



# GF-TADs for Europe

Seventh Regional Steering Committee meeting (RSC7)

## **Priority diseases in Europe, including transparency aspects**

AFSCA - Brussels – 16-17 October 2017

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# CONTENT

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## 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

and Analysis Department – OIE

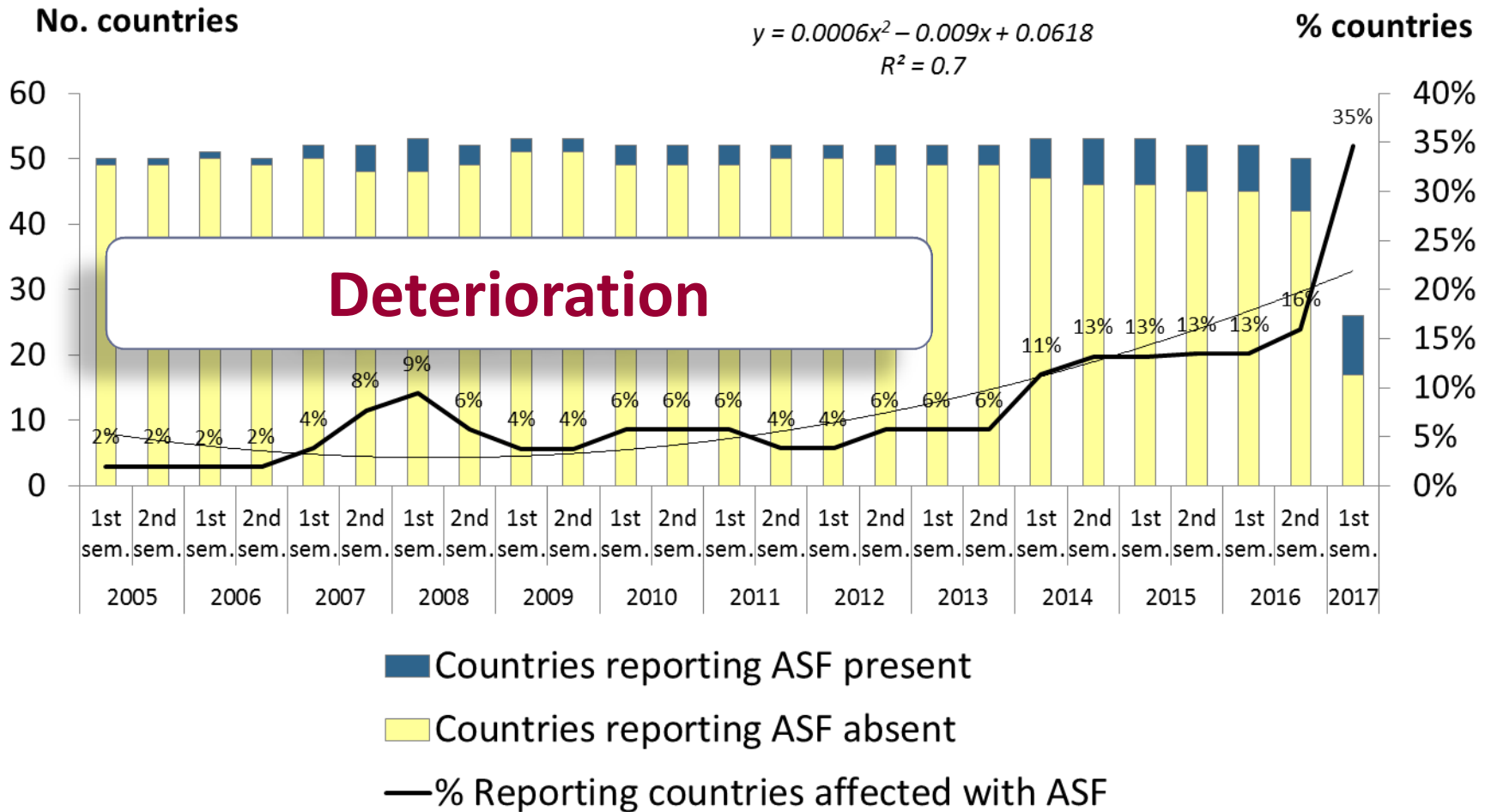
**Romania:** 1st occurrence starting from July 2017

**Moldova:** 1st occurrence starting from September 2016

□ No information  
■ Not in the Region

# Disease trend graph

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



# Analysis of WAHIS data



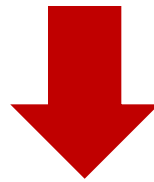
Evolution of proportion of outbreaks notified in domestic pigs vs. wild boars?

