

Climate change linked to conflict in societies

By Steve Connor

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A warmer world with more droughts and other climate-related disasters is likely to lead to a substantial increase in violent conflict between both individuals and entire societies, a major study has found.

A review of 61 detailed accounts of violence has concluded that personal disputes and wider civil conflicts increase significantly with large changes to weather patterns, such as increases in temperature and lack of rain, scientists said.

Even rather moderate shifts away from the norm result in marked increases in violence, according to the study, which concluded that the predicted 2C rise in average global temperatures this century could lead to a 50 per cent increase in major violent conflicts such as civil wars.

The researchers suggest that changes to the climate, and in particular increasing temperatures, are likely to lead to more frequent conflicts over increasingly sparse natural resources, in addition to the physiological stress on individuals caused by hotter weather.

"We want to be careful here. We are not saying that it is inevitable that future warming will mean more conflict. We are saying that past variation in climate – and in particular, past increases in temperature – are associated with more personal and group conflict," said Marshall Burke of the University of California, Berkeley.

"It is definitely possible that future societies will be better at dealing with extreme temperatures than we are today, but we think that it is dangerous to just assume this will be the case," said Burke, co-author of the study in the journal *Science*.

The research was based on a search of the academic literature for historical accounts of violent conflict, from personal violence such as murder and assaults to wider conflicts such as riots, ethnic tensions, civil war and even major collapses of civilisations going back thousands of years. Conflict between groups rather than between individuals showed the strongest link to changes in climate, the scientists said, with temperature rises being the most common risk factor – all of the 27 studies of modern societies, for instance, showed a link between hotter weather and greater violence.

"Our results hint at a couple of factors that might link climate to conflict," Burke said.

"The first is economic scarcity. Years of high temperature and extreme rainfall cause a deterioration in economic conditions, particularly in poor countries, and if things get really bad, people who lack other



The impact of climate change is likely include more conflict. Photo / APN

options might decide to take up arms.

"This seems to be a primary channel linking climate and group conflict in many agrarian societies," he added.

"At the same time, exposure to really hot temperatures also appears to cause a physiological response in how humans deal with each other: people become less trusting, more aggressive and more violent.

"It's likely that both of these mechanisms are at work, and we hope that future research will help uncover which mechanism is active in which setting."

Solomon Hsiang of Princeton University, another co-author of the study, said the link between climate change and violent conflict was clear but as yet there was no clear explanation, a little like the link in the 1950s between lung cancer and smoking, which could only be explained many years later.

– Independent

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