



Food and Agriculture  
Organization of the  
United Nations



# European neighborhood

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## Report on significant FAST diseases events and information

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January-March 2023

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EuFMD Pillar II

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

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Funded by  
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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 <sub>50</sub>	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.

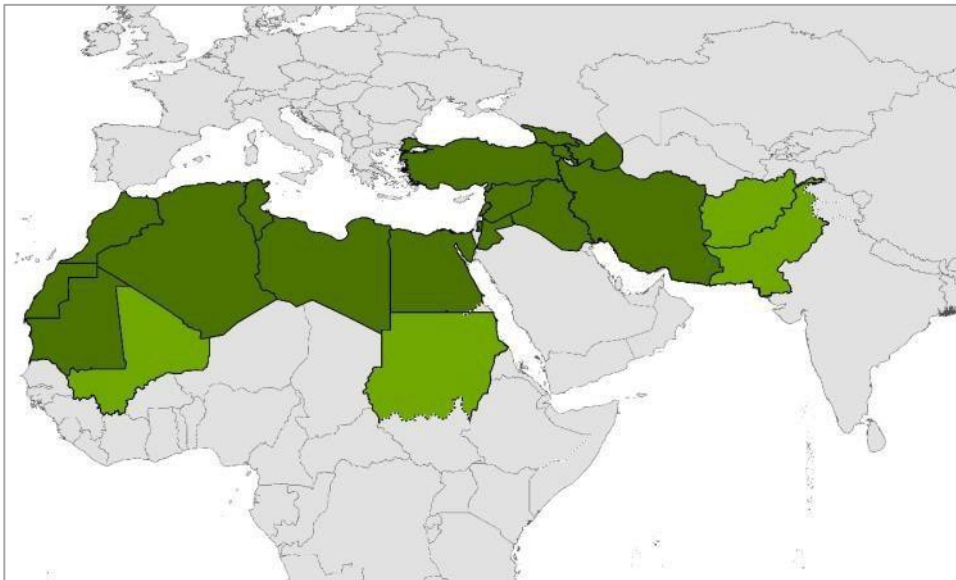
The program focuses on the control of Foot-and-mouth And Similar Transboundary animal diseases (FAST) in the neighboring regions through the improvement of prevention, surveillance, and control. In this context, the FAST quarterly report of significant events provides relevant and regular risk information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

[www.un.org/geospatial/file/3420/download?token=TUP4yDmF](http://www.un.org/geospatial/file/3420/download?token=TUP4yDmF)

*EuFMD Member Nations in European neighboring region: Republic of 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 1 January and 31 March 2023. Other information has been obtained through the EuFMD activities and networks in the European neighborhood. Information referring to the period before 1 January 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
Egypt	There have been 8 outbreaks this quarter.	-	-	A vaccination campaign started on 4 March. So far, 2 044 556 cattle and buffalo, and 728 545 sheep and goats have been vaccinated against FMD.	-	Data shared by the country.
Jordan	A total of 10 963 cases of FMD have been reported in cattle, in Dhlail, Zarqa Governorate	SAT2	-	Vaccination has been performed with a SAT2/Eritrea-containing vaccine outside of a 5 km radius from the outbreak and in a 10 km radius surrounding area. In addition, 70 000 heads were vaccinated twice with a three-week interval in the Northern governorates.	-	<a href="#">WAHIS</a>
Lebanon	-	-	A post-vaccination monitoring study is underway, to be concluded in September.	The first phase of the vaccination campaign for FMD in 2023 has begun, in SR and LR. The second phase shall take place after six months and will include a booster dose for LR only.	-	Data shared by the country.
Palestine	Two cases of FMD in suspected animals.	Serotype O	Testing of 28 samples from suspected cases in SR (in Bethlehem district) and two samples from LR. Only two cases were positive for FMD serotype O.	95 percent of LR herds and 80 percent of SR flocks were recently vaccinated with Boehringer vaccine against FMD serotypes O and A.	-	Data shared by the country.

