



KEY UPDATES

- Countries and territories reporting mosquito-borne Zika virus infections for the first time in the past week:
 - None
- Countries and territories reporting microcephaly and other central nervous system (CNS) malformations potentially associated with Zika virus infection for the first time in the past week:
 - Costa Rica, Dominican Republic and Haiti
- Countries and territories reporting Guillain-Barré syndrome (GBS) cases associated with Zika virus infection for the first time in the past week:
 - None
- The 2016 Summer Olympics held in Rio de Janeiro ended on 21 August. From the reports WHO received from national health authorities, there have so far been no laboratory-confirmed cases of Zika virus in anyone associated with the Olympics.
- Operational measures updates from the WHO Regional Office for the Americas:
 - WHO provided technical advice on integrated vector management in Puerto Rico, molecular diagnosis of Zika in the Bahamas, and clinical management of GBS in the context of the Zika emergency in Chile.

ANALYSIS

- Overall, the global risk assessment has not changed.
- Zika virus continues to spread geographically to areas where competent vectors are present.
- There are no additional major developments this week.

SITUATION

- 70 countries and territories (Fig. 1, Table 1) have reported evidence of mosquito-borne Zika virus transmission since 2007 (67 with reports from 2015):
 - 53 with a first reported outbreak from 2015 onwards (Fig. 2, Table 1).
 - Four with having possible endemic transmission or evidence of local mosquito-borne Zika infections in 2016.
 - 13 with evidence of local mosquito-borne Zika infections in or before 2015, but without documentation of cases in 2016, or with the outbreak terminated.

