

# Arctic Warming and Your Weather: Public Sees a Connection

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DURHAM, N.H. – New research from the University of New Hampshire finds that most people think future Arctic warming will affect the weather where they live.

The research was conducted by Lawrence Hamilton, professor of sociology and senior fellow at the Carsey Institute, and Mary Stampone, assistant professor of geography and the New Hampshire state climatologist. Their study, combining surveys with weather data, is presented in the article “Arctic Warming and Your Weather: Public Belief in the Connection” in the *International Journal of Climatology*.

Hamilton and Stampone used data from more than 1,500 random-sample telephone interviews conducted in 2012 and 2013 by the Granite State Poll. Recent scientific studies have reported that Arctic warming affects the weather farther south, changing the likelihood of extreme hot or cold events, unusual snowfall patterns, and drought. The UNH researchers explored public acceptance of such ideas by asking whether people believed that future Arctic warming will have major, minor, or no effects on the weather where they live. Sixty percent answered “major effects” and another 29 percent said “minor,” indicating wide public acceptance of the scientists’ Arctic/weather connection.

Unexpectedly, the percentage saying “major effects” went even higher if the survey interview was done on an unseasonably warm or cool day, but was lower if the interview happened at “normal” temperatures for that date. This unscientific temperature response seems to mirror scientific discussions about extremes.

The responses changed little after Superstorm Sandy impacted the region in October 2012, but show strong partisan divisions. “In general, Democrats and independents are more likely than Republicans to think that Arctic warming will have major effects on their weather. This belief rises with higher education among Democrats, but slightly declines

with education among Republicans. For independents, education makes little difference,” Hamilton and Stampone said. Previous studies have attributed such patterns to “biased assimilation,” a process in which people selectively acquire information that reinforces their pre-existing beliefs and prejudices.

“For example, they might selectively accept arguments consistent with their prejudices about climate change from among the contradictory public declarations that Sandy, and other weather events, are or are not related to Arctic warming. Better-educated individuals can more actively acquire scientific-sounding arguments that support ideology-linked beliefs on climate, increasing their polarization on this topic,” the researchers said.

Although these surveys focused only on New Hampshire residents, other recent studies have shown that the state is fairly representative of the U.S. as a whole, with regard to beliefs about climate change.

The Arctic/weather survey question and others on polar topics have been supported by grants from the National Science Foundation (PoLAR Climate Change Education Partnership). Survey sampling and data collection were done by the UNH Survey Center.

The University of New Hampshire, founded in 1866, is a world-class public research university with the feel of a New England liberal arts college. A land, sea, and space-grant university, UNH is the state's flagship public institution, enrolling 12,200 undergraduate and 2,300 graduate students.

## GRAPHICS

Arctic warming will have major effects on weather where you live.

[http://www.unh.edu/news/img/NH\\_arcweath1.jpg](http://www.unh.edu/news/img/NH_arcweath1.jpg)

[http://www.unh.edu/news/img/NH\\_arcweath2.jpg](http://www.unh.edu/news/img/NH_arcweath2.jpg)

Credit: Lawrence Hamilton and Mary Stampone/UNH

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