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control of foot-and-mouth disease

European neighborhood

EuFMD Pillar II

Report on significant FAST disease events and information

January - March 2021

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

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Acronyms and abbreviations

ADNS	Animal Disease Notification System
BEF	Bovine ephemeral fever
ELISA	Enzyme-linked immunosorbent assay
FAST diseases	Foot-and-mouth and similar transboundary animal diseases
FMD	Foot-and-mouth disease
GF-TADs	Global Framework for the Progressive Control of Transboundary Animal Diseases
LSD	Lumpy Skin Disease
NSP	Non-structural proteins
OIE	World Organisation 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
REMESA	Mediterranean animal health network
RVF	Rift Valley fever
SGP	Sheep and Goat Pox
SOI	Statement of Intentions between Transcaucasia and neighboring countries
SP	Structural proteins
TADInfo	Transboundary Animal Disease Information System (Egypt)
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.

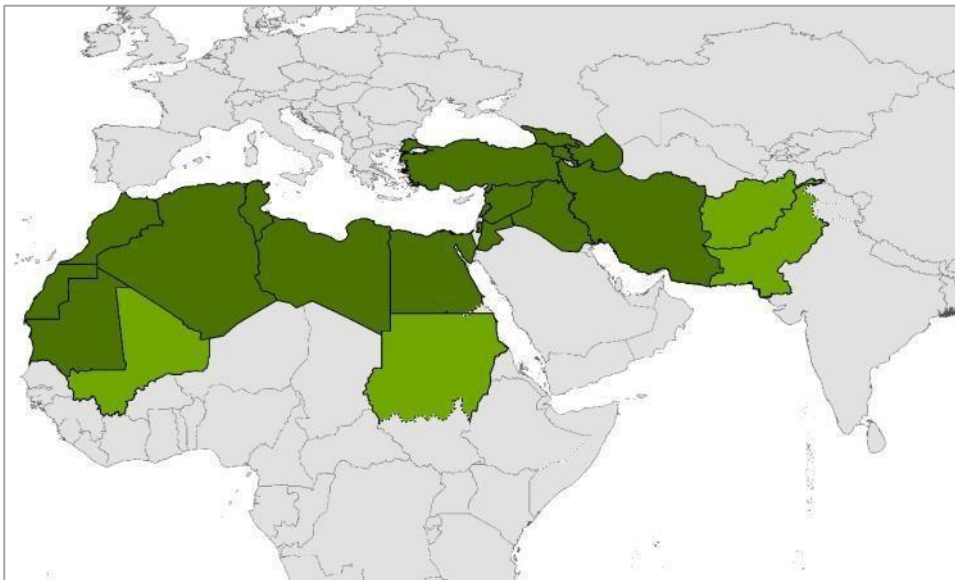
The program focuses on the control of foot-and-mouth and similar transboundary animal diseases (FAST) in the neighboring regions through the improvement of prevention, surveillance, and control. In this context, the FAST quarterly report of significant events provides relevant and regular risk information 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.

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 (Turkey, Georgia) (Figure 1).

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



EuFMD Member Nations in European neighboring region: Turkey, 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.

Source: Adapted from United Nations World map, May 2019.

Significant events and information

The data reported to the World Organization for Animal Health (OIE), and mentioned in this publication, have been sourced from the World Animal Health Information System (WAHIS) and refer to the period between 1st January and 31st March 2021. Other information has been obtained through the EuFMD activities and networks in the European neighborhood. Information referring to the period before 1st January might be reported when relevant.

Foot-and-mouth disease (FMD)

Middle East

Egypt

About 3.03 million large and small ruminants were vaccinated against FMD within the context of a large campaign launched on 6 February 2021 by the Egyptian veterinary services. Locally produced vaccines were used and modified by adding the serotype A lineage (A/AFRICA/G-IV), as a response to the outbreak reported in October 2020 caused by this lineage (source: GOVS).

Jordan

During the vaccination campaign in the first quarter of 2021, 7% of sheep, 6.8% of goats and 20.2% of cattle were vaccinated (source: national veterinary authority).

