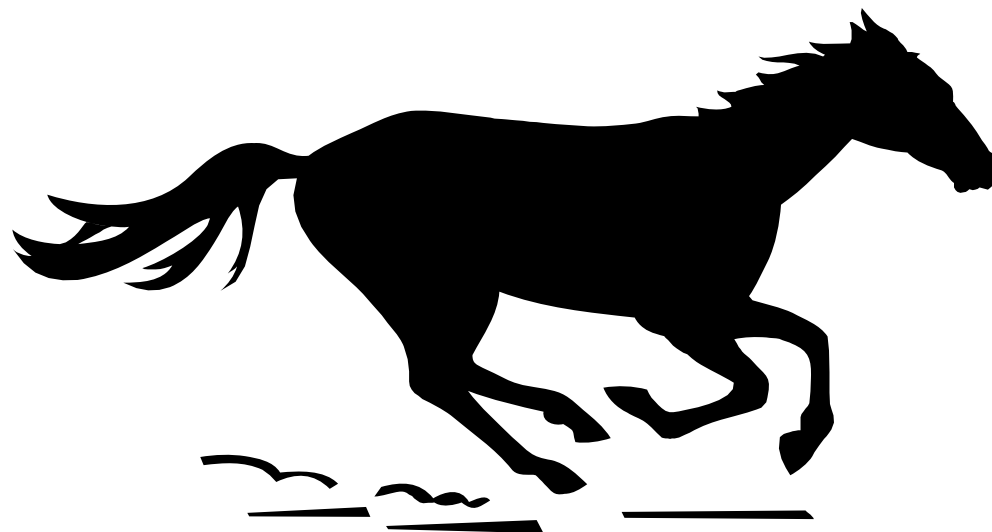




HELLENIC REPUBLIC  
MINISTRY OF RURAL  
DEVELOPMENT AND FOOD  
DIRECTORATE GENERAL OF VETERINARY SERVICES  
ANIMAL HEALTH DIRECTORATE

# **WEST NILE FEVER in Greece**

## **Epidemiological Situation in 2011**



**PRESENTATION AT THE SCoFCAH meeting of 8-9 Nov 2011**

# **1. Background**

## **Epidemiological situation in 2010**

# **2. Present situation (2011)**

- **Epidemiological situation in humans**
- **Epidemiological situation in animals**

# **3. Veterinary Surveillance Measures**

## Background

### Pre-2010

Detection of antibodies against WNV in humans and animals in the framework of independent surveys or official epidemiological investigation programmes (equidae )

However no clinical disease in humans or animals

### 2010

#### Humans

- 05/08/2010 Confirmation of the 1<sup>st</sup> case
- A total of **262 cases** detected (last case on October 2010), **35 fatalities**  
**191 cases** demonstrated symptoms of CNS involvement while the rest demonstrated only mild symptoms (e.g. febrile reaction).

#### Equidae (horses)

- 24 (25)/08/2010 Confirmation of the 1<sup>st</sup> outbreaks in horses
- A total of **27 outbreaks detected** (last case on October 2010)  
**13 outbreaks** involved cases (horses) with clinical signs (**3 fatalities**) while the rest were asymptomatic

