Overview on animal diseases situation in the Mediterranean basin

16th JPC/REMESA 2017
Mohammedia, Morocco
FMD
## History of FMD in North Africa

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>FMD serotype</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>1966 - 1990</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>1977</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>2014 - 2015</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>A</td>
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<tr>
<td></td>
<td>1979 - 2009</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>2003</td>
<td>SAT2</td>
</tr>
<tr>
<td></td>
<td>2009/2013</td>
<td>A-O-SAT2</td>
</tr>
<tr>
<td>Mauritania</td>
<td>1975 - 1976</td>
<td>SAT2</td>
</tr>
<tr>
<td></td>
<td>1997</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>SAT2</td>
</tr>
<tr>
<td>Marocco</td>
<td>1991 - 1992</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>1993</td>
<td>A</td>
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<td></td>
<td>2015</td>
<td>O</td>
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<tr>
<td></td>
<td>1979 - 1982</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>2014 - 2017</td>
<td>O</td>
</tr>
</tbody>
</table>

Figure 2. Potential pathway of FMD virus introduction in North Africa

origin: Indian sub-continent

24 hours stop-over in Middle East

2013

2014

2015
Animal movements in North Africa and recent FMD incursions in the region

O/ME-SA/Ind-2001 lineage
FMD epidemic in North Africa (2017-2018)

1st January 2017 – up to date

**Serotype:** A, **Topotype:** AFRICA / **Linéage:** G-IV

**Tunisia**
(28 April 2017)
- 2 outbreaks
- Serotype A

**Algérie:** 31 March and 10 April 2017
= 4 outbreaks serotype A

Immediate notifications to the OIE
FMD in Algeria (2017)

Total number of outbreaks: **108** outbreaks (**416** bovine cases and **169** cases in small ruminants);

- **416** cattle affected / 1251 animals present in the outbreaks;
- **169** affected small ruminants / 2261 animals in the outbreaks

24 declarations of FMD (abattoir / farmers) discovering 39 cases;

- **65** affected municipalities,
- **27** wilayas
FMD Middle East (2016-2018)

1st January 2016 – up to date

- Jordan: 2017 = 4 outbreaks / serotype A
- Israel: 2017/18 = 5 outbreaks / serotypes A et O
- Palestine: 2017 = 11 outbreaks serotypes O
Member Countries with endorsed official control programme for FMD

In 2015, the validation of the official FMD control program of Tunisia and Algeria was suspended.

Liste des Pays Membres ayant un programme officiel validé de contrôle de la fièvre aphteuse

Conformément à la Résolution N° 23 (85e Session générale de l’Assemblée mondiale, mai 2017)

=> Programme officiel validé de contrôle de la fièvre aphteuse

Pays Membres dont le programme officiel de contrôle de la fièvre aphteuse a été validé, conformément aux dispositions du Chapitre 8.8. du Code Terrestre (Edition 2016) :

- Chine (Rép. populaire de)
- Maroc
- Inde
- Mongolie
- Kazakhstan
- Namibie
- Thaïlande
- Venezuela (1)
Considerations

- The surveillance study conducted in 2017 in Algeria and Morocco highlighting the presence of virus circulation which is not surprising because this study was conducted during the 2017 FMD (serotype A) epidemic.

- Unfortunately Tunisia did not perform the study and so no information about virus circulation from this country. They are planning to carry out the survey in early 2018.

- No major progresses were done in the region since the 2014-2015 FMD epidemic and the same challenges are still present.

- It was challenged by some countries the fact that although the early detection of FMD cases is in place no basic control measures could be implemented to stop the spread of the disease.

- Necessary to repeat this surveillance in 2018 by requesting to all the three countries to conduct this action at the same time to obtain the real picture of the situation about the virus circulation in the region.
# List of African Horse Sickness free Member Countries

According to Resolution No. 27 (85th General Session of World Assembly, May 2017)

Member Countries recognised as **free from AHS** according to the provisions of Chapter 12.1. of the Terrestrial Code.

