



Food and Agriculture
Organization of the
United Nations

eofmd
european commission for the
control of foot-and-mouth disease

European neighbourhood EuFMD Pillar II

Report on significant FAST disease events and information

July–September 2022

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

EuFMD's programme, tools and initiatives

FAST

Foot-and-mouth And
Similar Transboundary
animal diseases

Dt

eufmd digital
transformation

vlearning

eufmd virtual learning
centre

microLearning

eufmd virtual learning

vlc EA

virtual learning centre
for East Africa

Tom

eufmd training
management system

SimExOn

simulation exercises
online

KnowBank

eufmd knowledge bank

GetPrepared

emergency preparedness toolbox

RiskComms

risk communications

SQRA

a method for spatial qualitative
risk analysis applied to fmd.

Pragmatist

prioritization of antigen management
with international surveillance tool

EuFMDiS

european foot-and-mouth disease
spread model

RMT-FAST

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

Vademos

fmd vaccine demand
estimation model

GVS

global vaccine
security

PQv

vaccine
prequalification

PCP

progressive control
pathway

PSO

pcp practitioner
officers

VPP

veterinary
paraprofessionals

PPP

public private
partnership

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



Together against wasting resources, think twice before printing.

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Acronyms and abbreviations

ELISA	Enzyme-linked immunosorbent assay
FAST diseases	Foot-and-mouth and similar transboundary animal diseases
FMD	Foot-and-mouth disease
LR	Large ruminants
LSD	Lumpy Skin Disease
NSP	Non-structural proteins
OIE	World Organization for Animal Health
PCP-FMD	Progressive control pathway for Foot-and-Mouth Disease
PCR	Polymerase chain reaction
PD ₅₀	Protective dose of 50 percent (a measure of vaccine potency)
PPR	Peste des petits ruminants
RVF	Rift Valley fever
SGP	Sheep and Goat Pox
SP	Structural proteins
SR	Small ruminants
WAHIS	World Animal Health Information System

Introduction

The European Commission for the Control of Foot-and-Mouth Disease (EuFMD) risk reduction program in the European neighboring regions of North Africa, Middle East, and South East European Neighborhood is delivered within the Hold-FAST strategy. This strategy continues the focus upon FMD risk reduction and extends the scope of preparedness and risk reduction activities to similar transboundary animal diseases which pose an immediate threat to the EuFMD Member Nations.

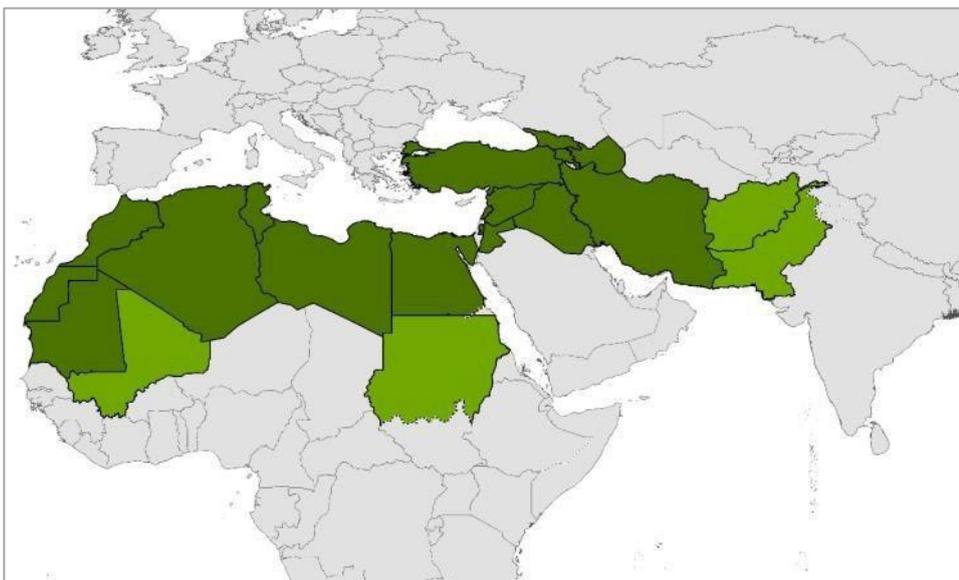
The program focuses on the control of Foot-and-mouth And Similar Transboundary animal diseases (FAST) in the neighboring regions through the improvement of prevention, surveillance, and control. In this context, the FAST quarterly report of significant events provides relevant and regular risk information to risk managers operating in EuFMD Member Nations and neighboring countries.

