

Warmer climate could lower dengue risk

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One of the mosquitoes that carries dengue and Zika viruses. Credit: Oregon State University on Flickr.

Health researchers predict that the transmission of dengue could decrease in a future warmer climate, countering previous projections that climate change would cause the potentially lethal virus to spread more easily.

Hundreds of millions of people are infected with dengue each year, with

some children dying in severe cases, and this research helps to address this significant global health problem.

Co-lead researcher Associate Professor David Harley from The Australian National University (ANU) said that dengue risk might decrease in the wet tropics of northeast Australia under a high-emissions scenario in 2050, due to mosquito breeding sites becoming drier and less favourable to their survival.

"While [climate change](#) generally poses a major threat to humanity, it also may reduce the incidence of dengue in some areas," said Dr Harley, an epidemiology researcher at the ANU Research School of Population Health.

The findings are also relevant to other mosquito-borne viruses including Zika because the mosquitoes that carry dengue also transmit the Zika virus.

"There is significant concern in countries on the margin of the tropical areas where dengue is mainly found, that with global warming dengue and other mosquito-borne viruses such as Zika will encroach and become common," Dr Harley said.

"Previous projections have suggested that climate change will increase transmission of mosquito-borne diseases globally.

"Our work, using a mathematical model based on Queensland conditions, suggests that [dengue transmission](#) might decrease with greater warming."

Dr Harley said the research findings did not suggest authorities could be complacent about climate change's effect on people's health.

"Generally, health and other impacts of climate warming will be negative in Australia and elsewhere in the world," he said.

"While we could see some reduction in [dengue](#) in Far North Queensland in a future warmer climate, the disease is widespread elsewhere in the world where outcomes would be different."

More information: C. R. Williams et al, Projections of increased and decreased dengue incidence under climate change, *Epidemiology and Infection* (2016). [DOI: 10.1017/S095026881600162X](https://doi.org/10.1017/S095026881600162X)

Provided by Australian National University

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