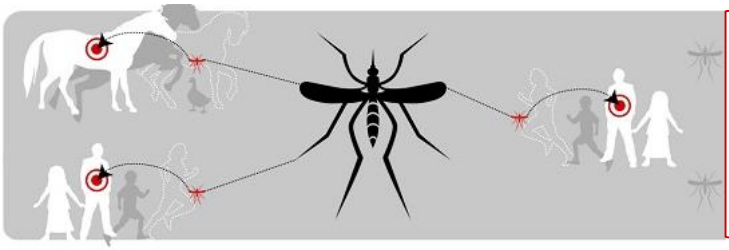

Integrated surveillance of West Nile and Usutu virus

Epidemiological report no. 9 16 September 2021
National data

1 In Evidence

This report summarizes the results of West Nile virus and the Usutu virus surveillance activities in Italy, updated to **15-09- 2021.**

- Since June 2021 **32 human case of WNV infection** has been reported from **Liguria, Emilia Romagna, Lombardia, Veneto and Friuli Venezia Giulia regions**.
- Surveillance in mosquitoes, resident birds, wild birds, poultry and horses confirmed the circulation of WNV Lineage 2 in **Emilia Romagna, Piemonte, Veneto, Friuli Venezia Giulia, Sardegna and Lombardia** regions. **WNV Lineage 1** has been detected in a mosquitoes pool collected in padova province.

- As of **2 September 2021**, **87** human cases of WND have been reported in EU member states, 43 in Greece, 27 in Italy, 5 in Spain, 4 in Romania, 3 in Austria, 3 in Hungary and 2 in Germany. Five deaths were reported (3 Greece, 1 Spain, 1 Romania). Twelve cases were reported from neighboring countries all from Serbia. (Source: ECDC 2021).

Figure 1. *Provinces where WNV has been detected in vectors, animals and humans (blood donor, fever and neuroinvasive cases)*

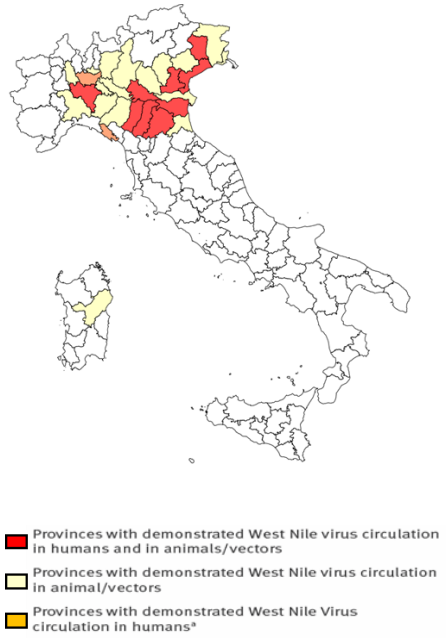

Figure 2. *Distribution of WNV human cases in EU*

2 Human

Since June 2021 **32** confirmed human cases of West Nile Virus (WNV) infection have been reported in Italy **20** in neuro-invasive form in Lombardia, Liguria, Friuli Venezia Giulia, Veneto and Emilia Romagna regions.