# Methodology

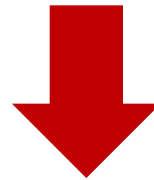


2005-1<sup>st</sup> sem. 2017

Nearly 9000 outbreaks in reported through WAHIS



Categorisation domestic pigs & wild boars

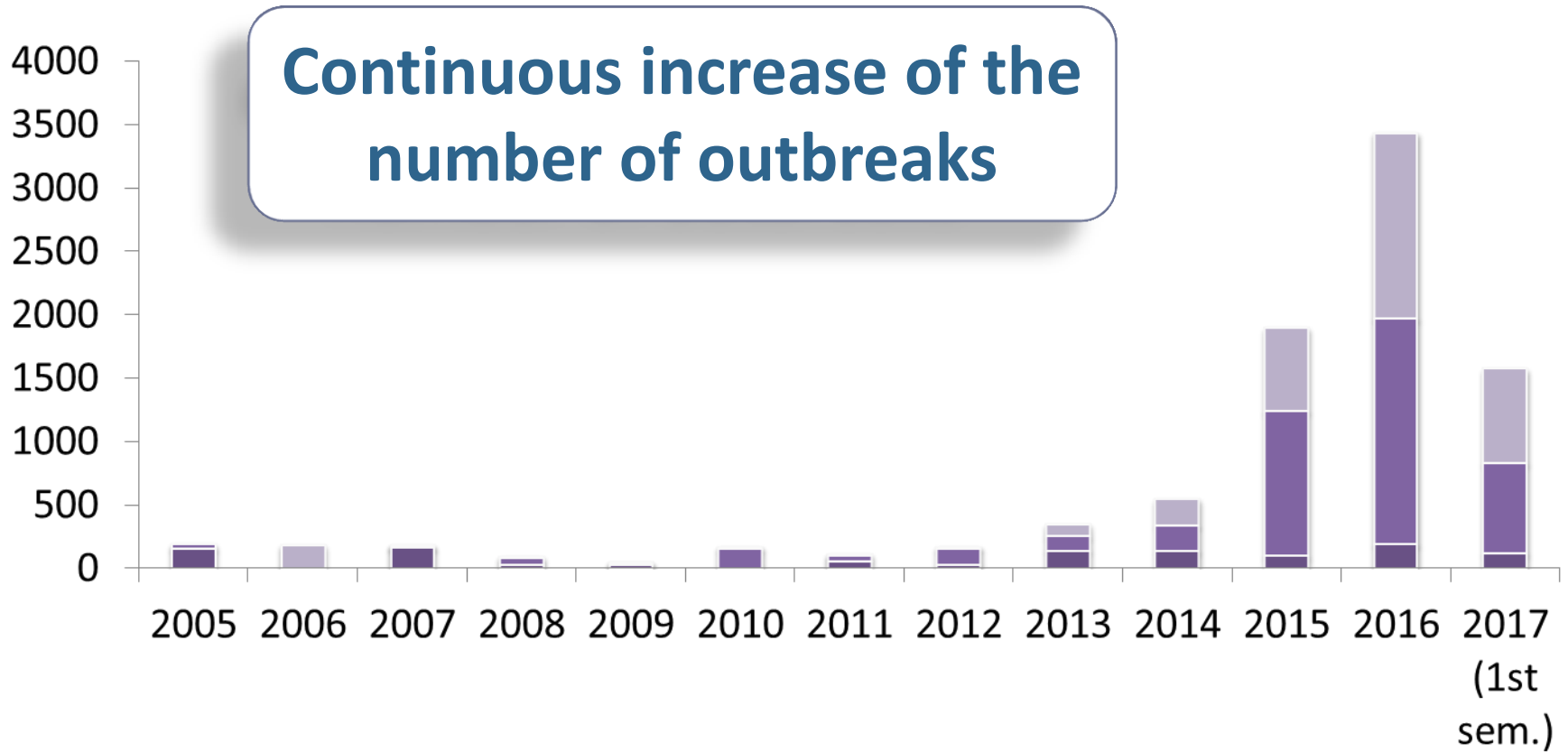


Numbers with years  
Proportions with years



# Results (1) – No. outbreaks by category

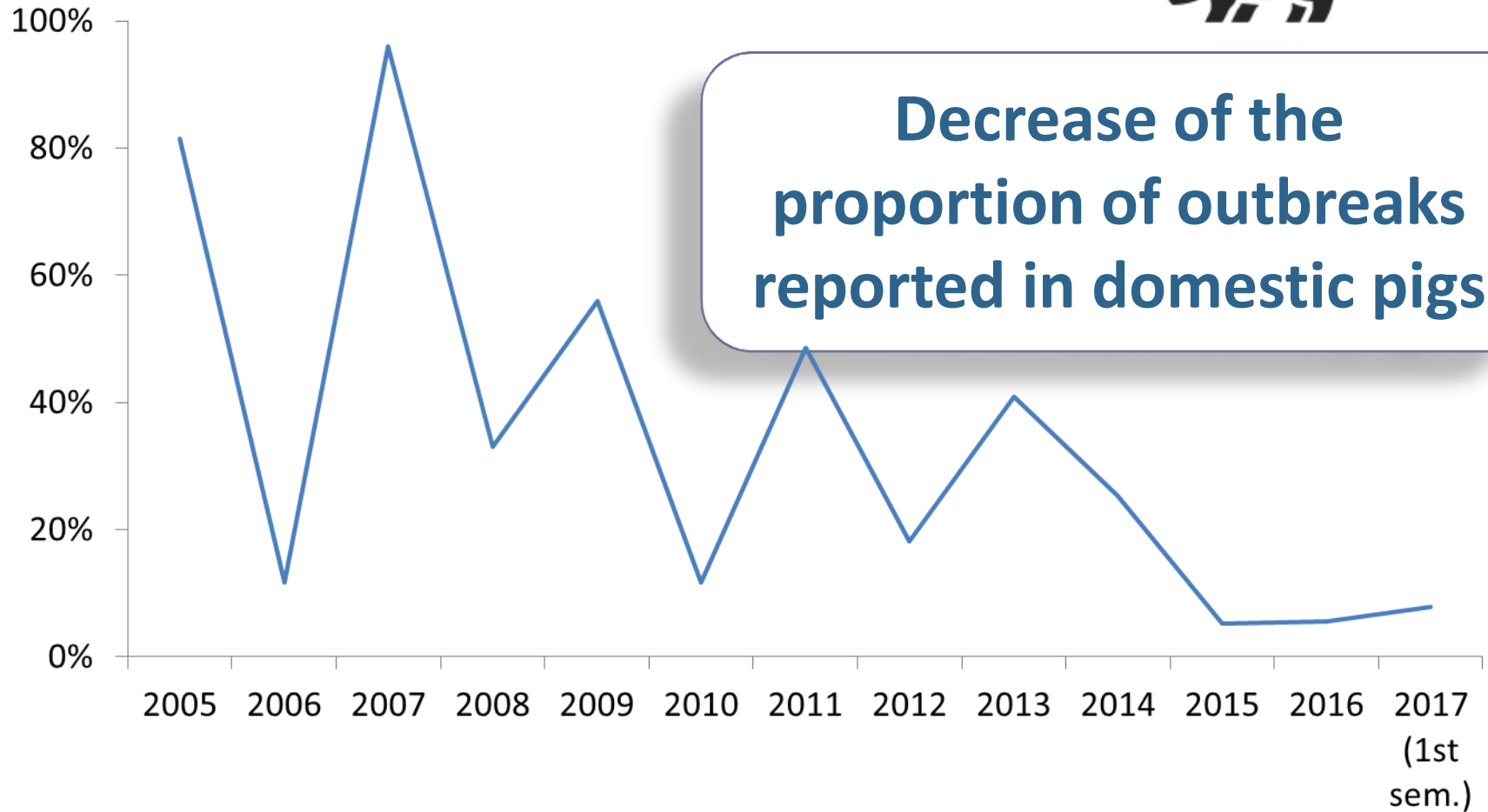
No. outbreaks



■ Swine    ■ Swine and wild boars    ■ Wild boars



# Results (2) - % outbreaks reported in domestic pigs only



# 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;
- **RECURRENCE** 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**

Country	Outbreaks in on-going events
Czech Republic	114
Latvia	697
Poland	630
Romania	2
Russia	598
Ukraine	127
Estonia	1052 (sufficiently stable in April 2016)
Lithuania	821 (sufficiently stable in September 2017)

When the situation is consider 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

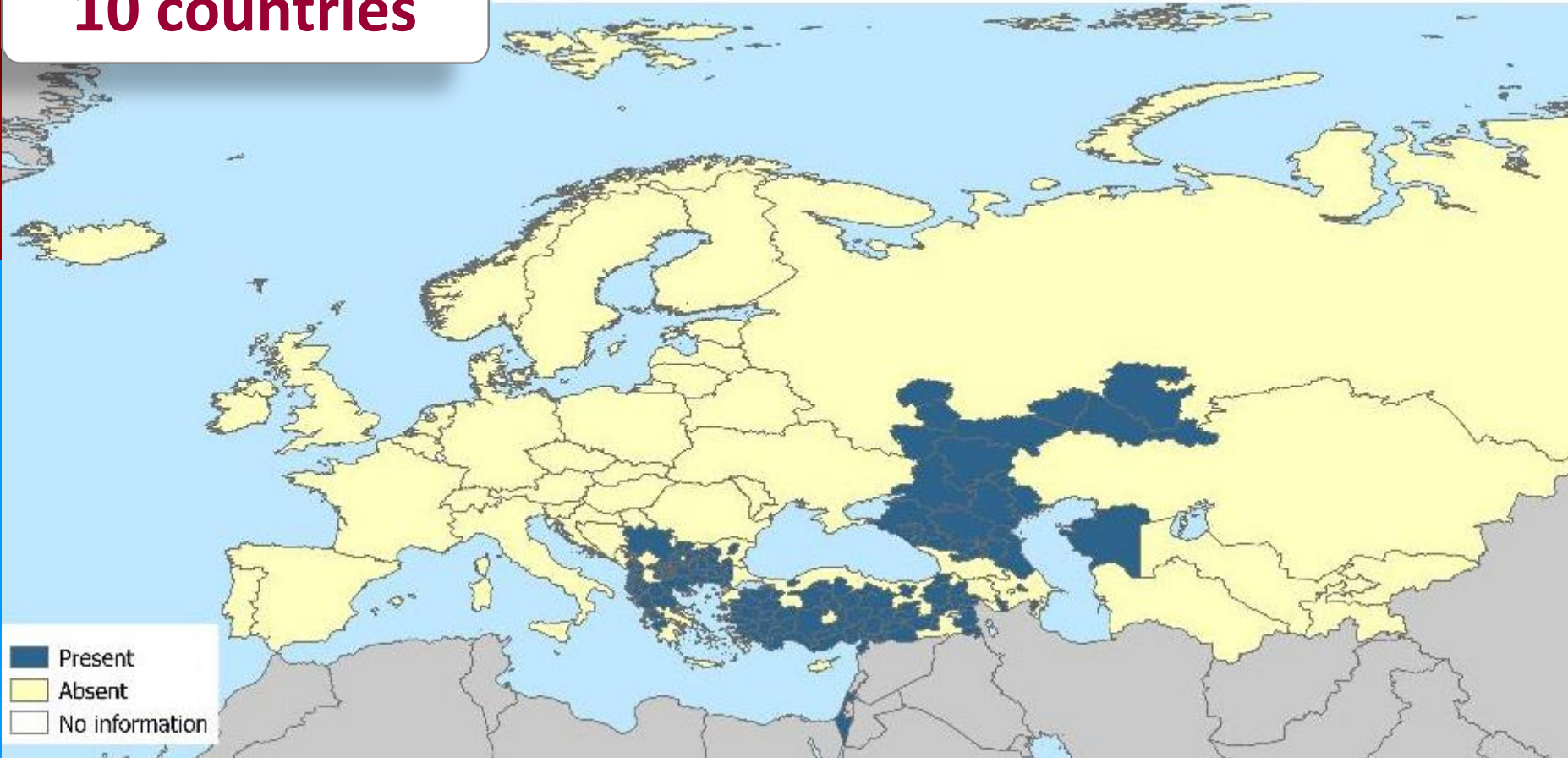
# Lumpy skin disease

# Reported distribution of LSD in 2016 and early 2017

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

**10 countries**

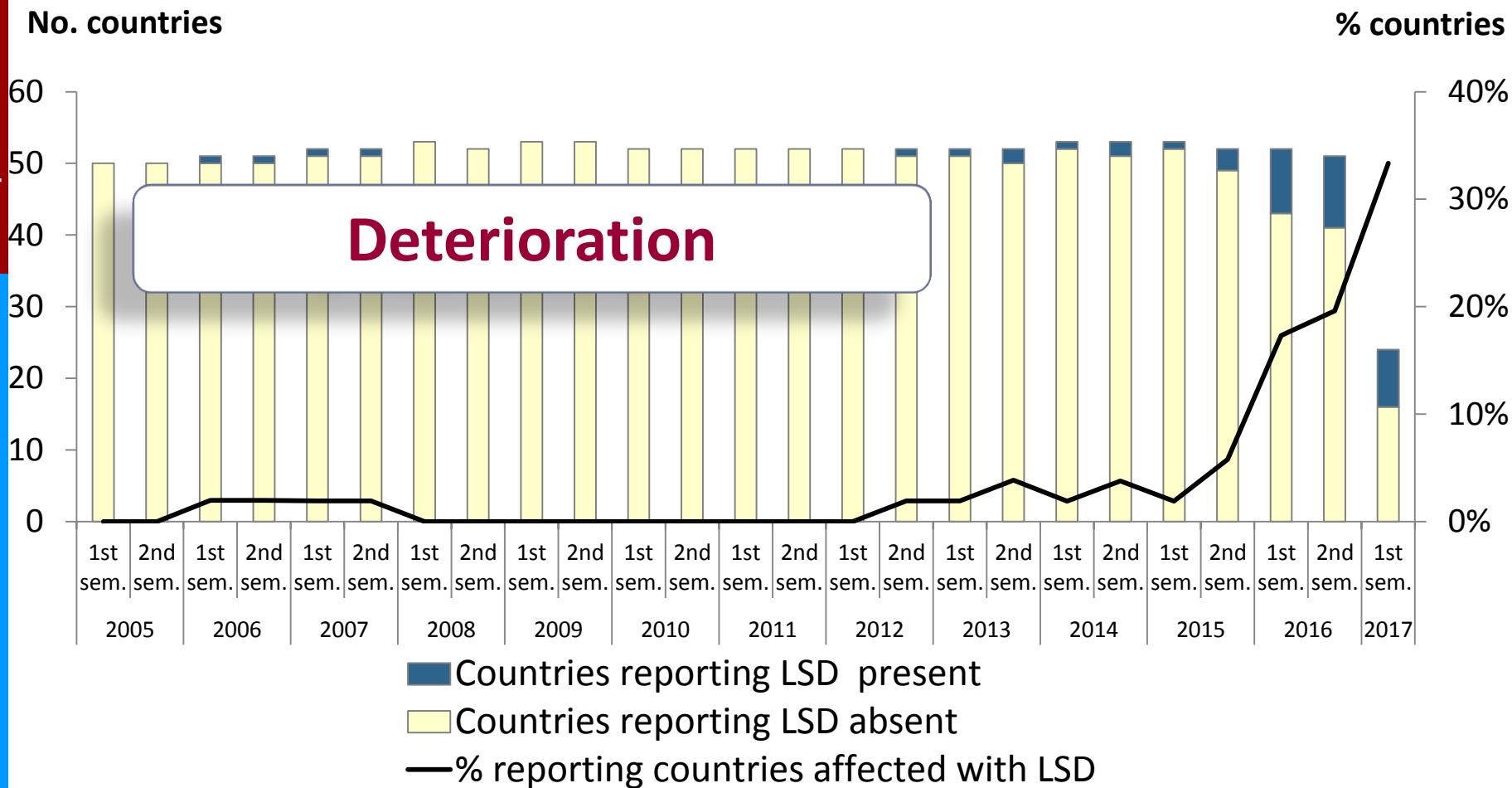
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# Disease trend graph

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

GF-TADs Europe



# Analysis of WAHIS data



Spread of the disease in the  
Region since 2005?



