

Brazil Is Doing Its Part in the Global Fight Against Zika

Luiz Alberto Figueiredo Machado

The country has deployed 300,000 health agents to help eliminate mosquito breeding grounds, says **Brazil's** ambassador to the United States.

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On Monday February 1, the World Health Organization (WHO) declared the Zika virus, transmitted by the *Aedes aegypti* mosquito, an international public health emergency. The announcement follows the declaration by **Brazil** of a national public health emergency. An outbreak of the Zika virus was detected last year in **Brazil**. The virus has since been found in several countries in Latin America and, more recently, the United States. The main concern is over the virus's link to microcephaly, a congenital condition where a child is born with a smaller than normal head size and impaired brain development.

The WHO declaration will allow for better coordination of actions and mobilization of the necessary funding in a global effort aimed at preventing the spread of the virus, as well as speeding up the research to develop a vaccine and new therapeutic drugs. Despite the real public health risk, it is important to avoid misinformation. At this point, there is no reason to cancel business or pleasure trips, but extra precautions must be taken by pregnant women, who should talk to a doctor before travelling to the most affected areas.

The Zika is not a new Ebola, its symptoms being similar to a mild flu in adults. The Zika virus is of course a matter of concern, given association with microcephaly in newborn babies. More data and standardized protocols are needed before the link – first discovered by Brazilian doctors – between the virus and such cases of abnormally small heads and brain damage can be fully clarified.

Microcephaly in newborn babies can also be caused by a number of other diseases. Health experts are dealing with something new: the link between Zika and microcephaly is unprecedented in the scientific literature and requires in-depth studies and analyses – which are already underway – both to find out what is really happening and to determine the risk level for pregnant women.

The Brazilian Ministry of Health is currently investigating 3,670 suspected cases of microcephaly in the country. According to the latest information released on February 2, 404 diagnoses of microcephaly were confirmed, of which 17 were linked to the Zika virus. Another 709 suspected cases of microcephaly had their diagnosis discarded. This in no way diminishes the seriousness of the risk, nor does it weaken the resolve of the Brazilian government to take action.

From a Brazilian perspective, this fight is global, regional, and national. Globally, the WHO will be the main coordinator of efforts in this fight to control the virus worldwide. On the regional level, **Brazil** is also in permanent contact with the Pan American Health Organization (PAHO) and regional partners, such as the United States.

In a January 29 telephone conversation, Presidents **Dilma Rousseff** and Barack Obama discussed shared concerns about the spread of the Zika virus in the Western Hemisphere. The leaders agreed on collaborative efforts to deepen our knowledge, advance research, and accelerate action to develop vaccines and other technologies to control the virus. They also agreed to continue to prioritize building national, regional, and global capacity to combat infectious disease threats more broadly. The heads of state decided to create a high-level group to build on the successful partnership already in place between the National Institutes of Health (NIH) and the Butantan Institute, both of which are working together and testing a vaccine against dengue fever.

At the domestic level, the Brazilian Government is seriously addressing this issue as a matter of utmost importance, not only in view of the Olympics but also because of its potential long-term impact on the

Brazilian people. The federal government has launched a three-front National Plan to Combat the Aedes and Microcephaly: prevention and combat against the Aedes aegypti; health care and assistance to pregnant women and children; and research. All efforts are coordinated by the federal government in partnership with State and local governments.

In order to fight the vector of the infection, the mosquito, the Brazilian Government has deployed 220,000 troops and 300,000 health agents, who are visiting communities to educate the population and help eliminate all mosquito breeding grounds. Insecticides and larvicides, as well as repellents, are also being employed as traditional weapons that proved efficient in the past. The mobilization also involves the civil society, schools, NGOs and other public and private institutions in a broad-based alliance to raise public awareness about the infection and prevent the spread of the disease.

Apart from these more traditional strategies and the efforts to strengthen its healthcare network, **Brazil** is investing in technology and research to develop a vaccine and new therapies. A genetically modified mosquito, now under trial, could offer a new and promising weapon. Our national public health institutions are reaching out to their partners abroad to strengthen the research network and develop more efficient diagnostic kits, antiviral drugs and a Zika vaccine.

In **Brazil**, the Butantan, Chagas, Pasteur, and FioCruz Institutes operate as leading world-class institutions with vast experience in tropical diseases and a successful record in technological development. All the available expertise and manpower of these and other organizations is now directed towards this fight, in cooperation with international partners. The private sector, especially drug companies, is also investing in research into new and innovative ways to defeat the virus. This is an emergency, but **Brazil** and the world have the know-how and are able to muster the human and material resources to meet the challenge.

As **Brazil** prepares for the Olympics in August, authorities are working hard to rid the Rio de Janeiro region and the whole country of Aedis aegypti mosquitoes. Moreover, the Olympics will take place during winter in the Southern Hemisphere, a period of cooler temperatures, which usually contribute to a sharp decrease in mosquito-borne illnesses.

The Brazilian Government promptly notified PAHO and WHO about the Zika outbreak and is taking the measures that have proved effective in similar situations in the past. I am certain that this strategy will pay off.

While any reaction based on misinformation may disrupt our daily lives without helping to solve the problem, effective measures require scientifically consistent data, transparency, rational planning, and decisive action. The international community must unite in this global effort and draw the right lessons to improve the international framework for preventing and fighting epidemics and tropical diseases. **Brazil** will continue to do its part with resolve and determination.

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