Updates on implementation of WELNET FMD workplan 2019-2021

WELNET FMD Leader

Abdulnaci BULUT, SAP Institute, Turkey abdulnaci.bulut@tarimorman.gov.tr



Laboratory Network for West Eurasia: WELNET FMD

Leader:Abdulnaci BULUT

14 countries are involved the network:

- Turkey, Iran, Pakistan, Afghanistan, Azerbaijan, Armenia, Georgia, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan and Kazakhstan.
- In addition to the virus pool 3 countries, Syria and Iraq were also included the network in concept of FMD control in the European neighbourhood.

In the 1st Regional Workshop:

it was recommended establish a laboratory network under the West Eurasia Roadmap Organization.

Objective:

promote better communication, improvement early detection, diagnostic capacity and performance of laboratories and also implementing a system for proficiency testing



WELNET Workplan 2019-2021

OBJECTIVE of the regional network*

- **Share** available **laboratory information** on the regional occurrence and spread of FMDV;
- **Provide recommendations** on selection of vaccine strains and engage in evaluation of vaccines quality;
- Harmonise FMD diagnostic procedures through participation ٠ in proficiency tests;
- **Prepare** and **exchange** reference diagnostic reagents;
- Advocate for submission of samples for diagnosis or confirmation to reference laboratories;
- Encourage *accreditation of diagnostic procedures* by national ٠ or international accreditation body;
- Promote the implementation of the international **lab biosafety** and biosecurity standards;
- Increase **competency of national laboratories** and identify ٠ constraints and to propose solutions.

TORs of the regional network*

- Produces diagnostic reagents, SOPs and 1. protocols
- 2. Provides training to national laboratories using train the trainers approach
- 3. Coordinates **proficiency testing** for the region (limited to screening tests)
- 4. Receives and processes samples for diagnostics from countries of the region
- 5. Ships samples to FAO/OIE reference centers for full characterization
- 6. Ensures and assist in regional procurement of essential diagnostic reagents for emergency release
- 7. Participates in regional laboratory network activities (potential leader)
- 8. Links with the regional **epidemiology** network

*Agreed in Laboratory and Epidemiology Network Meeting in 2017

Achievement Proposed WorkPlan for 2019-2021

Proposed WorkPlan for 2019-2021	Achievement
Participate in annual proficiency test scheme (PTS)	Partially, some labs could not participate organized by either at WLRFMD or ANSES -financial shortage; - dispatching diff. IATA rules
Assess the capacity/capability and performance of the national veterinary diagnostic laboratories.	Done by ANSES; available the results Presentation by ANSES in this WS
Training on FMD Diagnosis, Building up laboratory diagnostic capacity	 Not implement any laboratory base training activities in this WP period Waiting the assessment results Travel restriction by COVID19 Virtual e-learning on diagnostic techniques for FMDV provided by Pirbright Institute
Establishing Early Detection System, detection up coming risk	Partially achieved. -Developed Protocol for Sample Submission and Transportation -FMD epithelium sample submitted by Iran -Live animal and meat price survey has been initiated_(<i>results by Epi group</i>) -Tripattite meeting has been initiated -Information and data sharing through SEEN and SoI activities -Participated OIE Reference Laboratory Network and EC Lab Network Meeting
Continue webinar and evaluation meeting	Partially, -FITc Turkish and Russian version have been conducted -Management meeting for SoI and SEEN
Establishment a network for Molecular epidemiology data in the WEA laboratories (endemic countries)	Not achieved fully by WEA perspective, Genotyping data produced by \$AP Institute has been shared with WRLFMD

Assess the capacity/capability and performance of the national veterinary diagnostic laboratories.

A questionnaire was conducted by ANSES for SEEN countries in 2020

Rationale: It has been agreed by 1st Epi and Lab network meeting in 2017

Objective:

• Assess the capacity/capability and performance of the national veterinary

diagnostic laboratories.

 Based on the outputs of assessment better planning and organizing of training activities in apacities for the SEEN countries
 Indentification of FAST diagnostic order to buid up capacity and capability as well as harmonize the diagnostic technics

SCOPE: 9 laboratories in 7 countries are participated.

