

Sampling bias might be distorting view of upheaval due to global warming

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A small team of researchers from The University of Melbourne, the Georg Eckert Institute and Freie Universität has found problems with research related to assessing the propensity for war amid environmental changes due to global warming. In their paper published in the journal *Nature Climate Change*, the group argues that much of current research on the topic suffers from several bias flaws. Cullen Hendrix with the University of Denver outlines the arguments by the research team in the

same journal issue and suggests future research efforts will have to be refocused if they are to be useful in predicting future conflicts based on global warming projections.

As the planet heats up, some areas are going to become hotter and drier, and if that leads to a reduction in resources available to the people living in those areas, the result is likely to be bloodshed. Some people inside and out of the science community have even gone so far as to suggest that we have already seen examples—famine and war in Darfur, or on a larger scale, the ongoing Syrian civil war. But, the researchers with this effort point out, making predictions regarding future conflicts must be based on unbiased research efforts, something that has not been done very well so far.

The team combed through over 100 papers published from 1990 to 2017 meant to offer insights into the link between [global warming](#) and warfare and report finding substantial bias. They found, for example, that much of the research was focused on headline-making conflicts rather than small-scale affairs. They also noted that most of the conflicts occurred in areas where people spoke English, making it easier for the researchers, but leaving out many areas that likely should have studied but did not. They also found that many of the studies focused on areas that were already experiencing [conflict](#), such as Syria and Sudan. But, perhaps most strikingly, they found that areas of study were often not even those that have been deemed more likely to be geographically impacted by a [warming](#) planet.

They conclude by suggesting biased research in such a context could lead to "reproduction of colonial stereotypes"—a reference to English-speaking countries that were once part of the British empire.

More information: Courtland Adams et al. Sampling bias in climate–conflict research, *Nature Climate Change* (2018). [DOI:](#)

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Abstract

Critics have argued that the evidence of an association between climate change and conflict is flawed because the research relies on a dependent variable sampling strategy. Similarly, it has been hypothesized that convenience of access biases the sample of cases studied (the 'streetlight effect'). This also gives rise to claims that the climate–conflict literature stigmatizes some places as being more 'naturally' violent. Yet there has been no proof of such sampling patterns. Here we test whether climate–conflict research is based on such a biased sample through a systematic review of the literature. We demonstrate that research on climate change and violent conflict suffers from a streetlight effect. Further, studies which focus on a small number of cases in particular are strongly informed by cases where there has been conflict, do not sample on the independent variables (climate impact or risk), and hence tend to find some association between these two variables. These biases mean that research on climate change and conflict primarily focuses on a few accessible regions, overstates the links between both phenomena and cannot explain peaceful outcomes from climate change. This could result in maladaptive responses in those places that are stigmatized as being inherently more prone to climate-induced violence.

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