North Africa

Libya

The National Centre for Animal Health (NCAH) has recently launched a FMD mass vaccination campaign targeting all cattle populations (about 250,000 doses are available), and currently about ninety-four thousand (94,000) doses have been distributed to forty-three animal health offices in the East, West, and South of Libya. In parallel, blood samples are being collected to be tested against FMD and other transboundary animal diseases.

A post-vaccination monitoring study has also been designed and conducted. A total of 8 herds have been selected and blood samples are being collected according to the timetable indicated in the design (source: NCAH).

South East European Neighborhood (SEEN)

Iran (Islamic Republic of)

The strains of FMD isolated in the IS of Iran were similar to the previous trimester, with the predominant sub-lineages being O PanAsia-2/ANT10 and A Asia/Iran-05-Far-11. Serotype Asia-1 has also been isolated, and, with the start of grazing movements in spring, the risk of FMD outbreaks is expected to increase in the coming months.

According to the Iran Veterinary Organization (IVO), between 1st January and 1st April 2021, 1,405,493 large ruminants and 16,009,422 small ruminants were vaccinated against FMD with trivalent vaccines (O, A, Asia1), which were either locally produced or imported. The vaccination of nomadic animals was done free of charge (source: national veterinary authority, reported by EuFMD national focal points).

Transcaucasus countries: Armenia, Azerbaijan, and Georgia

The 2021 spring vaccination campaigns are currently underway in Georgia, Azerbaijan, and Armenia, following a risk-based approach according to their respective national FMD control strategies.

Georgia has conducted risk-based vaccination since 2017. The entire population of cattle and small ruminants of eastern Georgia is considered at high risk of FMD and therefore regularly vaccinated. In western Georgia, villages are targeted based on their proximity to live animal markets, migrating animals, and borders with Turkey and non-controlled territories.

Azerbaijan plans to conduct a post-vaccination serological survey for large and small ruminants after the spring vaccination campaign (source: national veterinary authority, reported by EuFMD national focal points).

Turkey

Turkey reported 26 outbreaks in cattle (n=19) and small ruminants (7). FMD is endemic in Anatolia and the identified sub-lineages are O PanAsia-2/Qom15 and O PanAsia-2/ANT10 (2 outbreaks in 2020) as reported in the previous FAST report. Both are well matched to the vaccines currently in use. Serotypes A and Asia1 have not been detected since January 2018 and July 2015, respectively.

The Thrace region has been free from FMD with vaccination since May 2010 (source: national veterinary authority, reported by EuFMD national focal points).

Peste des petits ruminants (PPR)

Middle East

Jordan

During the vaccination campaign in the first quarter of 2021, 8.3% of sheep and 6.7% of goats were vaccinated against PPR (source: national veterinary authority).

North Africa

Algeria

The last PPR occurrence was reported in March 2020 (lineage IV) (source: OIE,2021).

A new outbreak was reported in Guelma Wilaya (north-west), in February 2021, affecting 35 animals, both sheep and goats (19 deaths). In addition to the mass vaccination programs implemented since January 2020 and October 2020, ring vaccination was also carried out (12698 small ruminants were vaccinated) (source: OIE,2021).

South East European Neighborhood

Georgia

Mass vaccinations have continued with 53,000 doses administered in the reporting quarter (source: national veterinary authority, reported by EuFMD national focal points).

Iran (Islamic Republic of)

The incidence of PPR has decreased during the last year. An increased production of vaccines by national companies is reported. In the reporting quarter, 85 outbreaks were reported. Vaccination of small ruminants was conducted in high-risk areas with a history of the disease, and in domestic animals adjacent to wildlife. The IR of Iran intends to vaccinate the whole population of small ruminants in the country (source: national veterinary authority, reported by EuFMD national focal points).

Turkey

Turkey reported the occurrence of 11 PPR outbreaks during the reporting period.

The control policy includes vaccination of all newborn and unvaccinated adults and ring vaccination as a response to the outbreak. No movements of unvaccinated animals are allowed in the country. In the Thrace region, all small ruminants have been vaccinated since 2013 and, since then, PPR has not been clinically detected. In 2021 Turkey plans to achieve the OIE status of freedom with vaccination for the Thrace region.