COMPONENT of the QUESTIONNAIRE

- Logistics,
- Diagnosis capabilities,
- Resources for diagnostics
- Staff skills and training
- Sample management, and Biosafety/Biosecurity,
- National, Regional and International network and inter-laboratory coordination.



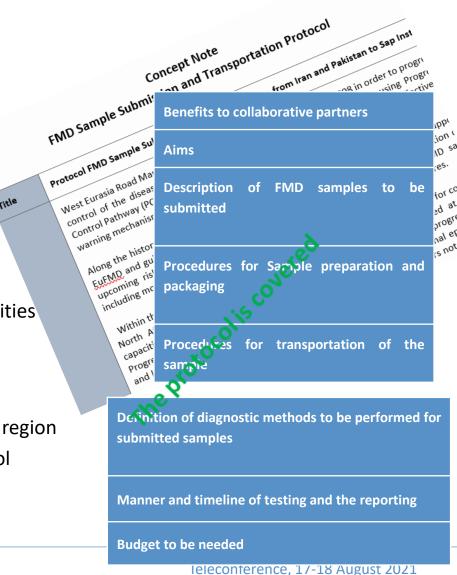


Developing on Early Detection System: Developing Protocol on Sample Submission

- A protocol on the FMD Sample Submission was developed by \$AP Institute and EuFMD
- **Objective:**
- a. Description of FMD samples to be submitted
- b. Procedures for Sample preparation and packaging
- c. Procedures for transportation of the sample
- d. Definition of diagnostic methods to be performed for submitted samples
- e. Manner and timeline of the reporting

• Benifit and advantage for the member countries in WEA

- 1. Practical solutions to overcome the difficulties of IATA rulesBuilt up diagnosis capacities the collaborated countries,
- 2. Enhance opportunity of sharing information in favour of detection of the risk,
- 3. Creating an early warning mechanism by diagnosis the sample in real time concept
- 4. Obtain valuable information and data for identifying of suitable vaccine to use in the region
- 5. Launched system will be maintained developing and improving of the national control strategy in favour of eradication of the disease
- 7. Reduce the risk to Europe from Neighbourhood of West Eurasia



Developing on Early Detection System: FMD Sample Submission to ŞAP INSTITUTE

- 25 samples were submitted by Iran Veterinary Organization (IVO).
- Samples were tested by:
 - Multiplex Real Time Rt PCR and Conventional PCR for serotyping of FMDV
 - Nucleotide Sequencing for genotyping
 - VNT for vaccine matching
- Report for Results of the samples was submitted to IVO
- Results was also presented in Tripartite meeting as well as the meeting on test results of Iranian FMD samples

OUTCOMES

- Provide valuable data and information for:
 - serotypes of FMDV sirculated in the WEA
 - data for genotype diversity
 - Data for vaccine matching for suitable vaccine strain selection in the region

