CURRENT ANIMAL HEALTH SITUATION WORLDWIDE: ANALYSIS OF EVENTS AND TRENDS

Dr Paula Cáceres Soto

Head, World Animal Health Information and Analysis Department
1. Global situation regarding four terrestrial OIE-listed diseases and infections currently subject to global control or eradication efforts
   - Infection with foot and mouth disease (FMD) virus
   - Infection with peste des petits ruminants (PPR) virus
   - Infection with rabies virus in dogs
   - Bovine tuberculosis (Infection with *Mycobacterium bovis*)

2. Global situation regarding four other diseases and infections of major interest
   - Infection with influenza A viruses of high pathogenicity in birds
   - African swine fever
   - Lumpy skin disease
   - Tilapia lake virus disease, an emerging disease in aquatic animals

3. Update on the WAHIS renovation project (WAHIS+)
Introduction

Members having submitted their six monthly report on terrestrial animal diseases

As of 6 May 2018:
- **92%** (167/181) the 1\textsuperscript{st} semester of 2017
- **81%** (147/181) for the 2\textsuperscript{nd} semester of 2017

> **350** INs & **2,100** FURs for 2017 and early 2018
Members having submitted their six monthly report on aquatic animal diseases

As of 6 May 2018:
- **63%** (115/181) the 1\textsuperscript{st} semester of 2017
- **56%** (102/181) for the 2\textsuperscript{nd} semester of 2017

\begin{itemize}
  \item $\approx 30$ INs & $75$ FURs for 2017 and early 2018
\end{itemize}
Chapter I

Global situation regarding four terrestrial OIE-listed diseases currently subject to global control or eradication efforts
Global control and eradication programmes are in place for 4 terrestrial OIE-listed diseases.

- **FMD (2012)**
- **PPR (2015)**
- **Rabies (2017)**
- **Bovine TB (2017)**
Objective of the horizontal chapter

What are the global situations of the four diseases like?

How have countries been implementing the relevant prevention and control measures?
Infection with foot and mouth disease virus (FMD)
FMD distribution in 2017 and early 2018

Global distribution
(data based on reports received up to 6 May 2018)

63 countries / territories

Present
Absent
No information

44 Immediate Notifications

* Data provided by Morocco
FMD distribution in 2017 and early 2018

Serotype A
(data based on reports received up to 6 May 2018)

* Data provided by Morocco
FMD distribution in 2017 and early 2018

Serotype A
(data based on reports received up to 6 May 2018)

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* Data provided by Morocco
FMD distribution in 2017 and early 2018

Serotype A
(data based on reports received up to 6 May 2018)

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20 countries / territories

Present
Absent
No information

Nepal
India
Bhutan
Bangladesh

New strain in the country
Nepal, April 2017
New strain in the country
Bhutan, March 2017

* Data provided by Morocco
Serotype O
(data based on reports received up to 6 May 2018)

35 countries / territories

Present
Absent
No information

* Data provided by Morocco

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Serotype O

(data based on reports received up to 6 May 2018)

35 countries / territories

* Data provided by Morocco
FMD distribution in 2017 and early 2018

Serotype Asia 1
(data based on reports received up to 6 May 2018)

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* Data provided by Morocco
FMD distribution in 2017 and early 2018

Serotype Asia 1
(data based on reports received up to 6 May 2018)

5 countries / territories

Present
Absent
No information
Serotype SAT 1
(data based on reports received up to 6 May 2018)

7 countries / territories

Present
Absent
No information

* Data provided by Morocco
Serotype SAT 2
(data based on reports received up to 6 May 2018)

* Data provided by Morocco
Serotype not specified
(data based on reports received up to 6 May 2018)

20 countries / territories
(32% of affected countries)

Present
Absent
No information

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* Data provided by Morocco
FMD distribution in 2017 and early 2018

Serotype not specified
(data based on reports received up to 6 May 2018)

20 countries / territories
(32% of affected countries)

