CLIMATE CHANGE MAY INCREASE RISK OF NEW INFECTIONS

Relevant for: Environment | Topic: Environmental Degradation - GHGs, Ozone Depletion and Climate Change

Over 3,000 mammal species might migrate and share viruses for next 50 years, if the world warms by 2°C. | Photo Credit: Getty Images

Climate change will result in thousands of new viruses spread among animal species by 2070 and that is likely to increase the risk of emerging infectious diseases jumping from animals to humans, according to a new study.

This is especially true for Africa and Asia, continents that have been hotspots for deadly disease spread from humans to animals or vice versa over the last several decades, including the flu, HIV, ebola and COVID-19.

Researchers, who published their findings on April 28 in the journal *Nature*, used a model to examine how over 3,000 mammal species might migrate and share viruses over the next 50 years if the world warms by 2°C, which recent research shows is possible.

They found that cross-species virus spread will happen over 4,000 times among mammals alone. Birds and marine animals were not included in this study.

Researchers said that not all viruses will spread to humans or become pandemic like the scale of the coronavirus but the number of cross-species viruses increases the risk of spread to humans. The study highlights two global crises, climate change and infectious disease spread.

Previous research has looked at how deforestation, extinction and wildlife trade lead to animalhuman disease spread, but there is less research about how climate change could influence this type of disease transmission., the researchers said at a media briefing on Wednesday.

"We don't talk about climate a lot in the context of zoonosis — diseases that can spread from animals to people," said study co-author Colin Carlson, an assistant professor of biology at Georgetown University. "Our study brings together the two most pressing global crises we have," he said.

Daniel R. Brooks, a biologist at University of Nebraska State Museum and co-author of the book *The Stockholm Paradigm: Climate Change and Emerging Disease*, said the study acknowledges the threat posed by climate change in terms of increasing risk of infectious diseases.

"This particular contribution is an extremely conservative estimate for potential emerging infectious disease spread caused by climate change," said Brooks.

Aaron Bernstein, a pediatrician and interim director of The Centre for Climate, Health, and the Global Environment at Harvard T.H. Chan School of Public Health, said the study confirms long-held suspicions about the impact of global warming on infectious disease emergence.

"The study indicates that these encounters may already be happening with greater frequency and in places near where many people live," Bernstein said.

Study co-author Gregory Albery, a disease ecologist at Georgetown University, said that

because climate-driven infectious disease emergence is already happening, the world should be doing more to learn about and prepare for it.

Jaron Browne, organising director of the climate justice group Grassroots Global Justice Alliance, said the study highlights climate injustices experienced by people living in African and Asian nations.

"African and Asian nations face the greatest threat of increased virus exposure, once again illustrating how those on the frontline of the crisis have very often done the least to create climate change," Browne said.

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