	Sender Id. (Code Date	of collection	Samples T	<mark>/pe</mark> Sa	mples Origin	Species of Or	igin Type	CVL Code		
Vping and v result	IR/00/1	-	20:04.26	Epitheli	m	Kordestan	Bovine	Asia1	LD108.1		
	IR/99/2		20.07.07	Epithelia		West.A	Bovine	Asiai	LD108.1		
nd V	IR/99/3		20.07.26	Epitheli		Tehran	Bovine	A	LD313		
2 2110	IR/99/4	-1	20.05.17	Epitheli		East .A	Bovine	0	LD132.1		
ninga	IR/99/5		2014302	Heart		Markazi	Sheep	0	LD166.1		
NON POSI	IR/99/6	3	10.06.16	Epitheli	ım	Alborz	Bovine	0	LD200.2		
	IR/99/7	1	20.07.21	Epitheli	ım	Ardabil	Bovine	A	LD317		
	IR/99/8		20.05.22	Heart		Tehran	Sheep	0	LD183		
Iral	IR/99/9		20.06.10	Epitheli		Ardabil	Bovine	0	LD206		
110	IR/99/10		20.07.02	Epitheli		West.A	Bovine	0	LD239.3		
	IR/99/11		20.06.16 20	2 Epitheliu		Qom	Bovine	0	LD252		
	IR/99/12		20.06.16 20 20.07.22	Epitheliu		Qom	Bovine	A	LD483		
	IR/99/13 IR/99/14	ute	20.07.22 20.07.28	Epithelia Foot Scar		Qom Mazandaran	Bovine Bovine	0	LD312 LD314.2		
	IR/99/14 IR/99/15	col	20107.28	Epitheli		Kordestan	Bovine	0	LD314.2 LD328.1		
FI	IR/99/15	Ç0.	20.07.28	Heart		Qazvin	Sheep	A	LD328.1		
	IR/99/17		20.07.25	Epitheli		West.A	Bovine	0	LD366		
	IR/99/18		20.08.22	Epitheli		Kordestan	Bovine	0	LD375		
	IR/99/19		20.09.19	Epitheli		West.A	Bovine	0	LD439.2		
	IR/99/20		20.10.14	Epitheli		West.A	Bovine	A	LD488.3		
	IR/99/21		20.06.06	Heart		Kermanshah	Sheep	0	LD212.4		
	IR/99/22		20.11.05	Heart		West.A	Bovine	ND	LD532		
	IR/99/23		20.01/16	Epitheli		Qom	Bovine	Asia1	LD1228		
	IR/99/24		20.01.16	Gingiva		Alborz	Cattle	Asia 1	LD1234/3		
	IR/99/25		20.01.19	Epitheli	ım	Tehran	Cattle	A	LD1235		
	-	25.C R	Results			=	RES	JLTS	E		
			<u>A</u> 5				A-AIRN 				
			POS								
			00			0-ANT10					
			\sim			<u> </u>					
			8			0-ANT10 00M-15					
			POS				O-AP	- JT10			
			2				1	~			
			0				0-6	- JT10			
			00004404400				A-A	IRN			
			8				Ξ				
			2				<u> </u>	VT10 VRN VT10			
		<u> </u>					O-AP				
	Isolate	Se	rotype A	A/GVII	A22/I	R A/IRN/	17 A/TUR/1	A/TUR/11	A/TUR/06		
		Cont	Linner	1	Q	(A05 ^{SIS}	4	(A05)	(A05)		
		Genot	y Lineage			13)	(A05)				
		pe)	(105)				
	Irn 20/21	A-05	FAR-11	0	0	0.13					
	1111 20/21	A-03	TAK-II	U	U	0.13					
	Irn 16/21	A-05	FAR-11	0	0	0.13					
	Irn 2/21	A-05	FAR-11	0	0	0.13	0.11	0.10	0.15		
	I	1.05	EAD 11			0.00	0.07	0.2	0.07		
	Irn 25/21	A-05	FAR-11			0.23	0.07	0.3	0.27		
	Isolate	Sero	type O	O/TUR	O/TUR/07		O/TUR/18		O1 MANISA		
		Genot	Lineage								
			Emeage					-			
		ype									
	Irn	ME-	ANT-10	>1		0.04		>1			
	19/21	SA									

Developing on Early Detection System: Tripattite meeting has been initiated

A tripartite meeting initiated between Iran and Turkey in coordination by EuFMD

- The meeting has the aim to facilitate the development of improved collaboration between Turkey, Iran and Pakistan for the prevention and control of FMD and similar TADs.
- Three meeting have been held since 1st meeting held on April 2020
- Addition to Turkey and Iran, Pakistan has also joined the tripartite meeting

OBJECTIVE

- To exchange information on epidemiological situation and level of implementation of control programmes for FAST* (FMD and Similar TADs) in the participating countries;
- To identify synergies in the control strategies
- To discussion the possible collaboration and mutual support between countries in areas such surveillance, early warning, safe trade, training and diagnosis;
- To define a mechanism to facilitate the regular sharing of risk information from bordering areas related to the occurrence of outbreaks, animal movements, vaccination programme, surveillance results, control measures implementations;
- To identify priority actions in the region according to the EuFMD workplan 2019-2021 and particularly related to risk mapping, risk based surveillance, vaccine and vaccination effectiveness, control strategies and capacity building;

