World Health Organization

SITUATION REPORT

ZIKA VIRUS
MICROCEPHALY
GUILLAIN-BARRÉ SYNDROME
15 DECEMBER 2016

DATA AS OF 14 DECEMBER 2016

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:
  - None
- Countries and territories reporting Guillain-Barré syndrome (GBS) cases associated with Zika virus infection for the first time in the past week:
  - None
- A traveler returned from Angola to France and presented with clinical signs and symptoms and serologic signs compatible with Zika virus infection. However, previous yellow fever vaccination and sero-positivity for other flaviviruses preclude the conclusive diagnosis of Zika virus infection because of the possibility of cross-reaction. Further investigations to determine if there is ongoing Zika virus transmission in Angola are ongoing.

ANALYSIS

- Overall, the global risk assessment has not changed. Zika virus continues to spread geographically to areas where competent vectors are present. Although a decline in cases of Zika infection has been reported in some countries, or in some parts of countries, vigilance needs to remain high.

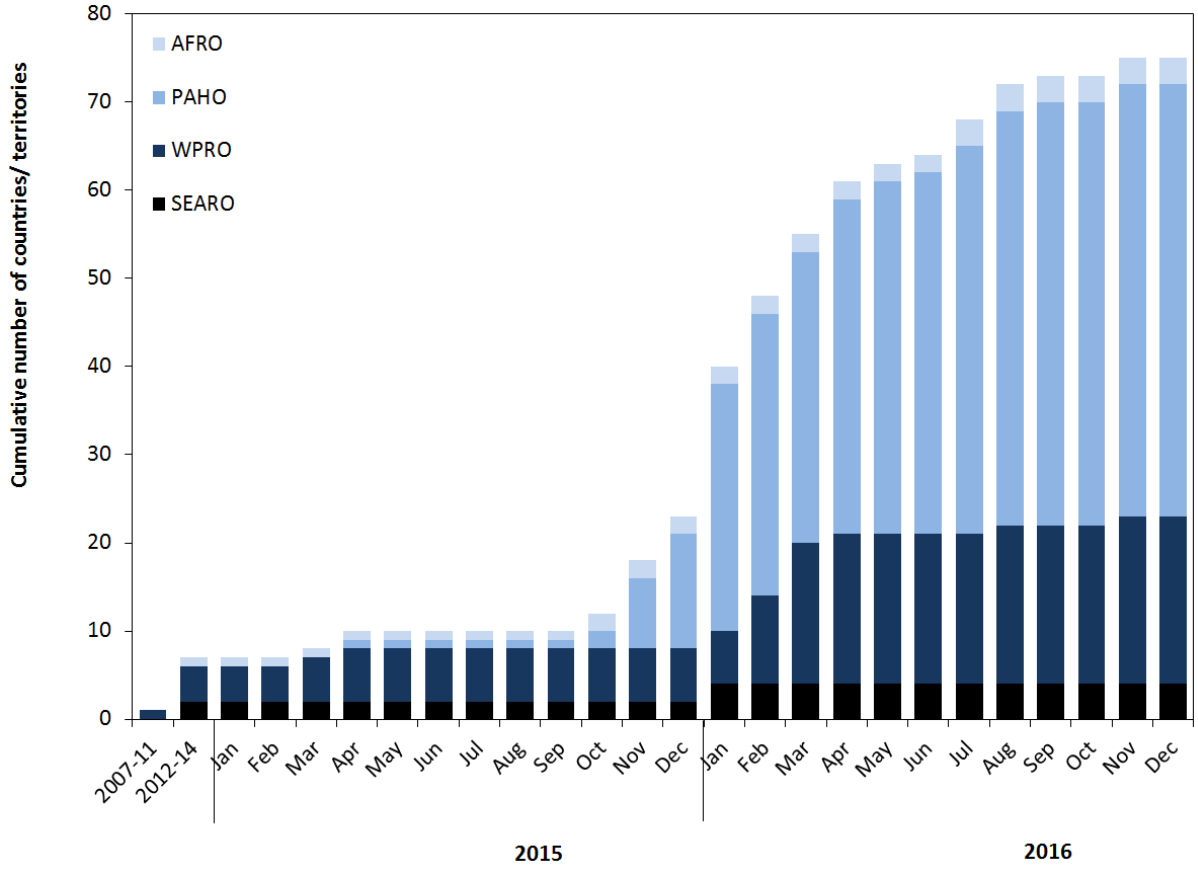
SITUATION

- Seventy-five countries and territories (Fig. 1, Table 1) have reported evidence of mosquito-borne Zika virus transmission since 2007 (69 with reports from 2015 onwards), of which:
  - Fifty-eight with a reported outbreak from 2015 onwards (Fig. 2, Table 1).
  - Seven with having possible endemic transmission or evidence of local mosquito-borne Zika infections in 2016.
  - Ten with evidence of local mosquito-borne Zika infections in or before 2015, but

without documentation of cases in 2016, or with the outbreak terminated.

- Thirteen countries have reported evidence of person-to-person transmission of Zika virus (Table 2).
- Twenty-nine countries or territories have reported microcephaly and other CNS malformations potentially associated with Zika virus infection, or suggestive of congenital infection (Table 3).
- Twenty countries or territories have reported an increased incidence of GBS and/or laboratory confirmation of a Zika virus infection among GBS cases (Table 4).