The constant monitoring of the epidemiological situation together with information on the implementation of control and surveillance strategies increases awareness of major transboundary animal disease threats for Europe and the regions of North Africa, the Middle East, and South East European Neighborhood (SEEN).

The European neighborhood

The neighborhood of the current 39 EuFMD Member Nations is made up by non-EuFMD Members that either have land borders with EuFMD Members, are members of the Mediterranean animal health network (REMESA), or whose animal health status provides an early warning for FAST disease spread to the neighborhood of Europe. The activity of Pillar II includes EuFMD Member Nations in the European neighboring region (Türkiye, Georgia) (Figure 1).

Figure 1. Countries included in the activities of the EuFMD Pillar II



Source: United Nations Geospatial. 2020. Map of the World. Cited 10 November 2022.

www.un.org/geospatial/file/3420/download?token=TUP4yDmF

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

Having land borders with EuFMD Member Nations: Armenia, Azerbaijan, the Islamic Republic of Iran, Iraq, the Syrian Arab Republic, Lebanon, Palestine, Jordan, and Egypt.

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

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

The boundaries and names shown and the designations used on these map(s) do not imply the expression of any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Significant events and information

The data reported to the World Organization for Animal Health (WOAH), and mentioned in this publication, have been sourced from the World Animal Health Information System (WAHIS) and refer to the period between 1st July and 31st September 2022. Other information has been obtained through the EuFMD activities and networks in the European neighborhood. Information referring to the period before 1st July might be reported when relevant or not previously reported.

Foot-and-mouth disease (FMD)

Middle East

Country	FMD Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Palestine	There have been 145 FMD outbreaks so far in 2022 (most at the start of the year), eight of the outbreaks (340 animals affected) were recorded in June.	Serotype O (O/ME-SA/PanAsia-2 ^{ANT-10} was reported in Dec 2021).	-	About 30 000 cattle are vaccinated twice a year-every six months in dairy farms with a coverage of more than 90 percent. Fattening calves are vaccinated on owners request About 9 000 000 sheep and goats are normally vaccinated once per year, although mass vaccination of SR has not been done in the last two years. A total of 577 995 animals have been vaccinated (A and O) since the start of June 2022.	-	Data shared by the country
Jordan	-	-	Active surveillance. Post-vaccination monitoring studies are planned.	Vaccination is provided free of charge. A mass vaccination campaign (O1/Campos vaccine strain) of 3 million doses is planned.	-	Data shared by the country
Syria	-	-	Passive and active surveillance. Annual sero-surveillance post-vaccination.	FMD vaccination is obligatory and free of charge. The vaccine used is the trivalent inactive O PanAsia2, A Iran05 and Asia 1 (6PD ₅₀). Cattle are vaccinated twice per year, sheep once per year. Mass vaccination is carried out in risk areas and borders. Emergency ring vaccination occurs as part of the rapid response plan.	-	Data shared by the country

Lebanon	-	-	-	A vaccination campaign is planned to target 76 654 dairy cattle (90 percent total population) and 614 055 SR (63 percent).	-	Data shared by the country
Egypt	From April 2022 there were an increasing number of FMD notifications. There were nine outbreaks between July – September.	A/AFRICA/G-IV toptotype	A post-vaccination monitoring study is ongoing.	From July 2022, vaccination campaigns are ongoing. Vaccination coverage in 2022 for LR is 54.3 percent and for SR is 32 percent. A mass vaccination campaign has been applied in the period from 14 July to 14 September. 2 148 449 large ruminants and 861 347 small ruminants were vaccinated. Vaccine used is a bivalent vaccine (mutated A/Africa/G-IV and A/Euro-S America) and used during the second campaign in July, side by side with the polyvalent vaccine.	-	ProMed: 20221002.8705896 Data shared by the country

North Africa

Country	FMD Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Sudan	-	PCP stage 2*.	-	Vaccination is mainly practiced on large-scale dairy farms. The vaccine used is purified oil-based inactivated FMD vaccine – O, A & SAT 2. A local vaccine was also developed (O, A & SAT 2).	-	Data shared by the country.

