

**Vector-Borne Diseases: Impact of Climate Change on Vectors and Rodent Reservoirs**  
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## **Epidemiology of vector-borne diseases in Germany**

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Surveillance of notifiable infectious diseases in Germany covers locally-endemic infections as well as imported infections. Tick-borne encephalitis (TBE) and lyme borreliosis are the major tick-borne infections endemic to Germany. The incidence of both infections has increased since 2001. Apart from environmental and climatic factors influencing vector and reservoir populations and human exposure (eg, outdoor activities), factors such as immunisation coverage (TBE) and raised diagnostic awareness may also contribute to these trends in the surveillance data. Notifiable imported mosquito-borne infections include malaria, dengue virus, and other viruses which may cause haemorrhagic fever. Under the current entomologic and climatic situation in Germany the risk of autochthonous transmission of pathogens imported from tropical countries is negligible. However, the recent chikungunya virus outbreak in Northern Italy demonstrates that distinct pathogens may also emerge in other European countries under certain conditions. In addition to routine surveillance, epidemiological and entomological studies are needed in order to monitor the geographical spread of endemic pathogens and the distribution of relevant vectors in Germany, and to enable early detection of any new vector-borne pathogens and/or their vectors.

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