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EuFMD P II: European Neighbourhood

Report on Significant FAST disease events and information

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

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Acronyms and abbreviations

ADNS	Animal Disease Notification System
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	Progressive control pathway
PCR	Polymerase chain reaction
PD ₅₀	Protective dose of 50 per cent (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 programme in the European neighbouring regions of North Africa, Middle East and South East European Neighbourhood is delivered within the Hold-FAST strategy. This strategy continues the focus upon FMD risk reduction but extends the scope of the preparedness and risk reduction activities to similar transboundary animal diseases which pose an immediate threat to the EuFMD member countries.

The programme focuses on the control of foot-and-mouth and other similar transboundary animal diseases (FAST) in the neighboring regions through the improvement of prevention, surveillance and control actions. 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 as well as the information obtained from control and surveillance strategies in the European neighbourhood can contribute to increase awareness on major animal disease threats for Europe and the regions of North Africa, Middle East and South East European Neighbourhood.

The European neighborhood

The neighborhood of the current 39 EuFMD Member Nations is defined as the neighboring countries which are not EuFMD Members and that either have land borders with EuFMD Members or 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. Countries included in the activities of the EuFMD Pillar II



EuFMD Member Nations in European neighbouring 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 Organisation for Animal Health (OIE) and mentioned in this publication have been sourced from the World Animal Health Information System (WAHIS) and are referred to the period between 1 July and 30 September 2020. Other information have been obtained through the EuFMD activities and networks in the European neighbourhood. Information referring to the period before 1 July is reported when relevant.

Foot-and-mouth disease

North Africa

Libya

Four outbreaks were notified to the OIE on 20 September 2020 (date of start of the outbreaks: 6 September 2020; status: continuing). Fourteen cases occurred in sheep in seven farms located in Beer El-Touta, Qasr Ben Ghashir, about 30 km south of Tripoli. Clinical signs were recorded in four premises out of seven. All of the farms are considered as one epidemiological unit with a population of 98 susceptible sheep. Local veterinarians collected about 30 samples, six of which resulted positive to the NSP ELISA test. Structural proteins (SP) ELISA testing to determine the serotype is still pending. An investigation team from the National Centre for Animal Health, Tripoli, should visit the infected premises soon. Source: [OIE WAHIS](#) and data shared by the country.

This cluster of cases follows a series of outbreaks that were recorded in the same region and linked to foot-and-mouth (FMD) virus serotype A: animal movements from southern Libya and high animal concentration in shared pastures were deemed to be possible risk factors for the source of the infection (for more information, see the previous issue of this report).

A FMD virtual awareness campaign targeting public and private vets on the topics of FMD diagnosis, sampling, biosecurity and epidemiology is currently underway by the National center of Animal Health of Libya, in collaboration with EuFMD and FAO sub regional office for North Africa.

Middle East

Egypt

In addition to the 1.36 million large and small ruminants vaccinated against FMD within the context of a massive campaign launched on 1 June 2020 by the Egyptian veterinary services, 64 936 additional animals were vaccinated during August 2020. Source: [ProMED, International Society for Infectious Diseases](#).

Jordan

The country hosts a population of about 80 000 cattle and 3.5 million small ruminants. FMD is endemic in Jordan (currently at stage two of the FMD Progressive Control Pathway), but the last clinical outbreak was detected in 2017.

Serosurveillance activities were carried out in northern governorates within the framework of the Awasi Sheep Genetic Improvement Project: eight per cent of the samples tested positive for non-structural proteins (NSP) antibodies.

Vaccination against FMD is carried out regularly using the following serotypes: O (O/MANISA, O/ME-SA/PanAsia-2) and A (A22/Iraq, A/ASIA/Iran-05). Ninety per cent of doses is supplied by governmental sectors and the remaining part is provided by the private sector. During the last two years, both the public and private vaccine supplies were imported from Russia.

A post vaccination monitoring study started at the beginning of 2020, but sample testing was delayed due to the COVID-19 pandemic.