Figure 1. Cumulative number of countries and territories by WHO region[1] reporting mosquito-borne Zika virus transmission for the first time by year (2007–2014), and by month from 1 January 2015 to 14 December 2016



[1] http://www.who.int/about/regions/en/

Table 1. Countries and territories that have reported mosquito-borne Zika virus transmission

Classification	WHO Regional Office	Country / territory	Total
Category 1: Countries with a 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; British Virgin Islands; Cayman Islands; Colombia; Costa Rica; Cuba; Curaçao; Dominica; Dominican Republic; Ecuador; El Salvador; French Guiana; Grenada; Guadeloupe; Guatemala; Guyana; Haiti; Honduras; Jamaica; Martinique; Mexico; Montserrat; Nicaragua; Panama; Paraguay; Peru; Puerto Rico; Saint Barthélemy; Saint Kitts and Nevis; 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)	**48**
	WPRO	American Samoa; Fiji; Marshall Islands; Micronesia (Federated States of); Palau; Samoa; Singapore; Tonga	**8**
Subtotal			**58**
Category 2: Countries with possible endemic transmission or evidence of local mosquito-borne Zika infections in 2016	**SEARO**	Indonesia; Maldives; Thailand	**3**
	WPRO	Malaysia; New Caledonia; Philippines; Viet Nam	**4**
Subtotal			**7**
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**	**1**
	WPRO	Cambodia**; Cook Islands**; French Polynesia**; Lao People's Democratic Republic; Papua New Guinea; Solomon Islands; Vanuatu	**7**
Subtotal			**10**
Total			**75**

[#]The wording has been revised in recognition of the fact that a country that has had a first outbreak since 2015 and in which that outbreak has since terminated, may again report a new outbreak or cases which would qualify the country to be re-included in category 1.

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

Category 1: Countries with a 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/volumes/94/9/16-171082.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 person-to-person 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, Netherlands, Portugal, Spain, United Kingdom of Great Britain and Northern Ireland	**7**
	WPRO	New Zealand	**1**
Total			**13**

