**COMMUNICABLE DISEASE THREATS** REPORT

# CDTR
# Week 37, 11-17 September 2016

**All users**

This weekly bulletin provides updates on threats monitored by ECDC.

# I. Executive summary

## EU Threats

### West Nile virus - Multistate (Europe) - Monitoring season 2016

Opening date: 30 May 2016 Latest update: 16 September 2016

During the June to November transmission season, ECDC monitors the situation in EU Member States and neighbouring countries in order to inform the blood safety authorities of areas affected by West Nile fever (WNF) and changes in the epidemiology of the disease.

➔Update of the week

During the past week, Austria and Spain both reported a new case. In the neighbouring countries, 36 new cases were reported by Israel (4), Russia (26), Serbia (5) and Ukraine (1).

### Monitoring environmental suitability of Vibrio growth in the Baltic Sea – Summer 2016

Opening date: 6 July 2015 Latest update: 16 September 2016

At the end of July 2016, three EU countries reported one case of *Vibrio* infection: Norway reported one case of *Vibrio parahamolyticus* infection associated with bathing in the Oslo Fjord, Germany reported a case of *Vibrio vulnificus* acquired on Swinoujscie beach (Poland – Baltic sea) and the Netherlands reported a case that was exposed in Zeeland (North Sea). ECDC has developed a model to map the environmental suitability for *Vibrio* growth in the Baltic Sea.

➔Update of the week

As of 15 September 2016, the environmental suitability for Vibrio growth in the Baltic Sea for the next five days is considered to be low to medium, particularly in the Gulf of Gdansk, Pommeranian Bay, and the coastlines around Lübeck and Kiel. The coastlines around the Langelandsbaelt (Langelandsbelt) and Storebaelt (Grosser Belt) should also be considered medium, based on the ECDC vibrio suitability tool.



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# Non EU Threats

## Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 16 September 2016

Global public health efforts are ongoing to eradicate polio, a crippling and potentially fatal disease, by immunising every child until transmission of the virus has completely stopped and the world becomes polio-free. Polio was declared a Public Health Emergency of International Concern (PHEIC) by the World Health Organization (WHO) on 5 May 2014 due to concerns regarding the increased circulation and international spread of wild poliovirus during 2014. On 11 August 2016, at the tenth meeting of the Emergency Committee, the temporary recommendations in relation to the PHEIC were extended for another three months. The World Health Organization recently declared wild poliovirus type 2 eradicated worldwide.

➔Update of the week

One new case of wild poliovirus type 1 (WPV1) was reported last week to WHO from Afghanistan.

Pakistan detected four new WPV1 environmental positive samples that were reported in the past week, collected throughout August from Balochistan (Quetta and Pishin districts), and Punjab (Lahore and Rawalpindi districts).

## Middle East respiratory syndrome – coronavirus (MERS CoV) – Multistate

Opening date: 24 September 2012 Latest update: 16 September 2016

Since April 2012 and as of 15 September 2016, 1 823 cases of MERS, including 701 deaths, have been reported by health authorities worldwide. The source of the virus remains unknown, but the pattern of transmission and virological studies point towards dromedary camels in the Middle East as being a reservoir from which humans sporadically become infected through zoonotic transmission. Human-to-human transmission is amplified among household contacts and in healthcare settings.

➔Update of the week

Since the last update of MERS-CoV on 11 August 2016 and as of 15 September 2016, there have been eight cases and two additional deaths reported. The cases were reported by Saudi Arabia (6 autochthonous cases), Thailand (1 imported ex Kuwait) and Austria (1 imported ex Saudi Arabia).

According to WHO press release on the 14 September 2016, no cases of MERS-CoV were detected among the pilgrims participating the Hajj, which took place from 9-14 September 2016 in Mecca, Saudi Arabia.

## Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015 Latest update: 16 September 2016

Since 1 February 2016, Zika virus infection and the related clusters of microcephaly cases and other neurological disorders constitute a public health emergency of international concern (PHEIC). Since 2015, and as of 15 September 2016, there have been 64 countries and territories reporting mosquito-borne transmission. According to WHO and as of 15 September 2016, 20 countries or territories have reported microcephaly and other central nervous system (CNS) malformations potentially associated with Zika virus infection or suggestive of congenital infection.