South East European Neighbourhood

Turkey

During an official meeting with the EuFMD, Turkey reported the occurrence of six FMD outbreaks in August and two in September (none in July), bringing the total to 82 outbreaks since the beginning of 2020 (The number of outbreaks reported to ADNS between 1 January and 4 October 2020 was 102. Source: [ADNS](#)). The eight outbreaks that occurred during the last trimester were concentrated in the northeastern part of the country (Erzurum, Ardahan and Artvin provinces).

FMD is endemic in Anatolia: currently, mainly Serotype O (O PanAsia-2/Qom15) is circulating. Since August, two outbreaks (in Van/Edremit and Tokat) were attributed to O PanAsia-2/ANT 10, a lineage not identified in Turkey since 2015. Based on Turkish genotyping analysis, the O PanAsia-2/ANT 10 virus differs by 13% from the O PanAsia-2/Qom15 virus, and the currently used vaccine strains protect well against it. Serotypes A and Asia1 were not detected since January 2018 and July 2015, respectively. Surveillance has shown a sharp decline of NSP prevalence in 2020 (average five per cent). Thrace region has been free with vaccination since May 2010 and NSP risk-based serological surveillance is currently in place in the region. EuFMD focal points from the Transcaucasus countries were informed about outbreaks in proximity to their borders, as part of the Statement of Intentions between Transcaucasia and neighboring countries (SOI). This triggered targeted control measures, including vaccination, surveillance and awareness raising in the adjoining border regions of the Transcaucasus countries.

Transcaucasus countries: Armenia, Azerbaijan and Georgia

Armenia, Azerbaijan and Georgia completed the 2020 spring vaccination campaigns. Armenia reached a 66.3 per cent coverage in both cattle and small ruminants, while Azerbaijan reached 99.01 per cent coverage in cattle and 58.41 per cent in small ruminants. The 2020 autumn campaign is currently underway in Georgia. According to the national FMD control strategies and the risk-based strategic plans, Transcaucasus countries use risk-based vaccination, with target vaccination coverage at district level between 0 and 100%.

Georgia has been conducting 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. Risk-based vaccination is applied in western Georgia, targeting villages located around live animal markets, presenting migrating animals, and bordering with Turkey or with non-controlled territories. The Official Control Programme of Georgia to progress to stage 3 of the Progressive Control Pathway (PCP) is currently revised after comments received by the Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs) FMD Working Group.

Iran (Islamic Republic of)

During an official meeting with EuFMD on 21 September 2020, the Islamic Republic of Iran reported 1 561 outbreaks and 36 306 cases in cattle, sheep, goats and buffaloes since the beginning of 2020 (972 new outbreaks between July and September). All of the 31 provinces of the country were affected. Laboratory confirmation was obtained through ELISA and PCR testing. The strains currently circulating are A (A05, G-VII), O (O/ME-SA/PanAsia-2), Asia1 (ASIA/Sindh-08). Strain O (MESA/PanAsia-2^{Qom15}) has been predominant during the last six months, but A strain has been increasingly detected in recent weeks. Implementation of biosecurity measures and vaccination strategies were the main control measures to be applied.

According to the Iran Veterinary Organization (IVO) policy, about 90 per cent of the animals reared in industrial farms were vaccinated using seven different vaccine brands produced locally or imported. The owners of the animals pay the cost of the vaccine. More than 24 million nomad animals are moved annually between wintering and summer areas: more than 13 million vaccine doses have been provided and free of charge vaccination of nomad herds is ongoing.

Table 1. Vaccination against FMD carried out by the Islamic Republic of Iran.

Species	Number vaccinated animals	Vaccination programme (number of vaccinations per year)	Vaccine strain	Vaccine potency	Vaccine origin
Cattle, buffaloes	484 229	2/3	O, A, Asia-1	>6PD ₅₀	Local
Cattle, buffaloes	3 664 076	2/3	O, A, Asia-1	>6PD ₅₀	Imported
Sheep, goats	31 671 383	1/2	O, A, Asia-1	>6PD ₅₀	Local
Sheep, goats	11 189 224	1/2	O, A, Asia-1	>6PD ₅₀	Imported

Live animal trade with Turkey and Pakistan is currently banned. Only slaughtered animals and meat are being further permitted into the Islamic Republic of Iran, A system to allow importation of meat from Pakistan has been established: between March 2019 and March 2020, 35 606 bovines were imported

through government-controlled border markets, quarantined and then sent directly to slaughterhouses. In addition, the Islamic Republic of Iran reported the existence of uncontrolled imports of camels from Pakistan both in 2019 and 2020. The Islamic Republic of Iran, Pakistan and Turkey have stated that one of their main priorities is to extend their mutual collaboration through sharing of information, laboratory samples and training of personnel: this will also enable to tackle illegal animal movements from Pakistan to the Islamic Republic of Iran.

