



**Continued Rebound in American
Belief in Climate Change:
Spring 2012 NSAPOCC Findings**

**Chris Borick, Muhlenberg College
Barry Rabe, University of Michigan**



Christopher Borick is Professor and Director of the Muhlenberg College Institute of Public Opinion.



Barry G. Rabe is a nonresident senior fellow in Governance Studies at The Brookings Institution and the J. Ira and Nikki Harris Family Professor at the Gerald R. Ford School of Public Policy at the University of Michigan.

During the past five years the views of the American public on the issue of global warming have demonstrated considerable volatility. Between 2008 and 2010 many national surveys found that a declining percentage of Americans believed that there was solid evidence of global warming. This decline has been followed by a period of modest rebound in more recent years. The most recent version of the National Survey of American Public Opinion on Climate Change (NSAPOCC), fielded in late March and early April of 2012, finds that the rebound in public belief in evidence of global warming continues to occur with current belief levels approaching those recorded in 2008.

Notably, the relatively high number of Americans that indicated there is solid evidence of global warming came during a Spring fielding of the NSAPOCC, countering declines in belief levels that occurred in Spring interviews following winter seasons in 2010 and 2011. This contrast with past spring results corresponds with substantially varied winter weather in most parts of the United States in recent years; the 2010 and 2011 winters produced record snowfall in many areas whereas the 2012 winter season ended up as one of the most mild in the last century. This correlation of weather variation and changing levels of belief is accompanied by additional evidence that Americans are linking weather events and experiences to their views on the existence of climate change.

Overall Views on the Existence of Global Warming

The results of the Spring 2012 NSAPOCC indicate that 65 percent of American adults believe that there is solid evidence that temperatures on earth have increased during the past four decades. This 65 percent mark is the highest since the Fall 2009 when the same percentage of Americans said that there was evidence of rising global temperatures, and a 13 percent increase from the low mark recorded in the Spring 2010.

Fig. 1: “From what you’ve read and heard, is there solid evidence that the average temperature on earth has been getting warmer over the past four decades?”

	Fall 2008 (n = 603)	Fall 2009 (n = 988)	Spring 2010 (n = 730)	Fall 2010 (n = 933)	Spring 2011 (n = 725)	Fall 2011 (n = 887)	Spring 2012 (n = 726)
Yes	72%	65%	52%	58%	55%	62%	65%
No	17%	20%	36%	26%	32%	26%	24%
Not Sure	11%	15%	13%	16%	12%	12%	11%

As an abundance of previous research has shown, partisan beliefs remain a powerful predictor of an American’s view regarding the existence of climate change.

The NSAPOCC Spring 2012 survey continues to find that the way that individuals describe their party affiliation is highly correlated with their views on the evidence of global warming. The latest findings indicate that over the last year there has been a modest increase in the percentage of Democrats that believe global warming is occurring and a more substantial growth in the percentage of independents that see evidence of rising temperatures on the planet. However among Republicans there was little change in opinion on the existence of global warming, with no statistically significant variation over the last year.

Fig. 2: Percent of Individuals that Believe There is Solid Evidence of Global Warming by their Party Affiliation

	Spring 2011	Fall 2011	Spring 2012
Democrat	73%	78%	81%
Republican	42%	47%	42%
Independent	52%	55%	72%

The most recent survey results also indicate an increasing confidence among Americans that global warming is occurring. Just under two thirds of those who believe global warming is occurring stated that they were very confident of this position. This 63 percent confidence level is 14 percentage points higher than in the fall of 2011 and marks the highest level since the NSAPOCC began in 2008.

Fig. 3: “How confident are you that the average temperature on earth is increasing? Are you very confident, fairly confident, not too confident or not confident at all that the average temperature on earth is increasing?”