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

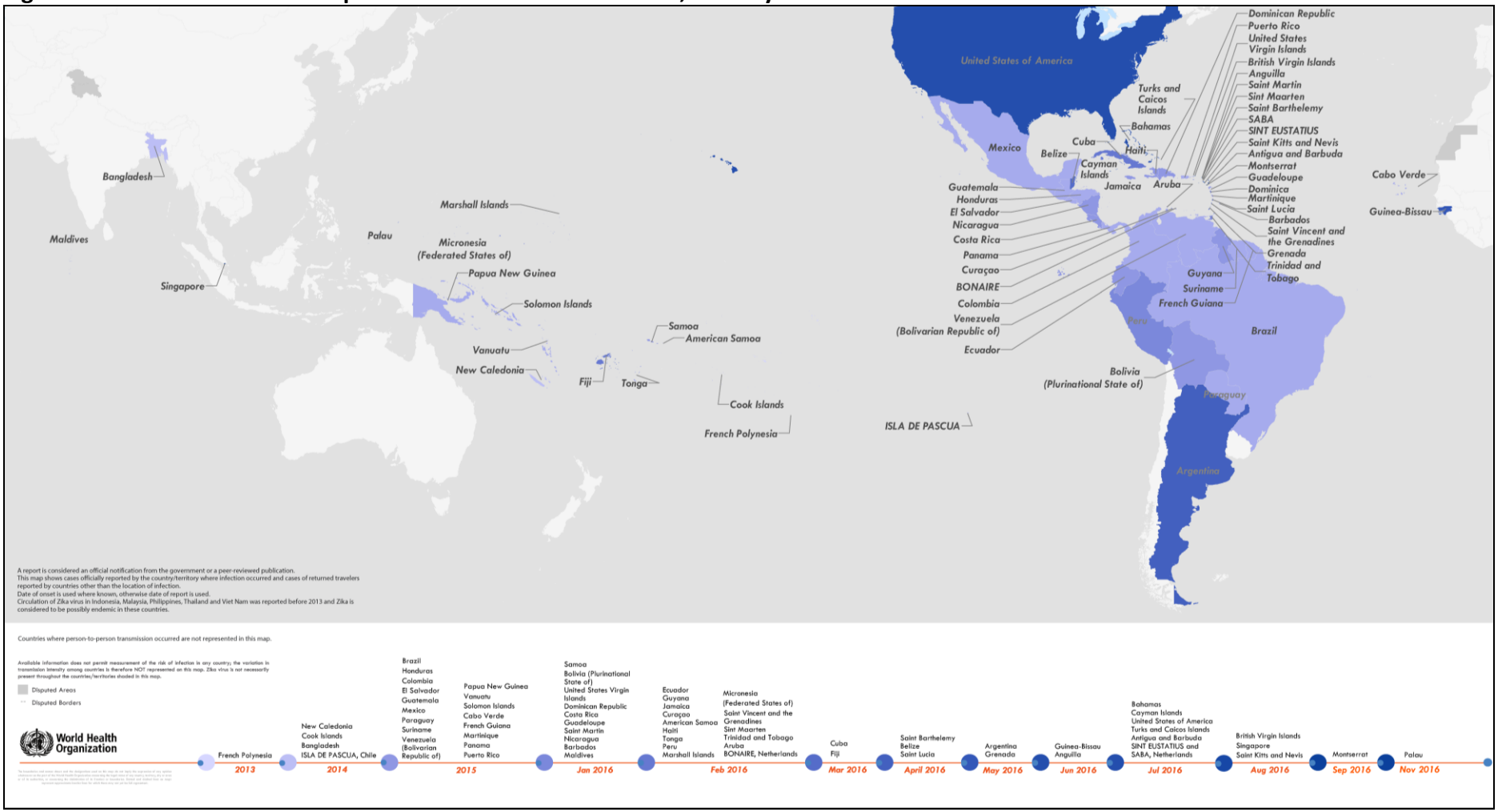
Reporting country or territory	Number of microcephaly and/or CNS malformation cases suggestive of congenital Zika virus infections or potentially associated with a Zika virus infection	Probable location of infection
Argenina	2	Argentina, Bolivia
Bolivia	9[2]	Bolivia
Brazil	2228[3]	Brazil
Cabo Verde	9	Cabo Verde
Canada	2	Undetermined
Colombia	67*[4]	Colombia
Costa Rica	2	Costa Rica
Dominican Republic	22[5]	Dominican Republic
El Salvador	4	El Salvador
French Guiana	14[6]	French Guiana
French Polynesia	8	French Polynesia
Grenada	1	Grenada
Guadeloupe	1	Guadeloupe
Guatemala	15[7]	Guatemala
Haiti	1	Haiti
Honduras	2	Honduras
Marshall Islands	1	Marshall Islands
Martinique	14[6]	Martinique
Nicaragua	2[8]	Nicaragua
Panama	5	Panama
Paraguay	2[9]	Paraguay
Puerto Rico	7[10]	Puerto Rico
Slovenia	1[11]	Brazil
Spain	2	Colombia, Venezuela (Bolivarian Republic of)
Suriname	2	Suriname
Thailand	2	Thailand
Trinidad and Tobago	1	Trinidad and Tobago
United States of America	37[12]	Undetermined**
Viet Nam	1	Viet Nam