# Methodology

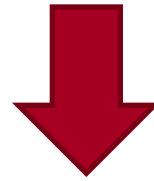
2005-1<sup>st</sup> sem. 2017



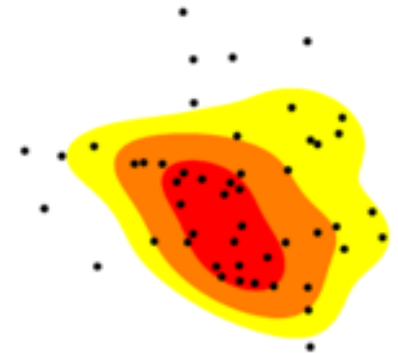
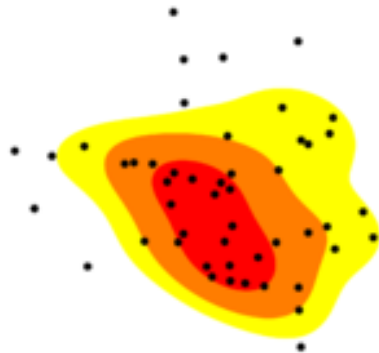
Nearly 2000 outbreaks in reported through WAHIS



Spatial analysis based on outbreak location



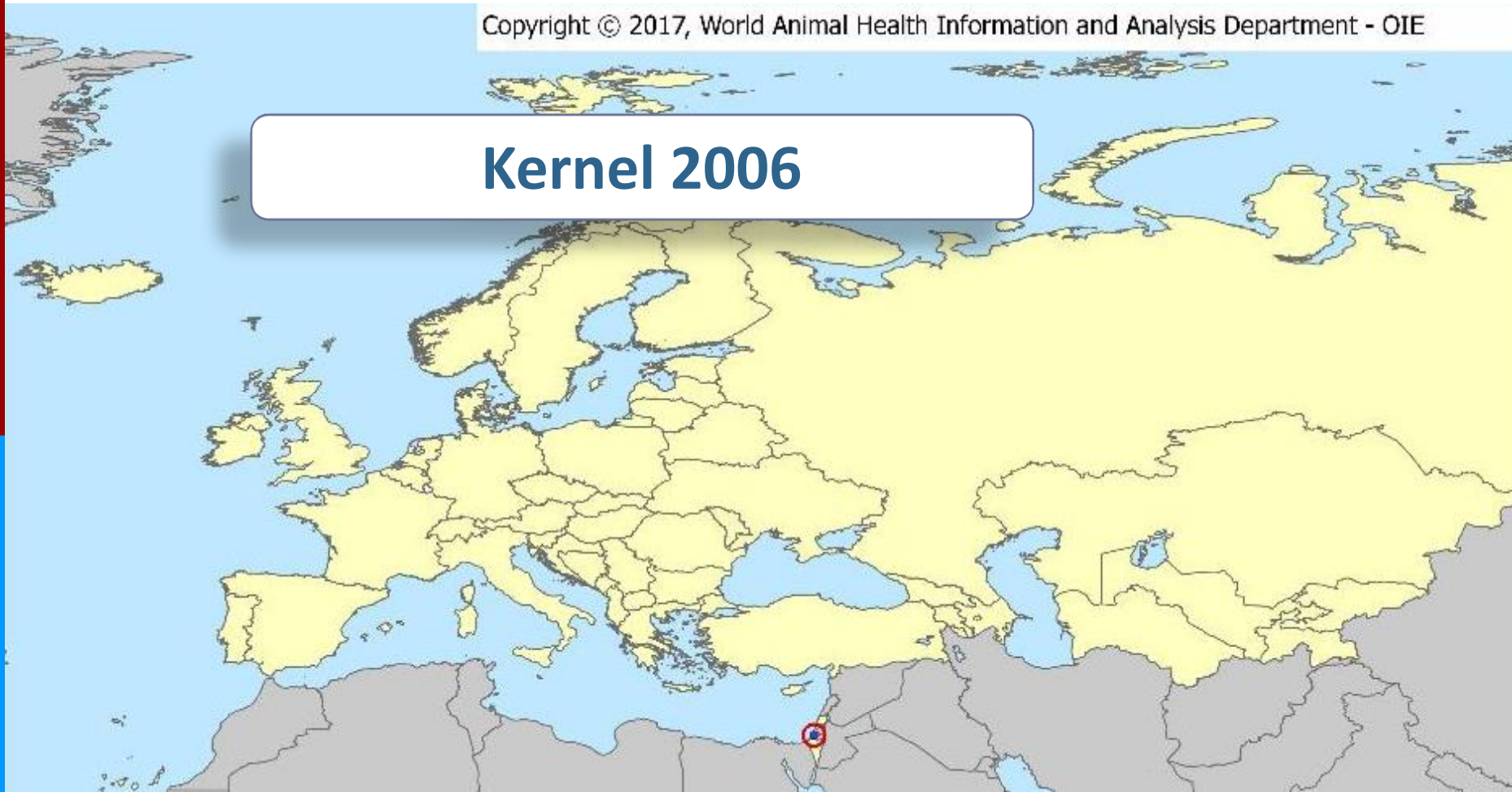
Kernel analysis



# Results – Spatial spread

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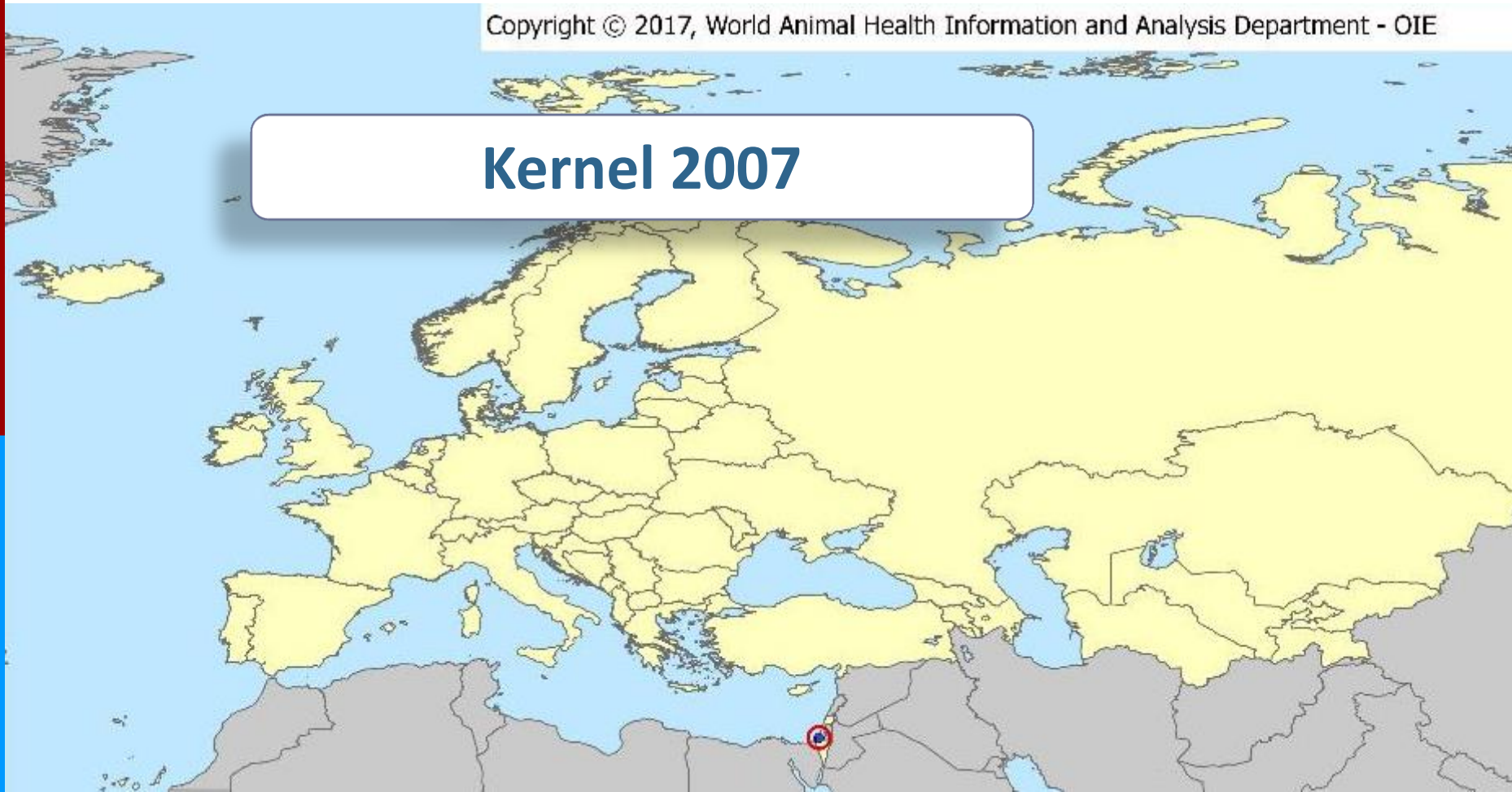
**Kernel 2006**