➔Update of the week

Twenty-two new locally-acquired cases have been reported in Florida since the last CDTR. In Asia, Singapore, Malaysia and Thailand continue to report locally-acquired cases.

The Lancet published the preliminary findings of a case-control study confirming the association between microcephaly and in-utero Zika virus infection.



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# II. Detailed reports

## West Nile virus - Multistate (Europe) - Monitoring season 2016

Opening date: 30 May 2016 Latest update: 16 September 2016

### Epidemiological summary

During the past week, Austria reported a new case, whose place of infection is still under investigation. Spain reported a new case, in the already affected province of Sevilla.
In the neighbouring countries, Israel reported four new cases, all in already affected areas (Haifa 2, Northern district 1 and Southern district 1).
Russia reported 26 confirmed cases, two in the newly affected Krasnodarskiy Kray and 24 in already affected oblasts (Astrakhan 6, Rostov 1, Samara 1, Saratov 13, Volgograd 2 and Voronezh 1).
Serbia reported five new confirmed cases, four in the newly affected districts of South-backi (3) and Srem, and one in the already affected South-banat district.
Ukraine reported its first case of WNF for 2016 transmission season, a probable case whose place of infection is the region of Cheras'ka.

Since the beginning of the 2016 transmission season and as of 15 September 2016, 111 cases of West Nile fever in humans have been reported in EU Member States and 181 cases in the neighbouring countries.

**Source**: ECDC WNF page | MoH Russia

### ECDC assessment

Although there has been a notable peak in West Nile fever transmission in the EU in the past few weeks, the overall number of cases is still within the historical range of values.

### Actions

From week 22 onwards, ECDC produces weekly West Nile fever (WNF) maps during the transmission season to inform blood safety authorities of WNF-affected areas.



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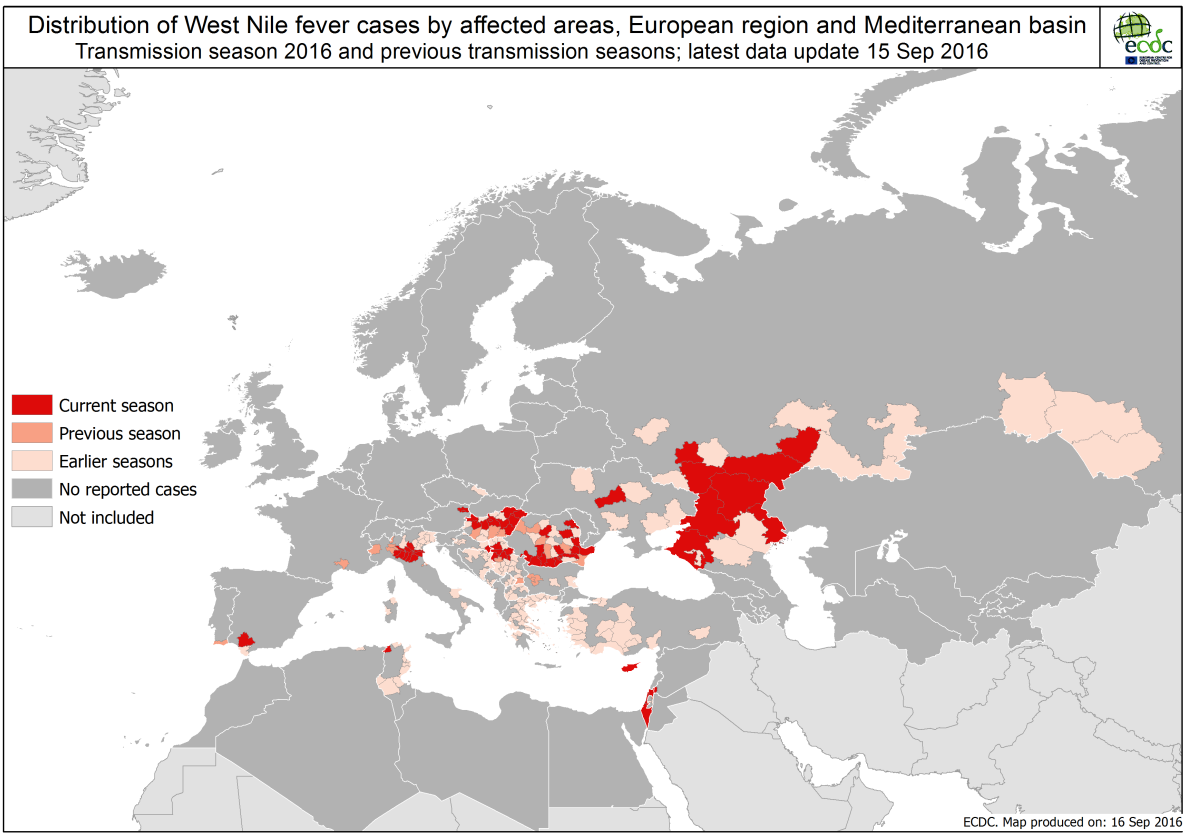
## Distribution of West Nile fever cases bu affected areas, European region and Mediterraneam bassin, 2016

