IZS TERAMO
ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELL'ABRUZZO E DEL MOLISE "G. CAPORALE"

West Nile Disease Epidemiological Bulletin

Teramo 26.08.2026

The National Plan for the Prevention, Surveillance and Response to Arboviral Diseases (PNA) 2020–2025 was developed to address the growing public health risk associated with the spread of arboviral diseases, i.e., viral infections transmitted by arthropod vectors. Climate change and globalisation play a major role in this context, as they influence the abundance, distribution, and life cycle of arthropod vectors of public health importance, while also facilitating the introduction of pathogens previously confined to tropical and subtropical regions.

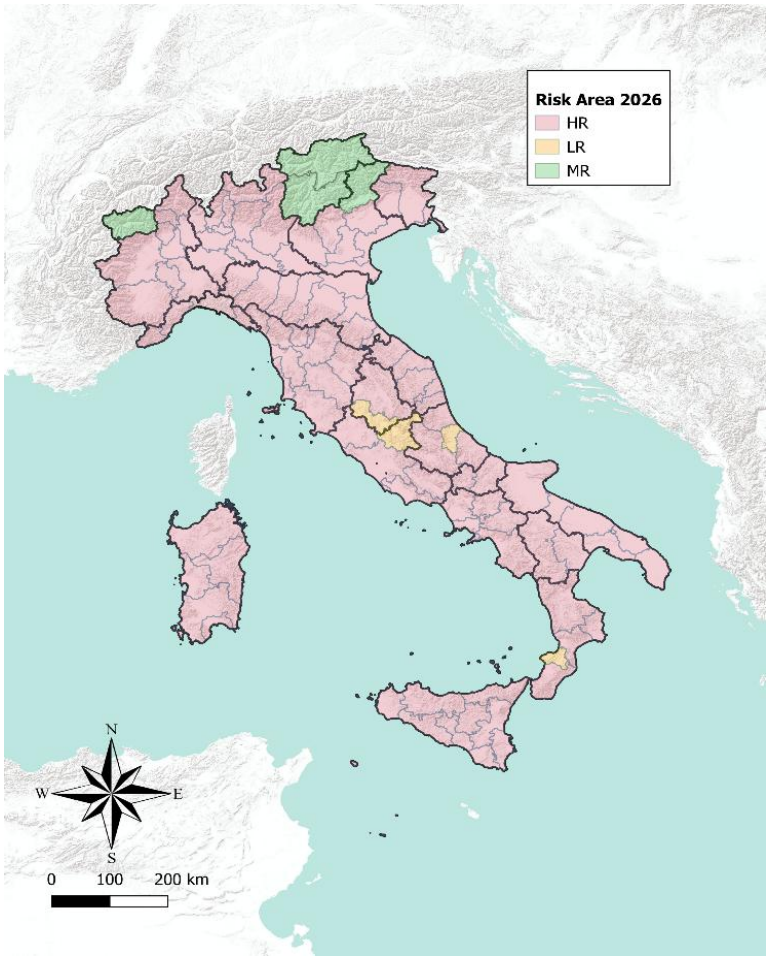
The PNA is implemented within the European regulatory framework established by Regulation (EU) 2016/429 (the Animal Health Law) and at the national level through Legislative Decree No. 136 of 5 August 2022, which regulates the prevention and control of animal diseases, including those transmissible to humans.

West Nile disease (WND) is one of the arboviral diseases covered by the integrated veterinary and human surveillance system established under the PNA. The primary objective of this integrated surveillance system is to detect viral circulation at an early stage throughout the country through targeted monitoring programmes. Early detection enables the timely implementation of prevention and control measures aimed at reducing the risk of human infection and safeguarding public health.

Veterinary surveillance includes both active and passive surveillance activities. Based on epidemiological evidence of West Nile virus (WNV) circulation during the previous five years and the recurrence of infection events, three geographical risk categories have been identified according to the likelihood of virus transmission: high-risk areas (HR), low-risk areas (LR), and minimal-risk areas (MR). Different surveillance programmes are implemented according to the assigned risk category, with the objective of achieving early detection of WNV circulation. These programmes target specific populations, including resident birds, poultry, mosquitoes, equids, and wild birds.

Human surveillance of imported and autochthonous human cases is based on the detection of cases of West Nile neuroinvasive disease (WND) and/or recent West Nile virus infection. Syndromic surveillance activities are conducted throughout the country all year round, with intensified surveillance during the vector activity season, from May to November.

Figure 1. Geographical classification of Italy into high-, low- and minimal-risk areas for West Nile virus transmission.



Epidemiological Situation Summary

The confirmed cases of West Nile Disease, categorized by target species, are presented below, as of 26 August 2026.

Table 1. Confirmed West Nile disease (WND) outbreaks and cases by target species.