# WEST NILE FEVER in 2011 in Greece -Background

## Epidemiological situation in 2010

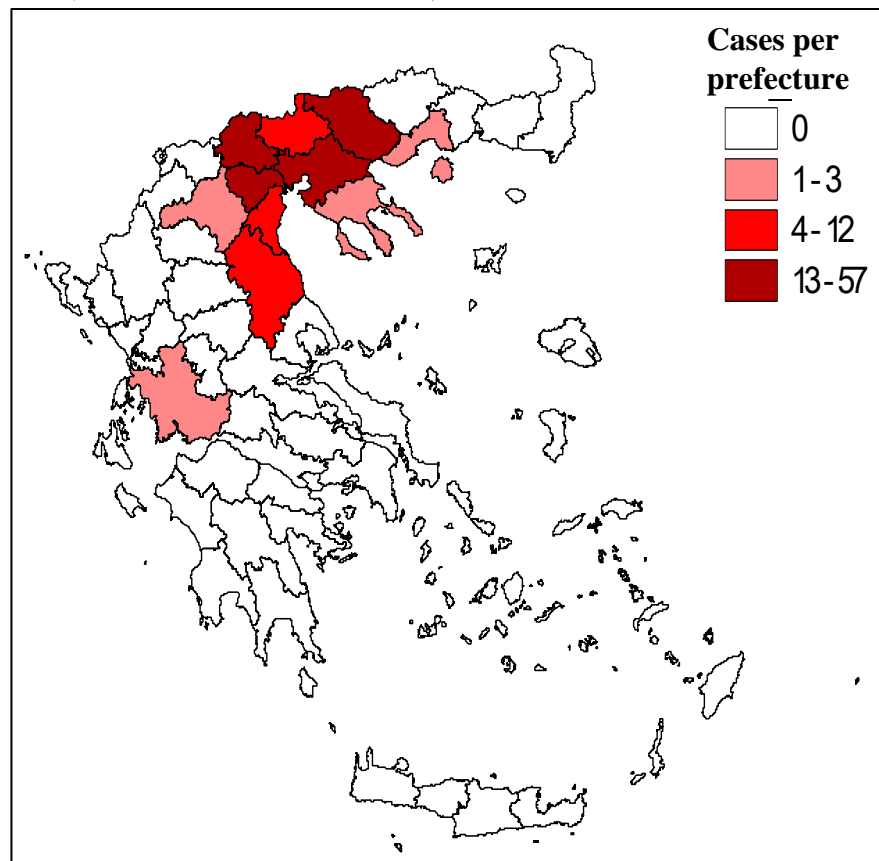
### Humans

Location of neuro-invasive cases in humans according to their residence

First case on 05 /08/2010

Last case on 11/10/2010

( *Source: KEELPNO* )

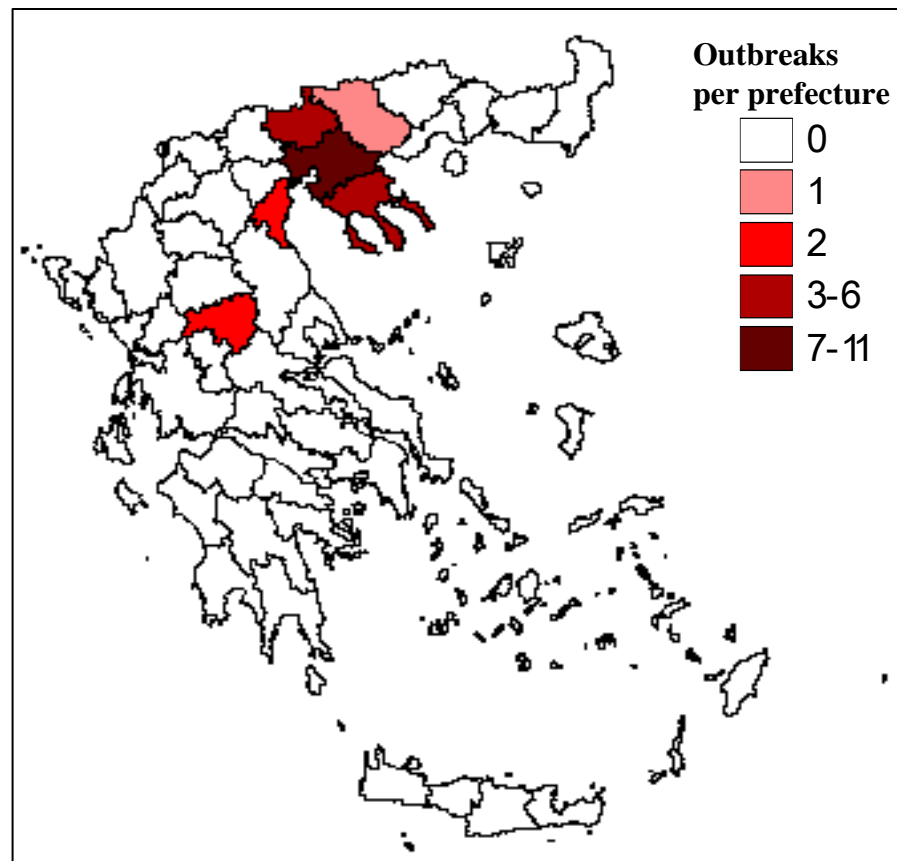


### Equidae

Location of outbreaks in horses (with or without clinical symptoms)

First case on 24 (25)/08/2010

Last case on 13/10/2010



# WEST NILE FEVER in 2011 in Greece – Present Situation

## Course of Events in 2011

### Humans

**26/07/2011:** First case confirmed in Thessaly

**29/7 - 2/8/2011:** cases in Thessaly/Central Macedonia- **1<sup>st</sup> human case confirmed in Attiki on 2/8/2011)**

### **August –October 2011**

More cases confirmed in prefectures located in Thessaly as well as Central /Western Macedonia ( regions affected in 2010) and in prefectures of Central Greece.