## North Africa

Country	FMD Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Libya	There were 15 outbreaks in two sites since the start of the year, up to the end of March 2023. The outbreaks are ongoing.	Blood samples were collected during the investigation and were positive on the NSP test and gave a positive result in the SP test for serotype O. Samples were submitted to IZSLER using FTA cards and confirmed positive to FMD topotype O/EA-3	-	Vaccination is underway.	-	<a href="#">WAHIS</a> Data shared by the country.

## South East European Neighborhood (SEEN)

Country	FMD Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Republic of Türkiye	35 FMD outbreaks were recorded in this quarter.	SAT2 (first case was identified in March 23). Six outbreaks were due to FMDV SAT2/XIV (all in East Anatolia), and 29 due to serotype O (28: O/PanAsia-2 <sup>Qom15</sup> , and 1: O/PanAsia-2 <sup>ANT</sup> )	In this quarter: 18 000 LR and 7 152 SR were clinically examined for FMD in Thrace region under the Thrace RBSP. 1 199 sera were collected from the European side of Istanbul and tested by NSP ELISA.  Clinical surveillance was achieved in 372 epi-units out of 394 in the buffer zone area. A total of 28 342 animals were examined for FMD surveillance.	Start of the spring campaign in February with quadrivalent 6PD <sub>50</sub> vaccine (O Panasia2, A/Asia/GVII; A/Asia/IRAN05 and Asia1/SINDH08), the planned completion date is 22 April. After detection of SAT2 in Iraq, a vaccine containing the SAT2 serotype was produced and made ready for use as of 9 March 2023.  Since then, a bivalent serotype O and SAT2 vaccine is used for campaign vaccination and outbreak response.	A range of control measures were implemented after the SAT2 confirmation in Iraq, incl. activation of contingency plan, increased clinical surveillance and movement restrictions. All outbreaks were investigated and responded to.	<a href="#">ProMed</a> , <a href="#">WAHIS</a> .  Data shared by the country.

Country	FMD Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Azerbaijan	-	-	Active and passive surveillance	1 475 584 cattle (56,6 percent of population) and 787 848 small ruminants (9,5 percent of population) were vaccinated in January-March 2023.	-	Data shared by the country - National Veterinary Authority
Armenia	-	-	Active and passive surveillance activities were increased due to the SAT2 situation in the nearby region. Clinical surveillance was conducted in the border regions and in 6 high risk regions (Marzes: Ararat, Armavir, Shirak, Gegharqunik, Tavush, Kotayk). The remaining areas will be included in the clinical surveillance. NSP serological surveillance is also planned. Regular awareness campaigns targeting farmers and vet services of central, regional and district levels were conducted.	Spring vaccination of LR was conducted early in 2023 to reduce the potential risk of virus spread; 90-95 percent vaccination coverage was achieved. SR will be vaccinated in the 2nd quarter. SAT2 vaccine is currently being purchased, to vaccinate all susceptible animals.	-	Data shared by the country.
Georgia	-	-	Analysis of SP/NSP sero-surveillance data from 2022 is ongoing.	The spring vaccination campaign has started; in total 369 160 LR and 547 329 SR will be vaccinated. Up to the reporting date 10,407 LR (1.0 percent of population*) and 4 676 SR (0.6 percent of population*) were vaccinated.	-	Data shared by the country