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% of the reporting countries that notified FMD (2012-2017)
(data based on reports received up to 6 May 2018)

- The area of FMD free zones increased by 133%
- 7 countries that were infected or had a part of their territory officially recognized as free in 2012 now have an official FMD free status for the entire country in 2018

No. countries

<table>
<thead>
<tr>
<th>1st sem.</th>
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</table>

% affected countries

- Countries reporting the disease present (with or without free zone)
- Countries reporting the disease absent (with or without free zone)
- FMD free Member Countries
- % affected reporting countries
% of countries applying all, some or none of the relevant prevention and control measures

**AFFECTED COUNTRIES**
- Surveillance
- Movement control
- Stamping out (whole/partial)
- Official vaccination

**ABSENT COUNTRIES**
- Surveillance
- Precautions at borders

What are the relevant measures?
% of countries applying all, some or none of the relevant prevention and control measures: FMD Present

Surveillance - Movement control- Official Vaccination- Stamping out (whole/partial)

% affected countries

- Countries applying none of the relevant measures
- Countries applying some of the relevant measures
- Countries applying all the relevant measures
- Countries with endorsed official control programme for FMD
% of countries applying all, some or none of the relevant prevention and control measures: FMD Absent

Surveillance – Precaution at borders

% absent countries

<table>
<thead>
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<th>Year</th>
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</table>

- Countries with endorsed official control programme
- Countries applying surveillance AND precaution at borders
- Countries applying surveillance OR precaution at borders
- Countries NOT applying surveillance OR precaution at borders

Members with Free Status are not included in the analysis
Infection with FMD virus: CONCLUSIONS

- FMD official situation has slightly improved, based on the expansion of FMD-free areas in the world and the progressive cessation of vaccination.

- Need to improve the diagnostic capabilities of countries to identify the serotypes.

- Countries are encouraged to make use of the Global FMD control strategy and the network of OIE Reference Laboratories and Collaborating Centres to design and implement well-structured control efforts.

- More accurate disease information through WAHIS for the continued monitoring of global progress of the control efforts.
Infection with peste des petits ruminants virus
PPR distribution in 2017 and early 2018
(data based on reports received up to 6 May 2018)

49 countries / territories (27%)
PPR distribution in 2017 and early 2018
(data based on reports received up to 6 May 2018)

49 countries / territories (27%)

First occurrence in the country, Burundi January 2018

Copyright © 2018, World Animal Health Information and Analysis Department – OIE
% of the reporting countries that notified PPR (2015-2017)

(data based on reports received up to 6 May 2018)

No. countries

% affected countries

Countries reporting the disease present
Countries reporting the disease absent (no free status)
PPR free Member Countries

% affected reporting countries

2015
1st sem.
2nd sem.

2016
1st sem.
2nd sem.

2017
1st sem.
2nd sem.

23%

26%
% of countries applying all, some or none of the relevant prevention and control measures

**AFFECTED COUNTRIES**
- Surveillance
- Movement control
- Stamping out (whole/partial)
- Official vaccination

**ABSENT COUNTRIES**
- Surveillance
- Precautions at borders

What are the relevant measures?
% of countries applying all, some or none of the relevant prevention and control measures: PPR Present

Surveillance - Movement control- Official Vaccination- Stamping out (whole/partial)

% affected countries

- Countries applying all the relevant measures
- Countries applying some of the relevant measures
- Countries applying none of the relevant measures
- Countries reporting official vaccination

Official vaccination
Has been decreasing???