Pakistan

The most updated information, provided during an official meeting with EuFMD on 21 September 2020, refers to the period between April and June: 27 outbreaks were reported in Punjab, Sindh and Khyber Pakhtunkhwa provinces. Circulating serotypes: O, A, Asia 1.

Peste des petits ruminants

North Africa

Morocco

The last case of peste des petits ruminants (PPR) occurred on 25 April 2020. On 11 September 2020, the country presented a new update on the national vaccination campaign against PPR and sheep pox: more than 22.5 million small ruminants have been vaccinated against peste des petits ruminants between 17 January and 20 May 2020. Source: [OIE WAHIS](#).

Middle East

Egypt

In August 2020, 129 293 animals have been vaccinated against PPR. Source: [ProMED, International Society for Infectious Diseases](#).

Libya

One outbreak was notified to the OIE on 7 October 2020 (date of start of the outbreak: 17 September 2020; status: continuing). The disease was detected in a farm hosting 600 sheep and 50 goats and 3 cattle located in Jafara area, south of Tripoli. Clinical signs were detected in about 50 sheep and 10 goats, and death of 18 sheep and 4 goats was reported. New animals had been introduced recently from the animal market. Blood sampling was carried out and laboratory confirmation was obtained at the National Centre for Animal Health, Tripoli, where 20 samples tested positive for PPR. Source: [OIE WAHIS](#).

On 11 October 2020, a follow-up visit was carried out in the affected premises. The animals showing clinical signs had grown to 95 sheep and 13 goats, while deaths had reached a number of 26 in sheep and 4 in goats. Twin abortions with death of the ewe were recorded. Swab samples were collected for laboratory confirmation. Source: Official investigation and reporting.

South East European Neighbourhood

Turkey

During an official meeting with EuFMD on 21 September 2020, Turkey reported the occurrence of 30 PPR outbreaks since the beginning of the year, ten of which occurred between July and September (one outbreak in July, seven in August, and two in September).

Since 2016, the control policy has included vaccination of all newborn and unvaccinated adults, using ring vaccination as outbreak response; no movement of unvaccinated animal is allowed. In Thrace region, all small ruminants have been vaccinated since 2013 and, since the same year, PPR has not been clinically detected. The Thrace region plan to achieve the OIE status of free with vaccination was

postponed to 2021. Clinical and serological surveillance are being carried out in the region, while animal movements are strictly controlled.

Georgia

Following a call for tender, 300 000 doses of vaccine against PPR were purchased from a Turkish manufacturer in 2020. The 2020 vaccination campaign reached 241 562 small ruminants.

Iran (Islamic Republic of)

During an official meeting with EuFMD on 21 September 2020, the Islamic Republic of Iran reported 147 outbreaks and 1 595 cases of PPR in sheep, goats and fallow deer since the beginning of 2020 (this results in 105 new outbreaks in the last trimester). The disease was reported in 25 provinces out of 31. Laboratory confirmation was obtained through ELISA and PCR testing. The currently circulating strain belongs to sub-lineage 4. Control measures consisted of emergency vaccination of epidemiological units, ring vaccination, and vaccination of livestock potentially in contact with wildlife.

Small ruminants in the country are regularly vaccinated free of charge with locally produced and imported vaccine. The vaccine coverage reaches approximately 80 per cent, with the remaining 20 per cent represented by nomad herds.

Table 2. Vaccination against PPR carried out by the Islamic Republic of Iran.