Country	FMD Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Iraq	<p>The total outbreak figures reported were 235 outbreaks with 4 448 cases and 481 deaths (17 595 susceptible ruminants). The main affected species were buffalos and cattle. Outbreaks were reported in the following governorates:</p> <p>Baghdad: 29, Ninawa: 37, Diyala: 31, Dewania: 14, Karkuk: 27, Anbar: six, Anajaf: 15, Babil: 42, Dhiqar: seven, Karbala: zero, Wasit: 11, Shlah addin: two</p> <p>There have been 30 outbreaks reported this quarter (29 061 cases in LR and SR), due to SAT2 in locations spread throughout Iraq.</p>	<p>Most outbreaks were due to the endemic serotypes O, A, and Asia-1. However, since December 2022 the number of outbreaks drastically increased due to SAT2 topotype XIV.</p>	<p>Passive surveillance.</p>	<p>There has been no FMD vaccination since 2021, but there are current efforts to obtain vaccine against SAT2.</p>	-	<p>Data shared by the country.</p> <p><a href="#">WAHIS</a></p>
Iran (Islamic Republic of)	<p>98 outbreaks were reported in LR, and 20 in SR this quarter.</p>	<p>O/PanAsia-2<sup>Ant-10</sup> No SAT2 virus has been identified.</p>	<p>Passive surveillance and risk based active surveillance and enhanced active surveillance is ongoing.</p> <p>Any samples that test negative for the currently circulating serotypes (O/A/Asia 1) are tested for SAT2</p>	<p>3.2 million LR and 47 million SR were vaccinated against FMD with trivalent vaccines (O, A, Asia 1) which were either locally produced or imported.</p> <p>In the new vaccination strategy, vaccination for villagers was free; in the future, industrial farms will also be vaccinated free of charge.</p>	-	<p>Data shared by the country</p>



Country	FMD Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Pakistan	In the 2nd semester of 2022, 893 outbreaks were reported in the three most affected provinces; 566 in Sindh, 275 in Punjab and 52 in Khyber Pakhtunkhwa, a mortality of 75 animals was observed.	-	-	-	-	Data shared by the country

## Peste des petits ruminants (PPR)

### Middle East

Country	PPR Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Lebanon	-	-	-	The first phase of the vaccination campaign for PPR in 2023 has begun, in SR.	-	Data shared by the country.

### South East European Neighborhood

Country	PPR Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Azerbaijan	-	-	Passive and active surveillance.	No vaccination applied.	-	Data shared by the country
Armenia	-	-	Passive surveillance	No vaccination applied.	-	Data shared by the country.

Country	PPR Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Iraq	Nine outbreaks were reported in the governorates of Anbar, Karkuk, Wasit, Annajaf. This was a total of 132 cases, 51 deaths, out of 2 110 susceptible sheep.	-	-	-	-	Data shared by the country (report does not include the Kurdistan Region)
Iran (Islamic Republic of)	11 outbreaks reported this quarter.	-	-	4.4 million sheep and goats (7.9 percent of SR population*) were vaccinated to increase the coverage and respond to PPR outbreaks.	-	Data shared by the country
Pakistan	In the 2nd semester of 2022, 931 outbreaks were reported in the three most affected provinces; 559 in Punjab, 237 in Sindh and 135 in Khyber Pakhtunkhwa, a mortality of 208 animals was observed.	-	-	-	-	Data shared by the country
Republic of Türkiye	-	Risk-based control strategy for Thrace is followed to aim for zonal PPR freedom.	In this quarter 7 152 SR were clinically examined in Thrace for PPR and were found negative clinically.	Newborn SR were vaccinated in Anatolia as preventive vaccination; ring vaccination is used as outbreak response; no vaccination in Thrace.	-	Data shared by the country.

## Lumpy skin disease (LSD)

### Middle East

Country	LSD Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Lebanon	-	-	-	The first phase of the vaccination campaign for LSD in 2023 has begun, in LR.	-	Data shared by the country.

### South East European Neighborhood (SEEN)

Country	LSD Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Azerbaijan	-	-	Passive and active surveillance	620 055 cattle (23,8 percent of population) were vaccinated in January-March 2023, 2 414 samples were collected for seromonitoring	-	Data shared by the country
Armenia	-	-	Passive surveillance	Annual vaccination campaign in high-risk areas will start in the 2nd quarter.	-	Data shared by the country.
Georgia	-	-	Passive surveillance is in place.	-	-	Data shared by the country.
Iraq	No outbreaks reported this quarter.	-	-	-	-	Data shared by the country.
Iran (Islamic Republic of)	-	-	-	The vaccination campaign ended in this quarter. 1.7 million LR (33.4 percent of LR population*) 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

Country	LSD Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Republic of Türkiye		The national strategy aims at disease freedom.	In this quarter 14,160 LR were clinically examined in high and low risk areas in Thrace, respectively. All were found negative for LSD clinically.	Annual mass vaccination, with sheep and goat pox vaccine used in the Anatolia region and the Neethling vaccine in the Thrace region.		Data shared by the country

## Rift Valley fever (RVF)

There were no reports of Rift Valley fever this quarter.