20% apply Stamping out
% of countries applying all, some or none of the relevant prevention and control measures: PPR Absent

Surveillance – Precaution at borders

% absent countries

<table>
<thead>
<tr>
<th>Year</th>
<th>1st sem.</th>
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</tbody>
</table>

- **Countries applying surveillance AND precautions at borders**
- **Countries applying surveillance OR precautions at borders**
- **Countries NOT applying surveillance OR precautions at borders**

Members with Free Status are not included in the analysis.
CONCLUSIONS

- The global situation has not shown a significant improvement since 2015.
- PPR has spread to some areas outside its traditional range over the last few years, including Eastern Europe and Asia.
- Few of the PPR-affected countries report having implemented all of the relevant control measures.
- Room for enhanced prevention and control measures.
- Greater commitment is required to achieve global eradication by 2030.
Infection with rabies virus
Rabies distribution in 2017 and early 2018
(data based on reports received up to 6 May 2018)

104 countries / territories (57%)

* Data provided by Morocco
Rabies distribution in 2017 and early 2018

(data based on reports received up to 6 May 2018)

104 countries / territories (57%)

- Recurrence Norway
  - May 2018

- Recurrence Egypt
  - March 2017

- Recurrence Hungary
  - February 2017

- Recurrence Kazakhstan
  - February 2017

- Recurrence Lebanon
  - February 2018

- Recurrence Malaysia
  - July 2017

* Data provided by Morocco
% of the reporting countries that notified rabies present and the breakdown on species affected in 2017

(data based on reports received up to 6 May 2018)

11 countries have made a self-declaration of freedom.

78 countries absent (43%)

104 countries present (57%)

79 countries (76%) dogs (with or without other species)

Non-canine species only 18%

Species not indicated 6%
What are the relevant measures of rabies in dogs?

<table>
<thead>
<tr>
<th>Surveillance</th>
<th>Official vaccination</th>
<th>Precaution at borders</th>
<th>Selective killing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Countries with disease present in dogs</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Countries with disease present in non-canine species only</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Countries with disease absent</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Implementation of the relevant measures in countries / territories

Disease present in dogs: 84%
- 14% Countries applying all the relevant measures
- 19% Countries applying some of the relevant measures including vaccination
- 65% Countries applying some of the relevant measures without vaccination
- 3% Countries applying none of the relevant measures

Disease present in non-canine species only: 37%
- 58% Countries applying all the relevant measures
- 32% Countries applying some of the relevant measures including vaccination
- 5% Countries applying some of the relevant measures without vaccination
- 13% Countries applying none of the relevant measures

Disease absent: 29%
- 58% Countries applying all the relevant measures
- 18% Countries applying some of the relevant measures including vaccination
- 11% Countries applying some of the relevant measures without vaccination
- 13% Countries applying none of the relevant measures
Rabies in dogs: CONCLUSIONS

- Rabies is a disease with significant global spread and impact.

- All countries are encouraged to:
  - Provide information of the occurrence of the disease and species affected
  - Report the official vaccination through WAHIS
  - Provide information on the control measures applied

- A gap in the implementation of official vaccination for rabies, especially, in the countries where the disease was reported in non-canine species only, which may lead to an increase in the risk to public health.
Bovine tuberculosis
Bovine tuberculosis distribution in 2017 and early 2018

(data based on reports received up to 6 May 2018)

80 countries / territories (46%)

Recurrence Malta July 2017

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* Data provided by Morocco
% of countries applying all, some or none of the relevant prevention and control measures

**What are the relevant measures?**

**AFFECTED COUNTRIES**
- Active surveillance
- Movement control
- Stamping out (whole/partial)

**ABSENT COUNTRIES**
- Surveillance
- Precautions at borders
Implementation of the relevant control measures

**Affected countries**
- 67%: Countries applying none of the relevant measures
- 25%: Countries applying some of the relevant measures
- 8%: Countries applying all the relevant measures

**Absent countries**
- 67%: Countries applying none of the relevant measures
- 19%: Countries applying some of the relevant measures
- 14%: Countries applying all the relevant measures

*Active Surveillance - Movement control - Stamping out (whole/partial)*

*Surveillance – Precaution at borders*
The disease was reported present by 80 of the reporting countries (46%).

In affected countries all the relevant control measures are being applied by 20 countries (25%).