South East European Neighborhood (SEEN)

Country	FMD Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Türkiye	19 FMD outbreaks were recorded in this quarter.	Most outbreaks are due to O/PanAsia-2 ^{Qom15} . Only one virus was characterized as the O/ PanAsia-2 ^{ANT-10} .	18 000 LR and 7 280 SR were clinically examined for FMD in Thrace region under the Thrace RBSP. 1 199 sera were collected in European side of Istanbul and tested by NSP ELISA. Clinical surveillance was achieved in 320 epi-units out of 394 in the buffer zone area. In total of 24 320 animals were examined in this surveillance for FMD. >80 percent antibody level was calculated in the population against FMDV in framework national SP surveillance.	By September, the Autumn vaccination campaign has been started. A quadrivalent vaccine (O Panasia2, A/Asia/GVII; A/Asia/IRAN05 and Asia1/SINDH08) with at least 6PD ₅₀ is used for vaccination.		Data shared by the country, National Database system, VETBIS.
Azerbaijan	-	-	Passive surveillance.	216 365 cattle and 557 499 small ruminants were vaccinated in July-September 2022. Total for the spring vaccination campaign: 2 210 718 cattle and 3 439 732 small ruminants were vaccinated.	-	Data shared by the country-National Veterinary Authority
Armenia	-	-	Passive surveillance. Plan to conduct active surveillance.	228 461 large ruminants and 100 592 small ruminants were vaccinated.	-	Data shared by the country – Figures are for the period 1 June – 31 August 2022

Georgia	-	-	NSP sero-surveillance has been planned and submitted to the regions for implementation. Totally 4 500 samples are planned to be collected for NSP.	Spring prophylactic vaccination has finished. During the reporting period 714 086 animals were vaccinated: 187 567 LR and 526 421 SR.	-	Data shared by the country
Iraq	1 024 FMD cases in sheep, 29 in goats, 573 in cattle, and 81 in buffalo have been notified to the Veterinary Directorate so far in 2022. A total of 50 clinical samples were submitted to the CVL with 32 percent positive. Confirmed clinical cases are in Basrah, Diyala and Ninevah, with unconfirmed clinical disease in Al-Anbar.	-	-	The vaccine was unavailable, so no vaccination has been conducted in 2022. The last vaccination campaign took place in June 2021.	Challenges: - Uncontrolled animal movements between governates or national borders, - lack of animal tagging system, - drought	Data shared by the country (11 th September 22)
Iran (Islamic Republic of Iran)	Eight outbreaks were reported in LR and 4 in SR this quarter.	O/PanAsia-2 ^{Ant-10} A/Iran-05 ^{Far-11}	Passive surveillance and risk based active surveillance and enhanced active surveillance is ongoing. Post vaccination monitoring of FMD vaccines, based on public-private partnership, is completed.	2 210 716 LR and 23 859 055 SR were vaccinated against FMD with trivalent vaccines (O, A, Asia1) which were either locally produced or imported. Vaccination is free of charge for villagers and nomadic farmers.	Movement of animals without history of appropriate vaccination and animals in incubation period of FMD are the most important risk of disease occurrence.	Data shared by the country

Peste des petits ruminants (PPR)

