What Is The Relationship Between Climate Change And Armed Conflicts?

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Picture: Guard Duty. Image credit: Rod Waddington via Flickr, CC BY-SA 2.0.

Does global warming increase number of armed conflicts? This question has been hotly debated over the last several years. This research area was sparked by American economist Edward Miguel and his colleagues ten years ago, when they reported that rainfall deviations can reduce economic growth and consequently increase the likelihood of violent clashes.

John O'Loughlin working at the University Colorado Boulder and his colleagues have investigated how changing climate has affected outbreaks of violence in Sub-Saharan Africa since the 80's. "Higher temperature deviations from long-term means do not contribute much to our understanding of elevated conflict risk across space and time compared with some socioeconomic and political considerations," the authors of the study say.

Many recent studies highlight that rising temperature creates dangerous areas in various vulnerable regions. However, exact causal mechanisms are usually not discussed. However, it is not difficult to imagine how global warming can indirectly increase risk of armed collisions among various interest groups. For instance, it can have negative influence on supply of basic resources, such as water or agricultural production. This in turn can create competition, which leads to violent conflicts. American researchers explored whether violence in Sub Saharan Africa is linked to growing temperature.

"Using a large database of conflict events and detailed climatological data covering the period 1980–2012, we apply a multilevel modeling technique that allows for a more nuanced understanding of a climate–conflict link than has been seen heretofore," they say.

On the one hand, scholars confirmed that significant relationship between climate change and number of armed combats can be observed. On the other hand, results of this study suggest that this association should not be exaggerated. Socioeconomic and political factors contribute more to our understanding than climatic ones. It is also possible that these results are not generalizable to other world regions.

"Compared with other world regions, Sub-Saharan Africa has low standards of living, poor governance, and enduring legacies of severe large-scale violence. Generalizing from our work (which examines a vulnerable region) to more stable regions may reveal even weaker climate variability effects, as was already noted in Asia," the scientists emphasize.

Article: Loughlin J.O., Linke A. M., and and F. D. W. Witmer, 2014, Effects of temperature and precipitation variability on the risk of violence in sub-Saharan Africa, 1980–2012, 16712–16717, Proceedings of the National Academy of Sciences of United States of America, source link.