Details about WNND cases are provided below

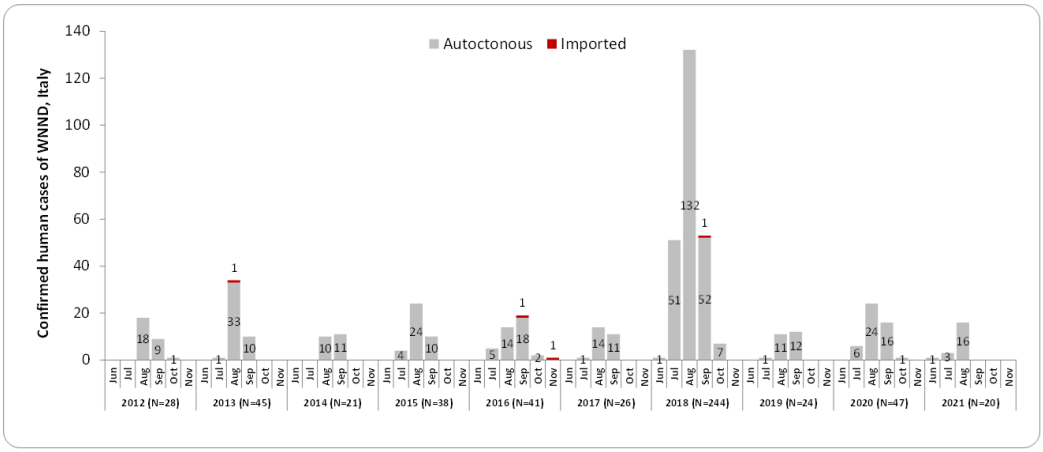

Figure 1. Trend of confirmed cases of WNND by month onset of symptoms. Italy: 2012 - 2021**.**

Figure 1 Trend of confirmed cases of WNND per month onset symptoms. Italy: **2012 - 2020**.

3 Horses

One WND outbreaks in horses have been confirmed by the National Reference Centre for exotic diseases (CESME) in **Mantova** province.

Figure 1 Geographical distribution West Nile virus detection in horses - **2021**

4 Resident birds of target species

CESME confirmed WND in **20** resident birds of target species in **Lombardia and Emilia Romagna regions.** The circulating strains belong to **Lineage 2.**

The target species for the surveillance are :

- **Magpie (*Pica pica*)**
- **Carrion crow (*Corvus corone cornix*)**
- **Eurasian jay (*Garrulus glandarius)***

Figure 2 Geographical distribution West Nile virus detection in resident birds of target species - **2021**

Region	Province	Carrion Crow	Magpie	Jay	n.birds+
EMILIA ROMAGNA	Modena		2		2
	Piacenza	3		1	4
	Ferrara		7		6
	Reggio Emilia	1	2		3
LOMBARDIA	Bergamo	3			3
	Mantova	1			1
Total		8	11	1	**20**

Table 1 West Nile virus detection in resident birds- **2021**

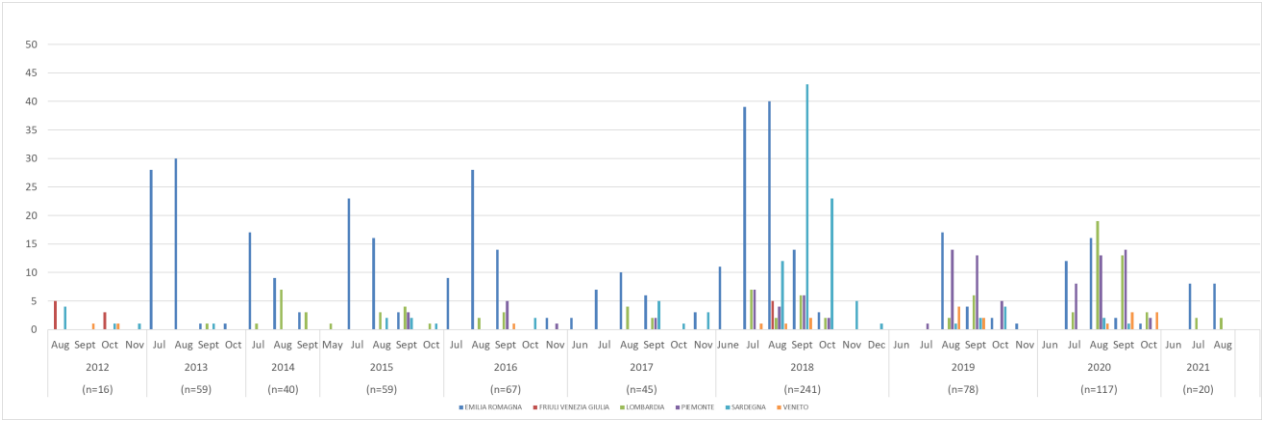

Figure 3 Spatio–temporal distribution West Nile virus detection in resident birds of target species - **2021**

5 Wild birds

WND has been detected in **16** wild birds in **Emilia Romagna, Veneto, Lombardia, Piemonte e Sardegna.**

