Teachable moments about climate change

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First-hand experience of extreme weather often makes people change their minds about the realities of climate change. That's because people are simply more aware of an extreme weather event the closer they are to its core, and the more intense the incidence is. So says Peter Howe of Utah State University in the US, who led a study in Springer's journal *Climatic Change Letters* about people's ability to accurately recall living through extreme weather events. It also focused on how people's proximity to such events – the so-called "shadow of experience" – aids their awareness of climatic episodes.

Howe's team mapped data on people's extreme weather perceptions from a national survey of 1,008 US adults conducted by the Yale Project on Climate Change Communication and George Mason Center for Climate Change Communication. The data were then overlaid on other maps of actual recorded events such as droughts, hurricanes and tornadoes.

They found that the public tends to accurately recall and report on extreme weather conditions. This is particularly true for hurricanes and tornadoes that cause large-scale destruction and personal suffering as well as events that attract media coverage. Drought, on the other hand, is much more difficult to perceive because it happens slowly over a longer period of time. It also generally affects a larger area of land. Actually, most people only believe that they have experienced a drought after 25 weeks of persistently dry conditions.

The closer people were to a weather event, the more intense and destructive it was and the longer it lasted, the better are the chances that

people will note it. Howe says the proximity effect may be explained by an increased likelihood of personally suffering harm or property damage as one approaches the site of the event, as well as environmental cues (such as dark clouds or high winds) and social cues (such as tornado sirens or warnings).

"The shadow of experience – or the area within which people are more likely to report that they have experienced extreme events – increases as the magnitude of an event increases," explains Howe. "Indirect damage through disruption of services, utilities, businesses, social networks, and local economies are one likely cause for the tendency of people to report personally experiencing events even if they live many kilometers away and did not suffer direct personal damage."

Howe and his team believe that maps showing the shadows of experience of extreme weather could be used to focus disaster preparedness and climate education efforts after an event. They advise weathercasters to provide more climate change context when extreme weather events happen, and to educate their viewers about the climatic reasons behind them. In the case of droughts, the public should be helped to recognize the phenomenon as it is happening and to take specific steps to deal with it.

More information: link.springer.com/article/10.1 … 07/s10584-014-1253-6

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