(source: national veterinary authority, reported by EuFMD national focal points).

Rift Valley fever (RVF)

Middle East

Egypt

About 2.9 million large and small ruminants have been vaccinated against RVF within the context of a large campaign launched on 6 February 2021 by the Egyptian veterinary services with a locally produced vaccine (Source: GOVS).

Lumpy skin disease

Middle East

Egypt

A mass vaccination campaign for the large ruminant population was launched at the end of the first quarter 2021, using the Neethling vaccine, which produced locally and used for the first time in the country. (Source: GOVS)

Jordan

During the vaccination campaign in the first quarter of 2021, 0.3% of cattle were vaccinated against Lumpy Skin Disease using heterologous vaccine, attenuated Gorgan goatpox strain (source: national veterinary authority).

South East European Neighborhood

Armenia, Azerbaijan, and Georgia

Vaccination campaigns are planned to start in late spring (source: national veterinar authority, reported by EuFMD national focal points).

Iran (Islamic Republic of Iran)

In this quarter, 739331 bovines were vaccinated with a heterologous vaccine (RM65 and Gorgan goat pox) and 225837 bovines were vaccinated with a homologous vaccine (Neethling). Vaccination is free of charge for villagers and nomadic farmers, while payment is required for animals of large-scale dairy farms. A homologous vaccine produced in Iran will soon be used.

The number of cases decreased in 2020 compared to 2019. This could be due to less favorable climatic conditions for the vectors (source: national veterinary authority, reported by EuFMD national focal points).

Turkey

One outbreak was reported in the Tokat province of Anatolia in February.

Mass vaccination campaigns for the large ruminant population are carried out annually heterologous vaccine (3-4 time dose) in Anatolia and homologous vaccine (Neethling vaccine) in the Thrace region (source: national veterinary authority, reported by EuFMD national focal points).

Sheep and goat pox (SGP)

Middle East

Jordan

During the vaccination campaign in the first quarter of 2021, 5.9% of sheep and 5.1% of goats were vaccinated against sheep and goat pox (source: national veterinary authority).

North Africa

Morocco

In January and February 2021, 37 outbreaks were reported in six regions (12 provinces) with 152 cases and 53 deaths) (source: ONSSA 2021).

No further outbreaks from Tunisia and Algeria were reported.

South East European Neighborhood (SEEN)

Iran (Islamic Republic of Iran)

In this quarter, 7913286 sheep and 2799019 goats were vaccinated, using locally produced vaccines with RM65 and Gorgan strains for sheep and goats respectively.

Vaccination is free of charge and conducted risk-based and as a response to outbreaks (source: national veterinary authority, reported by EuFMD national focal points).

Turkey

No outbreaks have been reported in Thrace since 2016. Control measures include vaccination of all small ruminants in Thrace and vaccination in response to outbreaks in Anatolia (the vaccination program is maintained in place for two years after the outbreak) (source: national veterinary authority, reported by EuFMD national focal points).

Bovine ephemeral fever (BEF)

South East European Neighborhood

Iran (Islamic Republic of)

In this quarter, 2952 cattle were vaccinated against bovine ephemeral fever with an inactivated imported vaccine. No outbreaks of BEF were reported (source: national veterinary authority, reported by EuFMD national focal points).

Conclusions

Foot and mouth disease

In Turkey, all reported outbreaks are due to serotype O. Further developments in the southeast European neighborhood will need special attention, also with regards to the upsurge in sub-lineage A Iran-05 Far-11 outbreaks in the IR of Iran.

Considering the incursion of A/AFRICA/GIV in Egypt, (Oct 2020) the collection of samples from outbreaks and their shipment to the FAO/OIE Reference Laboratory 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.

Peste des petits ruminants

Outbreaks were reported from Turkish Anatolia, the Islamic Republic of Iran and Georgia. The countries are implementing a mass vaccination campaign.