## Sheep and goat pox (SGP)

### Middle East

Country	SGP Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Lebanon	-	-	-	The first phase of the vaccination campaign for SGP in 2023 has begun, in SR.	-	Data shared by the country.

### South East European Neighborhood (SEEN)

Country	SGP Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Azerbaijan	30 cases of sheep and goat pox were reported in January 23 in Hajigabul.	-	Passive surveillance	2 564 412 SR (30,8 percent of population) were vaccinated in January-March 2023.	-	<a href="#">WAHIS</a> Data shared by the country

Country	SGP Outbreaks	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
Armenia	-	-	Passive surveillance	-	-	Data shared by the country
Republic of Türkiye	32 outbreaks reported.		In this quarter 7,152 SR were clinically examined in Thrace for PPR and were found negative clinically.	All SR were vaccinated in Thrace and in 13 high-risk provinces of Anatolia; additional vaccination occurs in response to outbreaks in Anatolia	-	Data shared by the country
Iraq	Outbreaks were reported in the following governorates: Naajaf: 11, Dewania: two, Dhiqar: two, Ninawa: two, Messan: one, Albasrha: one, Karkuk: six, Diyala: four and Muthana: one. There were 245 cases, 18 deaths, out of 3 574 susceptible sheep and goats.	-	Passive surveillance based on clinical signs	-	-	Data shared by the country (report does not include the Kurdistan Region)
Iran (Islamic Republic of Iran)	Five outbreaks of goat pox and 122 outbreaks of sheep pox were reported.	-	Passive surveillance	9.8 million SR (17.7 percent of SR population*) vaccinated in Jan - Mar 2023.		Data shared by the country

\*Vaccination coverage was estimated using predicted livestock population sizes for the year 2023 in the EuFMD Vaccine Demand Estimation Model of Foot-and-Mouth disease (FMD), VADEMOS found at <https://www.eufmd.info/vademos>.

## Summary

### Foot and mouth disease

The introduction of the new SAT2 topotype XIV has dominated the reports from Jordan, the Republic of Türkiye, and Iraq, with many other neighbouring countries increasing their surveillance activities and aiming to obtain access to an effective SAT2 vaccine.

Outbreaks were reported in Egypt, although the serotype responsible for these outbreaks is not specified, and Libya reported outbreaks due to Serotype O.

In the South East European neighbourhood, serotypes O, A and Asia 1 continue to circulate in Iraq and O/PanAsia-2<sup>ANT-10</sup> was reported in Iran. Many of the SEEN countries reported vaccination campaigns against FMD with varying coverage.

Especially, due to the emerging SAT2 outbreaks in the Middle East, surveillance data needs to be improved in many countries. 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 Iraq and Iran this quarter. Iran reported vaccinating against PPR.

### Lumpy skin disease

No outbreaks of lumpy skin disease were reported in the last quarter, for the countries where information could be obtained. Vaccination of about 1/3 of the large ruminant population was reported in Iran.

### Rift Valley Fever

No reports of Rift Valley fever were obtained this quarter.

### Sheep and goat pox

Sheep and Goat Pox was reported in Azerbaijan, for the first time in more than ten years. Iran reported vaccination against sheep and goat pox for just over 15% of the small ruminant population.

## Reports of important disease incidents since the end of the reporting period

The new incursion of FMDV serotype SAT2 continues to spread throughout the Middle East, leading to an increase in FMD outbreaks. Vaccines have been developed and produced to allow vaccination of susceptible livestock in the affected areas and some neighboring countries. SAT2 specific diagnostic tests including a lateral flow device (LFD) have been produced and are being made available where possible.

More information will be provided in the next FAST report (April-June 2023).