Species	Percentage of coverage in six months	Number vaccinated animals	Vaccination programme (number of vaccinations per year)	Vaccine strain	Vaccine origin
Sheep	20.0	8 949 192	1	Nigeria 75/1	Local and imported
Goats	12.5	2 202 802	1	Nigeria 75/1	Local and imported
Game reserve	-	1 242	1	Nigeria 75/1	Local and imported

Pakistan

A development project called “Phase I - Risk Based PPR control in Sheep and Goats of Pakistan” has been approved with a total budget of 1800 million Pakistani Rupees for six years.

Rift Valley fever

North Africa

Mauritania

On 24 September 2020, the country reported the occurrence of four outbreaks of Rift Valley fever (RVF) with a total of 68 cases and 26 deaths among a susceptible population of 378 camels (Date of start of the event: 17 September 2020, status: continuing). The outbreaks were localized in Aleg, Tidjikja and Tamchekket Departments, in the southern part of the country. Laboratory confirmation was provided through real time PCR by the National Office for Research and Development of Livestock on 23 September 2020. Source: [OIE WAHIS](#). Ongoing investigation are undertaken to evaluate the spread of the disease: up to early October, 9 human cases (6 deaths) were reported in Assaba (2 October), Tagant (3 October) and Hodh Chargui (1 October), while animal cases were reported in Assaba (cattle), Brakna (small ruminants), Tagant (camels), Hodh Gharbi (camels). A hundred of deaths were reported among camels in different regions and few abortions were reported in small ruminants (the period of deliveries is generally in July). Source: FAO Subregional Office for North Africa.

The disease was previously reported in Aleg Department on September 2015 and in Kiffa, Magtar Lahjar and Tidjikja Departments on October 2015. Source: [OIE WAHIS](#).

Libya

The total number of samples collected for active surveillance purposes in small ruminants has been updated to 426. Abortion at all stages of gestation and death of newborns with respiratory symptoms and diarrhea were observed in goats linked to informal animal movements.

The first cases of RVF ever reported in Libya occurred between January and May 2020: eight outbreaks, thirty-six cases and six deaths in sheep and goats were recorded since the beginning of the year. No additional cases were described during the last trimester. Source: [OIE WAHIS](#).

A syndromic surveillance programme has been launched with the assistance of EuFMD. The team involved in the activities was trained on data entry using the toolkit for mobile data collection KoBoToolbox. The surveillance programme is being implemented in four locations: Al Kufra in Southeast (bordering with Sudan); Ubari in Southwest (bordering with Chad); Tobruk in East (bordering with Egypt) and Riqdalin in Northwest (bordering with Tunisia).

Middle East

Egypt

In addition to the 1.2 million large and small ruminants vaccinated against RVF within the context of a massive campaign launched on 1 June 2020 by the Egyptian veterinary services, additional 55 063 animals have been vaccinated during August 2020. Source: [ProMED, International Society for Infectious Diseases](#).

Syndromic surveillance has been conducted using the data from the national database (TADInfo), as routinely health-related data (i.e. abortion) are monitored over time and space to generate threshold levels above which an investigation is initiated. It is noteworthy that about 260 epidemiology units are involved at district level to process and enter relevant information into the web-based database. Data are collected on a daily basis from about 1 700 governmental veterinary clinics distributed all over the country.

Additionally, active clinical surveillance has been conducted within governorates sharing borders with Sudan (Aswan, Red Sea, and New Valley) using participatory epidemiology tools to gather information. The surveillance team of each district visits two villages per week using the RVF case definition as guidance and collecting specimens in case of suspicion.

Sudan

On 23 September 2020, local media reported 62 people dead and 100 suspected cases in Merowe, in the northern region. Intense raining and flooding occurred during the past weeks caused the deterioration of environmental and health conditions, thus generating serious concern about the spreading of the disease. Source: [Sky news Arabia](#). In addition, abortions in animals were reported by Local media. Source: "[Alrakoba](#)".