**Situation as at Oct 2011 :** A total of **101cases** detected (**8 fatalities**). **76 cases** with symptoms of CNS involvement , the rest only mild clinical signs . Most cases in Thessaly –Attiki.  
( *Source: KEELPNO*)

### Equidae

12 horse samples from the same prefecture as the 1<sup>st</sup> human case (collected on 08/07/2011) negative for WNF antibodies .

**29/07/2011: First equidae outbreak confirmed in Attiki** (no human cases in the same area until then). Horses with clinical signs. Alert for public (human) health services- Immediate initiation of emergency surveillance in equidae of Attiki.

### **August –October 2011**

More equidae outbreaks confirmed through active (sentinel horses) or passive surveillance (investigation of clinical suspicions).

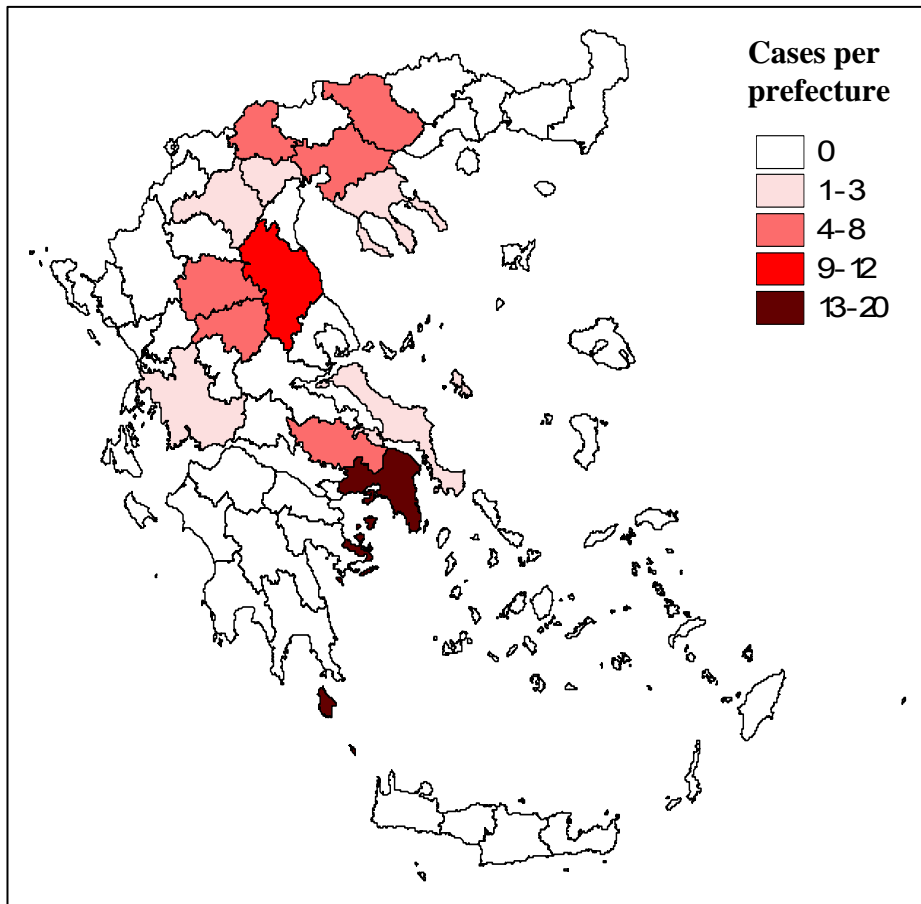
**Situation as at Oct 2011:** A total of **18 outbreaks** detected (**1 fatality reported, unclear if it was due to WNF**). In **9 outbreaks** affected horses showed symptoms (the vast majority in Attiki), in the rest affected horses were asymptomatic.