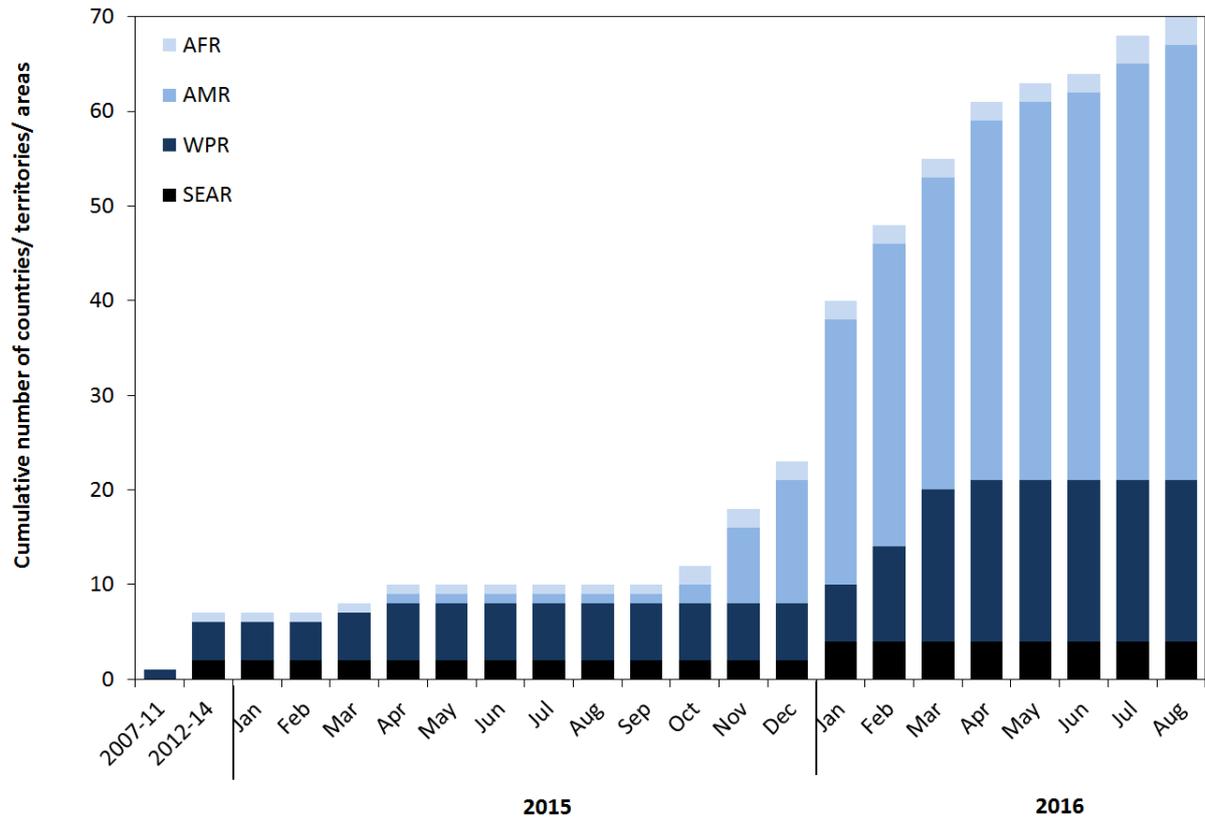
- Since February 2016, 11 countries have reported evidence of person-to-person transmission of Zika virus (Table 2).
- 20 countries or territories have reported microcephaly and other CNS malformations potentially associated with Zika virus infection or suggestive of congenital infection (Table 3). Four of the 20 countries reported microcephalic babies born from mothers in countries with no endemic Zika virus transmission but who reported recent travel history to Zika-affected countries.
- Outcomes of pregnancies with laboratory evidence of possible Zika virus in the United States of America¹:
 - 16 total liveborn infants with birth defects
 - Five total pregnancy losses with birth defects
- Outcomes of pregnancies with laboratory evidence of possible Zika virus in territories of the United States of America:
 - One total liveborn infant with birth defects
 - One total pregnancy loss with birth defects
- 18 countries and territories have reported an increased incidence of GBS and/or laboratory confirmation of a Zika virus infection among GBS cases (Table 4).
- In Guinea-Bissau, the gene sequencing results of the four confirmed Zika cases sent on 1 July are still pending. The investigation of the five cases of microcephaly detected since April 2016 is ongoing. Additional WHO deployments in entomology, epidemiology and laboratory are being planned.
- The 2016 Summer Olympics held in Rio de Janeiro ended on 21 August. From the reports WHO received from national health authorities, there have so far been no laboratory-confirmed cases of Zika virus in spectators, athletes or anyone associated with the Olympics. The situation is being closely monitored; a few cases may still occur, especially given the approximately one-week incubation period of the virus.
- WHO has developed advice and information on diverse topics in the context of Zika virus.^{2,3}

¹ <https://www.cdc.gov/zika/geo/pregnancy-outcomes.html>

² <http://www.who.int/csr/resources/publications/zika/en/>

³ <http://www.who.int/emergencies/zika-virus/en/> ; <http://www.who.int/risk-communication/zika-virus/en/>

Figure 1. Cumulative number of countries and territories by WHO region⁴ reporting mosquito-borne Zika virus transmission in years (2007–2014), and monthly from 1 January 2015 to 24 August 2016



⁴ <http://www.who.int/about/regions/en/>

Table 1. Countries and territories reporting mosquito-borne Zika virus transmission