Lumpy skin disease

Middle East

Egypt

On 26 August 2020, the General Authority for Veterinary Services reported the occurrence of cases of lumpy skin disease (LSD) within the governorates of Asyut, Al-Buhayrah, Ad Daqahliyah, Ash-Sharqiyyah, Al-Qalyubiyya, Al Minufyah, and Kafr El Sheikh. The cases were detected during the implementation of an active surveillance plan that reached 213 villages in 16 governorates between 9 and 26 August 2020. A total of 90 513 animals were examined in 2994 households: the disease was found in 27 households, especially among non-vaccinated animals. Control measures included quarantine, movement ban, vaccination within a radius of 10 km and vector control. The final aim of the active surveillance plan was reportedly to assess the presence of FMD, PPR, RVF, LSD, sheep and goat pox (SGP) and bovine ephemeral fever (BEF) in the whole country, covering 200 000 households located in 5 000 villages. In August, the Deputy Minister of Agriculture for Livestock and Fisheries Affairs explained that a response is under way to control the disease and to identify and vaccinate the animals that were not vaccinated due to delays related to the spread of COVID-19. In August 2020, 198 902 animals were vaccinated against lumpy skin disease. Source: [ProMED, International Society for Infectious Diseases](#).

Syrian Arab Republic

An update from 18 July 2020 reported 2 533 cases, 67 confirmed deaths and 93 probable deaths in Tartus governorate.

Lebanon

A risk-based vaccination program will be carried out, supported by the FAO-Lebanon with 40 000 doses of LSD vaccines. A risk-based serological surveillance will be conducted in potential risk areas at the borders with the Syrian Arab Republic and the other destinations of live animal flows from the Syrian Arab Republic.

South East European Neighbourhood

Turkey

During an official meeting with EuFMD on 21 September 2020, Turkey reported the occurrence of five outbreaks in five provinces (Sakarya, Düzce, Samsun, Ağrı, Van) since the beginning of 2020. The last outbreak was reported in August in Ağrı, in the eastern part of the country. No outbreaks were detected in Thrace.

A mass vaccination campaign is carried out annually using a triple dose of sheep and goat pox vaccine. Starting from 2021, Thrace will change its vaccination policy and will start to use Neethling vaccine.

Georgia

Following a call for tender, the National Food Agency purchased 404 500 doses of vaccine against LSD from a Turkish manufacturer (Sheep pox “Bakirkoy” strain, $10^{2.5} \times 6$ Tissue Culture Infectious Dose 50). In addition, 200 000 doses of Neethling strain vaccine were donated by the European Commission’s Directorate-General for Health and Food Safety. Up to date, 273 993 bovines were vaccinated.

Armenia

It was reported that 35 506 large ruminants were vaccinated between July and September 2020.

Iran (Islamic Republic of Iran)

During an official meeting with EuFMD on 21 September 2020, the Islamic Republic of Iran reported 65 outbreaks and 225 cases of LSD in cattle since the beginning of 2020. The disease was reported in 16 provinces out of 31 (this results in 23 new outbreaks in the last trimester). Laboratory confirmation was obtained through PCR testing. Implementation of biosecurity measures, emergency vaccination and movement restrictions were the main control measures applied.

The number of cases decreased in 2020 compared to 2019; this could be due to favorable climatic conditions which might have hampered the spread of the disease.

Table 3. Vaccination against LSD carried out by the Islamic Republic of Iran.

Species	Number vaccinated animals	Vaccination programme (number of vaccinations per year)	Vaccine strain	Vaccine origin
Cattle	1 771 784	1	Heterologous vaccine (RM-65 and Gorgan pox virus)	Local
Cattle	684 845	1	Homologous vaccine (Neethling)	Imported from Turkey

Vaccination is free of charge for villagers and nomads, while payment is required for the animals of large-scale dairy farms.

Sheep and goat pox

North Africa

Morocco

The disease is endemic in the region. During 2020, Morocco reported 56 sheep pox outbreaks (361 cases) in 14 provinces (7 regions). More than 22.5 million small ruminants have been vaccinated against sheep pox during the national vaccination campaign against PPR and sheep pox carried out between 17 January and 20 May 2020.

Middle East

Egypt

A total of 21 039 animals were vaccinated during August 2020. Source: [ProMED, International Society for Infectious Diseases](#).

