

**Vector-Borne Diseases: Impact of Climate Change on Vectors and Rodent Reservoirs**  
Berlin, 27 & 28 September 2007

## **Influence of climatic change on mosquito development and mosquito-borne diseases in Europe**

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In Europe mosquitoes have a strong impact on life quality of humans, tourism and economic development and can also threaten by transmitting mosquito born diseases. In this paper the consequences of climatic change on the development of mosquitoes and their control as well on emerging diseases are discussed. The comparison of temperature development in three time periods as 1952-1966, 1967 to 1981, 1982-2006 in Central Europe and West-Africa will serve as basis for the changing scenario related to population dynamics, abundance and phenology of mosquitoes. Furthermore, the risk for mosquito borne diseases such as West-Nile-Fever will be discussed based on the adaptation capacity of *Aedes albopictus* to climatic change. *Aedes albopictus* has been spreading world-wide since decades due to its high adaptation capacity to various climatic conditions it has been spreading world wide since decades. The mosquito invaded Italy in 1990 and a rapid spreading in most parts of southern Europe seems only a question of time. Also an immigration of the species further north is possible when we consider the changing climatic conditions during the last decades. Potential invasion places for *Ae. albopictus* have been investigated such as plant markets which offer lucky bamboo, stock piles of imported scrap tires, cargo harbour, railway stations and service areas along tourist routes and cargo traffic from countries where *Ae. albopictus* occurs. The vector capacity of anophelines in Central Europe for the transmission of *Plasmodium falciparum* causing Malaria tropica will be highlighted.

**Keywords:** Climatic change, mosquito development, mosquito-borne diseases in Europe, West-Nile-Virus.