Figure 4 Geographical distribution West Nile virus detection in wild birds - **2021**

Region	Province	n.birds+
EMILIA ROMAGNA	Bologna	1
	Ferrara	6
	Piacenza	3
	Reggio Emilia	1
VENETO	Venezia	2
LOMBARDIA	Brescia	1
PIEMONTE	Alessandria	1
SARDEGNA	Nuoro	1
Total		16

Table 2 West Nile virus detection in wild birds- **2021**

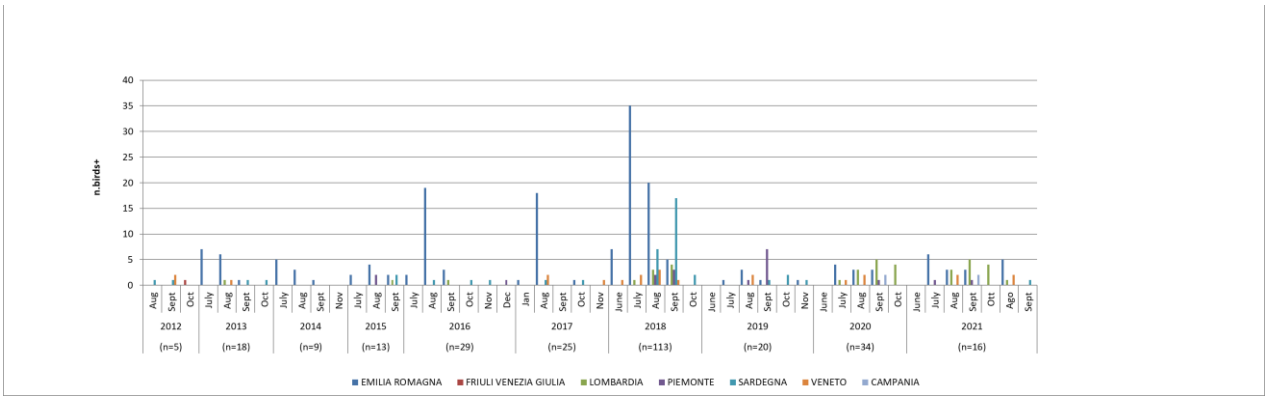

Figure 5 Spatio–temporal distribution West Nile virus detection in wild birds - **2021**



6 Entomological surveillance

WNV genome has been reported in **72** mosquito **pools** collected in **Emilia Romagna, Veneto, Friuli Venezia Giulia and Piemonte** region**.** The circulating strains belong to **Lineage 2**.WNV belong to Lineage 1 has been detected in a mosquitoes pool from **Padova** province.

Figure 6 Geographical distribution West Nile virus detection in mosquitoes - **2021**

Region	Province	n.pool+
EMILIA ROMAGNA	Bologna	10
	Ferrara	3
	Modena	10
	Piacenza	8
	Parma	3
	Reggio Emilia	11
FRIULI VENEZIA GIULIA	Udine	1
LOMBARDIA	Lodi	1
	Mantova	1
	Brescia	1
	Pavia	3
PIEMONTE	Alessandria	2
VENETO	Rovigo	2
	Treviso	1
	Venezia	8
	Padova	1
	Verona	6
Total		72