Regions	Province	N. outbreaks	N. positive equids	N. positive poultry	N. positive birds	N. positive mosquito pool
Abruzzo	Teramo	2				4
Calabria	Crotone	1			1	
Campania	Caserta	5			2	3
	Napoli	3			1	2
	Salerno	2				2
Emilia Romagna	Bologna	1				1
	Ferrara	9			9	1
	Forlì Cesena	1			1	

Regions	Province	N. outbreaks	N. positive equids	N. positive poultry	N. positive birds	N. positive mosquito pool
	Modena	1				1
	Parma	9	1		8	2
	Piacenza	2			1	1
	Ravenna	2			1	1
	Reggio Emilia	7			8	1
	Rimini	1				1
Friuli Venezia Giulia	Pordenone	1				1
Lazio	Latina	6	6			1
	Roma	22	9		14	
	Viterbo	1				7
Liguria	Genova	2			2	
Lombardia	Bergamo	3			3	
	Brescia	5			3	4
	Como	2			2	
	Cremona	14			23	
	Lodi	2			1	1
	Mantova	8			11	2
	Milano	37	1		35	1
	Monza e della Brianza	1			1	
	Pavia	18			20	1
	Varese	7	1		6	
Piemonte	Alessandria	8			1	10
	Asti	3			2	1
	Cuneo	5			4	1
	Novara	3			2	1
	Torino	3	2		3	
	Verbania	3			3	
	Vercelli	4			1	4
Puglia	Lecce	1	2			
Sardegna	Cagliari	2				2
	Oristano	11			4	8
	Sud Sardegna	1			1	
Sicilia	Siracusa	1	1			
Toscana	Firenze	2			1	1
	Grosseto	2			2	1
Trentino Alto Adige	Trento	1			1	
Umbria	Perugia	2			4	1
Veneto	Padova	22	1		14	13
	Rovigo	8				13
	Treviso	4			1	6
	Venezia	20			7	22

Regions	Province	N. outbreaks	N. positive equids	N. positive poultry	N. positive birds	N. positive mosquito pool
	Verona	16	1		8	7
	Vicenza	10	1		2	8
Totale		**307**	**26**	**0**	**214**	**137**

Figure 2. Temporal trend in confirmed West Nile Disease cases by target species.

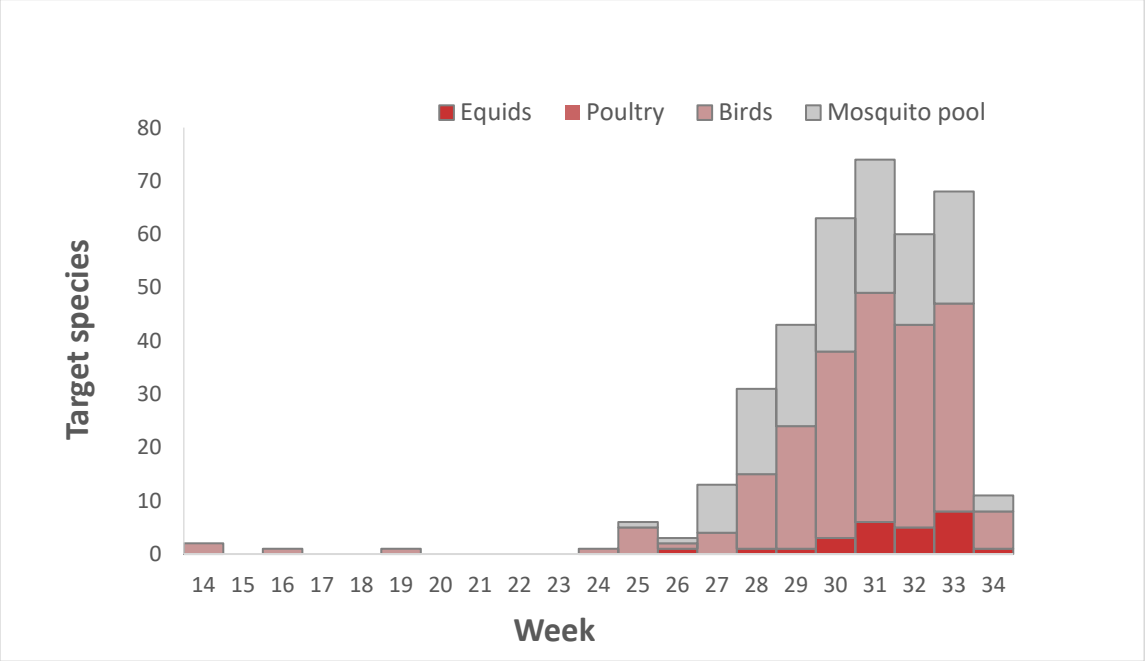
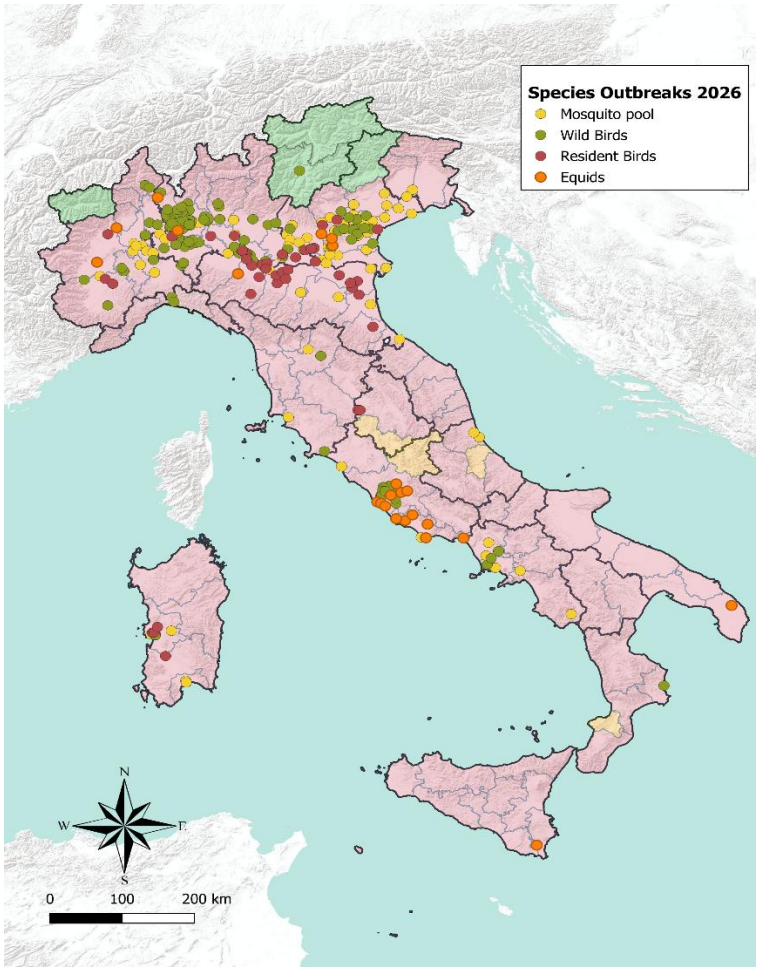