Classification	WHO Regional Office	Country / territory	Total
Category 1: Countries with a first reported outbreak from 2015 onwards	AFRO	Cabo Verde; Guinea-Bissau	2
	AMRO/PAHO	Anguilla; Antigua and Barbuda; Argentina; Aruba; Bahamas; Barbados; Belize; Bolivia (Plurinational State of), Bonaire, Sint Eustatius and Saba – Netherlands*; Brazil; Cayman Islands; Colombia; Costa Rica; Cuba; Curaçao; Dominica; Dominican Republic; Ecuador; El Salvador; French Guiana; Grenada; Guadeloupe; Guatemala; Guyana; Haiti; Honduras; Jamaica; Martinique; Mexico; Nicaragua; Panama; Paraguay; Peru; Puerto Rico; Saint Barthélemy; Saint Lucia; Saint Martin; Saint Vincent and the Grenadines; Sint Maarten; Suriname; Trinidad and Tobago; Turks and Caicos; United States of America; United States Virgin Islands; Venezuela (Bolivarian Republic of)	45
	WPRO	American Samoa; Fiji; Marshall Islands; Micronesia (Federated States of); Samoa; Tonga	6
Subtotal			53
Category 2: Countries with possible endemic transmission or evidence of local mosquito-borne Zika infections in 2016	SEARO	Indonesia; Thailand	2
	WPRO	Philippines; Viet Nam	2
Subtotal			4
Category 3: Countries with evidence of local mosquito-borne Zika infections in or before 2015, but without documentation of cases in 2016, or outbreak terminated	AFRO	Gabon	1
	PAHO/AMRO	ISLA DE PASCUA – Chile**	1
	SEARO	Bangladesh; Maldives	2
	WPRO	Cambodia; Cook Islands**; French Polynesia**; Lao People's Democratic Republic; Malaysia; New Caledonia; Papua New Guinea; Solomon Islands; Vanuatu	9
Subtotal			13
Total			70

*This includes confirmed Zika virus cases reported in BONAIRE – Netherlands, SINT EUSTATIUS and SABA – Netherlands.

**These countries and territories have not reported Zika virus cases in 2015 or 2016.

Categories are defined as follows:

Category 1: Countries with a first reported outbreak from 2015 onwards

- A laboratory confirmed, autochthonous, mosquito-borne case of Zika virus infection in an area where there is no evidence of circulation of the virus in the past (prior 2015), whether it is detected and reported by the country itself or by another state party diagnosing returning travellers **OR**
- A laboratory confirmed, autochthonous, mosquito-borne case of Zika virus infection in an area where transmission has been previously interrupted. The assumption is that the size of the susceptible population has built up to a sufficient level to allow transmission again; the size of the outbreak will be a function of the size of the susceptible population **OR**
- An increase of the incidence of laboratory confirmed, autochthonous, mosquito-borne Zika virus infection in areas where there is on-going transmission, above two standard deviations of the baseline rate, or doubling the number of cases over a 4-week period. Clusters of febrile illnesses, in particular when epidemiologically-linked to a confirmed case, should be microbiologically investigated.

Category 2: Countries with possible endemic transmission or evidence of local mosquito-borne Zika infections in 2016 with the reporting period beginning in 2007

- Countries or territories that have reported an outbreak with consistent presence of laboratory confirmed, autochthonous, mosquito-borne cases of Zika virus infection 12 months after the outbreak **OR**
- Countries or territories where Zika virus has been circulating for several years with consistent presence of laboratory confirmed, autochthonous, mosquito-borne cases of Zika virus infection or evidence of local mosquito-borne Zika infections in 2016. Reports can be from the country or territory where infection occurred, or from a third party where the case is first recorded according to the International Health Regulations (IHR 2005). Countries with evidence of infection prior to 2007 are listed in http://www.who.int/bulletin/online_first/16-171082.pdf

Category 3: Countries with evidence of local mosquito-borne Zika infections in or before 2015, but without documentation of cases in 2016, or outbreak terminated with the reporting period beginning in 2007

- Absence of confirmed cases over a 3-month period in a specific geographical area with climatic conditions suitable for year-round arbovirus transmission, or over a 12-month period in an area with seasonal vector activity.

Table 2. Countries reporting non mosquito-borne Zika virus transmission since February 2016

Classification	WHO Regional Office	Country / territory	Total
Countries with evidence of person-to-person transmission of Zika virus, other than mosquito-borne transmission	AMRO/PAHO	Argentina, Canada, Chile, Peru, United States of America	5
	EURO	France, Germany, Italy, Portugal, Spain	5
	WPRO	New Zealand	1
Total			11

Table 3. Countries and territories reporting microcephaly and/or CNS malformation cases potentially associated with Zika virus infection

Reporting country or territory	Number of microcephaly and/or CNS malformation cases suggestive of congenital Zika infections or potentially associated with a Zika virus infection	Probable location of infection
Brazil	1835 ⁵	Brazil
Cabo Verde	9	Cabo Verde
Canada	1	Undetermined
Costa Rica	1	Costa Rica
Colombia	29 ⁶	Colombia
Dominican Republic	3	Dominican Republic
El Salvador	4	El Salvador
French Guiana	3 ⁷	French Guiana
French Polynesia	8	French Polynesia
Haiti	1	Haiti
Honduras	1	Honduras
Marshall Islands	1	Marshall Islands
Martinique	10 ⁷	Martinique
Panama	5	Panama
Paraguay	2 ⁸	Paraguay
Puerto Rico	1	Puerto Rico
Slovenia	1 ⁹	Brazil
Spain	2	Colombia, Venezuela (Bolivarian Republic of)
Suriname	1	Suriname
United States of America*	21 ¹⁰	Undetermined**

* US-CDC has modified the way information is displayed. To protect the privacy of the women and children affected by Zika, US-CDC is not reporting individual state, tribal, territorial or jurisdictional level data.

**The probable locations of three of the infections were Brazil (1 case), Haiti (1 case) and Mexico, Belize or Guatemala (1 case).

⁵ <http://portalsaude.saude.gov.br/images/pdf/2016/agosto/17/Informe-Epidemiol--gico-n---39--SE-32-2016--16ago2016-19h10.pdf>

⁶ <http://www.ins.gov.co/boletin-epidemiologico/Boletn%20Epidemiologico/2016%20Boletin%20epidemiologico%20semana%2032.pdf>

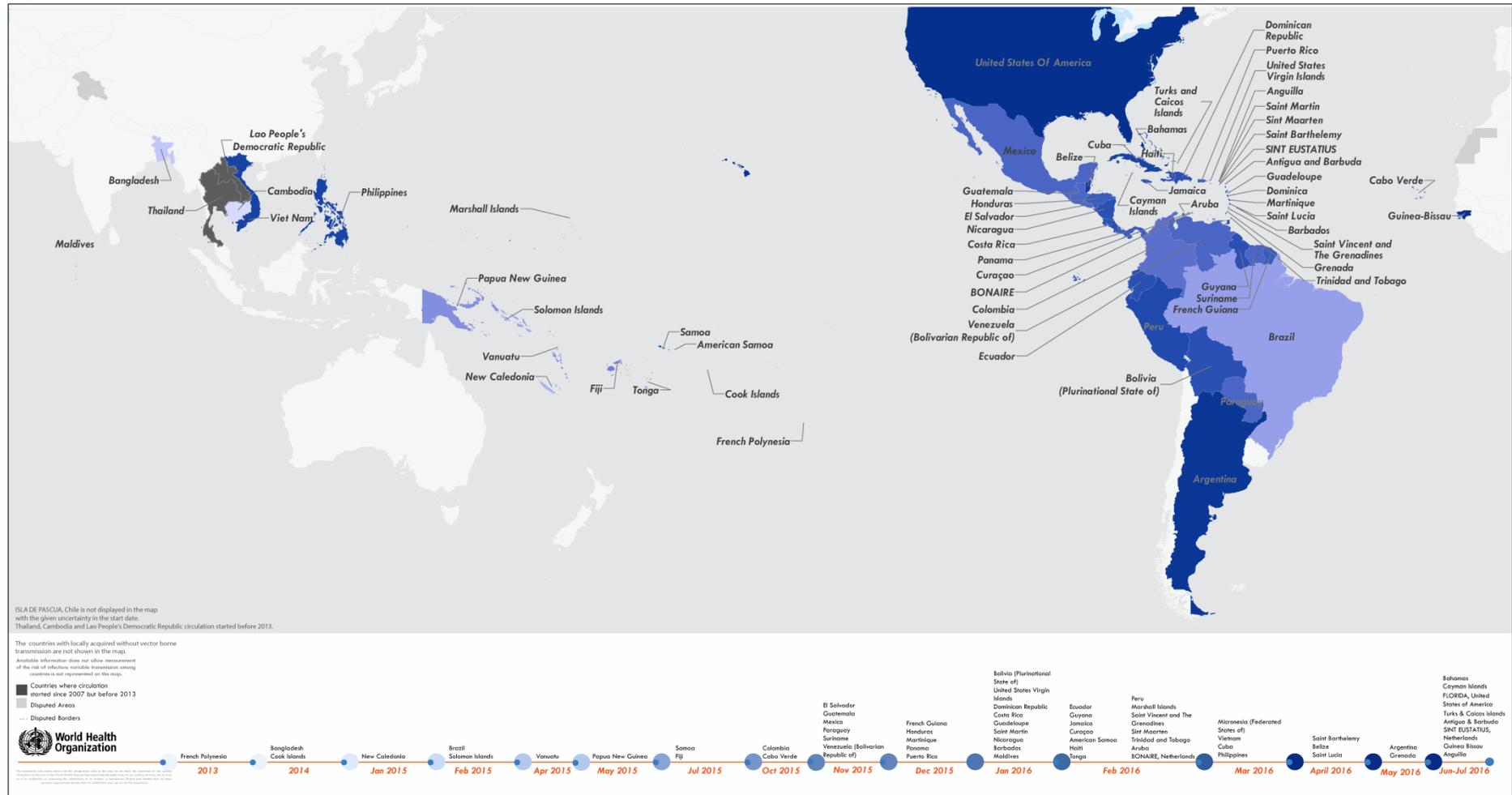
⁷ <http://www.invs.sante.fr/Publications-et-outils/Points-epidemiologiques/Tous-les-numeros/Antilles-Guyane/2016/Situation-epidemiologique-du-virus-Zika-aux-Antilles-Guyane.-Point-au-21-juillet-2016>