Members are encouraged to improve their level of surveillance and so be in a position to report more accurate information.

More rigorous control efforts are warranted in order to achieve the global goal “to end the global tuberculosis epidemic by 2030”
A smaller than expected percentage of the affected countries reported stamping out or selective killing and disposal as their primary official control measure.

Quality of information reported through WAHIS can be used to analyse the progress achieved with the ongoing global eradication efforts.

Make strategic use of OIE standards, the OIE’s mechanisms for official disease status recognition, endorsement of official control programmes, self-declarations of disease freedom and OIE PVS tool.
Chapter 2

Global situation regarding four diseases and infections of major interest
Infection with influenza A viruses of high pathogenicity in birds
HPAI poultry distribution in 2017 and early 2018
(data based on reports received up to 6 May 2018)

69 Immediate Notifications

Present
Absent
No information

*Data provided by Morocco

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HPAI non-poultry including wild birds distribution in 2017 and early 2018
(data based on reports received up to 6 May 2018)

January 2017

February 2017

September 2017

72 Immediate Notifications

49 countries/territories (27%)

*Data provided by Morocco
% of the reporting countries that notified HPAI present in poultry between 2005 and 2017
(data based on reports received up to 6 May 2018)

Two different major global panzootic waves
Have countries been reactive for controlling HPAI events?

What factors impacted on this reactivity?
Apparent mortality rate (Ap.MR) in domestic birds

\[ \text{Ap.MR} = \frac{\text{Dead animals}}{\text{susceptible animals}} \]

at outbreak level before the implementation of stamping out

How to interpret the proxy ApMR?

If low: country considered reactive in applying stamping out

If high: country considered little reactive in applying stamping out
Ap.MR calculated from early warning reports
(39% all the outbreaks)

Factors that had played a role in the reactivity of the countries

- Epidem. Units
  - Farms v/s backyards
- Size
  - n° susceptible animals
- Panzootic wave
HPAI in poultry: Results

Ap.MR values stratified by epidemiological unit

Ap.MR lower for farms = better reactivity

Ap.MR higher for backyard = little reactivity
HPAI in poultry: Results

Ap.MR values stratified by size of the affected farm

- Ap.MR lower for bigger farms = better reactivity
- Ap.MR higher for smaller farms = little reactivity
HPAI in poultry: Results

Ap.MR values stratified by panzootic wave

Ap.MR higher for 2005-2012 = little reactivity

Ap.MR lower for 2013-2018 = better reactivity
Ap.MR calculated from early warning reports
(39% all the outbreaks)


Spatial interpolation (Inverse Distance Weighting)

**Areas** that had showed **significant improvements** between the two panzootic waves
Distribution of Ap.MR improvement areas

Consequence of learning achieved from prior experience in preparedness and reactivity of Veterinary Services
HPAI in poultry: CONCLUSIONS

- New panzootic of HPAI with continuously changing virus behaviour
- Importance of collecting as much **accurate, real-time** information as possible
- Early detection and rapid control have improved & **importance of reactivity** to tackle the disease was recognised by Members
- New WAHIS+ system for early and timely reporting of information
African swine fever (ASF)
ASF distribution in 2017 and early 2018

(data based on reports received up to 6 May 2018)

34 countries/territories (19%)
ASF distribution in 2017 and early 2018

(data based on reports received up to 6 May 2018)

1st occurrence in Czech Republic, June 2017
1st occurrence in Hungary in April 2018
1st occurrence in Moldova, September 2017

34 countries/territories (19%)
% of the reporting countries that notified ASF present between 2005 and 2017
(data based on reports received up to 6 May 2018)

- Countries reporting the disease absent
- Countries reporting the disease present

% affected reporting countries
Which are the regions and routes at higher risk for ASF introduction?
Characterisation of ASF affected countries based on epidemiological scenarios (2005-2018)

- **In Africa:** 75% countries categorised as endemic
- **In Europe:** the majority first occurrence

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ASF Reporting by epidemiological scenario in 2017