South East European Neighbourhood

Turkey

During an official meeting with EuFMD on 21 September 2020, Turkey reported the occurrence of 49 outbreaks since the beginning of the year, 7 of which between July and September (1 outbreak in July, 4 in August, 2 in September). No outbreaks were reported in Thrace since 2016. Control measures include vaccination of all small ruminants in Thrace and vaccination in response to the outbreaks in Anatolia (vaccination programme maintained in place for two years after the outbreak).

Iran (Islamic Republic of Iran)

During an official meeting with EuFMD on 21 September 2020, the Islamic Republic of Iran reported 88 outbreaks and 611 cases of SGP since the beginning of 2020 (this resulted in 60 new outbreaks between July and September). Laboratory confirmation was obtained through PCR testing. The disease was reported in 19 provinces out of 31. Implementation of biosecurity measures and vaccination strategies were the main control measures to be applied. In the last six months, the former mass vaccination programme has been replaced by a new risk-based vaccination strategy. Vaccination is free of charge for the owners of the animals.

Table 4. Vaccination against SGP carried out by the Islamic Republic of Iran.

Species	Number vaccinated animals	Vaccination programme (number of vaccinations per year)	Vaccine strain	Vaccine origin
Sheep	18 372 294	1	RM-65	local
Goats	7 267 026	1	Gorgan	local

Bovine ephemeral fever

Middle East

Syrian Arab Republic

On 8 October 2020, FAO staff reported the rapid spread of a cattle disease in northwestern Syria, close to the border with Turkey. Clinical signs included high fever, loss of appetite, depression, lameness and abortion and were observed exclusively in adult cows. The clinical picture is compatible with bovine ephemeral fever, but several differential diagnosis are possible. On 12 October, the diseases reportedly spread amongst villages along Alasi river, in Salqin sub district and Harim district. Sampling has been carried out and Turkey has offered to receive the samples to be analyzed. The situation will be further monitored and described in the next FAST report.

South East European Neighbourhood

Iran (Islamic Republic of)

During an official meeting with EuFMD on 21 September 2020, the Islamic Republic of Iran reported 39 outbreaks and 92 cases of bovine ephemeral fever in cattle since the beginning of 2020. Laboratory confirmation was obtained through PCR testing. The disease was reported in Qazvin, Ilam, Khuzestan and Bushehr provinces. Implementation of biosecurity measures and emergency vaccination were the main control measures to be applied. Control measures consisted of quarantine, emergency vaccination of affected premises paid by the owners of the animals and surrounding high risk areas, vector control with insecticide spraying. All the outbreaks were recorded in villages: for this reason, the next vaccination campaign will target premises that are located in rural settings.

Table 5. Vaccination against BEF carried out by the Islamic Republic of Iran.

Species	Number vaccinated animals	Vaccination programme (number of vaccinations per year)	Vaccine origin
Cattle	56 711	1	Imported from Turkey

Conclusions

Foot and mouth disease

In Turkey, all reported outbreaks are still due to serotype O, which has re-emerged with O/ME-SA/PanAsia-2/ANT-10 sub-lineage after 5 years of absence. Further developments in Turkey will need special attention, also taking into account that serotype A and Asia1 are circulating in neighbouring Iran and the wider region.

Peste des petits ruminants

In North Africa, PPR reoccurred in northern Morocco between the end of January and the beginning of February 2020. The absence of new detected outbreaks during the last 5 months apparently confirms the effectiveness of the mass vaccination campaign that was implemented in the country between January and May 2020.

The disease was recently reported on two farms in Libya, approximately 30 km the South of Tripoli with a potential spreading of the disease in the area due to the epidemiological links between the infected farms and the livestock market. Confirmation was based on clinical signs and serology with virus confirmation pending.

Rift Valley fever

No new outbreaks were reported in Libya after May 2020, but the disease reoccurred in Mauritania after almost five years of absence. The virus threatens to potentially spill into other suitable habitats for vectors in North Africa and threaten susceptible animal populations in Sudan and other countries of the Eastern African region over the upcoming months due to favorable environment and climatic conditions.