# Results – Spatial spread

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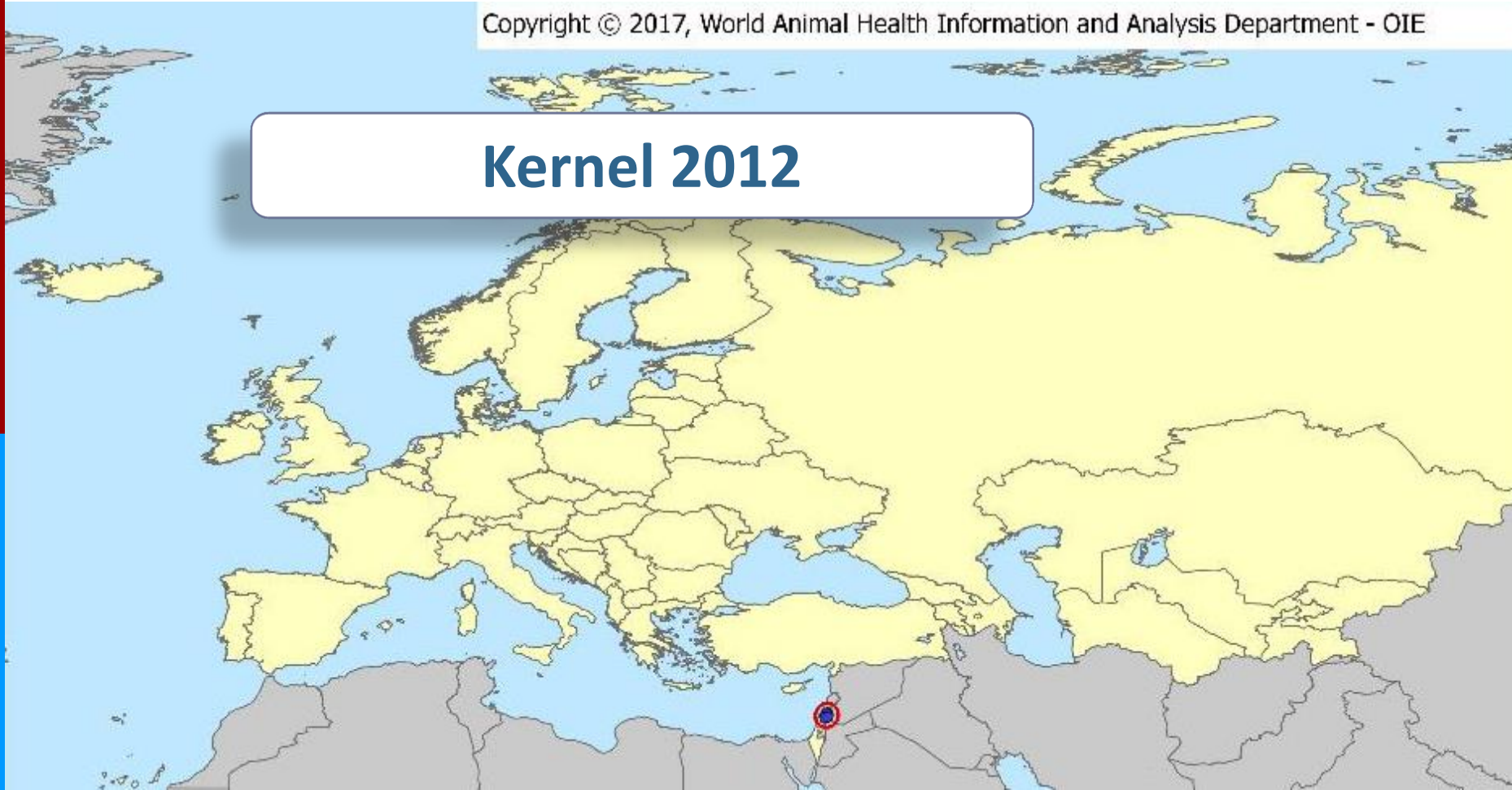
**Kernel 2007**



# Results – Spatial spread

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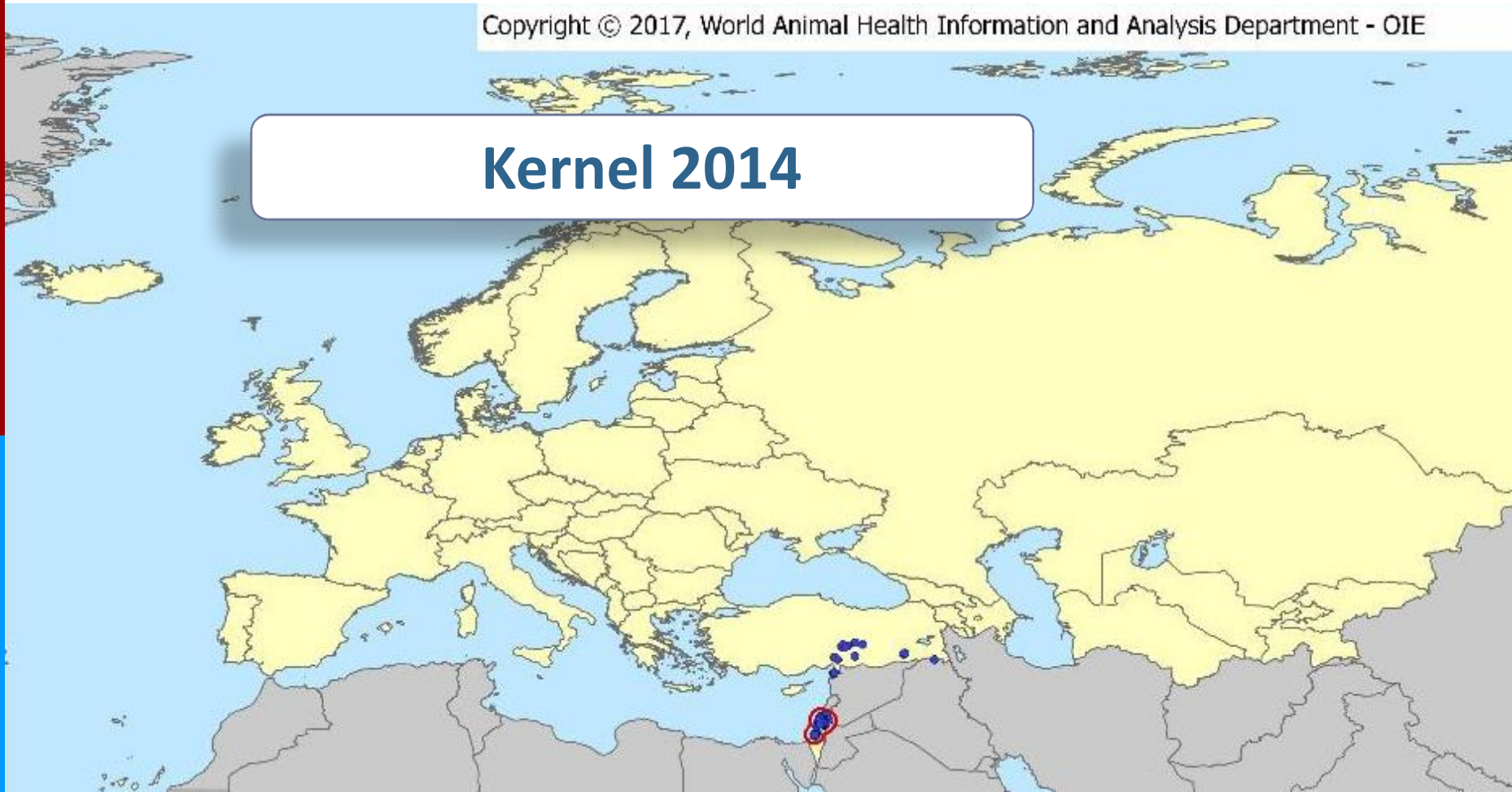
**Kernel 2012**



# Results – Spatial spread

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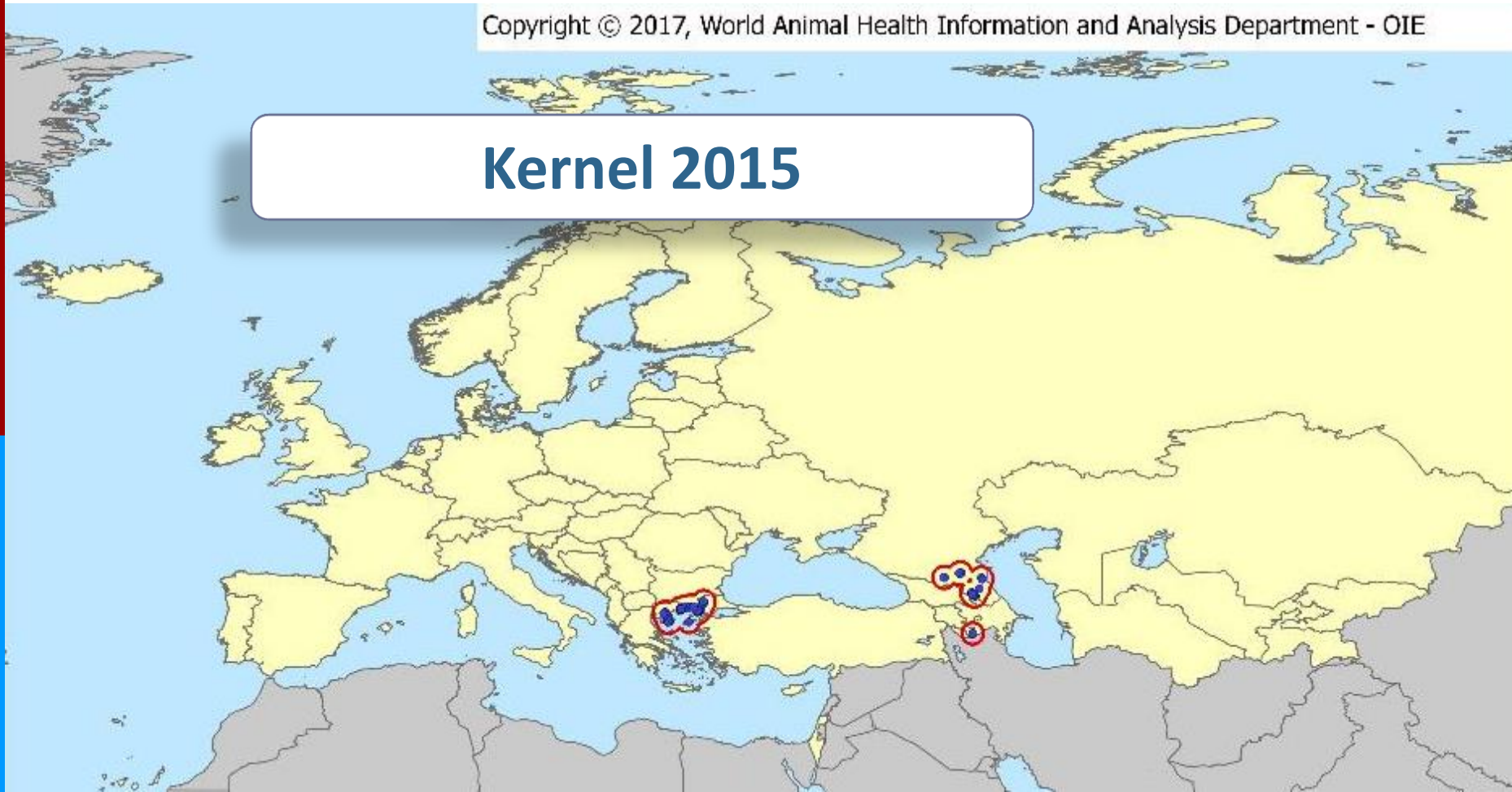
**Kernel 2014**