Rift Valley Fever

No outbreaks reported in the European neighbourhood. Egypt reported that a regular mass vaccination against RVF is conducted every six months and no outbreaks have been reported since 2003.

Lumpy skin disease

The disease is reported in Turkey with a small number of outbreaks in Anatolia and in the Islamic Republic of Iran.

A large scale vaccination campaign is currently under way in Egypt, using locally produced Neethling vaccine. This vaccine is being used for the first time in the country with the possibility to conduct field effectiveness studies.

Sheep and goat pox

The number of outbreaks has increased compared to the previous quarter in the South East European Neighborhood (Turkish Anatolia, Islamic Republic of Iran)

Bovine ephemeral fever

Vaccination campaigns have been carried out in the Islamic Republic of Iran and no outbreaks have been reported to date.

Table 1. Summary of significant events (first quarter 2021)

Disease	Country	Date	Outbreak	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
FMD	Egypt	6/2/2021		The genotype A/AFRICA/G-IV was reported in October 2020 and the vaccine was modified accordingly		About 3.03 million large and small ruminants were vaccinated against FMD	--	Data shared by the country
	Libya	March 2021	.		--	FMD mass vaccination campaign targeting all cattle populations (about 250,000 doses are available)		Data shared by the country
	Jordan	2021				Ongoing mass vaccination campaigns targeting LR & SR		Data shared by the country
	Turkey (Anatolia)	Jan-Mar 2021	26 outbreaks (7 in small ruminants, 19 in cattle) reported in Anatolia in the first quarter of 2021, all were due to serotype O. No outbreaks in provinces bordering Georgia, Armenia, Azerbaijan, and Iran.	Serotype O endemic in Anatolia (sublineage O/PanAsia-2/Qom15)	Clinical active surveillance is conducted in 8 provinces bordering with Georgia, Armenia, Azerbaijan and Iran	Spring preventive vaccinations started in mid-February, and are expected to finish on 10 th May. According to national risk assessment, vaccinations started in East and Central Anatolia. The campaign targets only large ruminants in Anatolia and both, large and small ruminants in Thrace, including a booster vaccination for primo-vaccinates. Min. 6PD50 vaccines are used for preventive and 10PD50 for emergency vaccination and in the surveillance zone for all susceptible species.	Due to the current FMD outbreak and lack of vaccination in Iran, there is an increased risk of virus incursion.	Data shared by the country, National Database system, VETBIS
	Armenia	Jan-Mar 2021	-	-	-	404174 LR were vaccinated with vaccines A Iran05, A G-VII, O PanAsia2, Asia-1 Sidnh08	-	Data shared by the country
	Azerbaijan	Jan-Mar 2021	--	--	--	1270952 bovines and 180 small ruminants were vaccinated in January-March. Vaccine coverage is 56,5% for bovines and 0,3% for small ruminants	--	Data shared by the country
	Jordan	Jan-Mar 2021	-	-	-	7% of sheep, 6.8% of goats and 20.2% of cattle were vaccinated	-	Data shared by the country

Disease	Country	Date	Outbreak	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
FMD	Georgia	Jan-Mar 2021	N/A	N/A	N/A	117 576 LR 39 769 SR	N/A	N/A
	Iran (Islamic Republic of)	Jan-Mar 2021	66 outbreaks in small ruminants and 103 outbreaks in large ruminants	Circulating lineages: A/ASIA/Iran 05; O/ME-SA/PanAsia-2; Asia1/ASIA/Sindh-08	Passive surveillance	1405493 large ruminants and 16009422 small ruminants were vaccinated with tetravalent or pentavalent vaccines (O, A, Asia1) locally produced or imported	Risk increases with grazing movements in spring	Data shared by the country
	Jordan	Jan-Mar 2021	-	-	-	8.3% of sheep and 6.7% of goats were vaccinated	-	Data shared by the country
PPR	Algeria	2021	outbreak was reported in february 2021	35 cases in both Sheep and Goats (19 deaths) in Guelma wilaya (north-west)	--	22 million animals (70% vaccination coverage) vaccinated. Ongoing vaccination round since October 2020. Ring vaccination around the reported outbreak was implemented	--	OIE; data shared by the country
	Tunisia	2021		--	--	No vaccination	--	--