Lumpy skin disease

The disease was reported in the Middle East region (Syrian Arab Republic, Egypt) and in the South East European Neighbourhood (Turkey, Islamic Republic of Iran). Due to the instability in Syria, the virus is likely to spread into the areas away from the conflict zones, as there is reportedly movement of dairy farmers with their animals away from the frontline into safer areas.

Sheep and goat pox

The disease was reported in North Africa (Morocco), the Middle East region (Egypt) and in the South East European Neighbourhood (Turkey, Islamic Republic of Iran).

Bovine ephemeral fever

The disease was reported in the South East European Neighbourhood by the Islamic Republic of Iran, while in the Middle East its possible occurrence at the beginning of October in the Syrian Arab Republic is yet to be confirmed. With the high number of clinical cases and lack of vaccine availability, transboundary spread through porous borders is likely if BEF virus is confirmed to be the causative agent.

Table 6. Summary of significant events (third quarter 2020).

Disease	Country	Date	Outbreak	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
FMD	Egypt	--	--	--	--	64 936 animals vaccinated in August	--	Data shared by the country
	Jordan	--	--	--	Serosurveillance in northern governorates: 8% of the samples NSP positive	Post vaccination monitoring study started at the beginning of 2020: results pending	--	Data shared by the country
	Libya	20/09/2020-continuing	4 outbreaks near Tripoli: 14 cases. Laboratory confirmation with NSP ELISA.	Previous outbreaks in the area were linked to serotype A; area connected with South	--	--	Risk of spread to Tunisia and Algeria. Awareness campaign targeting public and private vets currently underway	OIE
	Turkey (Anatolia)	08-09/2020	6 outbreaks in Erzurum, Ardahan and Artvin provinces	Serotype O endemic in Anatolia (O PanAsia-2/Qom15)	--	--	--	Data shared by the country
	Armenia	07-09/2020	--	--	--	631 729 bovines and 93 253 small ruminants vaccinated between July and September 2020	--	Data shared by the country
	Azerbaijan	07-09/2020	--	--	--	2 576 679 bovines and 4 756 238 small ruminants vaccinated in 2020	--	Data shared by the country

Disease	Country	Date	Outbreak	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
	Georgia	07-09/2020	--	--	--	545 882 bovines and 833 733 small ruminants vaccinated (based on risk) in 2020	--	Data shared by the country
	Iran (Islamic Republic of)	07-09/2020	972 outbreaks	Circulating serotypes: A (A05), O (O/ME-SA/PanAsia-2), Asia1 (ASIA/Sindh-08)	--	90 per cent coverage in large-scale dairy farms, vaccination of nomad herds in progress	Illegal imports of cattle and camels from Pakistan. Cattle imported illegally can be legalized under government control.	Data shared by the country
	Pakistan	04-06/2020	27 outbreaks in Punjab, Sindh and Khyber Pakhtunkhwa provinces	Circulating serotypes: O, A, Asia 1	--	Annual mass vaccination campaigns in cattle and buffaloes followed by SP and NSP serosurveys	"Risk-based FMD control in Pakistan" approved with a total budget of Rs 763 million for six years	Data shared by the country
PPR	Egypt	08/2020	--	--	--	129 293 animals vaccinated	--	ProMED, International Society for Infectious Diseases
	Libya	17/09/2020	1 outbreak in Jafara area, south of Tripoli, clinical signs in 50 sheep and 10 goats, death of 18 sheep and 4 goats	20 samples tested positive	Farms located in affected area to be investigated during next weeks		New animals recently introduced from the animal market	Data shared by the country, OIE WAHIS
	Morocco	01-05/2020	No new outbreaks after 25 April 2020	--	--	More than 22.5 million small ruminants vaccinated	--	OIE; data shared by the country