- Reporting presence
- Providing Quantitative info
- Number of cases

No. countries

No. cases reported

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Domestic</th>
<th>Wild pigs</th>
<th>Domestic</th>
<th>Wild pigs</th>
<th>Domestic</th>
<th>Wild pigs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sylvatic cycle</td>
<td>D-D</td>
<td>W&amp;T-D</td>
<td>W&amp;D</td>
<td>D</td>
<td>W&amp;T</td>
<td>T?</td>
</tr>
</tbody>
</table>

D: domestic pig; W: wild pig; T: ticks

 ASF affected countries
- Eastern/Southern Africa
- Europe
- Western/Middle Africa

3 scenarios → Origin of the risk in the Risk assessment

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ASF Reporting by epidemiological scenario in 2017

- Reporting presence
- Providing Quantitative info
- Number of cases

<table>
<thead>
<tr>
<th>Scenario</th>
<th>No. countries</th>
<th>No. cases reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sylvic cycle</td>
<td>Domestic</td>
<td>Wild pigs</td>
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<tr>
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<td>20000</td>
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<tr>
<td>D-D</td>
<td>12</td>
<td>25000</td>
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</table>

D: domestic pig; W: wild pig; T: ticks

3 scenarios → Origin of the risk in the Risk assessment
ASF: Methodology

Qualitative assessment of the risk of ASF introduction into free regions through 7 pathways/routes of introduction

Destination of risk = free ASF countries by regions*

* UN geographical regions
Qualitative risk assessment based on the use of **proxies** (factors that are likely to influence the risk for each pathway).

**Per each pathway**

<table>
<thead>
<tr>
<th>Data by region</th>
<th>Categorization (H-M-L-N)</th>
<th>Combination of risk categories</th>
<th>Risk results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proxy 1</td>
<td>Categories for P1 values</td>
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<td>Proxy 2</td>
<td>Categories for P2 values</td>
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<tr>
<td>Proxy 3</td>
<td>Categories for P3 values</td>
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</table>

**Categories for P1 values**

<table>
<thead>
<tr>
<th>Negligible (N)</th>
<th>Low (L)</th>
<th>Moderate (M)</th>
<th>High (H)</th>
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</table>

**Categories for P2 values**

<table>
<thead>
<tr>
<th>Negligible (N)</th>
<th>Low (L)</th>
<th>Moderate (M)</th>
<th>High (H)</th>
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**Categories for P3 values**

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<tr>
<th>Negligible (N)</th>
<th>Low (L)</th>
<th>Moderate (M)</th>
<th>High (H)</th>
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**Risk results**

Per pathway

60 results: 20 destination regions x 3 origins = 230 results

* 7 analysed pathways = 230 results
ASF: Results

Legal imports of pig products: 75%
Legal imports of domestic pigs: 77%
Illegal imports of wild pigs: 60%
Illegal imports of pig products: 73%
Movement of wild pigs: 65%
Garbage from boats: 50%
ASF: Results

HUMAN FACTOR

- Legal imports of pig products: 75%, Legal imports of domestic pigs: 83%, Illegal imports of domestic pigs: 77%
- Illegal imports of wild pigs: 60%, Illegal imports of pig products: 73%, Movement of wild pigs: 23%
- Garbage from boats: 35%
Individual risk profiles were produced for each region.

The risk for ASF introduction into America and Oceania regions was generally low/negligible.
Individual risk profiles were produced for each region.

Certain regions in Asia presented moderate risk in specific pathways.

Central Asia

Southern Asia
Individual risk profiles were produced for each region.

ASF-free European and African countries presented the highest risks for ASF introduction but with different profiles between them.
The global situation of ASF has deteriorated in recent years.

The risk assessment presented here only evaluated the first step of ASF virus release, without considering the exposure of susceptible population nor the consequences.

The identified risks should be managed by adequate prevention measures including biosecurity and coordination with all stakeholders involved.

