

# Climate and Vector Borne Pathogens: Challenges of the Present and of the Future

## Call for Papers

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Despite being a complex phenomenon, climate change influences the emergence risk of infectious diseases, including vector-borne diseases, through multiple pathways. Changes in temperature, precipitation, the number of annual hurricanes, the sea level, etc. may impact the habitat distribution and suitability for vector-borne diseases foci. The mentioned fluctuations could interfere with the life-cycle dynamics of the vector species (mosquitoes, ticks, etc.), the pathogenic organisms, and the reservoir organisms, thereby increasing the risks of exposure to disease in some areas.

Changes in climate may affect the survival and reproduction rates of the vectors that may lead towards altered transmission patterns of pathogens in existing foci, different geographical distribution, and incidence of diseases. Some diseases may, therefore, disappear from areas where they currently exist or their seasonal intensity and temporal activity may be disrupted. Furthermore, they may be the reason for the introduction of new vectors, hosts, or pathogens causing some diseases to spread to areas where they are currently absent.

In general, it is anticipated that human activities may lead to the interruption of natural enzootic foci of vector-borne infection and as a result will strongly influence disease transmission, causing, for example, the appearance of human cases in previously disease-free areas.

The current special Issue will try to cover most of the above described factors that may, one way or another, directly or indirectly cause a turn in the distribution of vector-borne diseases. Original research studies or review papers describing the state of the art are welcome.

Potential topics include but are not limited to the following:

- Vector-borne diseases (epidemic typhus, Chagas disease, plague, Leishmaniasis, river blindness, malaria, dengue, yellow fever, Japanese encephalitis, West Nile encephalitis, filariasis, African sleeping sickness, scrub typhus, Lyme disease, Tick-borne encephalitis, Rocky Mountain Spotted Fever, rickettsiaceae, *coxiella burnetii*, etc.)
- Vectors (lice, kissing bugs, fleas, sand flies, black flies, mosquitoes, tsetse flies, chiggers, ticks, etc.)
- Transmission dynamics, for example the process between human, vector, and/or animal populations

- Climate prediction models that consider climatic parameters, human intervention, animal species, etc., as potential parameters influencing the tendency of a pathogen distribution
- Reservoirs of vector-borne diseases
- Potential impact of climate change on emerging vector-borne pathogens
- Surveillance measures that strengthen public health infrastructure to improve recognition and response

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/cjidmm/cvbpf/>.

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Papers are published upon acceptance, regardless of the Special Issue publication date.

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