Disease	Country	Date	Outbreak	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
PPR	Turkey (Anatolia)	Jan-Mar 2021	11 outbreaks recorded in this quarter; no outbreaks in provinces bordering with Georgia, Armenia, Azerbaijan and Iran	--	Sero-surveillance is currently conducted for estimation of antibody levels and evaluation of immunity in the population.	Small ruminants have been vaccinated since 2016; ring vaccination used as outbreak response. Due to preparation for zonal freedom, no vaccination against PPR is conducted in Thrace.	A risk-based strategic plan for Thrace has been developed to aim for zonal freedom.	Data shared by the country, VETBIS
	Iran (Islamic Republic of)	Jan-Mar 2021	85 outbreaks in small ruminants (domestic and wildlife)	all sequenced circulating viruses were lineage 4	Passive surveillance	10579898 sheep and goats were vaccinated	All the epiunits adjacent to wildlife were vaccinated	Data shared by the country
	Armenia	Jan-Mar 2021	-	-	-	-	-	Data shared by the country
	Azerbaijan	Jan-Mar 2021	--	--	--	-	--	Data shared by the country
	Georgia	Jan-Mar 2021	--	--	--	52 8824 SR	-	N/A
RVF	Mauritania	2021	No further events were reported since November 2020	--		--	--	
	Egypt	2021	--	--		About 2.9 million large and--small ruminants have been vaccinated against RVF		Data shared by the country

Disease	Country	Date	Outbreak	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
LSD	Egypt	2021		--	--	--	mass vaccination campaign is ongoing	Data shared by the country
	Turkey (Anatolia)	Jan-Mar 2021	1 outbreak in Tokat provinces (Anatolia) in February.	--	--	Annual mass vaccination, with a 3-4 time dose sheep and goat pox vaccine used in Anatolia region. Neethling vaccine is used in Thrace region.	--	Data shared by the country, VETBIS
	Iran (Islamic Republic of)	Jan-Mar 2021	8 outbreaks in cattle	--	Passive surveillance	739331 bovines vaccinated by heterologous vaccine and 225837 bovines vaccinated by homologous vaccine	--	Data shared by the country
	Armenia	Jan-Mar 2021	-	-	-	-	-	Data shared by the country
	Azerbaijan	Jan-Mar 2021	--	--	--	-	--	Data shared by the country
	Georgia	Jan-Mar 2021	--	--	--	18 156 LR	-	N/A
	Jordan	Jan-March 2021	-	-	-	0.3% of cattle were vaccinated	-	Data shared by the country

Disease	Country	Date	Outbreak	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
SGP	Turkey (Anatolia)	Jan-Mar 2021	82 outbreaks	--	--	All small ruminants are vaccinated in Thrace, vaccinated in response to outbreaks in Anatolia	--	Data shared by the country
	Iran (Islamic Republic of)	Jan-Mar 2021	31 outbreaks of goat pox and 159 outbreaks of sheep pox	--	Passive surveillance	7913286 sheep and 2799019 goats have been vaccinated using a risk-based approach	outbreaks are especially found in unvaccinated animals	Data shared by the country
	Armenia	Jan-Mar 2021	-	-	-	-	-	Data shared by the country
	Georgia	Jan-Mar 2021	-	-	-	-	-	Data shared by the country
	Azerbaijan	Jan-Mar 2021	--	--	--	-	--	Data shared by the country
	Jordan	Jan-Mar 2021	-	-	-	5.9% of sheep and 5.1% of goats were vaccinated	-	Data shared by the country
BEF	Armenia	Jan-Mar 2021	-	-	-	-	-	Data shared by the country
	Georgia	Jan-Mar 2021	-	-	-	-	-	Data shared by the country
	Iran (Islamic Republic of)	Jan-Mar 2021	0		Passive surveillance	2952 cattle vaccinated between January and April 2021	--	Data shared by the country



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