ECDC




# Monitoring environmental suitability of Vibrio growth in the Baltic Sea – Summer 2016

Opening date: 6 July 2015 Latest update: 16 September 2016

## Epidemiological summary

On 24 August, Norway reported a case of *Vibrio parahamolyticus* infection associated with bathing in the Oslo Fjord. The case is a retired female without known underlying diseases. On 25 July, one day after she was in the mountains, where she got a wound under her knee, she bathed in the Oslo fjord. One day later she felt the wound was infected and she begun to feel unwell. She went to the emergency department. Symptoms developed quite fast into sepsis and necrotizing fasciitis. She was admitted to intensive care, where the leg was amputated, and *V. parahaemolitycus* was confirmed.

Germany reported that on the 24 July, a woman, who has underlying liver disease, suffered small wounds on her calfs. On one of the subsequent days, the wounds were exposed to Baltic Sea water on Swinoujscie beach. On the 29 July, she was admitted to a Berlin hospital with severe wound infection and septicemia. Laboratory result confirmed the presence of *Vibrio vulnificus* in the



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wounds and in her blood. She remains in critical condition in hospital and cannot be interviewed regarding further details of exposure in Swinoujscie. However, it has been confirmed by others that she did not visit additional beaches in either Germany or Poland.

On 25 August, The Netherlands reported a case of *Vibrio parahaemolyticus* infection. The case, a 57-year-old man who put his injured foot in the sea in Zeeland (North Sea) on 12 August, developed an infection on 13 August. He was admitted on 15 August and laboratory confirmed infection with *Vibrio parahaemolyticus*.

The environmental suitability for V*ibrio* growth in the Baltic Sea was very low before 19 July. On the 20 July, the risk increased in parts of the Baltic sea and was considered medium to high from 23 July to end of July which corresponds to the date of contamination of the two cases.

As of 15 September 2016, the environmental suitability for Vibrio growth in the Baltic Sea for the next five days is considered to be low to medium.

Sea surface temperature (SST) in the Baltic Sea: http://www.ospo.noaa.gov/Products/ocean/sst/anomaly/anim_full.html
*Vibrio* suitability tool available on the E3 Geoportal:
https://e3geoportal.ecdc.europa.eu/SitePages/Vibrio%20Map%20Viewer.aspx

Please note that this model has been calibrated to the Baltic Region in Northern Europe and might not apply to other worldwide settings prior to validation. For the Baltic Sea, the model parameters to be used in the map are the following values: number colour bands (20) scale method linear, legend range Min. value (0), and Max. value (28).

## ECDC assessment

Elevated sea surface temperatures in marine environments with low salt content provide ideal environmental growth conditions for certain *Vibrio* species. These conditions can be found during the summer months in estuaries and enclosed water bodies with moderate salinity. These *Vibrio* species can cause vibriosis infections, particularly *V. parahaemolyticus*, *V. vulnificus* and non-toxigenic *V. cholerae*. Vibriosis in humans caused by these species in the Baltic region have occurred in the past during hot summer months, particularly when the sea surface temperature has been elevated.

## Actions

ECDC is monitoring this threat on a weekly basis during the summer of 2016 and report on increased environmental suitability for growth of *Vibrio* bacteria.

The *Vibrio* suitability tool is available on the ECDC E3 Geoportal. Please note that this model has been calibrated to the Baltic region in northern Europe and might not be compatible with other regional settings prior to validation.



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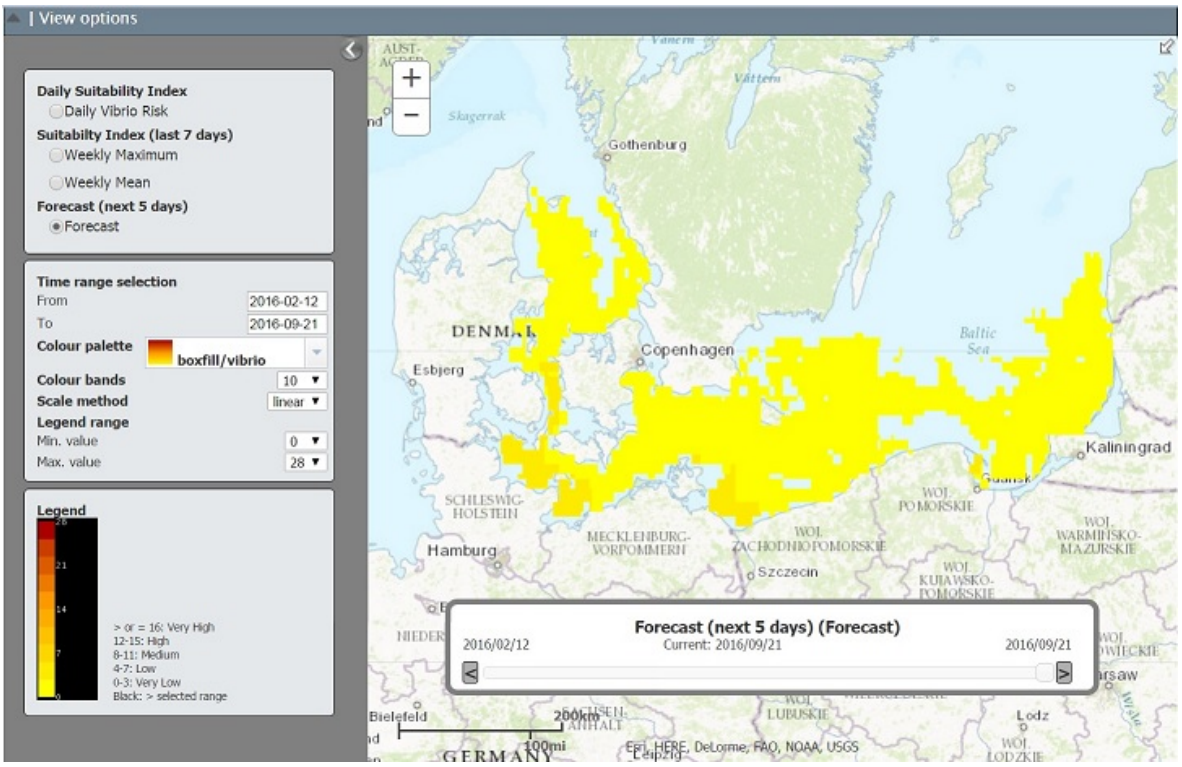
## Monitoring environmental suitability of Vibrio growth in the Baltic Sea - summer 2016

ECDC




# Poliomyelitis - Multistate (world) - Monitoring global outbreaks

Opening date: 8 September 2005 Latest update: 16 September 2016

## Epidemiological summary

In 2016, 26 cases of wild poliovirus type 1 (WPV1) have been reported so far, compared with 41 for the same period in 2015. The cases were detected in Pakistan (14), Afghanistan (9) and Nigeria (3). As of 13 September 2016, three cases of circulating vaccine-derived poliovirus (cVDPV) have been reported to WHO in 2016, all from Laos. There were 14 cVDPV cases during the same period in 2015.

**Web sources**: Polio eradication: weekly update | MedISys Poliomyelitis | ECDC Poliomyelitis factsheet | Temporary Recommendations to Reduce International Spread of Poliovirus | WHO Statement on the Seventh Meeting of the International Health Regulations Emergency Committee on Polio

## ECDC assessment

The last locally-acquired wild polio cases within the current EU borders were reported from Bulgaria in 2001. The most recent wild polio outbreak in the WHO European Region was in Tajikistan in 2010, when importation of WPV1 from Pakistan resulted in 460 cases.

**References**: ECDC latest RRA | Rapid Risk Assessment on suspected polio cases in Syria and the risk to the EU/EEA | Wild-type poliovirus 1 transmission in Israel - what is the risk to the EU/EEA? |RRA Outbreak of circulating vaccine-derived poliovirus type 1 (cVDPV1) in Ukraine

## Actions

ECDC monitors reports of polio cases worldwide through epidemic intelligence in order to highlight polio eradication efforts and identify events that increase the risk of wild poliovirus being reintroduced to the EU. Following the declaration of polio as a PHEIC, ECDC updated its risk assessment. ECDC has also prepared a background document with travel recommendations for the EU.

Following the detection of the cases of circulating vaccine-derived poliovirus type 1 in Ukraine, ECDC published a rapid risk assessment on its website.



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# Middle East respiratory syndrome – coronavirus (MERS CoV) – Multistate

Opening date: 24 September 2012 Latest update: 16 September 2016

## Epidemiological summary

As of 15 September 2016, 1 823 cases of MERS, including 701 deaths, have been reported by health authorities worldwide.

On 8 September 2016, **Austria** reported a case of MERS-CoV in a Saudi citizen. Since 2012, 16 cases of MERS-CoV have been reported in Europe. In 2012, the UK and Germany reported one imported case each from Qatar. In 2013, the UK reported one imported and two autochthonous cases, Germany (one imported case), France (one imported and one autochthonous case) and Italy (one imported case). All of the imported cases had recent travel history to Saudi Arabia, United Arab Emirates and Jordan. In 2014, Greece, Netherlands, Austria and Turkey all reported imported cases with recent travel history to Saudi Arabia. In 2015, Germany reported one imported case with travel history to United Arab Emirates.

On 30 July 2016, **Thailand**, announced a case in an 18-year-old Kuwaiti man who arrived in Thailand on 25 July with his family. This is the third case detected in Thailand.

The **Saudi Arabia** reported six male cases, ages ranging between 39 to 69 years. Of the six cases, four had camel contact, one was a secondary household contact and one was a primary case. The cases are from different areas in Saudi Arabia Alkharj, Huraymeila, Taif, Hufoof, Riyadh and Arar.

**Web sources**: ECDC's latest rapid risk assessment | ECDC novel coronavirus webpage | WHO | WHO MERS updates | WHO travel health update | WHO Euro MERS updates | CDC MERS | Saudi Arabia MoH |ECDC factsheet for professionals

## ECDC assessment

The importation of a case to Austria from Saudi Arabia is not unexpected but demonstrates the continued risk of importation to Europe after exposure in the Middle East. However, the risk of sustained human-to-human transmission in Europe remains very low. Taking into account the latest development in Austria, ECDC's conclusion continues to be that the MERS-CoV outbreak poses a low risk to the EU, as stated in the Rapid Risk Assessment published regarding the last case in Austria on 16 October 2014.

## Actions

ECDC published the 21st update of its MERS CoV rapid risk assessment on 21 October 2015.



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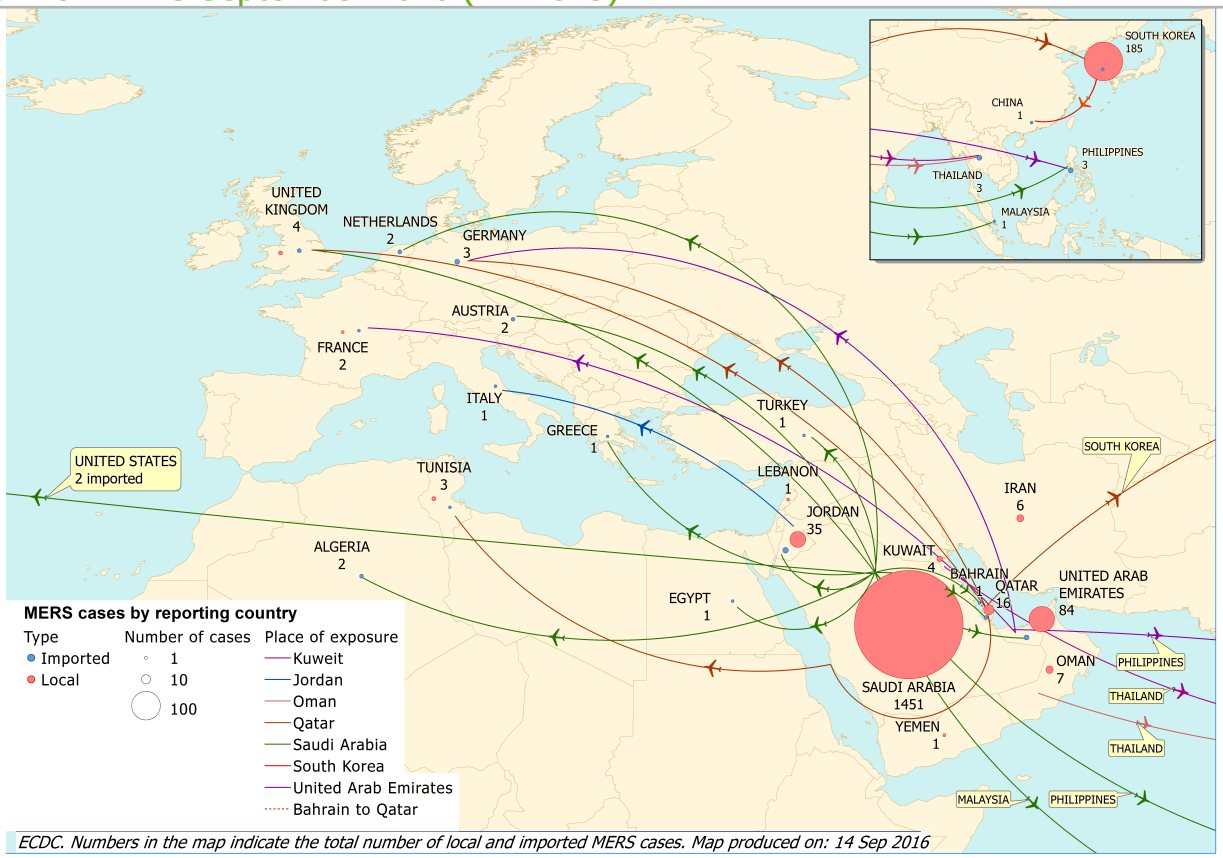
## Distribution of confirmed cases of MERS-CoV by country of reporting and of exposure, March 2012 – 15 September 2016 (n=1 823)




*ECDC. Numbers in the map indicate the total number of local and imported MERS cases. Map produced on: 14 Sep 2016*

# Zika - Multistate (world) - Monitoring global outbreaks

Opening date: 16 November 2015 Latest update: 16 September 2016

## Epidemiological summary

### 1. Update on number of cases

**The USA**

Twenty-two new locally acquired cases have been recorded in Florida over the past week. To date, 78 locally-acquired and 650 imported cases of Zika have been reported in Florida. The distribution of the locally-acquired cases is as follow: 71 in Miami-Dade, five in Palm beach, one in Pinellas and one in Broward.

**Singapore**

As of 15 September 2016, the Singapore National Environment Agency (NEA) records 355 locally-acquired ZIKV cases, an increase of 88 cases since the last CDTR. To date, ZIKV has been confirmed in eight pregnant women.

**Thailand**



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As of 15 September 2016 and according to media quoting the Ministry of Health, Thailand records about 200 cases since the beginning of the year in 16 provinces. Five provinces are under active control: Bangkok, Chiangmai, Buengkarn, Phetchaboon, Chantaburi.

