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Fall 2011 National Survey of American Public Opinion on Climate Change

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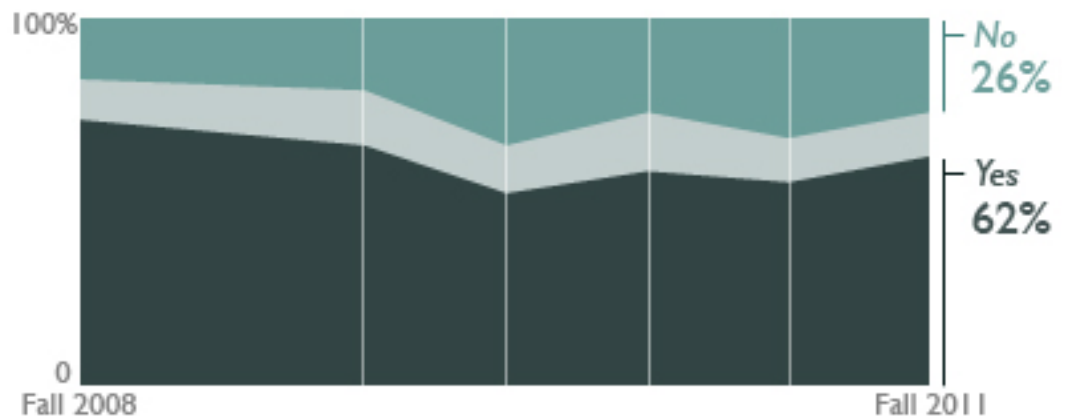
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Belief in global warming on the rebound

"Is there solid evidence that the average temperature on Earth has been getting warmer?"



After a period of declining levels of belief in global warming there appears to be a modest rebound in the percentage of Americans that believe temperatures on the planet are increasing. This is among the key findings of the latest fielding of the National Survey of American Public Opinion on Climate Change (NSAPOCC) which is jointly produced by the Gerald Ford School of Public Policy at the University of Michigan and the Muhlenberg College Institute of Public Opinion. The survey, which was fielded in December of 2011, found 62% of Americans agreeing that there is solid evidence that average temperatures on earth have been getting warmer over the past four decades, with 26% of U.S. residents maintaining an opposing view on the matter. The 62% “belief” mark is the highest level recorded since the fall of 2009 when 65% of Americans reported that there was solid evidence of climate change.

In the initial version of the NSAPOCC in the fall of 2008 over 7 out of 10 Americans reported a belief that the planet was warming. However by the spring of 2010 only 52% maintained the same view. Over the same period of time the percentage of Americans stating that there is not evidence of global warming

TABLE ONE

“Is there solid evidence that the average temperature on Earth has been getting warmer over the past four decades?”

	Fall 2008	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011
Yes	72%	65%	52%	58%	55%	62%
No	17%	20%	36%	26%	32%	26%
Not Sure	11%	15%	13%	16%	12%	12%

NSAPOCC Surveys 2008 -2011

more than doubled from 17% to 36%. After belief in global warming bottomed out in early 2010 there were vacillating but upward trending results reported in late 2010 and early 2011, culminating with the most recent findings that show a 10% upward shift in beliefs. The fall 2011 survey results indicate that current views on the existence of global warming are almost perfectly situated between the highs of late 2008 and the lows of early 2010, and are generally consistent with a number of other national surveys by organizations such as Pew and Gallup that have found increasing acknowledgement of climate change among residents of the United States.

TABLE TWO

Views on evidence of climate change by selected demographic categories

	There is Solid Evidence	There is Not Solid Evidence	Not Sure
Democrat	78%	15%	7%
Republican	47%	42%	11%
Independent	55%	30%	15%
White	64%	26%	10%
Non-White	60%	27%	14%
Male	58%	30%	12%
Female	66%	22%	12%
College Degree	60%	27%	13%
No College Degree	66%	24%	11%

NSAPOCC 2011

About half of Americans now point to observations of temperature changes and weather as the main reasons they believe global warming is taking place.

As previous versions of the NSAPOCC and other national surveys have shown, partisanship continues to play a key role in predicting an American's views on the existence of global warming. While over 3 out of 4 Democrats indicate that there is solid evidence of climate change, Republicans are almost evenly split on the question, with 47% seeing evidence of increasing global temperatures and 42% contending that there is not enough evidence that the Earth is getting warmer. Contrary to the apparent partisan influence on perceptions of climate change, other traditional demographic categories such as gender, race and educational attainment offer little in the way of providing cues about an individual's standing on this issue.