# Results – Spatial spread

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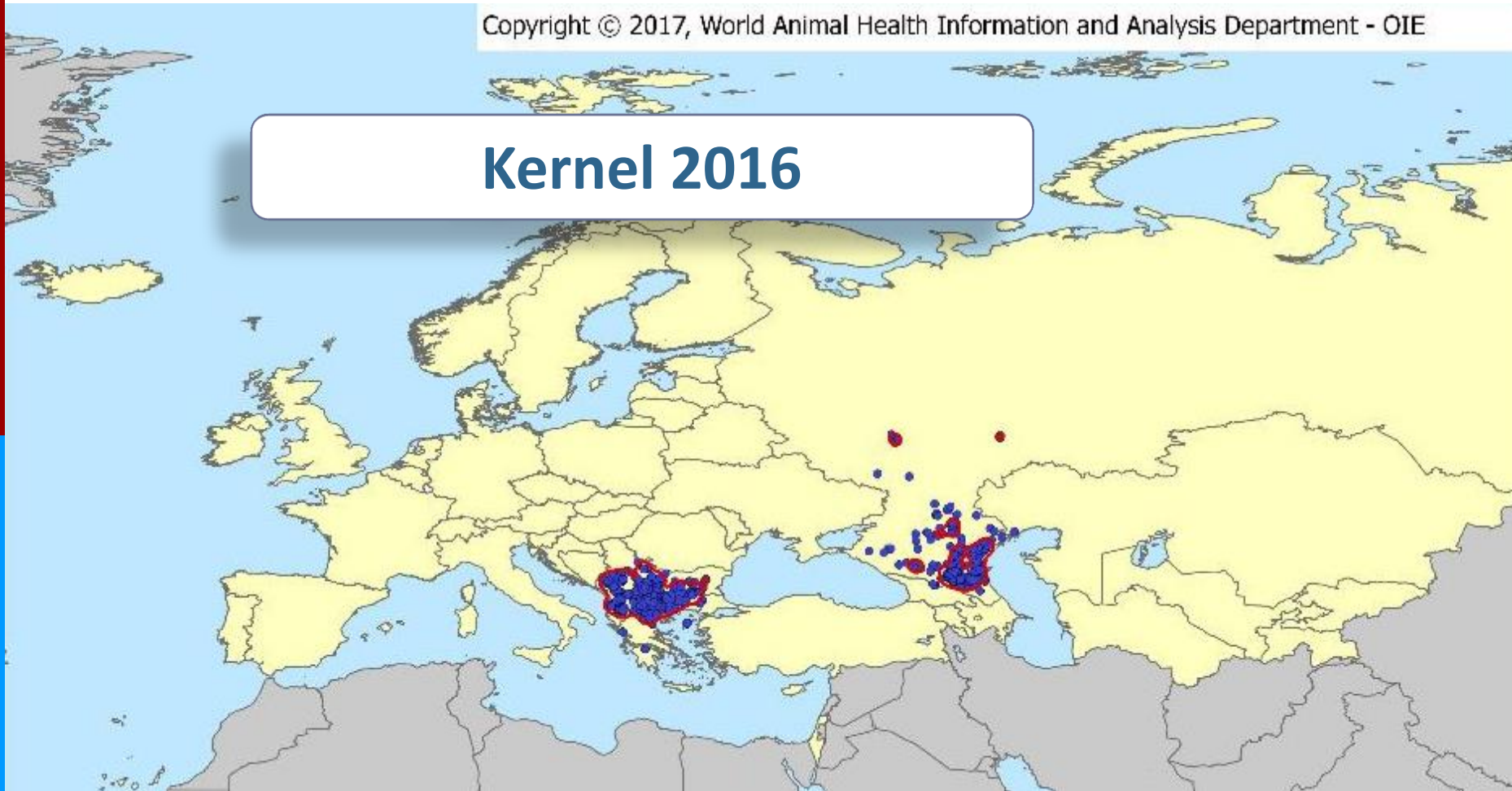
**Kernel 2015**



# Results – Spatial spread

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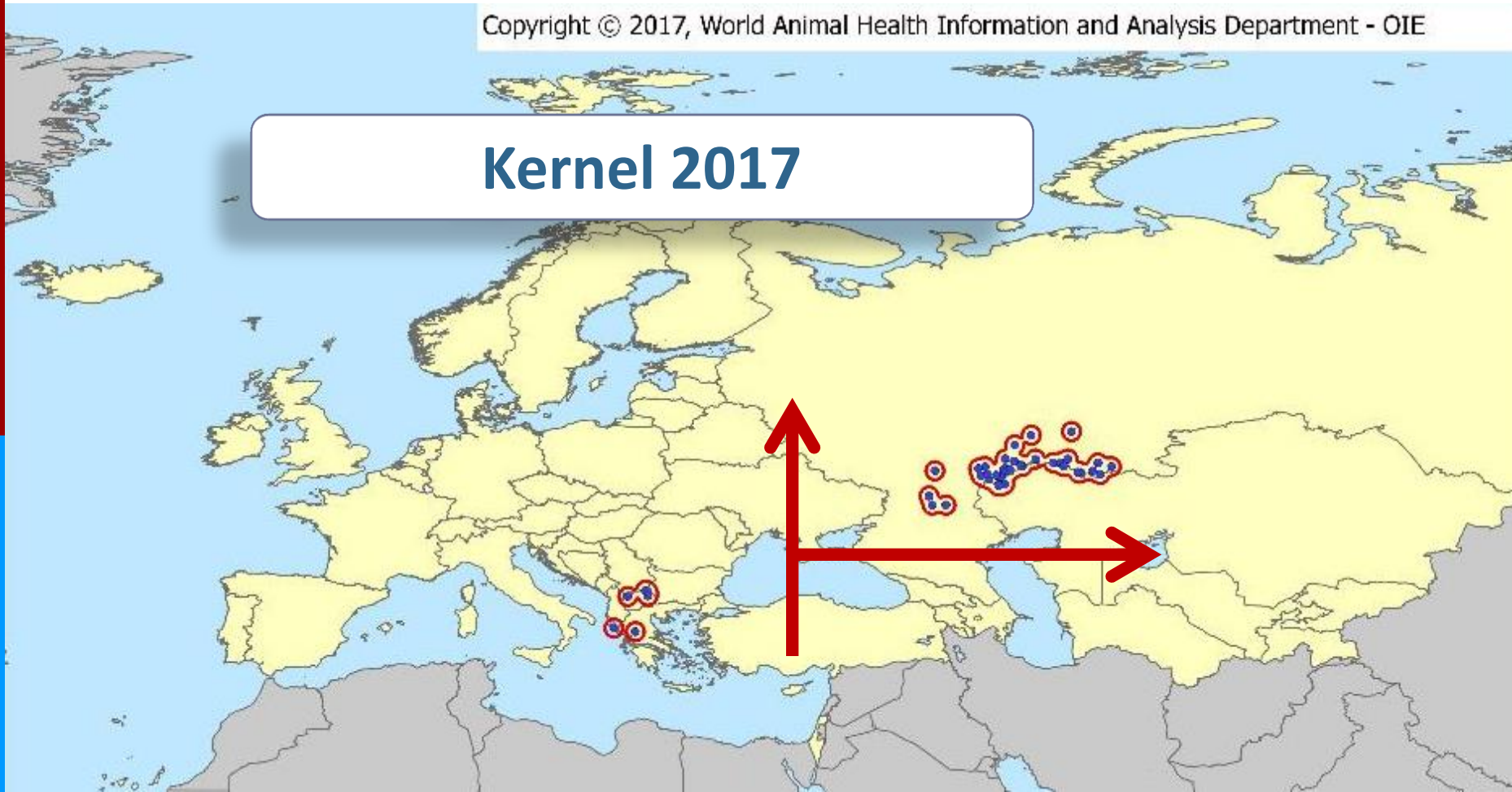
**Kernel 2016**



# Results – Spatial spread

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**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)