EXPECTED OUTPUTS

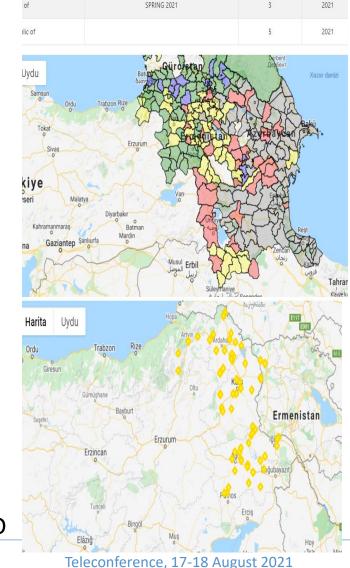
- Definition of activities for strengthened professional collaborations between countries for improved surveillance and control of priority FAST diseases in each country.
- Identification of risk information sharing system for early warning and improved risk based surveillance and control for FAST diseases
- Action plan for capacity building and applied research studies in support to risk based surveillance and control strategies

Developing on Early Detection System: Statement of Intention (SoI) activities

- Addition to Armenia, Azerbaijan, Georgia, Turkey and Russia, Iran and Iraq also were signed SoI; and involved of the activities
- As a principle of agreement;
 - immediate reporting of the FMD outbreaks as well as Monthly reporting
 - sharing information between Sol countries through database and EuFMD
 - Monthly reporting of the level of implementation of the vaccination
 - Planning and Implementing simulation exercise
 - Maintained progress on the national FMD control pathways (PCP-FMD), with improved capacity to assess new risks and monitor current control measures
 - Establishment of advisory group on monitoring and surveillance for FMD for better understanding FMD epidemiology in a region
 - Improved capacity to monitor effectiveness of vaccine and vaccination programmes

Under the principle:

- EuFMD created an effective and functional database system for accessing the data for outbreak and vaccination
- Turkey reports FMD outbreaks immediately as well as recorded into the database system; ecpecting initiated by the other countries
- All vaccination data is accessed into the database system and report to EuFMD



^{3&}lt;sup>rd</sup> Epidemiology and Laboratory Networks Meeting for West Eurasia

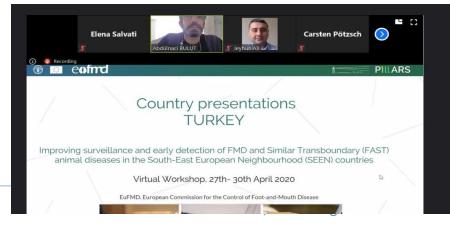
Developing on Early Detection System: Sol and SEEN Meeting and Workshop

- Serial Management and Evaluation meeting, virtual version, has been conducted for <u>SEEN/SOI activities</u>, since 2019
 - FAST Diseases situation report is submitted by focal points of SEEN countries
 - Shared information on Vaccination policy and vaccination coverage and performance
 - A technical group, Group of Vaccination Advice (GVA) created into SEEN countries in order to provide technical support on the vaccine and vaccination production, supplying, policy and assessment of performance
 - A workshop was conducted on monitoring and surveillance of FAST diseases



diseases Virtual workshop on improving surveillance and early detection of FMD and similar TADs in countries of the South-East European Neighbourhood (SEEN)

Kees van Maanen, Veterinary Virologist



Gaps identified

Encountered challenges related to WELNET FMD activities:

- WELNET structure:
- Visions, Objectives and ToRs have been identified very well, however;
- Lack of a specific funding is one of gap for sustainability of the network
- This is the network, but still can not be an able fully an exact member list and membership criteria
- Coordination and collaboration mechanism? Need a strong political commitment and agreement by the MS; for attention and follow up activities, designation of network member and permission for transparently joining of implementation and application
- Although there is a well progress on the launching diagnostic methods, but still have a big gap on the routine testing and reaching to a susceptible cases, sampling and testing of all
- Showing different ranging gaps on the diagnostic methods identified by the capacity assessment conducted by ANSES, need follow the results of the assessment
- There has been good progress on the international suppot particularly by EuFMD. However, this support continue more effective and extension to all the region. And the other international institutions also should be contributed like EuFMD.
- COVID19 impact negatively implemented many activities, particularly
 - Face to face meeting, WS and study
 - Lab training
 - Delaying of some activities such as sample submission and supplying reagents since restriction of costums and travelling, transportation
 - Although communication and some virtual meeting held very well by technological tools, but lossing of motivation is one of the big gap for all activities and implementation