⁸ <http://www.mspbs.gov.py/v3/paraguay-reporta-sus-dos-primeros-casos-de-microcefalia-asociados-al-zika/>

⁹ <http://www.nejm.org/doi/pdf/10.1056/NEJMoa1600651>

¹⁰ <http://www.cdc.gov/zika/geo/pregnancy-outcomes.html>

Figure 2. Global spread of Zika virus, 2013-2016



ISLA DE PASCUA – Chile is not displayed in the map given uncertainty about the date of onset of the outbreak there. Circulation of Zika virus in Thailand, Cambodia and Lao People’s Democratic Republic started before 2013. Countries where sexual transmission occurred are not represented in this map. Available information does not permit measurement of the risk of infection in any country; the variation in transmission intensity among countries is therefore NOT represented on this map. Zika virus is not necessarily present throughout the countries/territories shaded in this map.

Table 4. Countries and territories reporting Guillain-Barré syndrome (GBS) potentially associated with Zika virus infection

Classification	Country / territory
Reported increase in incidence of GBS cases, with at least one GBS case with confirmed Zika virus infection	Brazil, Colombia, Dominican Republic, El Salvador*, French Guiana, French Polynesia, Honduras, Jamaica, Martinique, Suriname**, Venezuela (Bolivarian Republic of)
No increase in GBS incidence reported, but at least one GBS case with confirmed Zika virus infection	Costa Rica, Grenada ¹¹ , Guadeloupe ¹² , Guatemala, Haiti, Panama, Puerto Rico

*GBS cases with previous history of Zika virus infection were reported by the International Health Regulations (2005) National Focal Point in United States of America.

**One case living in continental Netherlands was diagnosed in mid-January 2016 at the Erasmus Academic Medical Center and reported by the Netherlands.

¹¹ http://health.gov.gd/index.php?option=com_content&view=article&id=434:nine-confirmed-zika-cases-in-grenada&catid=83:latest-news&Itemid=932&lang=en

¹² <http://www.invs.sante.fr/Publications-et-outils/Points-epidemiologiques/Tous-les-numeros/Antilles-Guyane/2016/Situation-epidemiologique-du-virus-Zika-aux-Antilles-Guyane.-Point-au-23-juin-2016>