<table>
<thead>
<tr>
<th>Algeria</th>
<th>Czech Rep.</th>
<th>Kyrgyzstan</th>
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</thead>
<tbody>
<tr>
<td>Andorra</td>
<td>Denmark</td>
<td>Poland</td>
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<tr>
<td>Argentina</td>
<td>Ecuador</td>
<td>Latvia</td>
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<tr>
<td>Australia</td>
<td>Estonia</td>
<td>Liechtenstein</td>
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<tr>
<td>Austria</td>
<td>Finland</td>
<td>Lithuania</td>
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<tr>
<td>Azerbaijan</td>
<td>Former Yug. Rep. of Macedonia</td>
<td>Luxembourg</td>
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<tr>
<td>Belgium</td>
<td>France</td>
<td>Malaysia</td>
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<tr>
<td>Bolivia</td>
<td>Germany</td>
<td>Mexico</td>
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<tr>
<td>Bosnia and Herzegovina</td>
<td>Greece</td>
<td>Morocco</td>
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<tr>
<td>Brasil</td>
<td>Hungary</td>
<td>Myanmar</td>
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<tr>
<td>Bulgaria</td>
<td>Iceland</td>
<td>Netherlands</td>
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<tr>
<td>Canada</td>
<td>India</td>
<td>New Caledonia</td>
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<tr>
<td>Chile</td>
<td>Ireland</td>
<td>New Zealand</td>
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<tr>
<td>China (People’s Rep. of)</td>
<td>Italy</td>
<td>Norway</td>
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<tr>
<td>Chinese Taipei</td>
<td>Japan</td>
<td>Oman</td>
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<td>Colombia</td>
<td>Kazakhstan</td>
<td>Paraguay</td>
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<tr>
<td>Croatia</td>
<td>Korea (Rep. of)</td>
<td>Peru</td>
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<tr>
<td>Cyprus</td>
<td>Kuwait</td>
<td>Philippines</td>
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</table>
BT
BTV incursions in the Mediterranean region
Bluetongue

January 2018

Follow-up Report 13
BTV - 4

December 2017

Immediate notification
BTV - 3
Bluetongue

*Outbreaks notified through immediate notifications and follow-up reports*

**France**

**Italy**
BTV in Tunisia

- **BTV-3**
- **BTV-3 in a flock of sheep originating from Libya**
- **BTV-1**
BTV in Libya

Distribution of BT serotypes in Libya
PPR situation in North Africa

Jan-Juin 2017

No outbreaks in 2017
HPAI H5N8 clade 2.3.4.4 virus has been identified in poultry holdings, wild and captive birds in many Mediterranean countries between October 2016 and March 2018 with a peak in the number of countries reporting the disease between October 2016 and February 2017.
HPAI H5N5 and H5N6 viruses have been also identified in poultry holdings and wild birds in certain Mediterranean countries between late 2016 and early 2017.
H9N2 of the G1 lineage
New introductions on the AI evolving scenario in North African countries

Previously detected and «Novel» subtypes

HP H5N1
HP H5N8
LP H9N2
HP H7N1
LP H7N?

H5N8 HPAI (2.3.4.4) Wild birds, Nov 2016

H5N8 HPAI (2.3.4.4), Nov. 2016
Wild birds followed by outbreaks in backyard and farm poultry

H9N2 in Morocco 2016

HPAI H7N1
Wild birds, October 2016

Libya
LPAI H7N? poultry, May 2017

Algeria
Algeria

- **H7N1 HPAI**, Oct. 2016
- caused a large die-off in wild birds
- approximately **1800** dead birds belonging to:
- 8 families (mainly anatidae)/23 species
- **No genetic information available**
Present and future challenges:

- The high diversity of circulating subtypes makes control and eradication complex. Improving overall poultry diagnostics, to rule-out co-infections and evaluate the real pathogenicity of viruses is needed. In particular, subtyping, pathotyping and characterization of complete genome (timely detection of reassortment, selection of adaptive mutations to mammals, antigenic drift) have to be constantly applied.

- In case this is not possible, rely on International Reference Laboratories in a timely manner, especially for HPAI viruses.
Present and future challenges:

- Increase surveillance for early detection of AI not only in poultry but also in *wild birds*

- Increase biosecurity measures to avoid virus introduction from *wild birds*

- Matching vaccine strains to currently circulating strains and evaluate post vaccination seroconversion

- Design a plan for the control of H9N2 viruses and an exit strategy to end the HPAI endemicity in certain countries (e.g. HPAI H5N1 in Egypt)
Merci pour votre attention