GF-TADs for Europe

Seventh Regional Steering Committee meeting (RSC7)

Priority diseases in Europe, including transparency aspects

AFSCA - Brussels – 16-17 October 2017

Dr Paula Cáceres Soto
Head, World Animal Health Information and Analysis Department, OIE
1. Priority animal diseases in Europe reported to the OIE
   - African swine fever
   - Lumpy skin disease
   - Infection with influenza A viruses of high pathogenicity
   - Infection with foot and mouth disease virus
   - Infection with peste des petits ruminants virus
   - Infection with classical swine fever virus
   - Infection with rabies virus
   - Infection with Brucella abortus, Brucella melitensis and Brucella suis

2. Transparency and notification

3. WAHIS is becoming WAHIS+
African swine fever
Reported distribution of ASF in 2016 and 2017
(data based on reports received up to 15 September 2017)

10 countries

Czech Republic: 1st occurrence starting from June 2017

Romania: 1st occurrence starting from July 2017

Moldova: 1st occurrence starting from September 2016
Disease trend graph
(data based on reports received up to 15 September 2017)

\[ y = 0.0006x^2 - 0.009x + 0.0618 \]
\[ R^2 = 0.7 \]

- Countries reporting ASF present
- Countries reporting ASF absent
- % Reporting countries affected with ASF
Analysis of WAHIS data

Evolution of proportion of outbreaks notified in domestic pigs vs. wild boars?
Methodology

2005-1\textsuperscript{st} sem. 2017

Nearly 9000 outbreaks in reported through WAHIS

Categorisation domestic pigs & wild boars

Numbers with years
Proportions with years
Results (1) – No. outbreaks by category

Continuous increase of the number of outbreaks
Results (2) - % outbreaks reported in domestic pigs only

Decrease of the proportion of outbreaks reported in domestic pigs
Chapter 1.1.: Notification of diseases, infections and infestations, and provision of epidemiological information (Article 1.1.3)

Veterinary Authorities shall, under the responsibility of the Delegate, send to the HQ, in accordance with relevant provisions in the disease-specific chapters, notification, through the WAHIS or by fax or email within 24 hours, of any of the following events:

- **FIRST OCCURRENCE** of a LDII in a country, a zone or a compartment;
- **RECURRENT** of a LDII in a country, a zone or a compartment…;
- first occurrence of a **NEW STRAIN** of a pathogenic agent of a LDII in a country, …;
- a sudden and **UNEXPECTED CHANGE** in the distrib. or increase in incidence or virulence of, or morbidity or mortality caused by, the pathogenic agent of a LDII pres…
- occurrence of a LDII in an **UNUSUAL HOST SPECIES**;

**WEEKLY REPORTS** subsequent to a notification under point 1) above, to provide further information on the evolution of the event which justified the notification. These reports should continue until the *DII HAS BEEN ERADICATED OR THE SITUATION HAS BECOME SUFFICIENTLY STABLE* so that six-monthly reporting under point 3) will satisfy the obligation of the Member Country; for each event notified, a final report should be submitted;

LDII= listed disease, infection or infestation
<table>
<thead>
<tr>
<th>Country</th>
<th>Outbreaks in on-going events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech Republic</td>
<td>114</td>
</tr>
<tr>
<td>Latvia</td>
<td>697</td>
</tr>
<tr>
<td>Poland</td>
<td>630</td>
</tr>
<tr>
<td>Romania</td>
<td>2</td>
</tr>
<tr>
<td>Russia</td>
<td>598</td>
</tr>
<tr>
<td>Ukraine</td>
<td>127</td>
</tr>
<tr>
<td>Estonia</td>
<td>1052 (sufficiently stable in April 2016)</td>
</tr>
<tr>
<td>Lithuania</td>
<td>821 (sufficiently stable in September 2017)</td>
</tr>
</tbody>
</table>

When the situation is considered sufficiently stable, no more follow-up reports will be sent through WAHIS and the information about this disease will be included in the next six-monthly reports.
Conclusions

- **Deterioration** of the situation related to the number of countries affected

- **Increased number of outbreaks** reported through WAHIS

- **Decreased proportion** of outbreaks reported in domestic pigs

- In order to facilitate the reporting process, **important to consider the diseases sufficiently stable** and reporting through six-monthly report
Lumpy skin disease
Reported distribution of LSD in 2016 and early 2017
(data based on reports received up to 15 September 2017)

10 countries
Disease trend graph

(data based on reports received up to 15 September 2017)

Deterioration

GF-TADs Europe

No. countries

% countries

Countries reporting LSD present
Countries reporting LSD absent
-% reporting countries affected with LSD
Analysis of WAHIS data

Spread of the disease in the Region since 2005?
Methodology

2005-1\textsuperscript{st} sem. 2017

Nearly 2000 outbreaks in reported through WAHIS

Spatial analysis based on outbreak location

Kernel analysis
Results – Spatial spread

Kernel 2006
Results – Spatial spread

Kernel 2007

Copyright © 2017, World Animal Health Information and Analysis Department - OIE
Results – Spatial spread

Kernel 2012
Results – Spatial spread

Kernel 2014
Results – Spatial spread

Kernel 2015
Results – Spatial spread

Kernel 2016
Results – Spatial spread

Kernel 2017
Conclusions

- **Deterioration** of the epidemiological situation of the Region since 2005
- **Disease spread** to the north and to the east
- Control measures put in place *(vaccination)* is stopping the spread in 2017 *(EFSA)*
Infection with influenza A viruses of high pathogenicity
Reported distribution of HPAI in domestic birds in 2016 and 2017
(data based on reports received up to 15 September 2017)

26 countries

Finland: 1st occurrence in the country – cases in domestic birds starting from November 2016

FYRO Macedonia: 1st occurrence in the country – cases in domestic birds starting from January 2017

Serbia: 1st occurrence in the country – cases in domestic birds starting from December 2016
## Subtypes - HPAI in domestic birds in 2016 and 2017

(data based on reports received up to 15 September 2017)

<table>
<thead>
<tr>
<th>Subtype</th>
<th>No. Countries affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>H5</td>
<td>1</td>
</tr>
<tr>
<td>H5N1</td>
<td>1</td>
</tr>
<tr>
<td>H5N2</td>
<td>1</td>
</tr>
<tr>
<td>H5N5</td>
<td>2</td>
</tr>
<tr>
<td>H5N6</td>
<td>1</td>
</tr>
<tr>
<td><strong>H5N8</strong></td>
<td><strong>25</strong></td>
</tr>
<tr>
<td>H5N9</td>
<td>1</td>
</tr>
<tr>
<td>H7N7</td>
<td>1</td>
</tr>
</tbody>
</table>
Reported distribution of HPAI in wild birds in 2016 and 2017
(data based on reports received up to 15 September 2017)

32 countries

- Finland: 1st occurrence in the country – cases in wild birds starting from November 2016
- Lithuania: 1st occurrence in the country – cases in wild birds starting from February 2017
- FYRO Macedonia: 1st occurrence in the country – cases in wild birds starting from January 2017
- Serbia: 1st occurrence in the country – cases in wild birds starting from November 2016
- Montenegro: 1st occurrence in the country – cases in wild birds starting from December 2016
Subtypes - HPAI in wild birds in 2016 and 2017
(data based on reports received up to 15 September 2017)

<table>
<thead>
<tr>
<th>Subtype</th>
<th>No. Countries affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>H5</td>
<td>2</td>
</tr>
<tr>
<td>H5N5</td>
<td>10</td>
</tr>
<tr>
<td>H5N8</td>
<td>29</td>
</tr>
</tbody>
</table>
Infection with foot and mouth disease virus
EUROPE: OIE Member Countries' official FMD status map

Last update October 2017

© OIE 2017

Legend:
- Green: Member Countries and zones recognised as FMD free without vaccination
- Red: Suspension of FMD free status without vaccination
- Light green: Member Countries and zones recognised as FMD free with vaccination
- Gray: Countries and zones without an OIE official status for FMD

Countries and zones highlighted:
1. Malta
2. Austria, Switzerland, Italy, San Marino
3. Croatia, Bosnia, Herzegovina, Serbia, Romania
4. Moldova, Ukraine, Romania, Greece, Cyprus, Turkey
Reported distribution of FMD in 2016 and 2017
(data based on reports received up to 15 September 2017)

4 countries
(Armenia, Israel, Russia and Turkey)

Serotype O was reported 9/10/17 in Respublika Bashkortostan with 3 outbreaks
Infection with classical swine fever virus
EUROPE: OIE Member Countries' official CSF status map

Last update May 2017

© OIE 2017

- **Member Countries recognised as free from CSF**
- **Countries without an OIE official status for CSF**

Map showing the status of CSF (Casseouscret Fever) in Europe according to OIE (Office International des Epizooties) standards. The map highlights countries that are officially recognized as free from CSF and those that do not have an official status for CSF.
Reported distribution of CSF in 2016 and 2017
(data based on reports received up to 15 September 2017)

2 countries
(Latvia and Eastern part of Russia)
Infection with peste des petits ruminants virus
EUROPE: OIE Member Countries' official PPR status map

- Member Countries recognised as free from PPR
- Countries with no OIE official status for PPR

© OIE 2017
Reported distribution of PPR in 2016 and 2017
(data based on reports received up to 15 September 2017)

3 countries
(Georgia, Israel and Turkey)
PPR in Mongolia
(December 2016)

- More than **3000 deaths in Mongolian Saigas** (critically endangered)
- Reinforces the need to **investigate the role of wildlife** in PPR epidemiology
Infection with rabies virus
Reported distribution of rabies in 2016 and 2017
(data based on reports received up to 15 September 2017)

19 countries

- **Hungary**: recurrence starting from February 2017
- **Kazakhstan**: recurrences starting from October 2016 and February 2017
Infection with *Br. abortus*, *Br. melitensis* and *Br. suis*
Reported distribution of *B. abortus* in 2016 and 2017
(data based on reports received up to 15 September 2017)

18 countries
Reported distribution of *B. melitensis* in 2016 and 2017

(data based on reports received up to 15 September 2017)

20 countries
Reported distribution of *B. suis* in 2016 and 2017

(data based on reports received up to 15 September 2017)
Transparency and notification
General mandate of the OIE:

**General mandate of the OIE:** to improve animal health worldwide

**One of the OIE’s main objectives**

To ensure **transparency** in the global animal disease situation, including zoonosis.
Notification in Europe in 2017

- 127 immediate notifications submitted until 11 October 2017 by European countries.

- Six-monthly reports for 2017 submitted on:

<table>
<thead>
<tr>
<th>Terrestrial animal diseases</th>
<th>Aquatic animal diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st semester</td>
<td>49% Members</td>
</tr>
<tr>
<td>1st semester</td>
<td>43% Members</td>
</tr>
</tbody>
</table>
Rumours tracking activity: improvement of WAHIS sensitivity

OIE tracking team: 6 person

Sources: 250

Rumours detected: 20,000

Relevant rumours: 3,500

Selected to track: 900

130 (Early Warning) 770 (Monitoring)
Geographical tracking coverage

Rumours detected in 167 countries
**Evaluation of WAHIS sensitivity: early warning index**

**Regional approach**

<table>
<thead>
<tr>
<th>Region</th>
<th>Early warning index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>+14%</td>
</tr>
<tr>
<td>Americas</td>
<td>+8%</td>
</tr>
<tr>
<td>Asia, Far East and Oceania</td>
<td>+8%</td>
</tr>
<tr>
<td>Europe</td>
<td>+4%</td>
</tr>
<tr>
<td>Middle East</td>
<td>+25%</td>
</tr>
<tr>
<td><strong>All Regions</strong></td>
<td><strong>+8%</strong></td>
</tr>
</tbody>
</table>

Higher disease reporting probability for Europe ($\chi^2 = 4.72$, p-value < 0.05, odds ratio = 2.83)

This index estimates the increase of sensitivity due to tracking
WAHIS is becoming WAHIS+
Stakeholder engagement and consultation

Identification of users` needs

**Internal users**
Delegates and Focal Points.
March 2016

On-line survey:
206 respondents from 167 countries

01

Recommendation
Governance, Methodology, Technical issues, Budgeting, Skills - Human resources

WAHIS Think Tank
April 2016.

02

**External users**
April 2017.

On-line survey:
739 stakeholders from 143 countries

03

Consultative meetings
Specialist services providers

04

**Extensive stakeholders engagement and participation**

WAHIS+ Project team
2017 -
WAHIS is becoming WAHIS+

Development of a quicker and more intuitive system with new features

- Extended data mining
- Customisable data queries
- Enhanced mapping features and displays
- Genomic data linked to epidemiological information
- Integration with other databases and platforms (ADIS)
Be part of the revolution in global animal health data
Thank you for your attention

Dr Paula Cáceres Soto

12, rue de Prony, 75017 Paris, France
www.oie.int
media@oie.int - oie@oie.int