

16144 Zika Outbreak Could Be an Omen of the Global Warming Threat

By JUSTIN GILLIS FEB., *New York Times*, Feb 18, 2016

The global public health emergency involving deformed babies emerged in 2015, the hottest year in the historical record, with an outbreak in Brazil of a disease transmitted by heat-loving mosquitoes. Can that be a coincidence?

Scientists say it will take them years to figure that out, and pointed to other factors that may have played a larger role in starting the crisis. But these same experts added that the Zika epidemic, as well as the related spread of a disease called dengue, should be interpreted as warnings.

Over the coming decades, global warming is likely to increase the range and speed the life cycle of the particular mosquitoes carrying these viruses, encouraging their spread deeper into temperate countries like the United States.

Recent research suggests that under a worst-case scenario, involving continued high global emissions coupled with fast population growth, the number of people exposed to the principal mosquito could more than double, to as many as 8 billion or 9 billion by late this century from roughly 4 billion today.

“As we get continued warming, it’s going to become more difficult to control mosquitoes,” said Andrew Monaghan, who is studying the interaction of climate and health at the National Center for Atmospheric Research in Boulder, Colo. “The warmer it is, the faster they can develop from egg to adult, and the faster they can incubate viruses.”

Already, climate change is suspected — though not proven — to have been a factor in a string of disease outbreaks afflicting both people and animals. These include the spread of malaria into the highlands of eastern Africa and the rising incidence of Lyme disease in North America.

In interviews, experts noted that no epidemic was ever the result of a single variable. Instead, epidemics always involve interactions among genes, ecology, climate and human behavior, presenting profound difficulties for scientists trying to tease apart the contributing factors.

Cities in the tropics, the climate zone most favorable to the mosquito, have undergone explosive growth: Humanity passed a milestone a few years ago when more than half the population had moved to urban areas. But spending on health care and on basic public health infrastructure, like water pipes and sewers, has not kept pace. Mosquito control has also faltered in recent decades.

Several experts see the changing climate as just another stress on top of a situation that was already rife with peril.

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