Figure 3. Geographical distribution of confirmed West Nile Disease outbreaks by target species.



Human Surveillance for West Nile Disease

Surveillance activities for imported and autochthonous human cases are conducted throughout the year across the entire national territory, with intensified surveillance during the vector activity season, from May to November. Human surveillance is based on identification of suspected cases presenting with neurological symptoms, with particular attention to the differential diagnosis of encephalitis, meningitis, polyradiculoneuritis (Guillain–Barré syndrome), and acute flaccid paralysis.

For detailed information on human cases, please refer to the European Centre for Disease Prevention and Control (ECDC) West Nile virus dashboard at the link below: https://wnv-weekly.ecdc.europa.eu/

Usutu Virus Surveillance

Usutu virus (USUV) is included in the National Plan for the Prevention, Surveillance and Response to Arboviral Diseases. Surveillance of USUV infection is closely integrated with West Nile disease surveillance and is primarily based on the monitoring of specific target species, including sentinel birds, poultry, wild birds, and mosquitoes. These surveillance activities aim to assess epidemiological trends and enable the early identification of areas with viral circulation.

USUV surveillance represents an important public health tool, although human infections are asymptomatic in most cases or are associated with mild clinical manifestations. Its relevance is related both to the rare occurance of neuroinvasive disease and to the fact that it shares its transmission cycle and main vectors with West Nile virus. These characteristics highlight the need for an integrated approach to the surveillance, prevention, and control of arboviral diseases within coordinated monitoring systems.