Table 3 West Nile virus detection in mosquitoes- **2021**

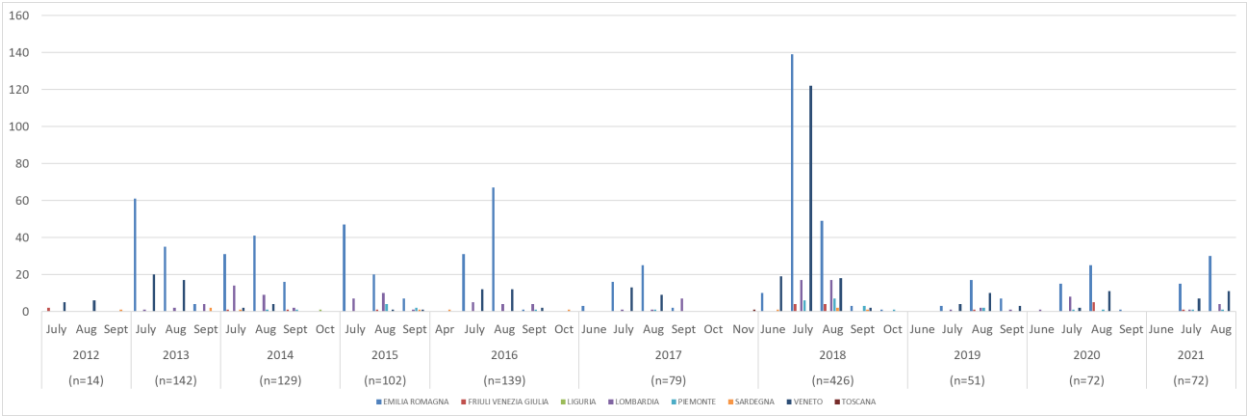

Figure 7 Spatio–temporal distribution West Nile virus detection in mosquitoes - **2021**

7

Poultry surveillance

- No WND outbreaks have been confirmed in poultry flocks.



8 USUTU virus surveillance

Usutu virus has been detected in **95** mosquitoes pools in **Emilia Romagna, Friuli Venezia Giulia, Lombardia, Piemonte, Marche and Veneto** regions and **82** birds in **Emilia-Romagna and Veneto** regions.

Figure 8 Geographical distribution Usutu virus detection in birds and mosquitoes - **2021**

Region	Province	n.pool+
EMILIA ROMAGNA	Bologna	11
	Ferrara	7
	Modena	12
	Rimini	3
	Parma	2
	Ravenna	2
	Piacenza	5
	Forl' Cesena	2
	Reggio Emilia	3
MARCHE	Ancona	2
	Ascoli Piceno	2
	Pesaro Urbino	1
	Fermo	2
PIEMONTE	Asti	1
VENETO	Rovigo	7
	Venezia	9
	Treviso	8
	Padova	4
	Verona	7
LOMBARDIA	Mantova	3
	Milano	1
FRIULI VENEZIA GIULIA	Pordenone	1
Total	95	

Table 4 Usutu virus detection in mosquitoes **-2021**

Region	Province	n.birds+
EMILIA ROMAGNA	Bologna	24
	Forlì-Cesena	7
	Rimini	25
	Ferrara	5
	Piacenza	3
VENETO	Padova	7
	Venezia	6
	Vicenza	1
	Verona	1
	Rovigo	2
REPUBBLICA DI SAN MARINO	San Marino	1
Total		82

Table 5 Usutu virus detection in birds - **2021**

9 National Plan for Prevention, Surveillance and Response to Arbovirus 2020-2025

West Nile (WNV) and Usutu (USUV) viruses surveillance activities since 2020 are included in the National Plan for Prevention, Surveillance and Response to Arbovirus 2020-2025.

The Plan integrates in a unique document the surveillance measures to be implemented at the national level for autochthonous and imported arboviruses, promoting a multidisciplinary approach in the management of surveillance and control activities.

More details about the integrated surveillance plan are available on the complete document «National Plan for Prevention, Surveillance and Response to Arbovirus 2020-2025.»

National Human surveillance activities are coordinated by the National Institute of Health (Istituto Superiore di Sanità, ISS) and the Ministry of Health is responsible to provide surveillance data to the European Commission and to ECDC. Moreover regions can implement normative-programmatic documents for the epidemiological and laboratory surveillance on their territory according to National legislation and guidelines provided by the Ministry of Health .

Veterinary surveillance activities are coordinated by the National Reference Center for the exotic diseases of animals (CESME) which harmonize the diagnostic procedures within the network of IIZZSS national laboratories and confirms suspected specimens. CESME is also in charge for the veterinary surveillance data management, collection and communication to the Ministry of Health according to the data flow reported in the Plan.

Useful links

- Web page of National Institute of Health
- Web page of Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale" (CESME)
- Directions of the National Italian Blood Center
- Directions of the National Italian Transplant Center
- Web page of the Italian Ministry of Health
- Web page of ECDC

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