Middle East

Country	PPR Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Lebanon	-	-	-	A PPR vaccination campaign is planned to be carried out twice per year.	-	Data shared by the country
Syria	-	-	Passive surveillance. Active surveillance – annual sero-surveillance for post-vaccination monitoring.	Vaccination of SR is obligatory and free of charge. Vaccine used is a freeze-dried attenuated PPR vaccine – Nig 75/1 strain. So far in 2022, 947 793 SR vaccinated.	-	Data shared by the country
Jordan	-	-	-	PPR vaccine used in SR is attenuated homologous live vaccine (strain PPR Nig 75/1). SR are vaccinated at age three months and then annually.	-	Data shared by the country
Egypt	One confirmed PPR outbreak in August 2022.	-	Active clinical surveillance is ongoing	A live attenuated PPR virus vaccine is used (Nig 75/1) – produced locally. A national PPR vaccination campaign is due to begin in October 2022.	-	Data shared by the country

North Africa

Country	PPR Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Algeria	Up to 22th Jul 2022, there were a total of nine outbreaks of PPR in the provinces of Tebessa (3), El Bayadh (4), Laghouat (1) and Medea (1).					ProMed: 22th Jul 2022 WAHIS (woah.org)-57458

South East European Neighborhood

Country	PPR Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Türkiye	No outbreaks of PPR were recorded in this quarter	A risk-based control strategy for Thrace has been developed to aim for zonal freedom for PPR.	In total 7 245 SR were clinically examined for PPR in August, in low-risk areas and were found negative clinically.	Newborn SR were vaccinated in Anatolia as preventive vaccination; ring vaccination was used as outbreak response. Due to the preparation for zonal freedom, no vaccination against PPR is conducted in Thrace.	-	Data shared by the country, National Database system, VETBIS.
Georgia	-	-	-	Georgia has completed vaccination against PPR in the spring. There is no plan to do any more PPR vaccination.	-	Data shared by the country
Azerbaijan	-	-	Passive and active surveillance for disease free status.	No vaccination applied.	-	Data shared by the country
Armenia	-	-	Passive surveillance and data collection for preparation of the dossier for disease free status.	No vaccination applied.	-	Data shared by the country – figures are for the period 01 June – 31 August 2022.
Iraq	11 outbreaks reported in sheep (813 cases, 145 deaths)	-	-	Vaccination started in July as outbreak response, 2 096 200 sheep and goats vaccinated, except Kurdistan and Dhiqar.	-	Data shared by the country
Iran (Islamic Republic of Iran)	13 outbreaks were reported in this quarter.	All sequenced circulating viruses were lineage 4.	Passive surveillance and risk based active surveillance is ongoing. Post vaccination evaluation was performed on 1 600 samples in Iran and results are being analysed.	2 128 669 sheep and goats were vaccinated to increase the coverage and respond to PPR outbreaks.	Most important risk is outbreaks in animals without	Data shared by the country

			Another PVE was conducted, and lab results will be provided as a cross-sectional survey after completion of vaccination in 100 Epi Units across of country.		history of vaccination.	
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Lumpy skin disease (LSD)

Middle East

Country	LSD Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Sudan	One outbreak of LSD (identified clinically) was reported in July 2022 in North Kordofan.	-	Passive surveillance	Reactive vaccination is performed in cattle.		Data shared by the country
Pakistan	LSD has killed more than 100 000 animals, with the disease circulating in Punjab and Sindh for more than six months.			The LSD vaccination will be applied, due to the number of cases in the country.		ProMed: 15th Jul 2022

South East European Neighborhood (SEEN)

Country	LSD Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Azerbaijan	-	-	Passive surveillance	2 013 273 cattle were vaccinated in July-September 2022.	-	Data shared by the country
Armenia	-	-	Passive surveillance	222 089 LR were vaccinated in high-risk areas.	-	Data shared by the country – figures are for the period 1st June – 31th August 2022
Türkiye	No outbreaks were reported in Anatolia in	A national strategy has been conducted	900 and 2 700 LR were clinically examined for	Annual mass vaccination, with sheep and goat pox vaccine used in the Anatolia	-	Data shared by the country,