## Epidemiological situation in 2011

### Humans

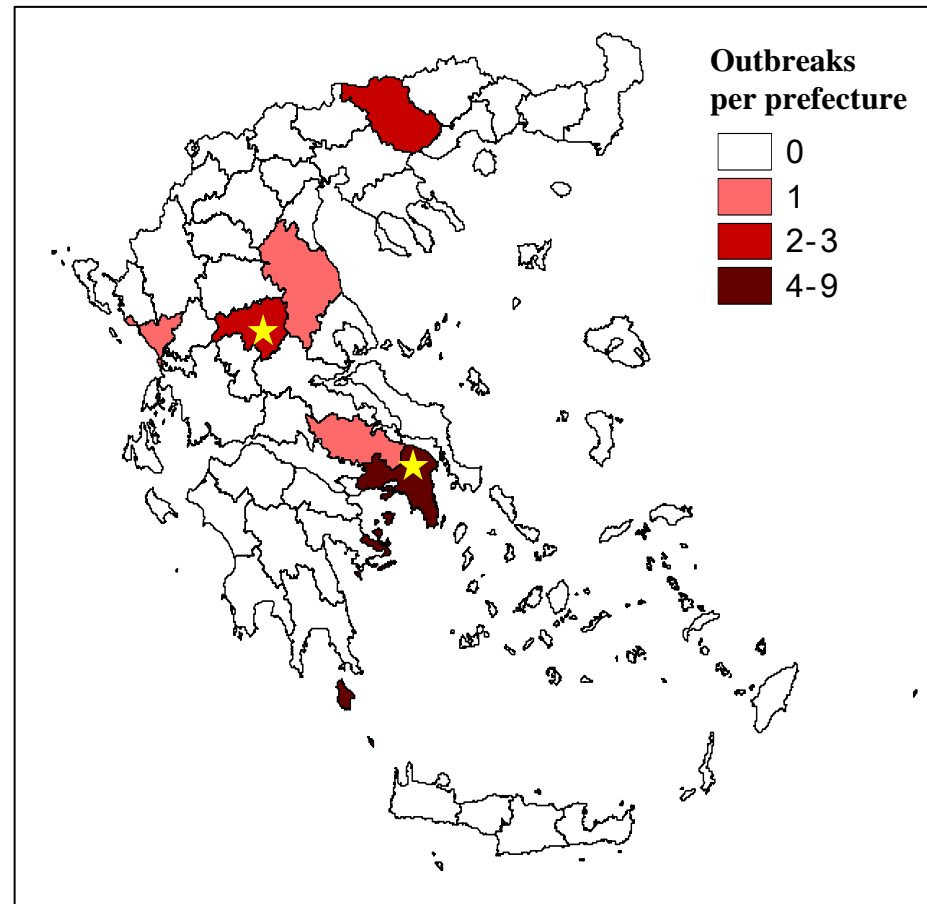
Location of neuro-invasive cases in humans according to their residence

( *Source: KEELPNO* )



### Equidae

Location of outbreaks in horses (star indicates prefecture with “clinical” outbreaks)



## **Measures in place since 2010**

Ministerial Decision 241316/26.10.2010 (published in OJ issue 1774B):

Surveillance programme of West Nile Fever in equidae and wild birds (2<sup>nd</sup> phase expanding into 2011)

## **Measures in 2011**

Circular Letter 132985/09.06.2011 :

Alertness of regional veterinary services throughout the country, enhancement of active (sentinel horses) and passive surveillance.

Circular Letter 137506/02.08.2011:

Initiation of emergency surveillance in equidae in the area of Attiki

Circular Letter 133092/10.08.2011:

Alertness of regional veterinary services – safeguard measures throughout the country

Ministerial Decision 133100/26.08.2011 (Published in OJ issue 2097 B) & Circular letter 133101/29.08.2011 : Expansion of the existing network of sentinel horses

# WEST NILE FEVER in 2011 in Greece – Veterinary Surveillance Measures

## Veterinary Surveillance programme of West Nile Fever in equidae and wild birds

### EQUIDAE

#### Update of census at national level:

(2ce per year, on going since 2010)

#### Passive surveillance:

Notification/ investigation of all clinically suspect cases in equidae (local veterinary authorities , private equidae practitioners, equidae owners e.t.c.)

#### Active surveillance :

- Regular blood sampling of sentinel horses in high risk areas (**substantially expanded since 2010**)
- Active clinical surveillance around confirmed human/animal cases

### WILD BIRDS

#### Passive surveillance:

Collection of all wild birds found dead or sick and consignment for lab testing (whole country)

#### Active surveillance :

Capture and sampling of wild birds in selected regions (habitats) for WNF testing

### Other activities :

- Close cooperation with the competent human health authorities in Greece : Ministry of Health and Social Solidarity and KEELPNO through the establishment of a Joint Committee dealing with vector - born diseases.
- Close cooperation with the official equestrian associations of Greece (enhanced involvement of equestrian practitioners in active surveillance)

# WEST NILE FEVER in 2011 in Greece – Veterinary Surveillance Results

## Veterinary Surveillance Results

### Serosurveillance in equidae

A total number of **1369** blood samples examined todate (Jan-Oct 2011, includes sentinels and clinical suspicions). Sentinel sampling/testing still in progress (last sampling scheduled for October 2011).