Disease	Country	Date	Outbreak	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
	Turkey (Anatolia)	07-09/2020	30 outbreaks	--	--	All small ruminants vaccinated since 2016; ring vaccination as outbreak response	Plan for Thrace status free with vaccination postponed to 2021	Data shared by the country
	Iran (Islamic Republic of)	07-09/2020	105 outbreaks	Sublineage 4	--	80 per cent coverage	20 per cent not reached by vaccination represented by nomad herds	Data shared by the country
	Armenia	07-09/2020			1640 samples, all negative			Data shared by the country
	Azerbaijan	07-09/2020						Data shared by the country
	Georgia	07-09/2020	--	--	--	23 400 small ruminants were vaccinated (241 562 since the beginning of 2020)	--	Data shared by the country
	Pakistan	--	--	--	--	Approved "Phase I-Risk Based PPR control in Sheep and Goats of Pakistan"	--	Data shared by the country
RVF	Mauritania	17/09/2020	4 outbreaks in camels in Aleg, Tidjikja and Tamcheppet Departments: 68 cases, 26 deaths. Human cases were reported.	Ongoing investigations to evaluate disease spread	--	--	--	OIE

Disease	Country	Date	Outbreak	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
	Libya	09/05/2020	No new cases	--	Active surveillance: blood sampling within and outside the protection zones and syndromic surveillance	--	--	OIE
	Egypt	08/2020	--	--	Syndromic surveillance and clinical surveillance	55 063 animals vaccinated	--	ProMED, International Society for Infectious Diseases
	Sudan	23/09/2020	Human deaths and suspected cases		Clinical surveillance and sampling in animals near affected area. Abortions reported.		Insecticide spraying campaign currently underway	Sky News Arabia and data shared by the country
LSD	Egypt	26/08/2020	New cases within governorates of Asyut, Al-Buhayrah, Ad Daqahliyah, Ash-Sharqiyyah, Al-Qalyubiyya, Al Minufyah, and Kafr El Sheikh	--	--	198 902 animals vaccinated	Surveillance and vaccination programme delayed by COVID-19	ProMED, International Society for Infectious Diseases
	Syrian Arab Republic	18/07/2020	2 533 cases, 67 confirmed deaths and 93 probable deaths in Tartus governorate	--	--	--	--	Data shared by the country
	Lebanon	--	--	--	Risk-based serosurveillance will be carried out at the borders	Risk-based vaccination will be carried out	--	Data shared by the country

Disease	Country	Date	Outbreak	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
	Turkey (Anatolia)	01-09/2020	5 outbreaks in Sakarya, Düzce, Samsun, Ağrı, Van provinces (Anatolia)	--	--	Annual mass vaccination with triple dose sheep and goat pox vaccine. From 2021, Thrace will employ a Neethling vaccine.	--	Data shared by the country
	Iran (Islamic Republic of)	07-09/2020	23 outbreaks	--	--	2 456 629 bovines vaccinated in the last six months.	--	Data shared by the country
	Armenia	07-09/2020	--	--	--	35 506 bovines vaccinated between July and September 2020	--	Data shared by the country
	Georgia	07-09/2020	--	--	--	224 703 animals were vaccinated	--	Data shared by the country
SGP	Egypt	08/2020	--	--	--	21 039 animals vaccinated	--	ProMED, International Society for Infectious Diseases
	Morocco	01-07/2020	56 outbreak , 361 cases			More than 22.5 million small ruminants vaccinated	--	OIE

Disease	Country	Date	Outbreak	Epidemiological information	Surveillance	Vaccination	Other risk information	Source
	Turkey (Anatolia)	07-09/2020	7 outbreaks	--	--	All small ruminants are vaccinated in Thrace, vaccinated in response to outbreaks in Anatolia	--	Data shared by the country
	Iran (Islamic Republic of)	07-09/2020	60 outbreaks	--	--	More than 25.5 million small ruminants vaccinated in 2020. Mass vaccination replaced by risk-based vaccination strategy	--	Data shared by the country
BEF	Syrian Arab Republic	8-12/10/2020	non-identified disease in cattle with clinical signs compatible with BEF, in northwestern Syria	--	Sampling was carried out. Analysis still pending	--	Close to the border with Turkey	Data shared by the country
	Iran (Islamic Republic of)	01-09/2020	39 outbreaks and 92 cases in cattle in Qazvin, Ilam, Khuzestan and Bushehr provinces	--	--	56 711 cattle vaccinated in 2020	--	Data shared by the country



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