The Standing Group of Experts on ASF in Europe (under GF-TADs) could serve as a model for other diseases.
Lumpy skin disease (LSD)
% of the reporting countries that notified LSD present between 2005 and 2017

(data based on reports received up to 6 May 2018)

No. countries

% affected countries

Countries reporting the disease absent

Countries reporting the disease present

—% affected reporting countries

30° (>3000 km) northwards in the last 10 years

Deterioration
LSD distribution in 2017 and early 2018

(data based on reports received up to 6 May 2018)

*Data provided by Morocco

47 countries/territories (27%)
LSD distribution in 2017 and early 2018

(data based on reports received up to 6 May 2018)

Recurrences in zones in Macedonia (FYRO) January & April 2017

Recurrence in Greece February 2017

Recurrences in zones in Russia June & December 2017

47 countries/territories (27%)

*Data provided by Morocco*
Prevention and control strategies implemented over the past 13 years & differences in disease evolution?
Lumpy skin disease: Methodology

- **Groups 1 and 2**: description *trend of the disease* & *control strategies* implemented at regional level

- **Group 3**: description *preventive strategies*
LSD: Results – Group 1

Traditionally affected areas

| Year | 1st sem. | 2nd sem. | 1st sem. | 2nd sem. | 1st sem. | 2nd sem. | 1st sem. | 2nd sem. | 1st sem. | 2nd sem. | 1st sem. | 2nd sem. | 1st sem. | 2nd sem. | 1st sem. | 2nd sem. | 1st sem. | 2nd sem. | 1st sem. | 2nd sem. |
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| 2005 | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       |
| 2006 | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       |
| 2007 | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       |
| 2008 | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       |
| 2009 | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       |
| 2010 | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       |
| 2011 | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       |
| 2012 | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       |
| 2013 | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       |
| 2014 | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       |
| 2015 | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       |
| 2016 | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       |
| 2017 | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       | 20       |

- No improvement

Countries reporting LSD present
- % affected countries reporting control strategies
- % affected countries reporting all recommended pillars of LSD control strategy
LSD: Results - Group 2

Recently affected areas

No. countries

<table>
<thead>
<tr>
<th>Year</th>
<th>1st sem.</th>
<th>2nd sem.</th>
<th>1st sem.</th>
<th>2nd sem.</th>
<th>1st sem.</th>
<th>2nd sem.</th>
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<th>2nd sem.</th>
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<th>2nd sem.</th>
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</tbody>
</table>

% affected countries

- Countries reporting LSD present
- % affected countries reporting control strategies
- % affected countries reporting all recommended pillars of LSD control strategy

Successful strategy ✅
LSD: Results-Group 3

Free Areas

More countries implementing preventive strategies

Countries reporting LSD absent

% reporting countries notifying preventive strategies

World Organisation for Animal Health - Protecting animals, Preserving our future | 85
LSD: CONCLUSIONS

• Quick spread in 2014-2016 but **no further spread in 2017/2018**

• **Effectiveness of the control strategies** in recently affected areas

• Assistance from OIE Reference Laboratories and Collab. Centres

• Members in at-risk areas are encouraged to initiate **vaccination campaigns ahead of virus entry**

• **Manual** and **Code** Chapters on LSD were updated in 2016 and 2017
Tilapia lake virus disease: an emerging disease in aquatic animals
Aquatic Animal Health Code: Emerging disease

Means a disease, other than listed diseases, which has a significant impact on aquatic animal or public health resulting from:

• a change of known pathogenic agent or its spread to a new geographic area or species; or

• a newly recognised or suspected pathogenic agent.
About 6 000 000 tonnes in more than 100 countries

Global distribution of annual tilapia production in 2015
(data based on information provided by FAO)

Tilapia production (tonnes)
- 1 - 1000
- 1000 - 10000
- 10000 - 50000
- 50000 - 180000
- No information
Global distribution of annual tilapia production in 2015 & reported events in 2017 and early 2018

Geographical distribution of TiLV wider than that determined so far?

