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Studying climate change's effect on violence



SIUE photo

Ideas at work

Dennis Mares, associate professor of sociology and criminal justice studies, and Ken Moffett, associate professor of political science, in SIUE's College of Arts and Sciences.

Posted: Friday, December 11, 2015 12:05 pm

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In this week's segment of Segue, SIUE's College of Arts and Sciences (CAS) Dean Gregory Budzban, PhD, hosts Ken Moffett, PhD, associate professor in the Department of Political Science, and Dennis Mares, PhD, associate professor in the Department of Sociology and Criminal Justice Studies.

They primarily discuss a recently published paper authored by Mares and Moffett, titled "Climate Change and Interpersonal Violence: a "Global" Estimate and Regional Inequities." The findings of this research were published in *Climatic Change*, a leading journal in this area. Mares and Moffett's research examines the effects of climate change on human behaviors, especially interpersonal violence. Their study examines the impact of rising temperatures on worldwide homicide rates.

Mares explains the two theoretical models that underlie the rationale of their current study: Routine Activities Theory and General Effective Aggression Model. The former theory (RAT) suggests that as climate change increases pleasant weather, people tend to be out-and-about more frequently, thus subjecting themselves to higher risks of victimization. The latter theory (GAAM) indicates that violence may increase as people become increasingly agitated from rising global temperatures.

To consider other known predictors of homicide rates, the researchers, include economic, social, and political indicators such as unemployment rates and war casualties. They investigate their findings using a dataset that consists of 57 countries across 17 years.

They find that homicide rates increase in those countries as temperatures rise. Each one degree Fahrenheit increases corresponds to an average 3 percent uptick in homicide levels. Mares and Moffett, however, also note that a great regional diversity exists in the impact of climate change, with no influence in former Soviet states, but a much stronger impact in Africa, North America, and Australia.

Mares and Moffett's study is the only one that includes such a broad dataset. Budzban is fascinated by the depth of cross-sectional, time series data which the pair analyzed. With it, Budzban believes that the work of these researchers will create a different kind of conversation in the realms of both interpersonal violence and global climate control.

Budzban notes the strength of the data that have been collected, as well the topic's general importance to current events. "In terms of what's going on around the world and with the Paris Climate Change Conference, I foresee this study becoming even more relevant," he said. "As a global issue and its effect on every part of the world, arguably, there's not a more important issue right now than climate change," shares Budzban. "However, getting a global consensus on how to address the issue is complex. "It has been about things like rising sea levels, but if people see that there's more to it – there's effects of climate change that are less visible, and that it's something that's going to affect people on a day-to-day basis."

Mares hopes this is one of the biggest takeaways of their research - the impact that climate change has across the globe and the need for leadership from industrial powers to reduce pollution levels and the carbon footprint as a whole.

"This is not just an issue of violence. It affects levels of health, the spread of disease and agricultural outputs," Mares says.

Mares explained the next step for their research. "We are thinking about expanding the data and seeing if we can get more years and countries in there, but also looking at different types of deaths. There's multiple ways we can go about this. One is disaggregating the actual homicide data and looking at the specific types of homicides and how those are impacted." The authors indicate that they may even expand beyond homicides and examine other preventable deaths, like suicides and motor vehicle deaths, since prior studies have found similarities across these types of incidents.

Tune in to WSIE 88.7 FM every Sunday at 9 a.m. as weekly guests discuss issues on SIUE's campus.

By Logan Cameron, SIUE Marketing & Communications