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Global Warming Linked With Increased Violence Worldwide

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Israeli Soldier and Tanks

A look back at the last 12,000 years of human history reveals even small spikes in temperature and precipitation can yield major surges in violence and social upheaval -- a troubling discovery when the world is projected to warm by an average of 2 degrees Celsius (3.6 degrees Fahrenheit) by 2050.

The **study**, published in the journal *Science*, was led by researchers from Princeton University and The University of California, Berkeley, who analyzed 60 studies from a number of disciplines exploring the connection between weather and violence throughout the world as far back as 10,000 BC and continuing on to present day.

In doing so, they found that while climate is not the sole or primary cause of violence, it clearly exacerbates existing social and interpersonal tension in all societies, regardless of wealth or stability.

Put into numeric form, they determined that one standard-deviation shift (the amount of change from the local norm) in heat or rainfall boosted the risk of a riot, civil war or ethnic conflict by an average of 14 percent.

Furthermore, they found a 4 percent chance of a similarly sized upward creep in heat or rain sparking person-on-person violence such as rape, murder and assault.

Leading the study was Solomon Hsiang, who conducted the work as a postdoctoral research associate in the Program in Science, Technology and Environmental Policy in Princeton's Woodrow Wilson School of Public and International Affairs.

By calculating that the world as a whole will likely face an average of 2 to 4 standard-deviation shifts in global climate conditions by mid-century, Hsiang argues he and his colleagues have produced a system policymakers and researchers alike can rely on to estimate correlations between climate change and violence.

"We think that by collecting all the research together now, we're pretty clearly establishing that there is a causal relationship between the climate and human conflict," Hsiang said in a press release. "People have been skeptical up to now of an individual study here or there. But considering the body of work together, we can now show that these patterns are extremely general. It's more of the rule than the exception."

Going forward, Hsiang says future studies should focus on why these two are linked. Then, with this key of information in place, "we can think about designing effective policies or institutions to manage or interrupt the link between climate and conflict."