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In Poll, Many Link Weather Extremes to Climate Change

By [JUSTIN GILLIS](#)

For a graphic of the survey responses see

<http://www.nytimes.com/interactive/2012/04/17/science/earth/seeing-a-global-warming-connection-to-the-weather.html?ref=earth>

Scientists may hesitate to link some of the weather extremes of recent years to [global warming](#) — but the public, it seems, is already there.

A [poll](#) due for release on Wednesday shows that a large majority of Americans believe that this year's unusually warm winter, last year's blistering summer and some other weather disasters were probably made worse by global warming. And by a 2-to-1 margin, the public says the weather has been getting worse, rather than better, in recent years.

The survey, the most detailed to date on the public response to weather extremes, comes atop other polling showing a recent uptick in concern about climate change. Read together, the polls suggest that direct experience of erratic weather may be convincing some people that the problem is no longer just a vague and distant threat.

“Most people in the country are looking at everything that’s happened; it just seems to be one disaster after another after another,” said [Anthony A. Leiserowitz](#) of [Yale University](#), one of the researchers who commissioned the new poll. “People are starting to connect the dots.”

The poll opens a new window on public opinion about climate change.

A large majority of climate scientists say the climate is shifting in ways that could cause serious impacts, and they cite the human release of greenhouse gases as a principal cause. But a tiny, vocal minority of researchers contests that view, and has seemed in the last few years to be winning the battle of public opinion despite slim scientific evidence for their position.

The poll suggests that a solid majority of the public feels that global warming is real, a result consistent with other polls that have asked the question in various ways. When invited to agree or disagree with the statement, “global warming is affecting the weather in the United States,” 69 percent of respondents in the new poll said they agreed, while 30 percent disagreed.

Dr. Leiserowitz’s [unit](#) at Yale, along with [researchers](#) at George Mason University, commissioned the survey, conducted by [Knowledge Networks](#). That company surveyed 1,008 American adults by computer in the last half of March, with a margin of sampling error of plus or minus 3 percentage points.

While many online polls are not representative of the broad public, Knowledge Networks is [noted](#) for its efforts to overcome this problem, including giving computers to households too poor to have them. The survey reveals public attitudes that are at least roughly consistent with scientific [understanding](#) of how the climate is changing.

For instance, when people were asked whether they attributed specific events to global warming, recent heat waves drew the largest majorities. Scientists say their statistical evidence for an increase of weather extremes is indeed strongest when it comes to heat waves.

Asked whether they agreed or disagreed that global warming had contributed to the unusually warm winter just past, 25 percent of the respondents said they strongly agreed that it had, and 47 percent said they somewhat agreed. Only 17 percent somewhat disagreed, and 11 percent strongly disagreed.

Majorities almost as large cited global warming as a likely factor in last year's record summer heat wave, as well as the 2011 drought in Texas and Oklahoma. Smaller but still substantial majorities cited it as a factor in the record United States snowfalls of 2010 and 2011 and the Mississippi River floods of 2011. Those views, too, are consistent with scientific evidence, which suggests that global warming is causing heavier precipitation in all seasons.

One of the more striking findings was that 35 percent of the public reported being affected by extreme weather in the past year. The United States was hit in 2011 by a remarkable string of [disasters](#) affecting virtually every region, including droughts, floods, [tornadoes](#) and heat waves.

Dr. Leiserowitz said that recent events might be puncturing the public's "very simplistic mental model of what global warming is supposed to be."

Past survey work had suggested, he said, that people tended to see the climate change problem as "distant in time and space — that this is an issue about polar bears or maybe Bangladesh, but not my community, not the United States, not my friends and family."

Because the survey questions are new, it is not clear how people's views about weather extremes may be changing over time. However, more general polling by the Gallup organization suggests that public concern about climate change, which has waxed and waned over the years, may be starting to rise again.

Since 1989, Gallup has asked, "how much do you personally worry about global warming?" The percentage of people saying they were worried peaked at 66 percent just before the [recession](#), then fell to a low of 51 percent in 2011, as the economy overwhelmed other concerns.



Gallup's most recent [survey](#), in March, showed an uptick to 55 percent. "It's certainly possible that this is the start of a trend back up," said Frank M. Newport, Gallup's editor in chief, though he added that another year of polling data would be necessary to be certain.

Advocacy groups seeking policies to limit climate change say that extreme weather is giving them an opening to reach the public.

A group called 350.org is planning a worldwide series of rallies on May 5, under the slogan “Connect the Dots,” to draw attention to the links between climate change and extreme weather. (The group’s name is a reference to what it views as the safe upper limit for the concentration of carbon dioxide in the atmosphere.)

“My sense from around the country and the world is that people definitely understand that things are getting freaky,” said [William E. McKibben](#), the founder of 350.org. “During that crazy heat wave in March, everyone in Chicago was out enjoying the weather, but in the back of their mind they were thinking, this is not right.”

This article has been revised to reflect the following correction:

Correction: April 24, 2012

An article on Wednesday about a poll indicating that more Americans are inclined to link recent weather extremes to global warming referred imprecisely to the name of a group that is trying to draw attention to that link. The name, 350.org, refers to what the group considers a safe upper limit for carbon dioxide in the atmosphere (350 parts per million), not an ideal level. (The level in March was 394 parts per million.)