**On 9 December a joint publication between the National Institute of Health of Colombia, the US-CDC National Center on Birth Defects and Developmental Disabilities and the Colombia Ministry of Health reported that between 31 January and 12 November 2016, a total of 147 microcephaly cases in fetus and infants had laboratory evidence of Zika virus infection by real-time reverse transcription–polymerase chain reaction (rRT-PCR) or immunohistochemistry.*[13]

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

[2] https://www.minsalud.gob.bo/1877-santa-cruz-medicos-del-pais-se-capacitan-en-el-manejo-de-enfermedades-producidas-por-el-zika
[3] http://portalsaude.saude.gov.br/images/pdf/2016/dezembro/08/Informe-Epidemiologico-n55_%20SE-48_2016-07dez2016.pdf
[4] http://www.ins.gov.co/boletin-epidemiologico/Boletn%20Epidemiolgico/2016%20Bolet%C3%ADn%20epidemiol%C3%B3gico%20semana%2048.pdf
[5] http://digepisalud.gob.do/documentos/?drawer=Boletines%20epidemiol%C3%B3gicos*Boletines%20semanales*2016
[6] http://invs.santepubliquefrance.fr/fr/Publications-et-outils/Points-epidemiologiques/Tous-les-numeros/Antilles-Guyane/2016/Situation-epidemiologique-du-virus-Zika-aux-Antilles-Guyane.-Point-au-6-octobre-2016
[7] http://www.mspas.gob.gt/index.php/en/mspas/noticias/1239-comunicado-ante-la-epidemia-del-virus-zika.html?tmpl=component&print=1&layout=default&page=
[8] https://www.el19digital.com/articulos/ver/titulo:49165-rosario-en-multinoticias-21-de-noviembre-2016
[9] http://www.mspbs.gov.py/v3/paraguay-reporta-sus-dos-primeros-casos-de-microcefalia-asociados-al-zika/
[10] http://www.salud.gov.pr/Estadisticas-Registros-y-Publicaciones/Informes%20Arbovirales/Reporte%20ArboV%20semana%2046-2016.pdf
[11] http://www.nejm.org/doi/pdf/10.1056/NEJMoa1600651
[12] http://www.cdc.gov/zika/geo/pregnancy-outcomes.html
[13] https://www.cdc.gov/mmwr/volumes/65/wr/mm6549e1.htm?s_cid=mm6549e1_w

Figure 2. New detection of mosquito-borne Zika virus infections, January 2013–December 2016



A report is considered an official notification from the government or a peer-reviewed publication. This map shows cases officially reported by the country/territory where infection occurred, and cases of returned travellers reported by countries other than the location of infection. Date of onset is used where known, otherwise date of report is used. Circulation of Zika virus in Indonesia, Malaysia, Philippines, Thailand and Viet Nam was reported before 2013, and Zika is considered to be possibly endemic in these countries. Countries where person-to-person 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 that have reported 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, Guadeloupe[14], Guatemala, Honduras, Jamaica, Martinique, Puerto Rico[15], Suriname**, Venezuela (Bolivarian Republic of)
No increase in GBS incidence reported, but at least one GBS case with confirmed Zika virus infection	Bolivia (Plurinational State of), Costa Rica, Grenada[16], Haiti, Mexico, Panama

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

***One case living in continental Netherlands was diagnosed in mid-January 2016 and reported by the Netherlands.*

[14] http://invs.santepubliquefrance.fr//Publications-et-outils/Points-epidemiologiques/Tous-les-numeros/Antilles-Guyane/2016/Situation-epidemiologique-du-virus-Zika-aux-Antilles-Guyane.-Point-au-15-septembre-2016

[15] http://www.salud.gov.pr/Estadisticas-Registros-y-Publicaciones/Informe%20Sndrome%20GillainBarr/Informe%20de%20Casos%20del%20S%C3%ADndrome%20de%20Guillain-Barr%C3%A9_7Oct2016.pdf

[16] 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