Personal Weather Observations

More Americans than ever are pointing to experiences with warmer temperatures as the main reason that they believe global warming is occurring. In the December fielding of the NSAPOCC, about 1 in 4 Americans identified experiences with warmer temperatures as the factor that was most responsible for their belief that temperatures on earth are increasing. The 24% of respondents citing observations of warmer temperatures as the main reason behind their beliefs regarding climate change is the highest level since the question was first asked in 2008 and equal to the number of Americans that point to changing or extreme weather as the main factor why they believe climate change is occurring. In all, about half of Americans now point to observations of temperature changes and weather as the main reasons they believe global warming is taking place.

TABLE THREE

"What is the primary factor that has caused you to believe that temperatures on earth are increasing?"

	Fall 2008	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011
Glaciers/ Polar Ice Melting	19%	N/A	22%	17%	21%	14%
Warmer Temps. Observed	19%	N/A	15%	22%	17%	24%
Weather Changes Observed	18%	N/A	15%	17%	17%	24%
Sci. Research	9%	N/A	14%	10%	9%	8%
Gore Documentary	2%	N/A	<1%	<1%	<1%	<1%
Media Coverage	15%	N/A	16%	14%	14%	12%
Declining Species	<1%	N/A	<1%	1%	2%	2%
Human Activity	4%	N/A	5%	9%	7%	9%
Natural Patterns	<1%	N/A	3%	2%	3%	4%
Not Sure/Other	12%	N/A	10%	10%	11%	5%

NSAPOCC Surveys 2008 -2011

The responses are illustrative of the effect that personal observations of weather have on views about climate change...a man in Minnesota noted that “we had more snow last year than ever.”

A sampling of the open-ended comments provided by survey respondents helps demonstrate the role that weather plays in shaping individual views on global warming. A male senior citizen from Illinois, who feels that there is solid evidence of global warming, said that the primary reason that led him to this conclusion was “winters just aren’t as cold as they were in the past.” Similarly, a middle-aged woman in Florida attributed her position on global warming primarily to her observations that “this time of year is warmer than it is expected to be.” A young man in Texas identified the primary reason for his view that the Earth is warming to “temperatures last summer that were awful,” while another young Texan stated that the “droughts this past summer” were the primary reason that she believed temperatures on earth were increasing. In these cases and many others Americans turn first to the weather they experience as the key reason for their acceptance of global warming.

Personal observations also play a significant role in leading individuals to say that global warming is not occurring. The most common reason that Americans who do not think global warming is occurring give for this position is their personal experience with temperatures and weather. Of those stating that they don’t think temperatures on earth are increasing, 1 in 3 cited observations of weather as the main cause. Again, the open-ended responses are illustrative of the effect that personal observations of weather have on views about climate change. A young New Jersey woman said “our weather seems just as cold as in the past,” while a middle-aged man in Minnesota noted that “we had more snow last year than ever.” A senior citizen from Ohio said that “winters were just as cold as when I was a kid,” and a young man from Maine simply said “that it’s freezing out” when asked what the primary factor was for his view that global warming was not occurring. As with those who believe global warming is happening, skeptics regularly turn to experience with weather to explain why they have arrived at their position on the matter.

Seasonal Fluctuation

The NSAPOCC surveys also point to a seasonal fluctuation in terms of the impact of temperatures on beliefs regarding global warming. Among those that maintain the position that global warming is not occurring there is a higher number that claim personal observations as the primary cause of this view during surveys fielded in the spring than in the fall. For example, after the relatively cold and snowy winters of 2010 and 2011 over 40% of those claiming that global warming is not happening cited personal observation as the main reason for their position on the matter. However, just over 30% of non-believers cite personal observations as the primary factor that determined their position on the matter when surveyed before winter begins. Conversely, individuals who believe that the Earth is warming are more likely to cite experiences with warmer temperatures when surveyed in the fall than they are to cite hotter temperatures as the main cause of their views when asked in the Spring. (See Table Three)

While an increasing number of Americans identified weather related phenomena as the primary reason that has determined their views on the existence of global warming, an array of factors affect one's position on this matter. For Americans who that believe climate change is occurring, factors beyond weather such as retreating glacial and polar ice and declining polar species appear to be having the greatest effect on convincing an individual that the planet is warming. Conversely, the work of the International Panel on Climate Change (IPCC) and computer modeling fail to deliver the same impact on Americans' views on climate change.

TABLE FOUR

Factors that have a very large effect on individual views that the Earth is getting warmer

	Fall 2008	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011
Declining glaciers and polar ice throughout the globe	63%	N/A	57%	63%	61%	56%
Warmer temperatures in your area during recent years	42%	N/A	30%	48%	34%	39%
Computer models that indicate the earth is getting warmer	30%	N/A	25%	22%	28%	18%
The strength of hurricanes hitting the United States	47%	N/A	30%	39%	30%	31%
Reports from the Intergovernmental Panel on Climate Change	N/A	N/A	N/A	16%	N/A	13%
Milder winters in your area	36%	N/A	19%	32%	17%	24%
Declining numbers of polar bears and penguins	40%	N/A	44%	44%	40%	46%
Severe droughts in area across the United States	47%	N/A	29%	41%	29%	35%
Extreme weather events such as major storms and floods	N/A	N/A	N/A	N/A	N/A	43%

NSAPOCC Surveys 2008 -2011

Droughts and Regional Effects

The effects of severe droughts on attitudes towards climate change took on a distinctly regional character in 2011. With the northeast experiencing one of the wettest years on record and areas of the south such as Texas experiencing record

setting dry periods, individuals in those regions reported varied impact of droughts on their views about climate change. As can be seen in Table Five, 42% of individuals who think global warming is occurring and live in the southeast indicated that severe drought had a very large effect on their position. Conversely, in the rain-soaked northeast only 25% of those who think the earth is getting warmer said that droughts had a very large effect on their opinion of this matter.

As 2012 begins, a growing number of Americans indicate a belief that global warming is occurring.

TABLE FIVE

The role of severe droughts on individual belief in global warming (by region)

Region	Percent Indicating Severe Droughts had a Very Large Effect on Their Belief that the Earth was Getting Warmer
Nationally	35%
Northeast	25%
Southeast	42%
Midwest	34%
West	36%

Trust in Science and Media

The divide between individuals who believe climate change is occurring and those who think it is not happening appears to be enhanced by differences on a number of key issues related to the presentation of research on global warming by scientists and the media. While Americans who think the planet is warming largely disagree with the premise that the media and climate scientists are overstating evidence about global warming, most citizens who do not see evidence of increasing temperatures on Earth believe that scientists and the press are distorting evidence on the matter. In terms of scientists, more than 8 out of 10 Americans who don't think global warming is occurring believe that scientists are overstating evidence about global warming for their own interest. Comparatively, less than 3 out of 10 Americans that think global warming is occurring held the belief that scientists are building up the evidence of global warming to suit their personal interests.

Conclusion

As 2012 begins, a growing number of Americans indicate a belief that global warming is occurring. After a significant decline in public acceptance of climate change between 2008 and 2010 the most recent version of the National Survey of of

TABLE SIX

Public perceptions of the presentation of evidence about global warming by scientists and the media

Group	Percent of Group that believes Scientists are Overstating Evidence About Global Warming for their Own Interests	Agreement That The Media is Overstating Evidence About Global Warming
Individuals Who Think Global Warming Is Occurring	28%	34%
Individuals Who Think Global Warming Is Not Occurring	81%	90%
Individuals Not Sure About Global Warming Occurring	47%	60%

American Public Opinion on Climate Change (NSAPOCC) finds a notable increase in the ranks of United States residents who think that temperatures on the earth have become hotter. The expansion of belief in climate change has corresponded with more Americans attributing their beliefs to experiences with warmer temperatures and stronger storms, including personal observations of weather phenomena. The effect of these shifts in beliefs on public policies and electoral politics in the U.S. remains uncertain. A follow-up report from the NSAPOCC will explore the policy dimensions of American public opinion towards global warming.

Methodology

The following key findings report summarizes data collected in a telephone survey of residents of the United States between December 4 and 21, 2011. 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 887 surveys completed. Of the 887 surveys, 639 were completed on land lines and 248 were completed on cell phones. The total number of completions results in a margin of error of +/- 3.5% 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 response rate for the survey was 26% using American Association of Public Opinion Research's RRI calculation method. 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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