	Fall 2008	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012
Very Confident	58%	40%	53%	55%	50%	49%	63%
Fairly Confident	38%	52%	39%	37%	43%	44%	32%
Not Too Confident	3%	7%	6%	6%	5%	5%	4%
Not Confident At All	0%	1%	1%	1%	2%	2%	1%
Not Sure	1%	0%	1%	1%	1%	1%	1%

Note: Asked only of individuals who indicated that there is solid evidence of increasing global temperatures. N = 473

The Impact of Weather on Opinions of Climate Change

The growth in the percentage of Americans who see evidence of global warming

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appears to be related to individual perceptions of weather conditions and events. An examination of NSAPOCC results following the past three winters helps to demonstrate this point. As noted earlier, during the spring of 2012, 65 percent of Americans indicated that there is evidence of global warming, compared to only 52 percent in the spring of 2010 and 55 percent in the spring of 2011. Respondents to each of those surveys were asked what the primary factor was that led them to that conclusion, with weather playing varied roles that correspond with varied levels of belief. In 2010 and 2011, when belief levels were lower, a relatively smaller share of respondents (30 percent in 2010 and 34 percent in 2011) indicated that experiences with weather events and warmer temperatures were the major reason they thought global warming was occurring. However, in 2012, with belief levels growing, a higher percentage of respondents (41 percent) cited weather experience as the primary factor behind their position on this matter.

Fig. 4: “What is the primary factor that has caused you to believe that temperatures on earth are increasing?”

	Spring 2010	Spring 2011	Spring 2012
Glaciers Melting	22%	21%	15%
Warmer Temperatures Observed	15%	17%	21%
Weather Changes Observed	15%	17%	20%
Scientific Research	14%	9%	11%
Media Coverage	16%	14%	9%
Declining Species	N/A	2%	1%
Human Activity	5%	7%	10%
Natural Patterns	3%	3%	4%
Not Sure/Other	10%	11%	10%

Note: Asked only of individuals who indicated that there is solid evidence of increasing global temperatures.

The effect of the warmer winter that included low snowfall levels in most parts of the nation can be seen in the findings presented in Figure Five. The NSAPOCC has regularly included a question that asks respondents to rate the effect that mild winters in their areas have on their view that global warming is occurring. During the cold and snowy winters of 2010 and 2011 the percentage of respondents who indicated that their experiences with milder winters had a very large effect on their views about global warming was relatively low with 19 percent and 17 percent of respondents selecting this response. Conversely, about twice as many respondents in the latest NSAPOCC reported that the mild winter had a large effect on their view that planetary temperatures are rising.

Fig. 5: “Have milder winters had a very large, somewhat large, not too large, or no effect on your view that the earth is getting warmer?”

	Fall 2008	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012
Very Large	36%	N/A	19%	32%	17%	24%	35%
Somewhat Large	31%	N/A	38%	28%	25%	33%	33%
Not Too Large	13%	N/A	15%	17%	19%	25%	18%
No Effect	18%	N/A	26%	22%	37%	17%	14%
Not Sure	3%	N/A	2%	<1%	1%	2%	1%

Note: Asked only of individuals who indicated that there is solid evidence of increasing global temperatures.

When asked to provide the key factor behind her view that global warming was occurring a middle-aged woman in Wisconsin said that her “garden was already growing in March.”

The effect of the milder winter conditions were also evident in many of the open-ended comments that respondents provided to the question regarding the primary factor behind their belief that global warming was occurring. For example, a middle-aged male from Connecticut stated that “there was no winter this year,” and a young woman in Maryland noted that “the seasons are abnormal with no snow and cold.” When asked to provide the key factor behind her view that global warming was occurring a middle-aged woman in Wisconsin said that her “garden was already growing in March.”

Weather and Climate Change Skeptics

With the percentage of Americans who do not think there is solid evidence of global warming down by 12 points since the spring 2010, there is evidence that weather has played a role in the decline. In NSAPOCC surveys during the fall of 2010 and 2011 about two out of three climate change skeptics reported that their personal observations of weather had either a “very large” or “somewhat large” effect on their position that there is not enough solid evidence to convince them that temperatures on the planet are increasing. However, in the spring of 2012 only about four out of 10 skeptics of global warming reported their personal experiences with weather as having a very large or somewhat large effect on their position on global warming, as discussed in Figure Six.

Fig. 6: “Have your personal observations of weather had a very large, somewhat large, not too large, or no effect on your view that the earth is not getting warmer?”

	Fall 2010	Fall 2011	Spring 2012
Very Large	38%	40%	23%
Somewhat Large	29%	26%	18%
Not Too Large	14%	14%	31%
No Effect	18%	16%	28%

Not Sure	<1%	1%	2%
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Note: Asked only of individuals who indicated that there is not solid evidence of increasing global temperatures.

These findings are substantiated by the open-ended responses to the question regarding the primary factor that leads an individual to the position that there is not solid evidence of rising global temperatures, as reflected in Figure Seven. After the 2010 and 2011 winter seasons a plurality of climate skeptics pointed towards their personal observations of weather as the primary reason why they do not think global warming is occurring. However, in the latest iteration of the NSAPOCC only 20 percent of Americans that do not think global warming is happening cited their personal experiences as the primary factor behind this position.

In particular, in 2012 a larger percentage of global warming skeptics cited politically driven agendas and personal religious beliefs as the primary factors for their stance on global warming's existence.

Fig. 7: "What is the primary factor that makes you believe that temperatures on earth are not increasing?"

	Fall 2008	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012
Personal Observation	42%	N/A	43%	29%	40%	33%	20%
Natural Patterns	19%	N/A	22%	32%	29%	22%	21%
Lack of Evidence	11%	N/A	13%	7%	8%	14%	11%
Media has Misled	3%	N/A	2%	3%	2%	2%	4%
Evidence Disproves	8%	N/A	9%	9%	5%	6%	10%
Religious Factors	<1%	N/A	4%	3%	4%	8%	10%
Politically Driven	2%	N/A	<1%	2%	1%	<1%	9%
No Particular Reason	5%	N/A	4%	5%	3%	6%	6%
Not Sure/Other	9%	N/A	3%	10%	10%	11%	10%

Note: Asked only of individuals who indicated that there is not solid evidence of increasing global temperatures.

With fewer individuals citing personal observations of weather as the main reason for their rejection of global warming claims, other factors have taken on more prominent roles. In particular, in 2012 a larger percentage of global warming skeptics cited politically driven agendas and personal religious beliefs as the primary factors for their stance on global warming's existence. A sampling of open ended comments provides some insight into the factors that underlie current rejection of global warming. A middle-aged man from Florida said the primary reason he does not think global warming is happening is because "politics takes too much of a part of science," with a male senior citizen in Georgia stating that global warming was "a bunch of political hype." In response to the question regarding the primary factor for their position that global warming is not occurring, a senior citizen from California indicated that "God controls the weather," while a middle-aged woman from Louisiana simply said: "read the Bible."

Conclusions

The latest round of the NSAPOCC provides evidence that the number of Americans who believe that warming is occurring continues to rise after notable decline between 2008 and 2010. This rebound in acceptance of global warming existence has occurred as more Americans are connecting personal experiences with weather to their views on climate change. The abnormally warm winter of 2011 and 2012 appears to have enhanced the connection that many Americans make between meteorological conditions in their area and their broader beliefs regarding climate change. In our next report we explore where Americans stand on an array of policy options that are designed to mitigate climate change through reduced greenhouse gas emissions, given the continuing rebound effect in public belief in global warming as demonstrated in this survey.

Methodology

The following key findings report summarizes data collected in a telephone survey of residents of the United States between March 28 and April 16, 2012. Individual households and cell phones throughout the United States were selected randomly for inclusion in the study. The sample of phone numbers used in the survey was generated by Genesys Sampling Systems of Ft. Washington, PA. Interviewing was conducted by the staff of the Muhlenberg College Institute of Public Opinion, with 726 surveys completed. Of the 726 surveys 520 were completed on land lines and 206 were completed on cell phones. The total number of completions results in a margin of error of +/- 4% at the 95% confidence interval. However the margin of errors for sub groups (i.e. women, income groups, age categories) is larger due to smaller sample size. Percentages throughout the survey have been rounded upward at the .5 mark, thus many totals in the results will not equal 100%. The American Association of Public Opinion Research (AAPOR) cooperation rate (COOP3) for the survey was 24% and the AAPOR response rate (RR3) was 16% for the survey. The data has been weighted by the following categories: age, gender, educational attainment, race and region. The instrument was designed by Christopher Borick of Muhlenberg College and Barry Rabe of the University of Michigan in consultation with Erick Lachapelle of the University of Montreal.

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The Brookings Institution
1775 Massachusetts Ave.,
NW
Washington, DC 20036
Tel: 202.797.6090
Fax: 202.797.6144
www.brookings.edu/governance.aspx

Editors

Christine Jacobs
Stephanie C. Dahle

Production & Layout

Stefani Jones