- Israel August 2011
- Thailand October 2015
- Chinese Taipei June 2017
- Philippine May 2017
- Malaysia June 2017
- Peru November 2017

Tilapia production (tonnes)

- 1 - 1000
- 1000 - 100000
- 100000 - 500000
- 500000 - 1800000
- No information

(data based on information provided by FAO & OIE)
Evolution from 2000 to 2015 of the global production of tilapia, by world region

(data based on information provided by FAO)

Tremendous increase in aquaculture production!

Production (million tonnes)

- Africa: 148%
- Americas: 192%
- Asia: 320%
- Europe: 403%
- Oceania: 39%
Tilapia lake virus disease: CONCLUSIONS

• Capacity of the virus for long distance spread

• Importance of **understanding the geographical distribution of TiLV** to prevent and control its possible spread

• Members are encouraged to **investigate mortality and morbidity events** in tilapines, to notify the OIE and submit viral isolates to the National Center for Biotechnology Information (NCBI) gene bank.

Increase in the information submitted to the OIE observed in the past five years for aquatic animal diseases. OIE support, Aquatic focal point access to WAHIS and e-learning
Chapter 3

Update on the WAHIS renovation project (WAHIS+)
WAHIS+ launch for GS 2019

- User-friendly
- Respond to evolving standards
- High-resolution dynamic maps
- Facilitates data extraction & analysis
- Supports interoperability with other data & systems
### The temporal roll-out strategy for 4 stages

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>Timeline</th>
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</thead>
<tbody>
<tr>
<td>1. Foundation</td>
<td>Rebuilding modernised Core modules and migration of current WAHIS data</td>
<td>Dec. 2019</td>
</tr>
<tr>
<td>2. Evolutive</td>
<td>Interoperability, integration with other systems and data sources</td>
<td>May 2020</td>
</tr>
<tr>
<td>3. Advanced</td>
<td>Integration of historical data sources before 2005 (Handistatus)</td>
<td>March 2021</td>
</tr>
<tr>
<td>4. Optimisation</td>
<td>Integration of new modules and future innovations</td>
<td>2027 and beyond</td>
</tr>
</tbody>
</table>
Stage 1: Foundation [April 2018-Dec. 2019]: Improvement and modernization of current modules

May 2019

- Local report (*new*)
- Immediate notification
- Follow-up report
- Six-monthly report

Objective for end 2019

- Annual report
- Wild annual report,
- Alert App for smartphones
- E-learning

Integration

- Historical data from WAHIS 2005
- ADIS interoperability

Implementation

- Modern data mining system
- GIS terrestrial and aquatic
- Automatic translation tool
- New dashboards for the VS
Partner to ensure 10 year’s vision

International Call for tender
30 October 2017

End-to-end partnership

General Specifications
April – June 2018

Tender award
23 February 2018
WAHIS+ Project Governance

**Steering Committee** (monthly)

- **Strategic Advisory Committee**: Provides strategic direction on project oversight. *Meeting on 13th December 2017*
- **Key users Committee**: Assists WAHIAD and WAHIS+ project team in solution testing.
Key users involvement in WAHIS+ project

01  Dedicated panel of key users: Focal points and experts

02  Global representation

03  Virtual meetings

04  Provide functional and design related feedback to the WAHIS+ project team

05  Ensure that developed modules are relevant to end-users expectations

06  Perform final end user testing
Strategic approach for communication and advocacy

GLOBAL ORGANISATIONS AND AGENCIES, SOME MEMBER COUNTRIES AND DONORS, TRADE PARTNERS, ACADEMIA, RESEARCHERS, CIVIL SOCIETY

SPEAK HIGHLY & CALL FOR MORE USE

(External communication workshop on 20th of February)

MEMBER COUNTRIES INCREASE SUPPORT AND COMMITMENT TO WAHIS
Thank you for your attention