Introduction

Global climate change is resulting in rising temperatures. As temperatures become warmer and more humid, vector borne and water borne diseases that thrive in those conditions, such as Zika Virus, Malaria, Lyme Disease, and Red Tide, may become more prevalent and Humans may be exposed to more of the vectors and the disease they carry. This poses a threat to public health.

Zika Virus

Zika is a mosquito carried virus, and mosquitoes are known to thrive in warm, humid environments. Increasing global temperatures is a sign that the population of mosquitoes carrying Zika could increase. Mosquito populations would potentially be spread further due to the growing temperatures caused by climate change.

Malaria

The virus is transmitted through mosquitoes, and the rise of global temperatures will result in increased spreads of the disease. Studies have been produced in areas of the world that have high rates of malaria among the population; the results showed that places that experience no or varying rates of infections (depending on the amount of rainfall present) increase as the global temperature rises.

Lyme Disease

Lyme disease occurrence is highly seasonal, and cases are mainly reported in the months of June, July, and August. Climate models project a temperature and rainfall increase over the Northeastern U.S. where most Lyme disease cases occur, and suggests that climate change will make environmental conditions suitable for earlier annual onset of Lyme disease cases. Earlier onset of the Lyme disease season was positively associated with warmer and more humid conditions. It is possible that climate change may affect the annual onset of Lyme disease in future decades.

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Red Tide

Changes in specific weather patterns including weather related to the ocean (ex: El Ninos and North Atlantic Oscillation) due to climate change affect the way that plankton and algae grow. This causes shifts and possible problems with events like red tides. In a red tide, a specific type of harmful algae blooms to a great degree, causing the death and illness of sea creatures such as manatees. It also has been known to cause illness in humans living in the area. Shifts in climate are making red tides more likely to happen and make human and sea life sick.

Conclusion

Temperature increase due to climate change is one of the main reasons for the increase of populations of vectors (ex: mosquitoes and ticks) which carry disease. Warmer and more humid temperatures, as well as the increased populations of these vectors, will expose humans to a higher risk of catching a vector borne communicable disease.

Bibliography: