National Institute of Environmental Health Sciences

Mosquito-borne disease and climate change in Australia: Time for a reality check

Author(s): Russell RC
Year: 2009
Journal: Australian Journal of Entomology. 48: 7-Jan

Abstract:

Will warming climate increase the risk or prevalence of mosquito-borne disease in Australia, as has been projected in a number of scientific publications and governmental reports? Unfortunately, most of these 'predictions' do not adequately consider the current and historical distribution of the vectors and diseases, their local ecology and epidemiology and the impact of societal features and the capacity for public health interventions in Australia. Overall, a strong case can be made that we are unlikely to see significant changes in the distribution of transmission of the exotic pathogens causing malaria and dengue, and while activity of endemic arboviruses such as Murray Valley encephalitis and Ross River viruses may possibly increase in some areas, it is likely to decrease in others. The ecologies of mosquito-borne diseases can be complex and difficult to predict, and any evaluation of potential effects of changes in climate will need a detailed examination of site-specific vector, host and other factors likely to influence the outcomes on human health. Of itself, climate change as currently projected, is not likely to provide great cause for public health concern with mosquito-borne disease in Australia.

Source: http://dx.doi.org/10.1111/j.1440-6055.2008.00677.x

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Australasia

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: General Mosquito-borne Disease

Model/Methodology:

type of model used or methodology development is a focus of resource

Methodology

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified