

# Climate change linked to increase in violence, war

Hotter temperatures could lead to more violence, researchers suggest

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The world is likely to become a more violent place as temperatures continue to rise as a result of climate change, a new study suggests.

Published in *Science*, the study links elevated temperatures and changes in rainfall to the rise of personal assaults and group conflicts such as civil war.

Three researchers from the University of California Berkeley — Solomon Hsiang, Marshall Burke and Edward Miguel — looked at 60 studies from around the world, spanning hundreds of years, detailing the collapse of major empires, wars and instances of interpersonal violence.

They found where there are warmer temperatures there is an increased likelihood for violent behaviour.

"We find strong causal evidence linking climatic events to human conflict ... across all major regions of the world," researchers said.

Hsiang also noted the collapse of the Mayan civilization occurred during periods of severe drought more than 1,200 years ago.

## What does that mean for the future?

The researchers estimate that across the globe temperatures are likely to increase by about 2 C over the next 50 years.

So, in accordance with those current projected climate change trends — if they are not somehow mitigated — they concluded that instances of civil unrest could potentially increase by about 56 per cent by 2050.

"When the weather gets bad, we tend to be more willing to hurt other people," said Hsiang, economist and lead author of the study.

According to the study, instances of Interpersonal violence — such as assault, abuse, rape and murder — were also likely to increase by about 16 per cent.

In war-torn parts of equatorial Africa, it says, every added temperature value of about almost 1 C or so increases the chance of conflict between groups — rebellion, war, civil unrest — by 11 per cent to 14 per cent. For the United States, the formula says that for every increase of about 3 C, the likelihood of violent crime goes up two to four per cent.

Temperatures in much of North America and Eurasia are likely to go up by that 3 C by about 2065 because of increases in carbon dioxide pollution, according to a separate paper published in *Science* on Thursday.

## Other factors

Some criticism facing the study is that it does not make clear exactly under what conditions the heat contributes to an increase in violence.

"The world will be a very violent place by mid-century if climate change continues as projected," said Thomas Homer-Dixon, a professor of diplomacy at the Balsillie School of International Affairs in Ontario.

But Joshua Goldstein, a professor of international relations at American University and author of *Winning the War on War*, found faults with the way the study measured conflicts. He said the idea of hotter tempers with hotter temperatures is only one factor in conflict, and that it runs counter to a long and large trend to less violence.

"Because of positive changes in technology, economics, politics and health" conflict is likely to continue to drop, although maybe not as much as it would without climate change, Goldstein said. The researchers said that as of now they can only speculate, but are trying to understand the relationship between heat and aggression.

*With files from The Associated Press*