



Integrated surveillance of West Nile and Usutu virus

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National data

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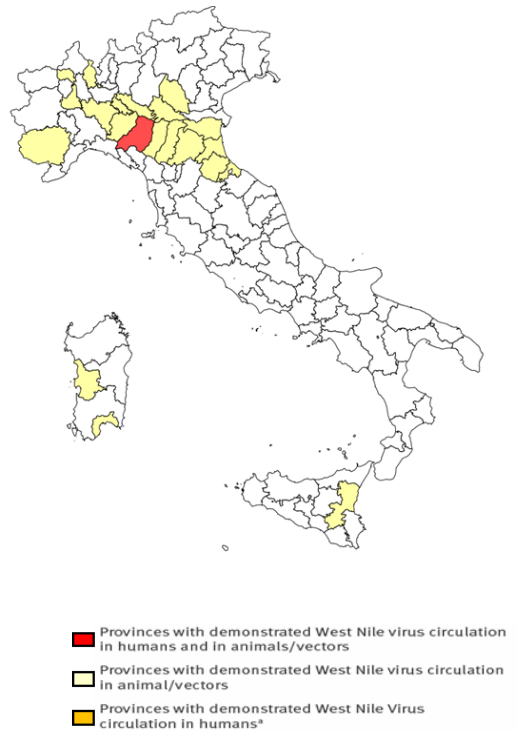
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In Evidence

This report summarizes the results of West Nile virus and the Usutu virus surveillance activities in Italy, updated to **19-7-2023**

- Early start of the season of West Nile virus circulation. In two provinces, Catania (04/05/2023) and Varese (08/05/2023), positivity was confirmed in mosquito pools and in birds of the target species, respectively.
- Since the start of surveillance, 1 confirmed case of WNV infection in humans has been reported in Parma province in a blood donor. Currently WNV circulation involved 20 Italian provinces belonging to 6 regions: Piedmont, Lombardy, Veneto, Emilia-Romagna, Sicily and Sardinia.
- Veterinary surveillance conducted on horses, mosquitoes, resident and wild birds confirmed circulation of WNV Lineage 2 in Emilia-Romagna, Lombardy, Sardinia and Piedmont, while WNV Lineage 1 was confirmed in Sicily. Positivity are being confirmed in the provinces of Cuneo, Oristano, Forlì-Cesena, Lodi, Cremona, Verona, and Reggio Emilia.

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



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Human

Since the start of surveillance, 1 confirmed case of WNV infection in humans has been reported in Parma province in a blood donor.

3

Horses

No WND outbreaks have been confirmed in equids.



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Resident birds of target species

CESME confirmed WNV in **12 resident birds** belong to target species from **Lombardia, Sardegna, Piemonte, Emilia Romagna**. 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*)**



Region	Provinces	Carrion Crow	Magpie	Jay
Lombardia	Varese	1	0	0
Emilia Romagna	Parma	2	4	0
	Piacenza	0	1	0
	Ravenna	0	1	0
Sardegna	Sud Sardegna	2	0	0
Piemonte	Vercelli	1	0	0
Total		12		

Table 1 West Nile virus detection in birds belong to target species- **2023**

Figure 1 Geographical distribution West Nile virus detection in birds belong to target species - **2023**

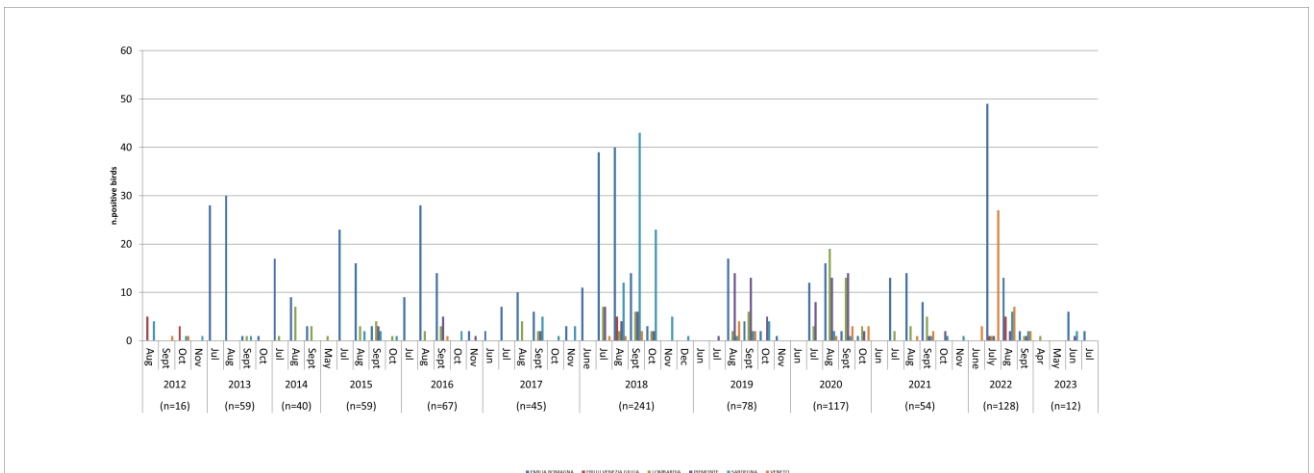


Figure 2 Spatio-temporal distribution West Nile virus detection in birds belong to target species - **2023**

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Wild birds

CESME confirmed WNV in **1 wild birds** from **Emilia Romagna** region. The circulating strains belong to **Lineage 2**.



Region	Province	Species
Emilia Romagna	Rimini	Blackbird
Total		1

Table 2 West Nile virus detection in wild birds **2023**

Figure 3 Geographical distribution West Nile virus detection in wild birds- **2023**

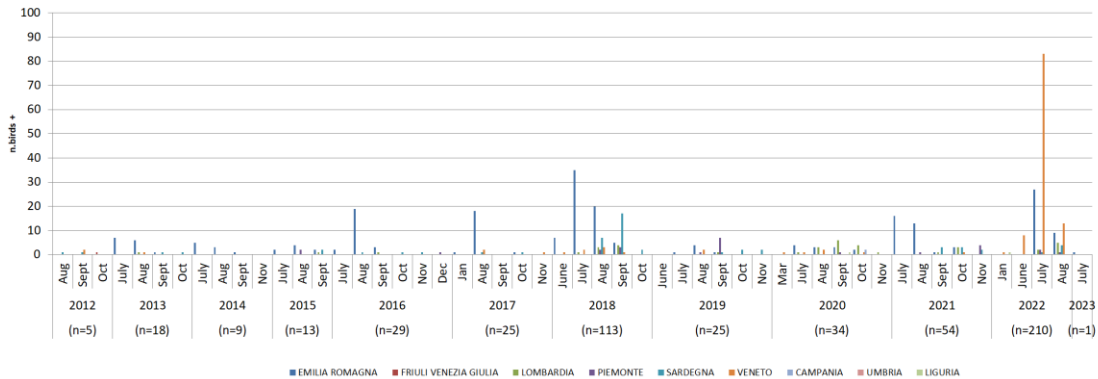


Figure 4 Spatio-temporal distribution West Nile virus detection in wild birds - **2023**

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Entomological surveillance

WNV genome has been reported in **8 mosquito pool** collected in **Emilia Romagna, Lombardia and Sicilia**, regions. The circulating strains belong to **Lineage 2**. In Sicilia was confirmed **WNV Lineage 1**



Region	Provinces	n.pool
Sicilia	Catania	1
Emilia Romagna	Piacenza	1
	Parma	1
	Modena	1
	Ravenna	1
	Bologna	1
	Ferrara	1
Lombardia	Pavia	1
Total		8

Table 2 West Nile virus detection in mosquitoes- **2023**

Figure 5 Geographical distribution West Nile virus detection in mosquitoes - **2023**

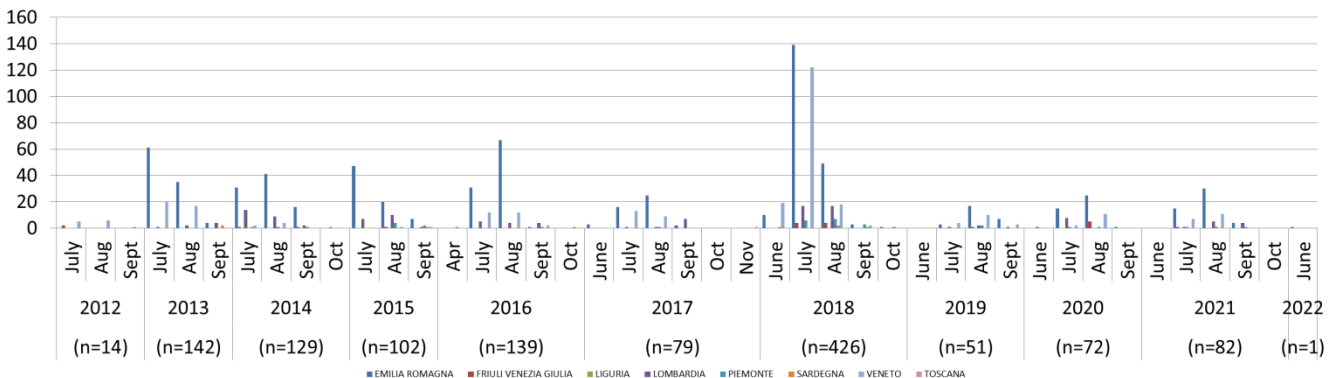


Figure 6 Spatio-temporal distribution West Nile virus detection in mosquitoes - **2023**

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Poultry surveillance

- No WND outbreaks have been confirmed in poultry flocks.



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USUTU virus surveillance

Usutu virus has been detected in 2 mosquitoes pool and 3 wild birds from **Piemonte, Emilia Romagna and Toscana regions.**



Region	Province	n.pool
Piemonte	Cuneo	1
Toscana	Pistoia	1
Total		2

Table 3 Usutu virus detection in mosquitoes - **2023**

Figure 7 Geographical distribution Usutu virus detection in birds and mosquitoes - **2023**

Region	Provinces	n.birds
Emilia Romagna	Parma	1
Veneto	Verona	1
Toscana	Siena	1
Total		3

Table 4 Usutu virus detection in birds -**2023**

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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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