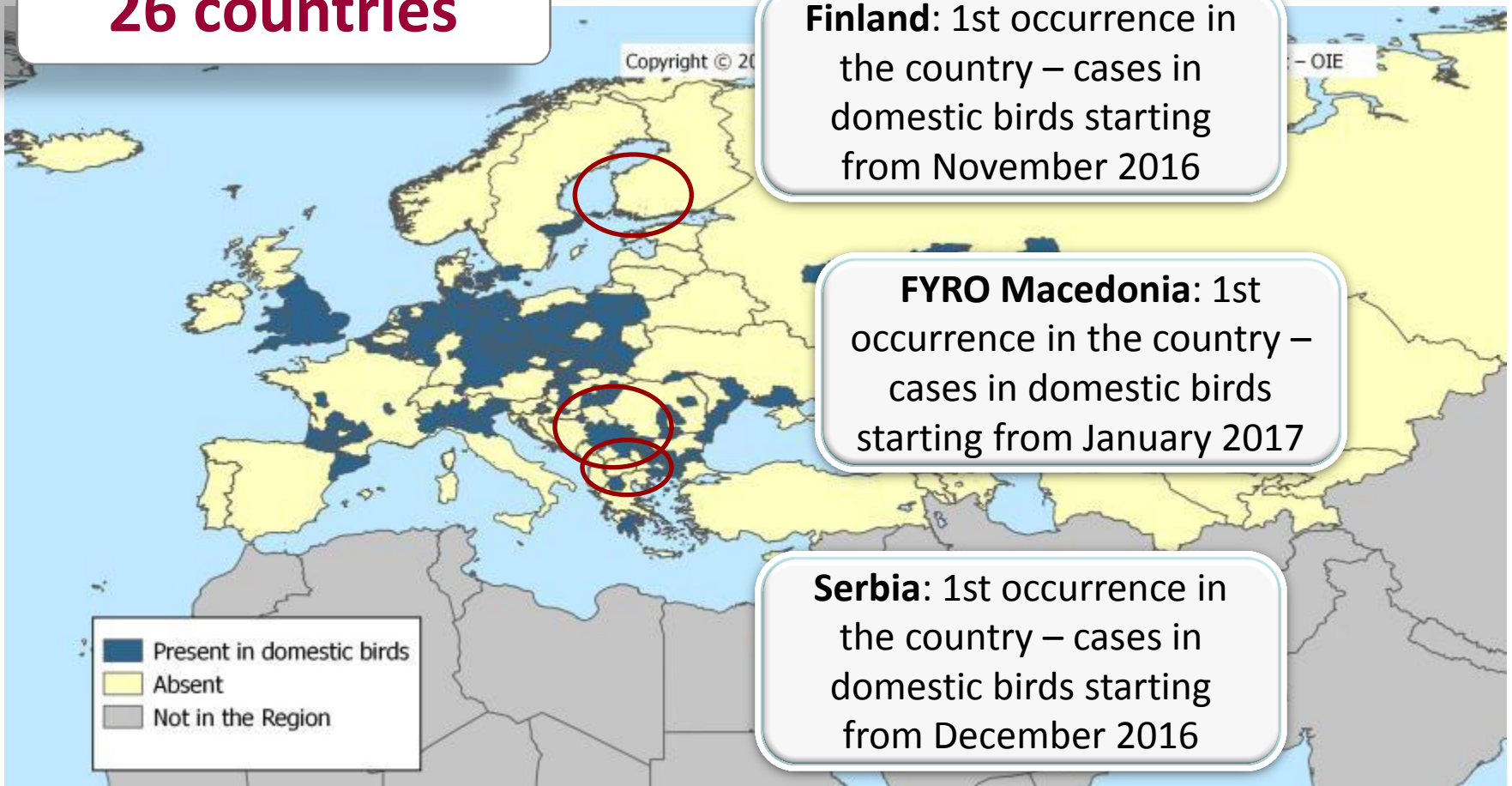
# Infection with influenza

## 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**



# Subtypes - HPAI in domestic birds in 2016 and 2017

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

Subtype	No. Countries affected
H5	1
H5N1	1
H5N2	1
H5N5	2
H5N6	1
<b>H5N8</b>	<b>25</b>
H5N9	1
H7N7	1

# Reported distribution of HPAI in wild birds in 2016 and 2017

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

**32 countries**

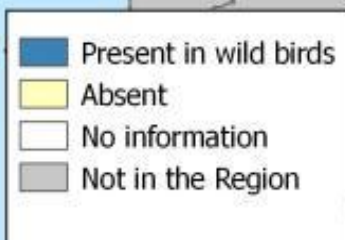
**Finland:** 1st occurrence in the country – cases in wild birds starting from November 2016

**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)

Subtype	No. Countries affected
H5	2
H5N5	10
<b>H5N8</b>	<b>29</b>

# Infection with foot and mouth disease virus

# EUROPE: OIE Member Countries' official FMD status map

Last update October 2017



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Member Countries and zones recognised as FMD free without vaccination

Suspension of FMD free status without vaccination

Member Countries and zones recognised as FMD free with vaccination

Countries and zones without an OIE official status for FMD



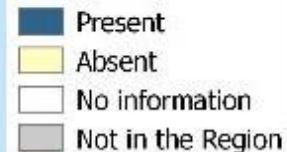
# Reported distribution of FMD in 2016 and 2017

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

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**4 countries**  
(*Armenia, Israel, Russia and Turkey*)

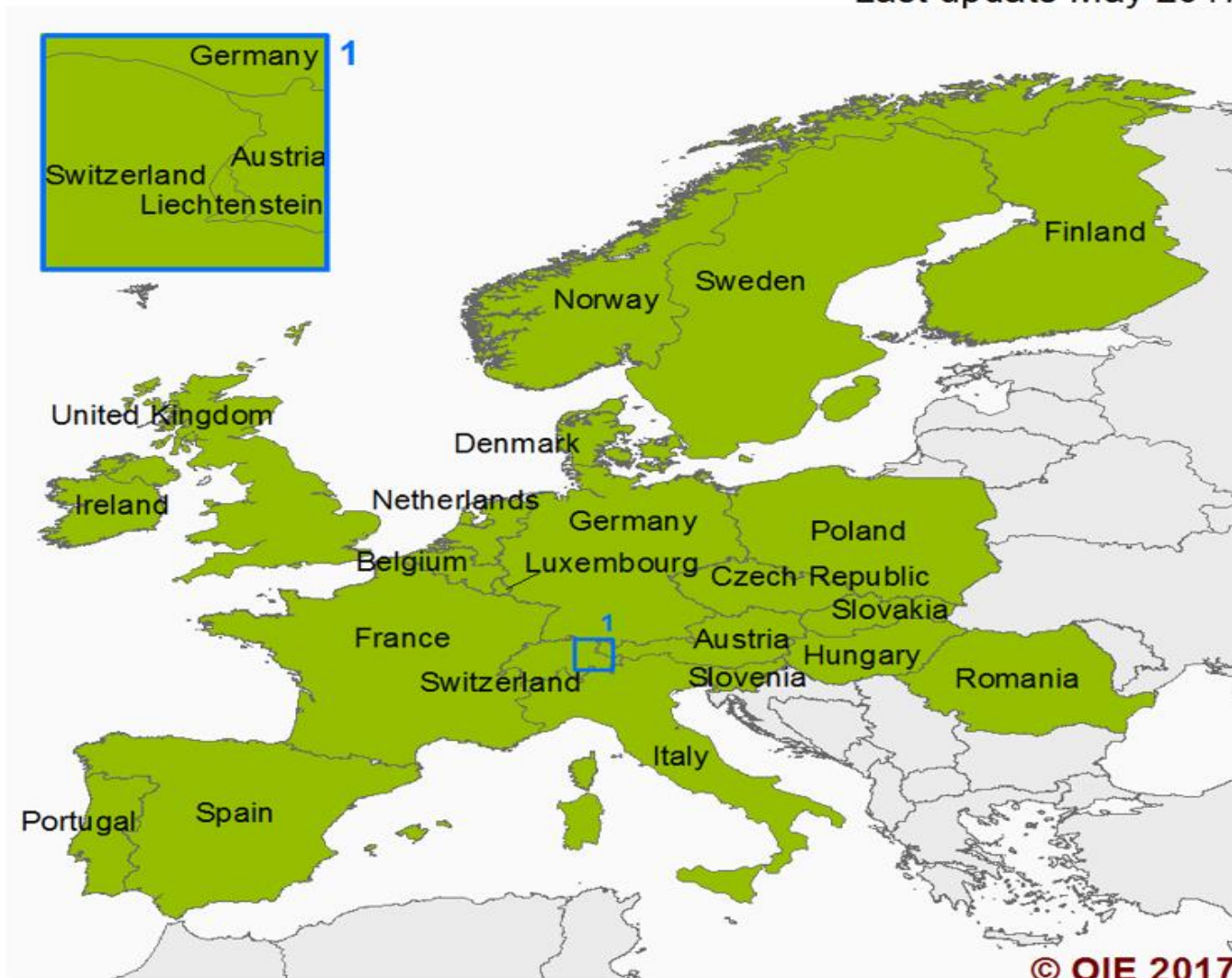
**Serotype O was reported 9/10/17 in Respublika Bashkortostan with 3 outbreaks**




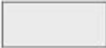
# Infection with classical swine fever virus