**Malaysia**
Six cases have been reported by national authorities between 1 and 13 September.

**EU/EEA imported cases:**
Since week 45/2015, 19 countries (Austria, Belgium, Czech Republic, Denmark, Finland, France, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom) have reported 1 614 travel-associated Zika virus infections through The European Surveillance System (TESSy). This corresponds to an increase of 57 cases since the last update. Since week 45/2015, seven EU countries reported 80 Zika cases among pregnant women.

**EU's Outermost Regions and Territories**
As of 15 September 2016:
*Martinique*: 36 100 suspected cases have been reported, an increase of 305 since last week. The weekly number of cases is stable.
*French Guiana*: 9 710 suspected cases have been detected, an increase of 86 cases since last week. The weekly number of cases is stable.
*Guadeloupe*: 29 850 suspected cases have been detected, an increase of 380 suspected cases since last week. The weekly number of cases is stable.
*St Barthélemy*: 675 suspected cases have been detected, an increase of 45 suspected cases since last week. The weekly number of cases is stable.
*St Martin*: 2 265 suspected cases have been detected, an increase of 100 suspected cases since last week. The weekly number of cases is stable.

Since February 2016, 12 countries have reported evidence of person-to-person transmission of Zika virus, probably via a sexual route.

### 2. Update on microcephaly and/or central nervous system (CNS) malformations potentially associated with Zika virus infection

As of 8 September 2016, microcephaly and other central nervous system (CNS) malformations associated with Zika virus infection or suggestive of congenital infection have been reported by 20 countries or territories. Brazil reports the highest number of cases. Eighteen countries and territories worldwide have reported an increased incidence of Guillain-Barré syndrome (GBS) and/or laboratory confirmation of a Zika virus infection among GBS cases.

In the EU, Spain (2) and Slovenia (1) have reported congenital malformations associated with Zika virus infection after travel in the affected areas. Cases have also been detected in the EU's Outermost Regions and Territories in Martinique, French Guiana and French Polynesia.

**Web sources:** ECDC Zika Factsheet | PAHO | Colombian MoH | Brazilian MoH | Brazilian microcephaly case definition |SAGE MOH Brazil | Florida Health department

## ECDC assessment

The spread of the Zika virus epidemic in the Americas is likely to continue as the vectors (*Aedes aegypti* and *Aedes albopictus* mosquitoes) are widely distributed there. The likelihood of travel-related cases in the EU is increasing. A detailed risk assessment was published on 30 August 2016. As neither treatment nor vaccines are available, prevention is based on personal protection measures. Pregnant women should consider postponing non-essential travel to Zika-affected areas.

## Actions

ECDC publishes an epidemiological update every Friday together with maps containing information on countries or territories which have reported confirmed autochthonous cases of Zika virus infection. A Zika virus infection atlas is also available on the ECDC website.

ECDC publishes information concerning vector distribution on the ECDC website, showing the distribution of the vector species at 'regional' administrative level (NUTS3).



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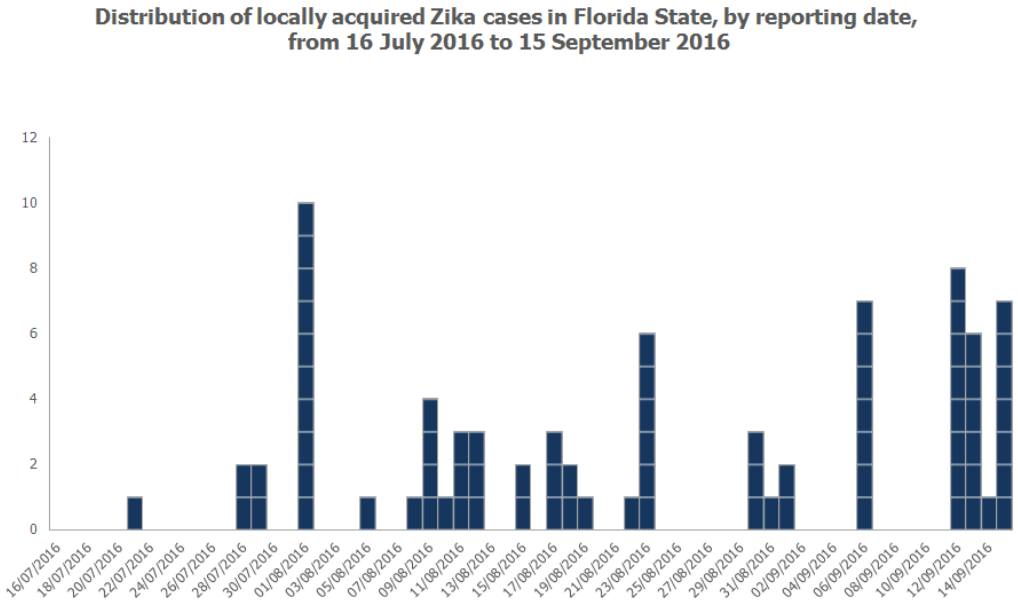
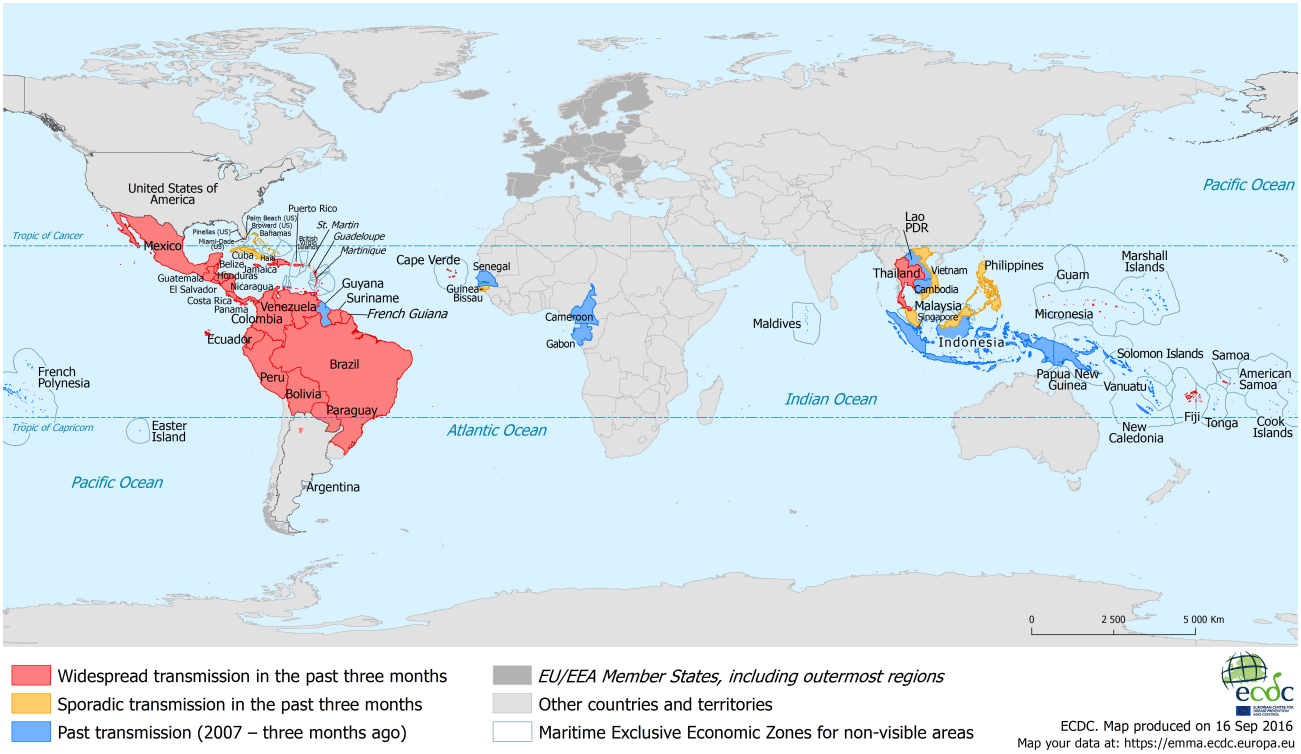
## Distribution of locally acquired Zika cases in Florida State (US), by reporting date, from 16 July 2016 to 15 September 2016

ECDC (Adapted from Florida health departement and media)




## Countries or territories with reported confirmed autochthonous cases of Zika virus infection in the past three months, as of 16 September 2016

ECDC



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