As the world gets warmer, people's tempers are likely to get hotter, scientists say.

A massive new study finds that aggressive acts like committing violent crimes and waging war become more likely with each added degree.

Researchers analyzed 60 studies on historic empire collapses, recent wars, violent crime rates in the United States and lab simulations that tested police decisions on when to shoot. They found something in common over centuries: Extreme weather - very hot or dry - means more violence.

"When the weather gets bad, we tend to be more willing to hurt other people," said economist Solomon Hsiang of the University of California, Berkeley.

He is the lead author of the study, published online Thursday by the journal Science.

The team of economists even came up with a formula that predicts how much the risk of different types of violence should increase with extreme weather. In war-torn parts of equatorial Africa, it says, every added degree Celsius or so increases the chance of conflict between groups by 11 per cent to 14 per cent.

For the United States, the formula says that for every increase of 3 C, the likelihood of violent crime goes up two per cent to four per cent.

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

When the Intergovernmental Panel on Climate Change updates its report next year on the impacts of global warming, it will address the issue of impacts on war for the first time, said Carnegie Institution scientist Chris Field, who heads that worldwide study group.

In one study, police officers in a psychology experiment were more likely to choose to shoot someone in a lab simulation when the room temperature was hotter, Hsiang said.