biennial budget contribution MN to a standard measure of inflation.
- Emergency and training Funds proposal to be extended for next Biennium 2024-2025
- EU Funded Activities (Phase V: 2019-2023)
 - Activities planning and Expenditures monitoring 30 September 2023
 - Final Financial report to be prospected to Donor before end year 2023.
- EU Funded Activities (Phase VI: 2023-2027)
 - Strategic and Financial plan to be presented during the 45th General Session in May 2023
 - Formulation of Contribution Agreement to be discussed with donor.

CC presented the EuFMD Secretariat administrative summary and financial position of the Trust Funds (Appendix 10) operated by the Commission.

The position of EuFMD Members contribution report showed no outstanding contribution for year 2022. USD 214 672 received on a total Contribution year 2023 USD 656 601.

For the 2024-2025 biennium, based on 2023 five categories revised threshold and CPI index (9.57 percent over the two previous year). The total annual contribution of USD 731,393, budget allocation for Biennium 2024-2025 will be presented at the upcoming General Session.

The financial report on the EuFMD Emergencies and Training Funds, for provision of virtual and Real-time trainings to non-EuFMD members and support to FAO Regional Offices, was presented, indicating project closure 31-12-2023 as per FAO Financial Regulations. The EuFMD to work on the opening of a new Multidonor Trust Fund aligned with the new FAO policies, for use in activities in line with the EuFMD Strategic Plan, including response to FMD emergency situations or to support capacity-building programmes. With a proposal to extend the project in alignment with Administrative Fund MUL011 up to NTE 31-12-2025 for endorsement by 45th GS to facilitate the transition phase before the opening of a new MTF.

The financial statement at 31 January 2023 of the project "EuFMD Real Time Training Course for Texas A&M University" was presented, highlighting available balance for activities for 4th VRTT in 2023. The project was extended up to February 2024 and ongoing discussion with donor for an amendment to the agreement for additional funds to implement and delivery of Real Time Training activities.

The financial statement at 31 January 2023 of the BMGF project "Veterinary and veterinary para-professional capacity skills training" (Nov.2020 - Dec.2023) was presented. Amendment to the agreement for increased budget of USD 348 000 and revised activities for Phase II grant agreement in progress with donor for review.

The financial Position of EU Funded Activities (Phase V2019-2023) was reported, showing the level of expenditures by Pillar at 31 January 2023 after 40 months of activities representing the 83 percent of the

programme implementation, highlighting no over expenditures by budget line according to the endorsed Budget Revision.

Accurate monitoring, tracking and mapping of expenditures by Pillar was carried out as well as budget line for planning of activities up to end of Phase V 30-09-2023. The FAO evaluation of the project will be held over the summer months of 2023, between June and August).

EuFMD to prepare and present the Financial report to the donor before the end year 2023, to allocate EU final instalment (the final Financial and Narrative report as per Contribution agreement shall be submitted at the latest six months after project operational closure 30 September 2023).

Phase VI budget proposal & strategic plan will be presented during the 45th General Session in May 2023, for outlining of the Contribution Agreement to be discussed with donor.

Discussions

On the EuFMD emergency and training funds (1993-2023), CC suggested this project to be extended to the Multidoor trust fund, where contributions from countries are received.

LB asked if anyone was against the submission of this document for the 45th EuFMD General Session adoption. The document was accepted.

Conclusions:

- 25. Acceptance to propose for 45th GS endorsement extension of MUL004 to 31 December 2025
- 26. Endorsement of the Executive Committee was given to the financial report provided.

Item 12. Any other business

FR indicated an issue related to the coordination mechanism among MNs to respond to crises or to mitigate risks as after the notification of SAT2 in the European neighbourhood the Secretariat requested MNs holding a national vaccine bank with SAT2 strain to state their willingness to donate vaccine to Türkiye for preventive vaccination in risk areas but did not receive a reply.

Conclusions

- 27. The mechanisms to strengthen communication and collaboration among MNs during emergencies should be improved, making the best use of the functions of the EuFMD Commission.
- 28. The Secretariat is to organize a coordination meeting with non-EU MNs to facilitate the candidature for the Executive Committee membership from representative of non-EU countries.

United Nations Sustainable Development Goals (UN-SDGs)

EuFMD's programme has a main focus on















Animal Production and Health Division, NSHA / European Commission for the Control of foot-and-mouth disease (EuFMD)

eufmd@fao.org

fao.eufmd.org eufmdlearning.works eufmdvirtual.com eufmd-tom.com

Food and Agriculture Organization of the United Nations
Rome, Italy

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.

Hold-FAST tools

AESOP, Assured emergency supply options. EuFMDiS, FMD spread model.

GET PREPARED, Emergency preparedness toolbox.

GVS, Global Vaccine Security.

SIMEX Online, Simulation exercises.

Outbreak Investigation application.

Pragmatist, Prioritization of antigen management with international surveillance management tool.

PCP-FMD, Progressive Control Pathway for foot-and-mouth disease.

PCP-SO, Support Officers.

RTT, Real Time Training.

SAT-PCP, PCP Self-Assessment Tool.

SMS Disease reporting.

SQRA toolkit, A method for spatial qualitative risk analysis applied to FMD.

TOM, EuFMD training management system.

VADEMOS, Vaccine Demand Estimation Model

VI C. Virtual Learning Center