Political views have limited impact on how we perceive climate anomalies, study finds

October 30 2017

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Individual perceptions of climate anomalies are largely immune to political bias, especially when people observe large and persistent departures from average conditions.

That is the finding of a new study by researchers at the University of Oklahoma and Oklahoma State University, published today in the journal *Environmental Research Letters*. The study was supported by a National Science Foundation EPSCoR Grant (OIA-1301789).

Human contributions to climate change alter ecosystems, and, consequently, the ecosystem services that sustain human life (e.g., food and water production). To preserve these services or develop viable alternatives, humans must recognise feedback - signals of climate change and ecosystem decline - from natural systems.

While in some instances this feedback is easy to see - changes in marine life after a water pollution event, for example - in other instances it can be subtle, variable and subject to distortions, which can include political motivation or bias.

To explore this, the researchers examined how people in Oklahoma - a conservative state where a large fraction of the population is sceptical about human-caused climate change - perceived climate anomalies such as extremes of temperature or rainfall.

Lead author Dr. Joseph Ripberger said: "We matched high-resolution data on climate conditions from the Oklahoma Mesonet to the Meso-Scale Integrated Socio-geographic Network (M-SISNet), an address-based panel survey that continuously measures public perceptions of climatic conditions over time."

"We found that, apart from slight biases at the extreme ends of the political spectrum, people in Oklahoma - a state where the concept of 'global warming' traditionally gets quite a chilly reception - readily perceived feedback from the climate system."

"We saw individuals drawing on objective signals, such as departures

from average rainfall and temperatures, when they revised their perceptions of climate feedback. As you would expect, this revision was at its most pronounced when the signals were large and consistent."

The study's results could be heartening news for those hoping to build cross-party consensus on climate change policy.

Co-author Dr. Hank Jenkins-Smith said: "While more work is needed to understand how this kind of updating affects broader beliefs about climate change and public policy, analysis of dynamic data on human perceptions allows us identify similarities across the partisan spectrum.

"These similarities bode well for efforts to promote mitigation, adaptation, and resilience, as human systems continue to interact with a changing climate."

More information: 'Bayesian versus politically motivated reasoning in human perception of climate anomalies' *Environmental Research Letters* (2017). DOI: 10.1088/1748-9326/aa8cfc

Provided by Institute of Physics