	this period.	for gaining free status for LSD in Türkiye . Additionally, a project has been implemented for surveillance and vaccination as well as to improve capacity.	FMD in August (in high risk and in low-risk areas respectively) – all were negative.	region and the Neethling vaccine in the Thrace region.		VETBIS
Georgia	-	-	Passive surveillance is in place.	42 994 animals were vaccinated in the high-risk area.	-	National Food Agency.
Iraq	Seven outbreaks reported, one in Diqar (6 cases) and six in Diyala (8 cases).	-	-	145 524 cattle and buffaloes vaccinated in all governorates (preventive and as outbreak response), except in Kurdistan and Dhiqar.	-	Data shared by the country
Iran (Islamic Republic of Iran)	Eight reported outbreaks in cattle in this quarter.	-	Active and passive surveillance with risk-based surveillance in hotspot areas	79 735 LR were vaccinated with a homologous vaccine (Neethling vaccine). Vaccination is free of charge for villagers and nomadic farmers, while payment is required for animals of large-scale dairy farms.	-	Data shared by the country

Rift Valley fever (RVF)

North Africa

Country	RVF Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Mauritania	The number of livestock infected with RVF was 231 in September 2022, distributed over several states, affecting camels and previously sheep. Human cases have also been also identified.	-	-	-	-	ProMed: 20220928.8705845 WAHIS (woah.org)-54962

Sheep and goat pox (SGP)

Middle East

Country	SGP Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Sudan	Two outbreaks of SGP (identified clinically) have been reported In July 2022.	-	Passive surveillance.	Reactive vaccination is performed in SR.	-	Data shared by the country

South East European Neighborhood (SEEN)

Country	SGP Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Azerbaijan	-	-	Passive surveillance	39 358 SR vaccinated in July-September 2022.	-	Data shared by the country
Türkiye	48 outbreaks reported.	-	In total 7 245 SR were clinically examined for SGP in August, in low-risk areas and were found negative clinically.	All SR are vaccinated in Thrace and in 13 high-risk provinces of Anatolia, and additional vaccination occurs in response to outbreaks in Anatolia	-	Data shared by the country
Iraq	Eight outbreaks reported in districts of Diyala (3), Alanbar (1), Kirkuk (2), AlBasra (1) and AlMuthana (1)	-	-	-	-	Data shared by the country

Summary

Foot and mouth disease

Foot and mouth disease continues to circulate in the Middle East in Palestine, Jordan and Iraq, which is likely continuation of the spread of lineage O/ME-SA/PanAsia-2^{ANT-10}.

Outbreaks were reported in Egypt, reportedly due to serotype A (A/AFRICA/G-IV), for which it has been reported that vaccines used in the country have been modified to confer protection against these strains.

In the South East European neighbourhood, O/ME-SA/PanAsia-2^{Qom15} continues to circulate in Anatolia, Türkiye, with one outbreak detected and most outbreaks due to O/PanAsia-2^{Qom15} and Iran also reported outbreaks due to O/PanAsia-2^{Ant-10} and A/Iran-05^{Far-11}.

Surveillance data needs to be improved in many countries, especially in the Middle East and North Africa. The collection of samples from outbreaks and their shipment to FAO/WOAH Reference Laboratories is particularly important, so that phylogenetic and vaccine matching analysis can be performed. This can assist in providing evidence on the origin of the virus and on the efficacy of vaccines. There is a need to ensure that vaccines in use are protective against the correct circulating strains.

Peste des petits ruminants

Outbreaks were reported in Algeria and Egypt this quarter, the lineage not described. Egypt is due to start a mass vaccination campaign in October 2022, with a Nig 75/1 live attenuated vaccine.

Lebanon, Syrian Arab Republic, Jordan, Türkiye (Anatolia), and Georgia all reported vaccination against PPR in 2022.

Lumpy skin disease

Outbreaks were reported in Sudan and Pakistan this quarter. Vaccination was reported in Sudan, Armenia, Azerbaijan, Türkiye, and Georgia.

Rift Valley Fever

Mauritania reported outbreaks of Rift Valley fever this quarter in camels.

Sheep and goat pox

Sudan and Türkiye reported outbreaks of sheep/goat pox this quarter. Azerbaijan, Türkiye and Sudan report vaccination against sheep and goat pox.

EuFMD Committees

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

Hold-FAST tools

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

United Nations Sustainable Development Goals (UN-SDGs)

EuFMD's programme has a main focus on



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