# EUROPE: OIE Member Countries' official CSF status map

Last update May 2017



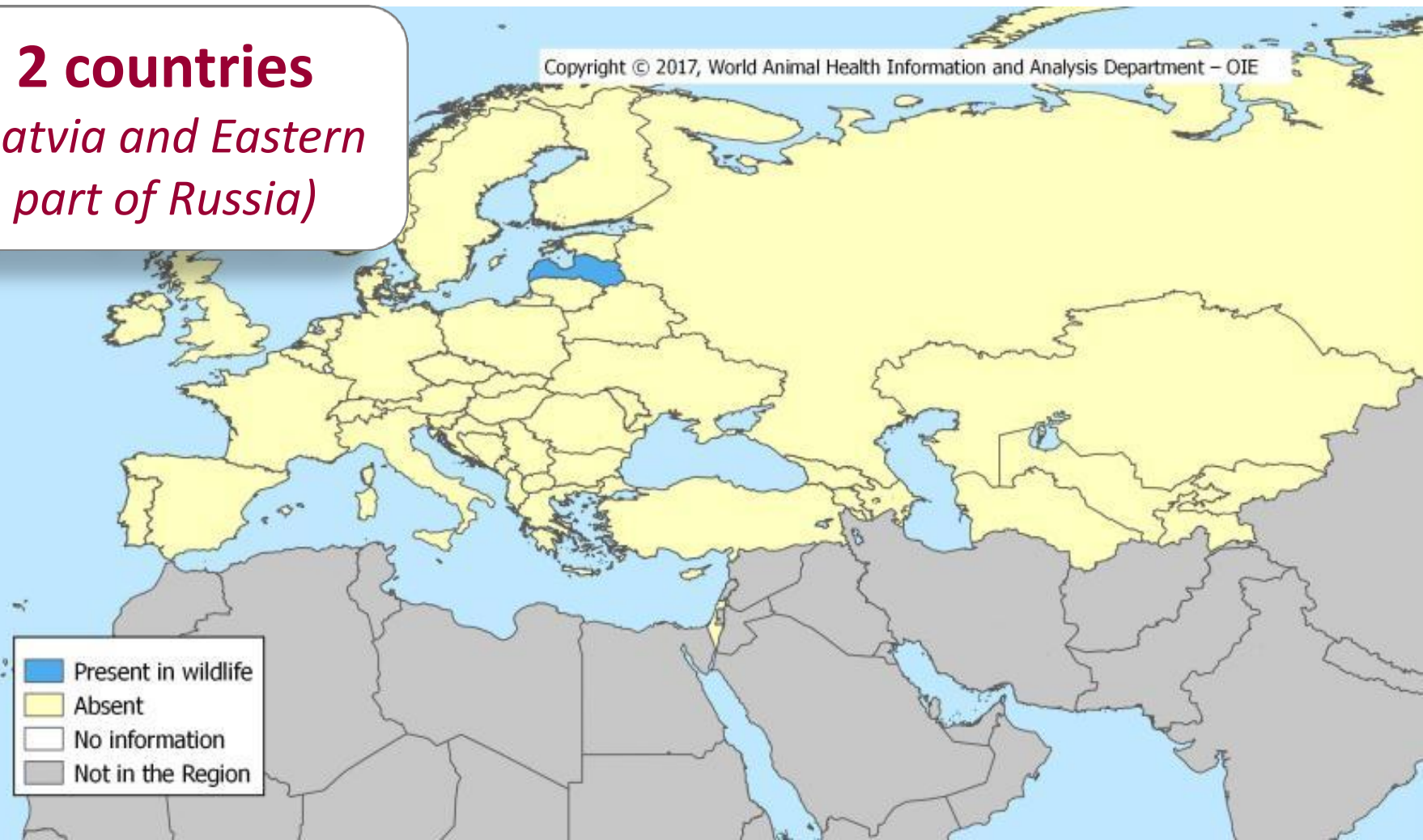
© OIE 2017

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

# Reported distribution of CSF in 2016 and 2017

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

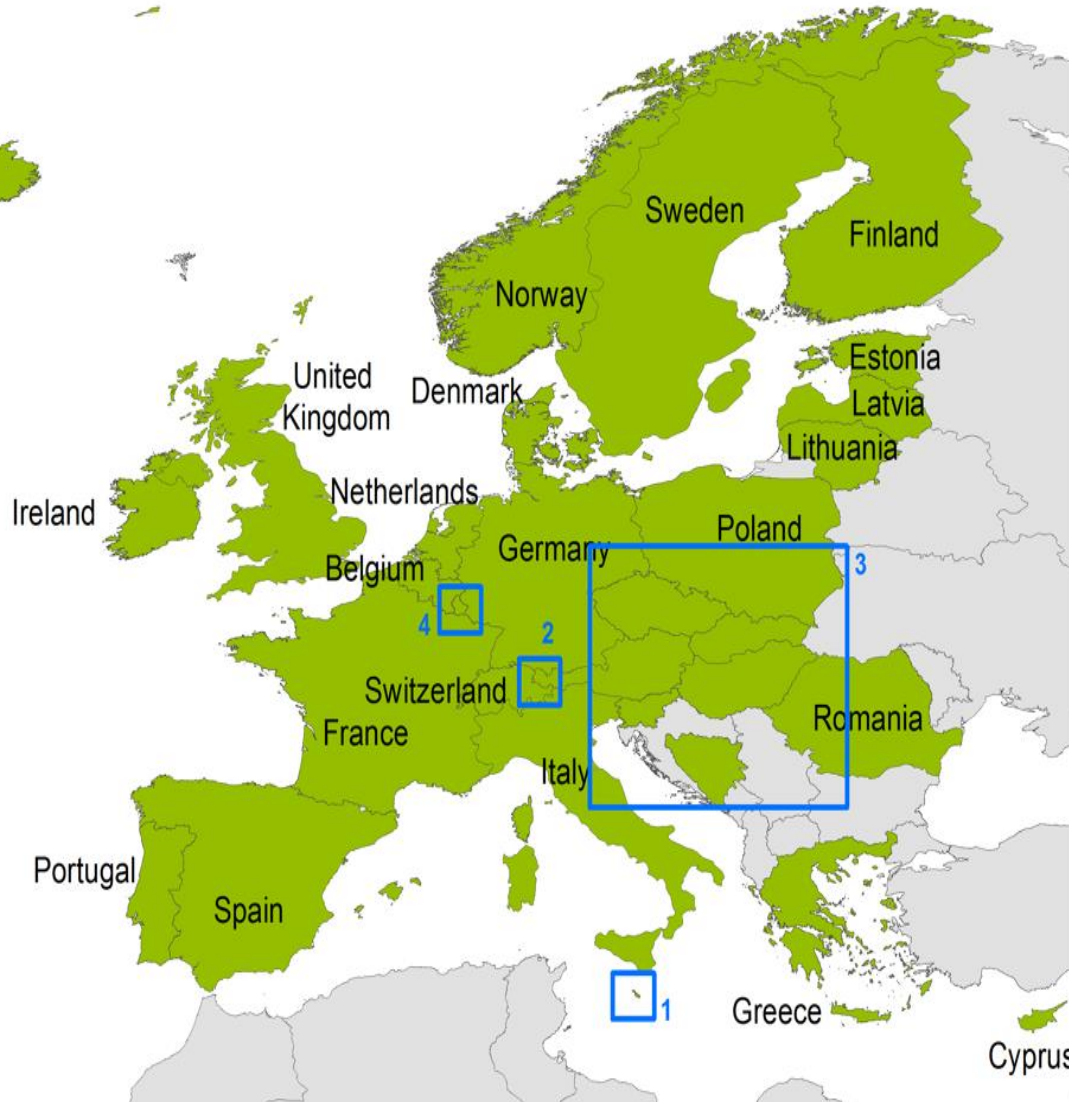
**2 countries**  
*(Latvia and Eastern  
part of Russia)*



# Infection with peste des petits ruminants virus

# EUROPE: OIE Member Countries' official PPR status map

Last update May 2017



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

# Reported distribution of PPR in 2016 and 2017

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

**3 countries**

*(Georgia, Israel  
and Turkey)*

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# 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**

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**Hungary:** recurrence starting from February 2017

**Kazakhstan:** recurrences starting from October 2016 and February 2017

- Present in domestic animals
- Present in wildlife
- Absent
- No information
- Not in the Region

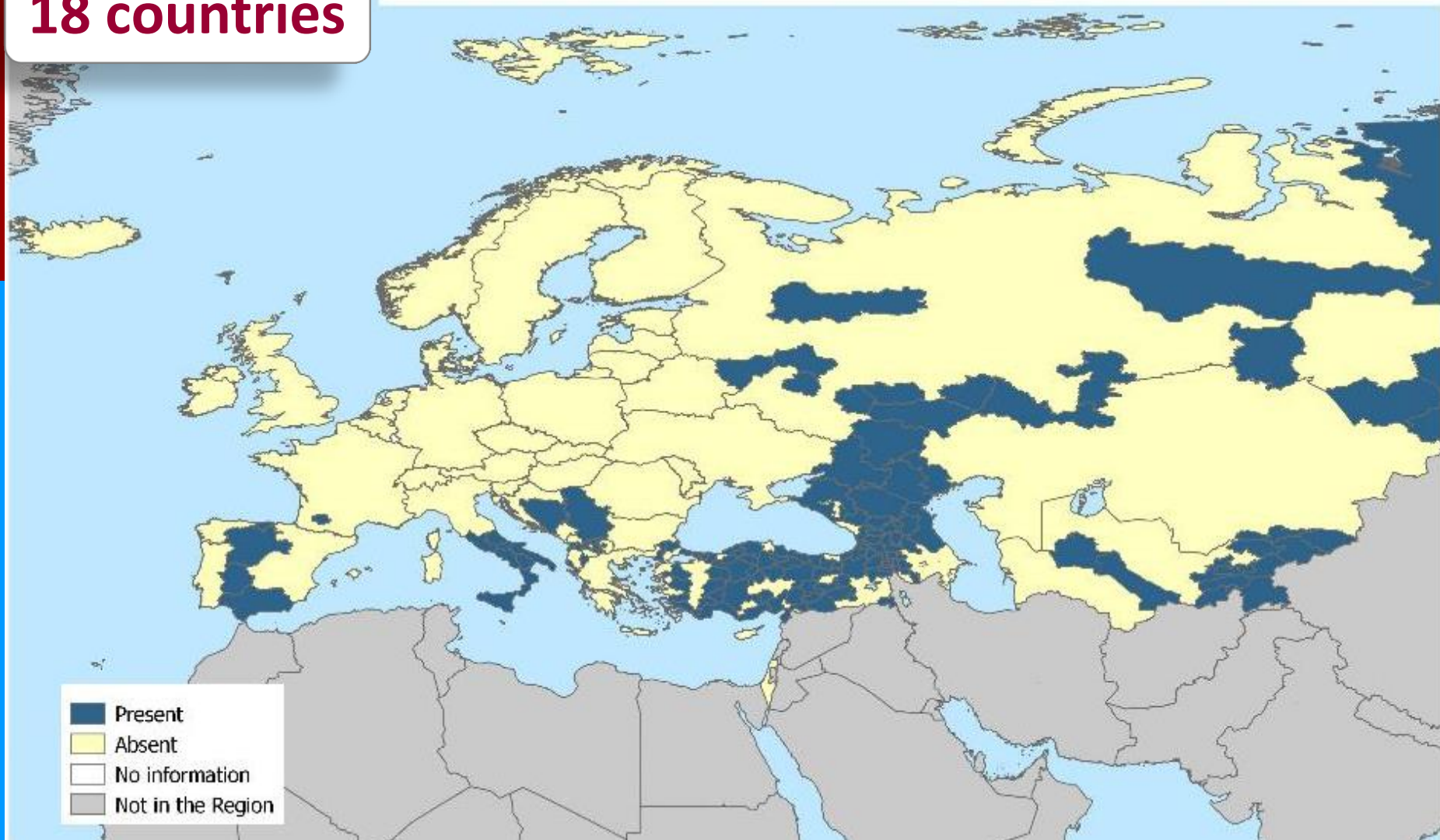
# Infection with *Br. abortus*, *Br. melitensis* and *Br. suis*