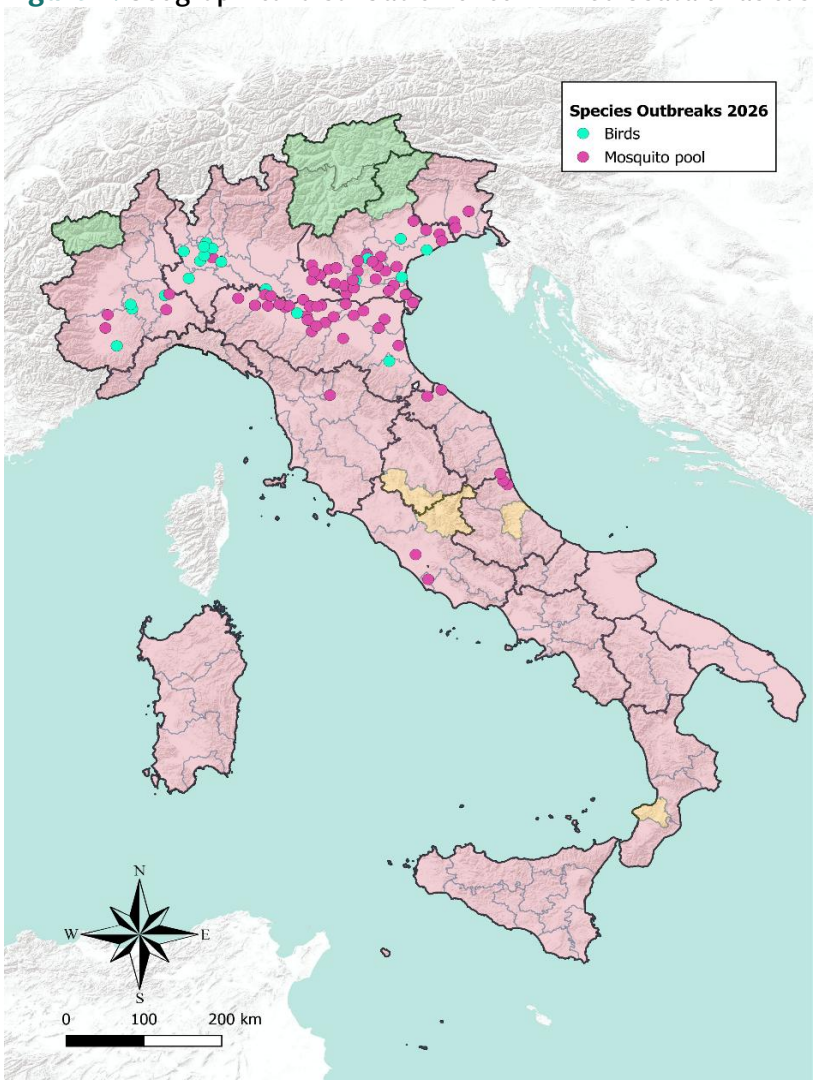
Confirmed cases of Usutu virus infection by target species are presented below, with data updated to 26 August 2026.

Table 2. Confirmed Usutu virus cases by target species.

Regions	Province	N. positive birds	N. positive mosquito pool
Abruzzo	Teramo	1	2
Emilia Romagna	Bologna		3
	Ferrara		12
	Forlì Cesena	1	1
	Modena		6
	Parma		7
	Piacenza		11
	Ravenna		1
	Reggio Emilia	1	14
Friuli Venezia Giulia	Udine		5
Lazio	Latina		1
	Roma		1
Lombardia	Cremona	1	
	Lodi	1	
	Mantova		1
	Milano	4	1
	Monza e della Brianza	2	
	Pavia	1	
Marche	Ascoli Piceno		1
	Pesaro Urbino		3
Piemonte	Alessandria	1	2
	Asti	3	
	Cuneo	2	2
Toscana	Firenze		2
Veneto	Padova	2	10

	Rovigo		17
	Treviso	1	3
	Venezia	2	11
	Verona		15
	Vicenza		6
Totale		**23**	**138**

Figure 4. Geographical distribution of confirmed Usutu virus cases by target species.



Dengue, Chikungunya, Zika, Tick-borne Encephalitis (TBE) and Toscana Virus (TOSV) Infection Surveillance

Infections caused by Chikungunya virus, Dengue virus, Zika virus, Tick-Borne Encephalitis virus (*TBE*) and Toscana virus (*TOSV*) are among the arboviral diseases covered by the surveillance activities conducted under the National Plan for the Prevention, Surveillance and Response to Arboviral Diseases (PNA).

Chikungunya, Dengue and Zika virus infections are transmitted to humans, the main vertebrate host, through the bites of mosquitoes of the genus *Aedes*. Entomological surveillance aims to collect data on the presence and abundance of *Aedes albopictus* in at-risk areas, to carry out targeted investigations around reported human cases to support the implementation of vector control measures, and to confirm the involvement of mosquito vectors in cases of locally acquired infection. Surveillance activities also aim to detect the possible presence of other invasive mosquito species.

Tick-borne encephalitis and Toscana virus infections are vector-borne zoonoses endemic in Italy. TBE is transmitted through tick bites, with ticks acting as both vectors and reservoirs of infection, whereas TOSV is transmitted by sand flies. Any positive findings detected in arthropod vectors must be reported to the National Animal Disease Information System (SIMAN).

This section reports exclusively the finding of veterinary surveillance.

Table 3. Dengue, Chikungunya, Zika, Tick-Borne Encephalitis (TBE), and Toscana virus (TOSV) detection in vectors reported in SIMAN.

Disease	Regions	Province	N. outbreaks	N. virus-positive arthropods
Chikungunya	Lazio	Roma	1	1
TBE	Veneto	Belluno	1	3
Toscana	Veneto	Padova	3	5