Possible solutions – way forward for the WELNET in 2021-2022

Issues	Solutions	Responsibility	Timeline	Identification of potential assistance
Overcome for poor participation of PTS	2.Encouraging the member countries for	Government of the member countries International Institutions WEA the Regional Advisory Group EC, OIE/FAO; GFTADs; EuFMD	-	Creating a specific budget allocation by contribution from per member and international institution Creating a core group management and monitoring; might be through WELNET or?
Activation of WELNET	· · · · · · · · · · · · · · · · · · ·	Government of the member countries Member Laboratories International Institutions WEA the Regional Advisory Group EC, OIE/FAO; GFTADs; EuFMD	6 moths	Encouraging or supporting a regional OIE reference lab in the WEA A new perspective aproaching risk assessment and disease management in the WEA by EC, since the region is one of highest risk area to Europe
Sample Submission	for expenses of transportation and overcoming IATA rules	Government of the member countries Member Laboratories International Institutions WEA the Regional Advisory Group EC, OIE/FAO; GFTADs; EuFMD	6 months	Evaluate or seeking use of inactivated virüs by LFD Adopted of IATA rule for LFD metodology, if possible
Laboratory training	 Allocation a specific budget, might be through the EuFMD International reference intitutes could be implement more training and contribute 	EC, OIE/FAO; GFTADs; EuFMD European Ref. Labs		Currently ŞAP Institute offers training charge of free for training fee, but travel and DA are needed supporting Need additional donation

3rd Epidemiology and Laboratory Networks Meeting for West Eurasia

PROPOSAL OF WORK PLAN FOR 2021-2022; BASED ON DISCUSSION DURING GROUP WORK

1. Continue participation of PTS

a. WRLFMD or ANSES

b. Encouraging support for participation, call to member countries for strong political commitment, financial support

c. How is effective that lab does not use routine testing and participating by donated kit just before PTS application?

2. Providing laboratory base training on the diagnostic methods

- a. Identification of training manner and type reference with outputs of the assessment survey by ANSES
- b. Supporter institutions? WRLFMD, ANSES, ŞAP Institute, ARRIAH else?
- c. Budget allocation for training expenses as well as travelling

d. Evaluation process after the training; follow up visit for adaptation of the technics in routine in the house lab

3. Continue activities for «Early Detection System»

- a. Continue technical and financial support by EuFMD for SoI and SEEN activities
- b. Encouraging sample submission through the Protocol principles
- c. Extension of sample submission to other endemic countries
- d. Other international or regional donor for financial and technical supporter?

e. What kind of solution can be created for Overcoming with heavy IATA rules for sample transportation? Can be feasible or valid LFD inactivation method?

PROPOSAL OF WORK PLAN FOR 2021-2022; BASED ON DISCUSSION DURING GROUP WORK (2)

4. Continue webinar and evaluation meeting

a. SoI and SEEN activities are a good tool in favour of early detection _ encouraging of continuation and enhancing the activities

b. Extension or creating the similar activities in the remained area of WEA

5. Establishment a network for Molecular epidemiology data in the WEA laboratories (endemic countries)

- need a strong political agreement or SoI to create and implement this networking

6. Ensure on performing of validated sero-surveillance for estimation of NSP prevelance in the vaccinated population

a. Need comprehensive study for evaluation of using current NSP ELISA methods in the population in where it is vaccinated

b. Current NSP ELISA methods were validated in the WS conducted in 2004, but only by naive sera collected from non-vaccinated animal, the sera from vaccinated herds were excluded for validation

c. Can we achieve a study for evaluation of the criteria usage design of sero-surveillance and interpretation and analysis of the results

Thanks for your attention Any questions, comments ?