# Reported distribution of *B. abortus* in 2016 and 2017

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

**18 countries**

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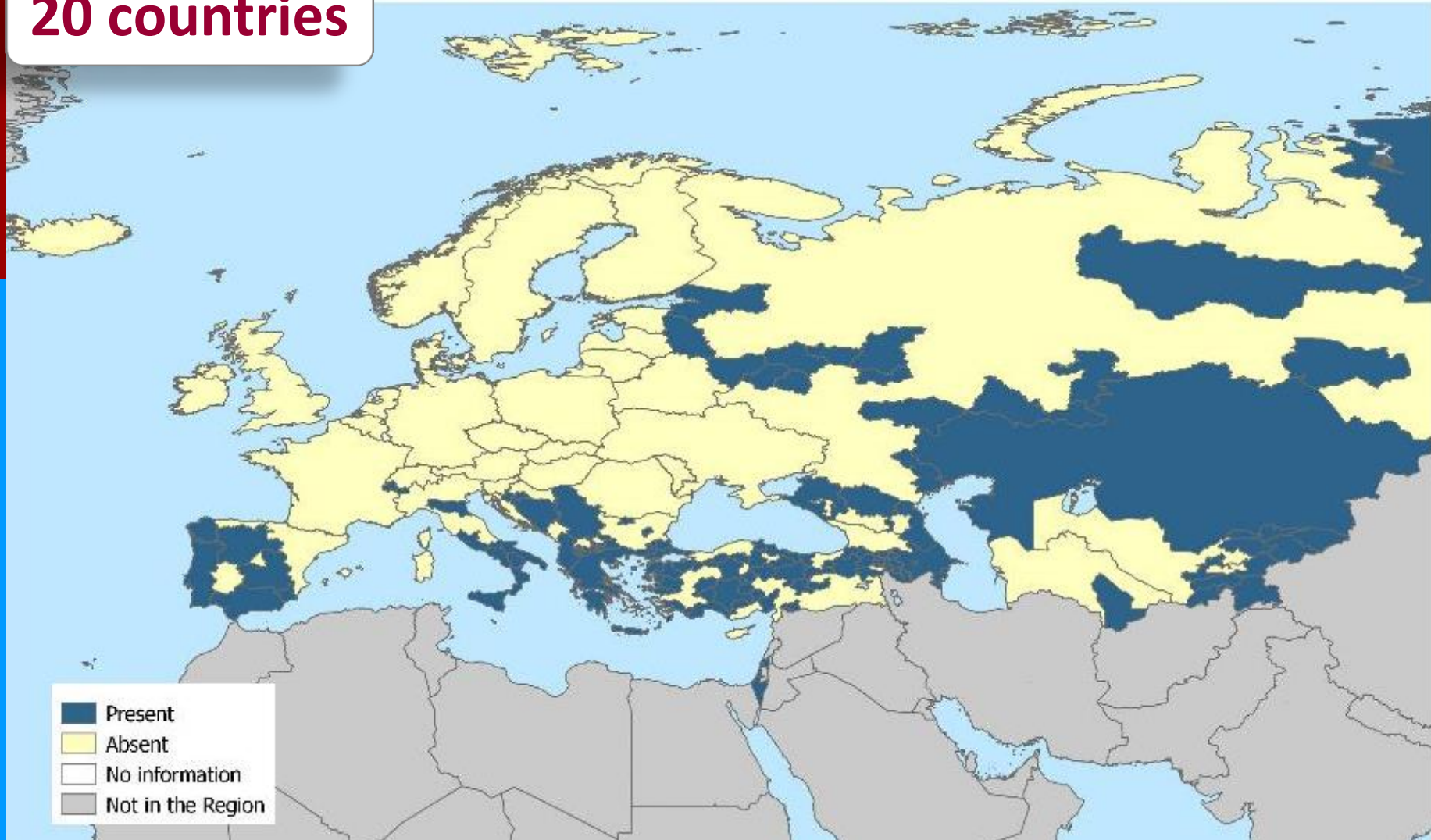


# Reported distribution of *B. melitensis* in 2016 and 2017

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

**20 countries**

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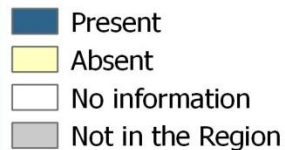


# Reported distribution of *B. suis* in 2016 and 2017

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

**15 countries**

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# Transparency and notification

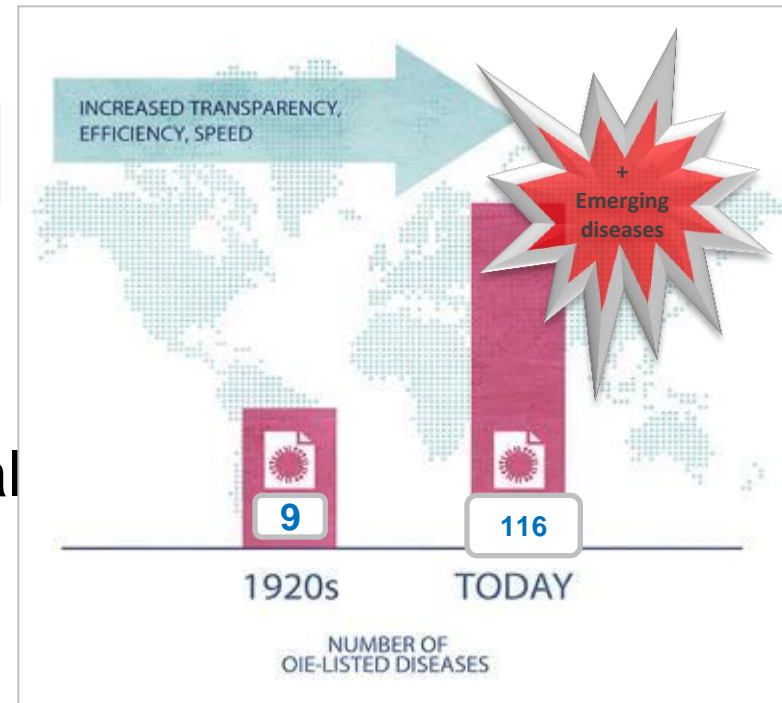
# General mandate of the OIE

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 :



<i>Terrestrial animal diseases</i>	
1 <sup>st</sup> semester	<b>49%</b> Members



<i>Aquatic animal diseases</i>	
1 <sup>st</sup> semester	<b>43%</b> Members

# Rumours tracking activity: improvement of WAHIS sensitivity

**OIE tracking team**

6 person

**Sources**

250

**Rumours detected**

20 000

**Relevant rumours**

3 500

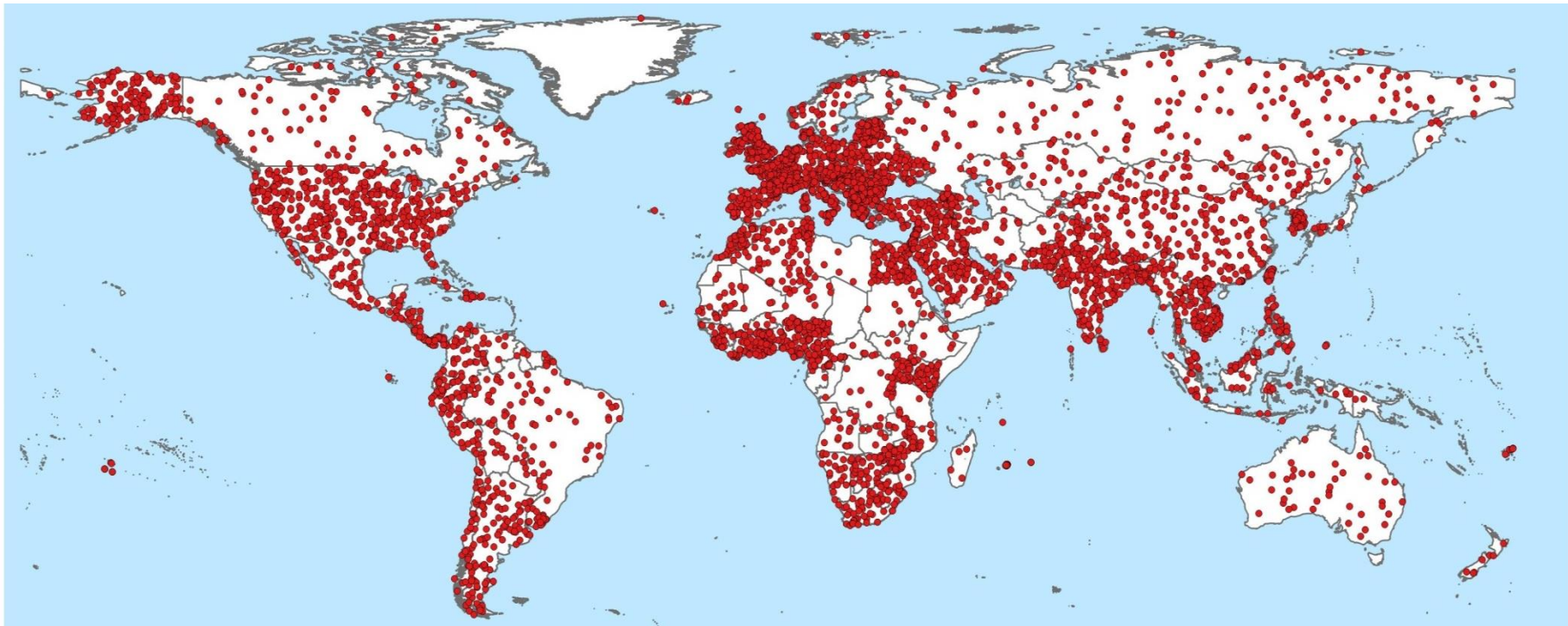
**Selected to track**

900

130 (Early Warning)

770 (Monitoring)

# Geographical tracking coverage



Rumours detected in 167 countries

# Evaluation of WAHIS sensitivity: early warning index

## Regional approach



Region	
Africa	
Americas	
Asia, Far East and Oceania	
Europe	
Middle East	
All Regions	

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

+8%

+8%

+4%

+25%

**+8%**

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:

01

206 respondents from 167 countries

Recommendation

02

Governance  
Methodology,  
Technical issues,  
Budgeting  
Skills -Human resources

WAHIS Think Tank

April 2016.

### External users

April 2017.

On-line survey:

03

739 stakeholders from 143 countries

Consultative meetings

04

Specialist services providers

WAHIS+ Project team

2017 -

**Extensive stakeholders engagement and participation**



# 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)

# WAHIS+



Organisation  
Mondiale  
de la Santé  
Animale

World  
Organization  
for Animal  
Health

Organización  
Mundial  
de Sanidad  
Animal

***Be part of the revolution in  
global animal health data***





# Thank you for your attention



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