### Results (todate)

**179** samples (13 % of total samples) positive in screening serological tests (IgG +IgM antibodies ). Mostly in areas where human /animal outbreaks were detected in 2010-2011.

Out of those **28** samples (2 % of total samples) were positive for IgM antibodies (reported outbreaks with or without clinical signs)

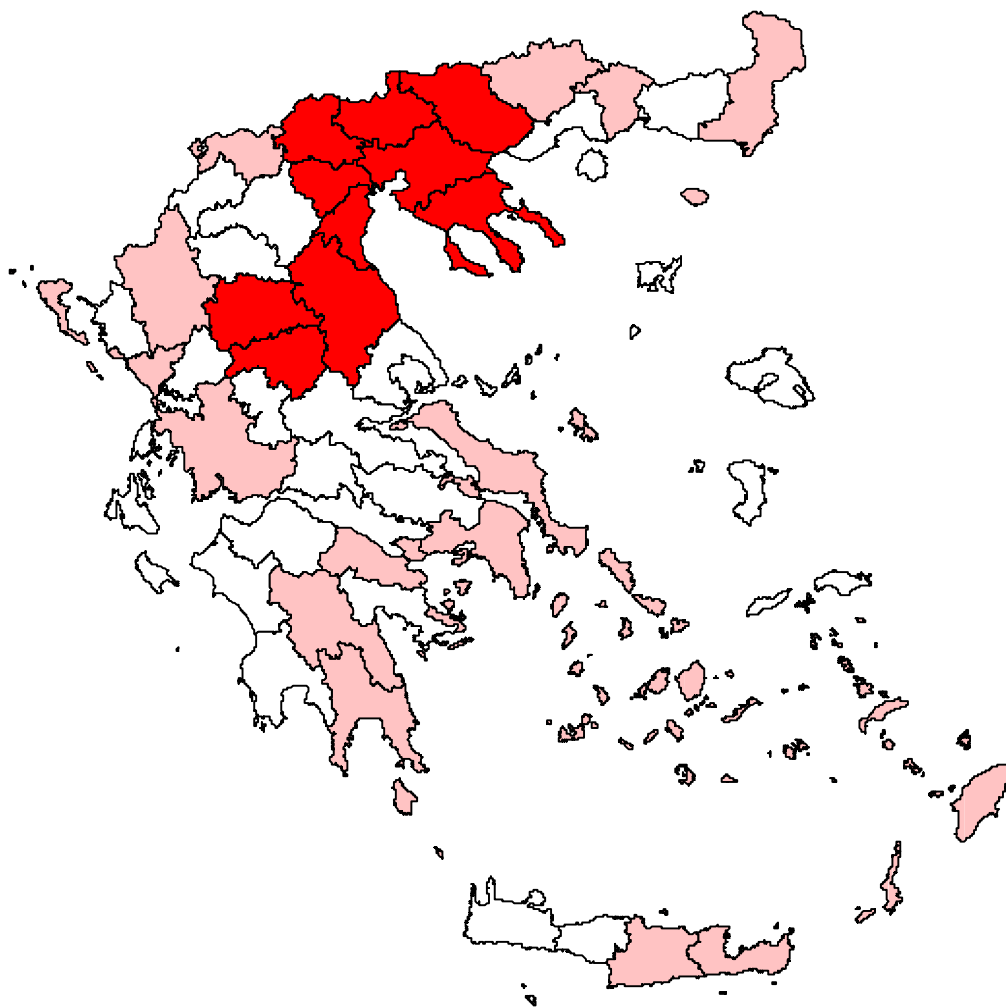
### Location of Sentinel horses (sampling /tests in progress)



Prefectures with sentinels in place since 2010



Prefectures where sentinels were placed for the first time in 2011



## Veterinary Surveillance Results

### Clinical surveillance around confirmed human / equidae cases:

To date retrospective epidemiological investigation of equidae holdings around confirmed human/equidae cases has not revealed the presence of clinical signs that could have raised suspicion of an imminent WNF episode in the vicinity before the onset of human or equid cases (investigation in progress).

### Wild bird surveillance (active)

39 birds (corvidae and other) examined since the beginning of 2011, all from the Thessaloniki /Axios river Delta areas (epicenter of the 2010 epidemic).

ELISA (screening) : 6/32 positive for WNF antibodies

PCR : 0/7 positive for WNF virus

**Acknowledgments**

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Veterinary Institutes)**

**Hellenic Centre for Disease Control and Prevention  
(KEELPNO)**