



Impact of climate variability on randomness of cholera

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Cholera is perhaps one of the oldest and deadly water-borne disease that affects nearly 3-5 million human population each year around the globe. Its existence was first documented in the Indian subcontinent around 5th century BC and seven cholera pandemics have been recorded worldwide since the 18th century. This spatiotemporal movement had brought cholera on the radar of global concern, which led into the causal and susceptibility research, leaving a research vacuum in the field of vibrio movement. One of the two current dominant thought on the spread of cholera suggests the presence of vibrios in the environment (water body) and under conducive conditions, these vibrios interact with the human population that leads to the trigger of the disease. This suggestive theory brought all identified and non-identified locations under the scrutiny of water quality in terms of these pathogens. We have analyzed thousands of vibrios reported in several databases in last five decades and have constructed an innovative space-time evolution of these bacteria around the globe. In this study, we will provide an environmental niche model to determine the spatiotemporal movement of these vibrios that will shed insights on the randomness of the vibrios in the world.