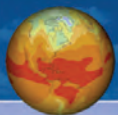


# CLIMATE CHANGE IN THE AMERICAN MIND

Americans' Global Warming Beliefs  
and Attitudes in April 2013



YALE PROJECT ON  
**CLIMATE CHANGE  
COMMUNICATION**  
BRIDGING SCIENCE + SOCIETY



4C

George Mason University  
Center for Climate Change Communication

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## Introduction

This report is based on findings from a nationally representative survey – *Climate Change in the American Mind* – conducted by the Yale Project on Climate Change Communication and the George Mason University Center for Climate Change Communication. Interview dates: April 8 – 15. Interviews: 1,045 Adults (18+). Total average margin of error: +/- 3 percentage points at the 95% confidence level. The research was funded by the Surdna Foundation, the 11th Hour Project, the Grantham Foundation, and the V.K. Rasmussen Foundation.

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## Executive Summary

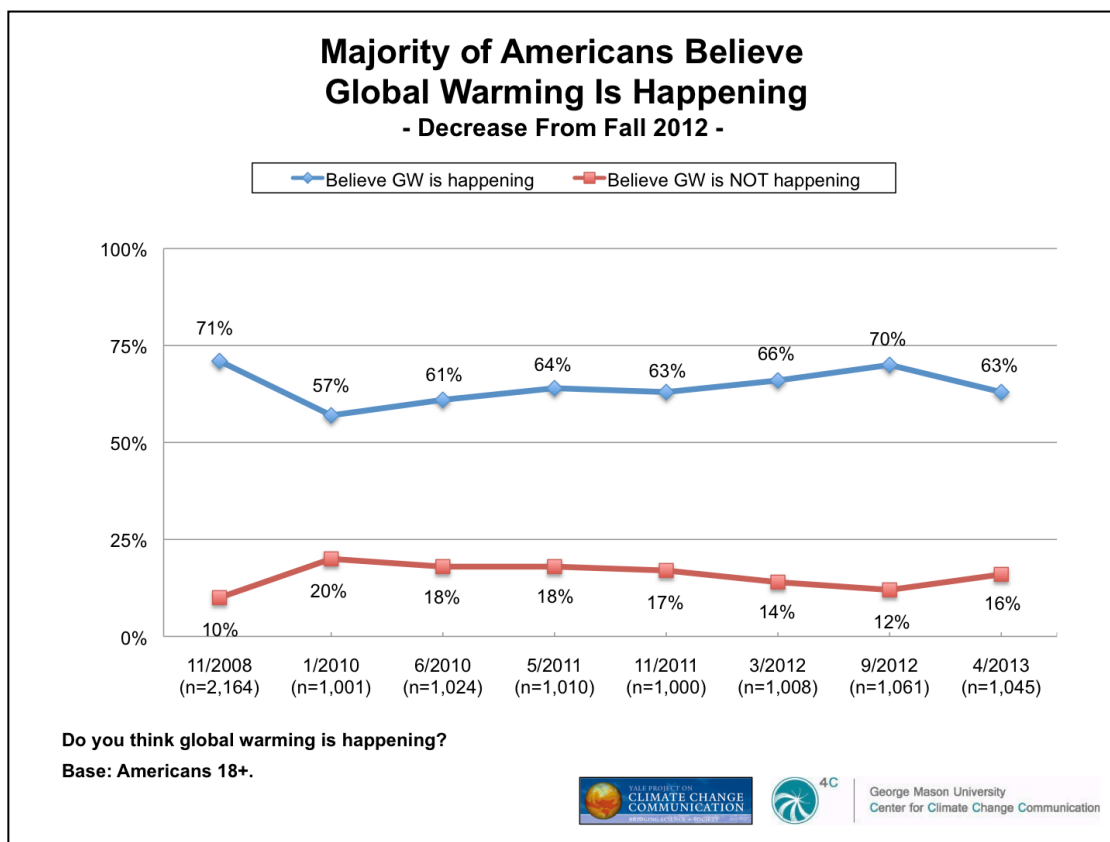
- Nearly two in three Americans (63%) believe global warming is happening. Relatively few – only 16 percent – believe it is not. However, since Fall 2012, the percentage of Americans who believe global warming is real has dropped 7 points to 63%, likely influenced by the relatively cold winter of 2012-13 (compared to the prior year) and an unusually cold March just before the survey was conducted. In March of 2012, after an unusually warm winter, 66 percent of Americans believed global warming was happening; thus, seasonal effects may account for at least some of the change we observe.
- Those who believe global warming is happening are more certain of their convictions than those who do not. Of the 63% of Americans who believe global warming is happening, most say they are “very” (33%) or “extremely sure” (27%). By contrast, of the unconvinced, fewer are very (28%) or extremely sure of their view (18%).
- About half of Americans (49%) believe global warming – if it is happening – is caused mostly by human activities, a decrease of 5 points since Fall 2012, but similar to levels stretching back several years.
- More Americans believe that “most scientists think global warming is happening” than believe there is widespread disagreement among scientists (42% versus 33%, respectively). One in five Americans (20%) continue to feel they “don’t know enough to say” and fewer than one in 20 (4%) believe that “most scientists think global warming is not happening.”
- About half of Americans (51%) say they are “somewhat” or “very worried” about global warming, a 7 percentage-point decline in worry since Fall 2012.
- At least four out of ten Americans say global warming will harm people in their community (45%), their family (44%), or themselves (42%). Though Americans today, compared to Fall 2012, are slightly less likely to perceive these threats of harm, they are much more likely to do so today than they were a year ago.
- Global warming is also perceived as a threat to people in developing countries (55%, down 9 points since September 2012, but similar to March 2012), in other modern industrialized countries (53%, down 4 points since September, but up 4 points since March 2012), and in the United States (52%, down 5 points since September, but up 6 points since March 2012).
- Today, four in ten Americans say people around the world are being harmed *right now* by climate change (38%), while 34 percent say global warming is currently harming people in the United States.

## 1. Climate Change Beliefs

### A majority of Americans believe global warming is happening.

Nearly two in three Americans (63%) believe global warming is happening. Relatively few – only 16 percent – believe it is not. Since Fall 2012, the percentage of Americans who believe global warming is happening has dropped 7 points to 63%. Since March 2012, the proportion has dropped 3 points.

The decrease in the belief that global warming is happening occurred largely in the Northeast and the South, two regions in which respondents were much more likely, compared to Fall 2012, to report having experienced extreme cold temperatures and, in the Northeast, extreme snow storms (e.g., Nemo) over the past year.<sup>1</sup> Further, much of the United States experienced an unusually cold March, just before the survey was conducted. Prior research has found that personal experience with weather, particularly recent weather, can influence how some people think about global warming.<sup>2</sup>



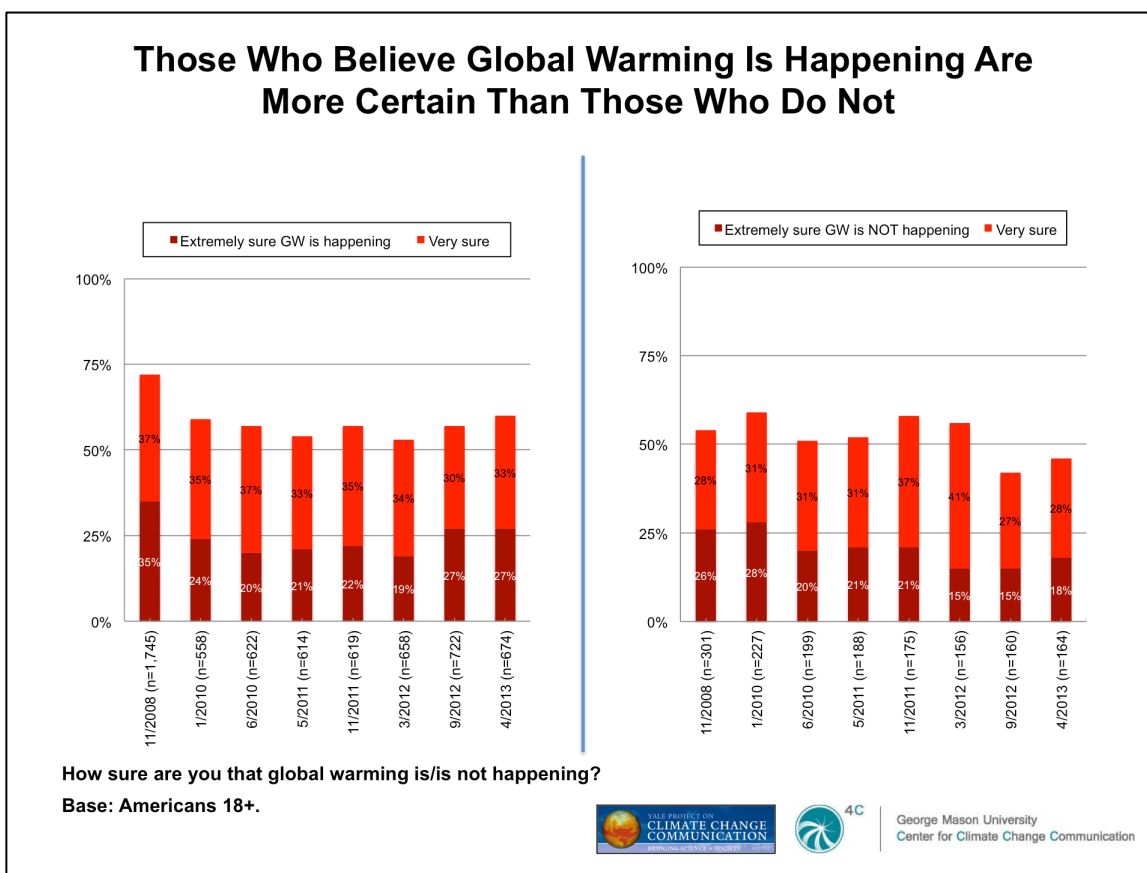
<sup>1</sup>Leiserowitz, A., Maibach, E., Roser-Renouf, C., Feinberg, G., & Howe, P. (2013) *Extreme Weather and Climate Change in the American Mind: April 2013*. Yale University and George Mason University. New Haven, CT: Yale Project on Climate Change Communication.

<sup>2</sup>c.f., Hamilton, Lawrence C., and Mary D. Stampone. 2013. "Blowin' in the Wind: Short-term Weather and Belief in Anthropogenic Climate Change." *Weather, Climate, and Society*. doi:10.1175/WCAS-D-12-00048.1. <http://journals.ametsoc.org/doi/abs/10.1175/WCAS-D-12-00048.1>.

**Those who believe global warming is happening are more certain than those who do not.**

Of the 63% of Americans who believe global warming is happening, most say they are “very” (33%) or “extremely sure” (27%) it is. More specifically, the proportion of Americans who believe global warming is happening and who say they are “extremely sure” it is the same as it was last Fall, and has increased by 8 percentage points since March 2012.

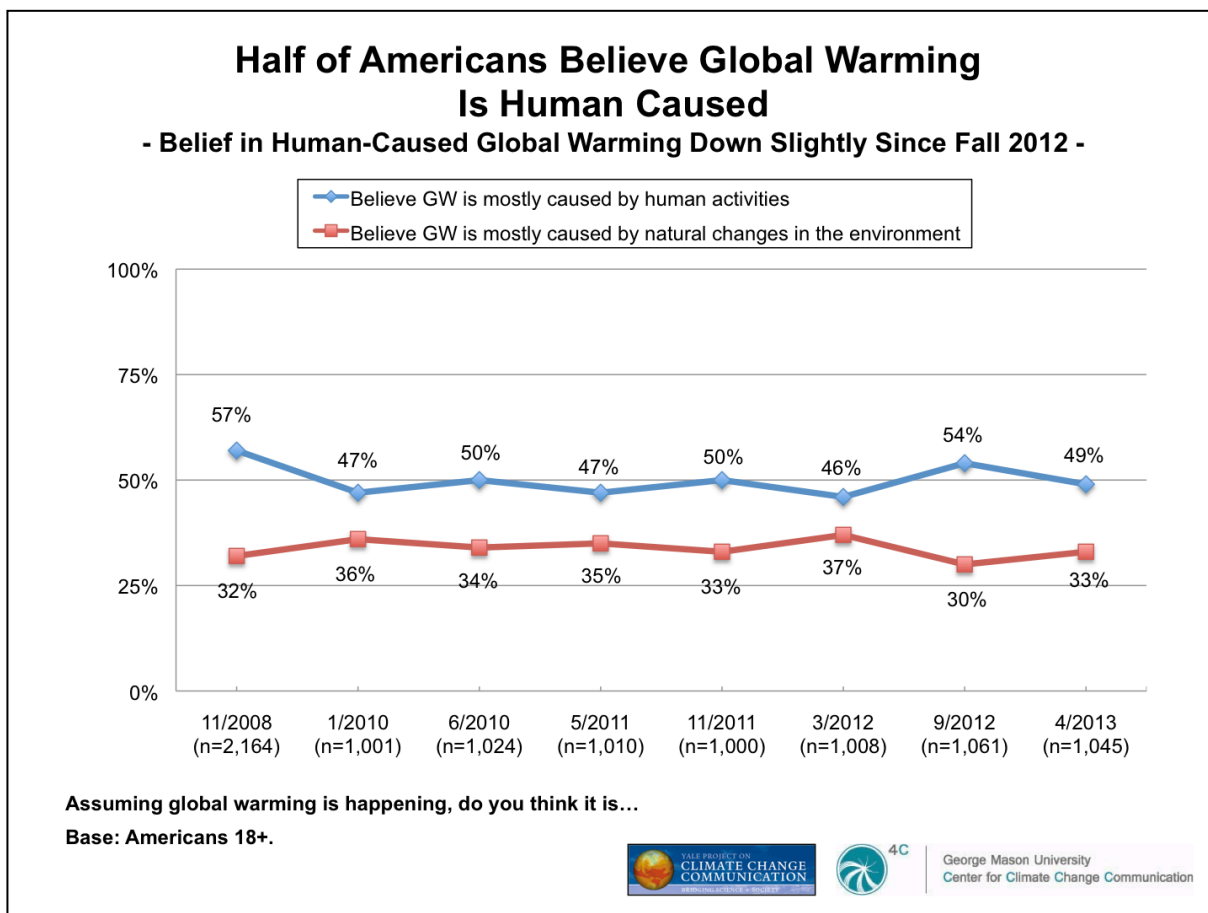
By contrast, of those who do *not* believe global warming is happening, fewer are either very (28%) or extremely sure (18%) of their view, which represents a slight increase from Fall 2012, but a decrease of 10 percentage points since Spring 2012.



**Half of Americans believe that global warming is human caused.**

About half of Americans (49%) believe global warming – if it is happening – is caused mostly by human activities, a decrease of 5 points since Fall 2012, but similar to levels stretching back several years.

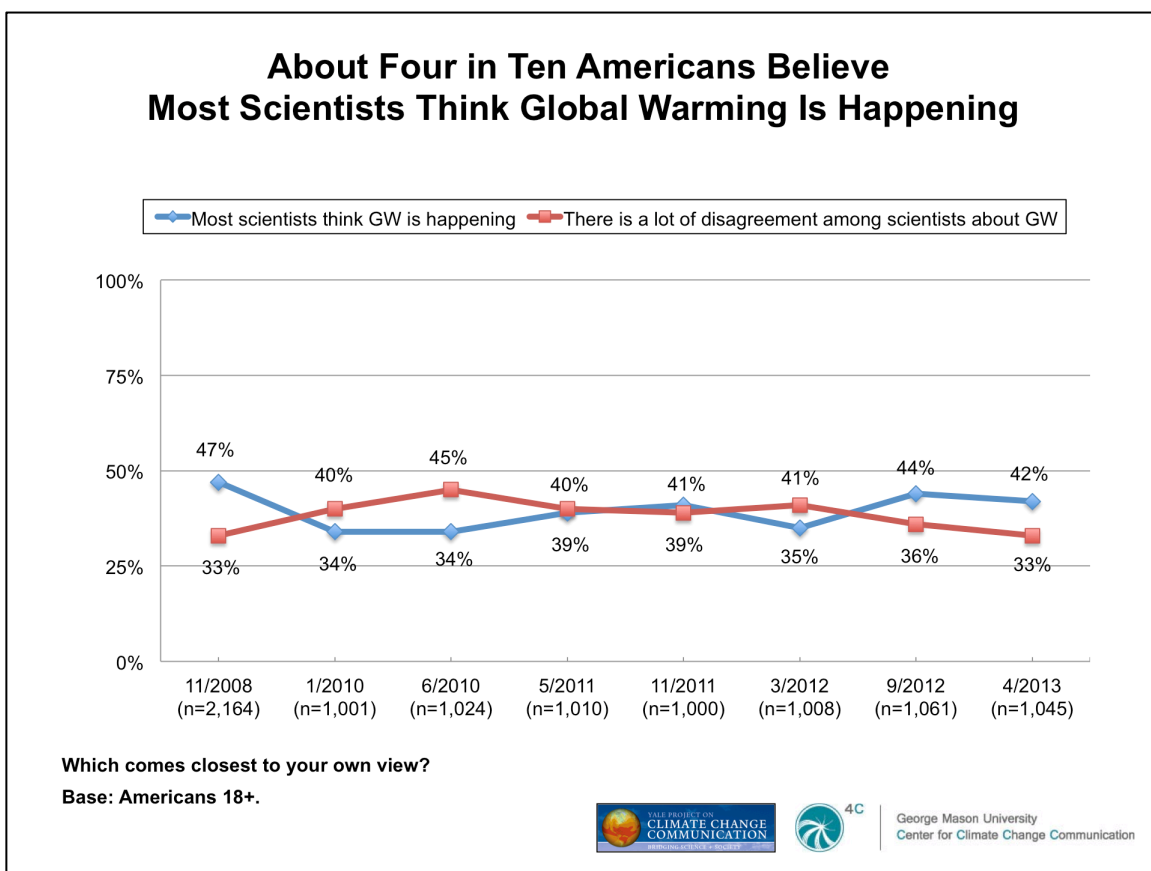
At the same time, belief that global warming is due mostly to natural changes in the environment is up slightly to 33% (up 3 points since Fall 2012), but also similar to levels stretching back several years.



**About four in ten Americans believe most scientists think global warming is happening.**

The great majority of climate scientists have concluded that global warming is happening, mostly human caused and, if left unchecked, will have serious consequences for human societies and the natural world. Yet, over the years, there has been considerable confusion within the American public about the level of scientific agreement.

In Spring 2013, more Americans believe that “most scientists think global warming is happening” than believe “there is a lot of disagreement among scientists” (42% versus 33%, respectively). This confirms the reversal of a prior trend, in which Americans were more likely to believe scientists disagreed than agreed about the existence of global warming.

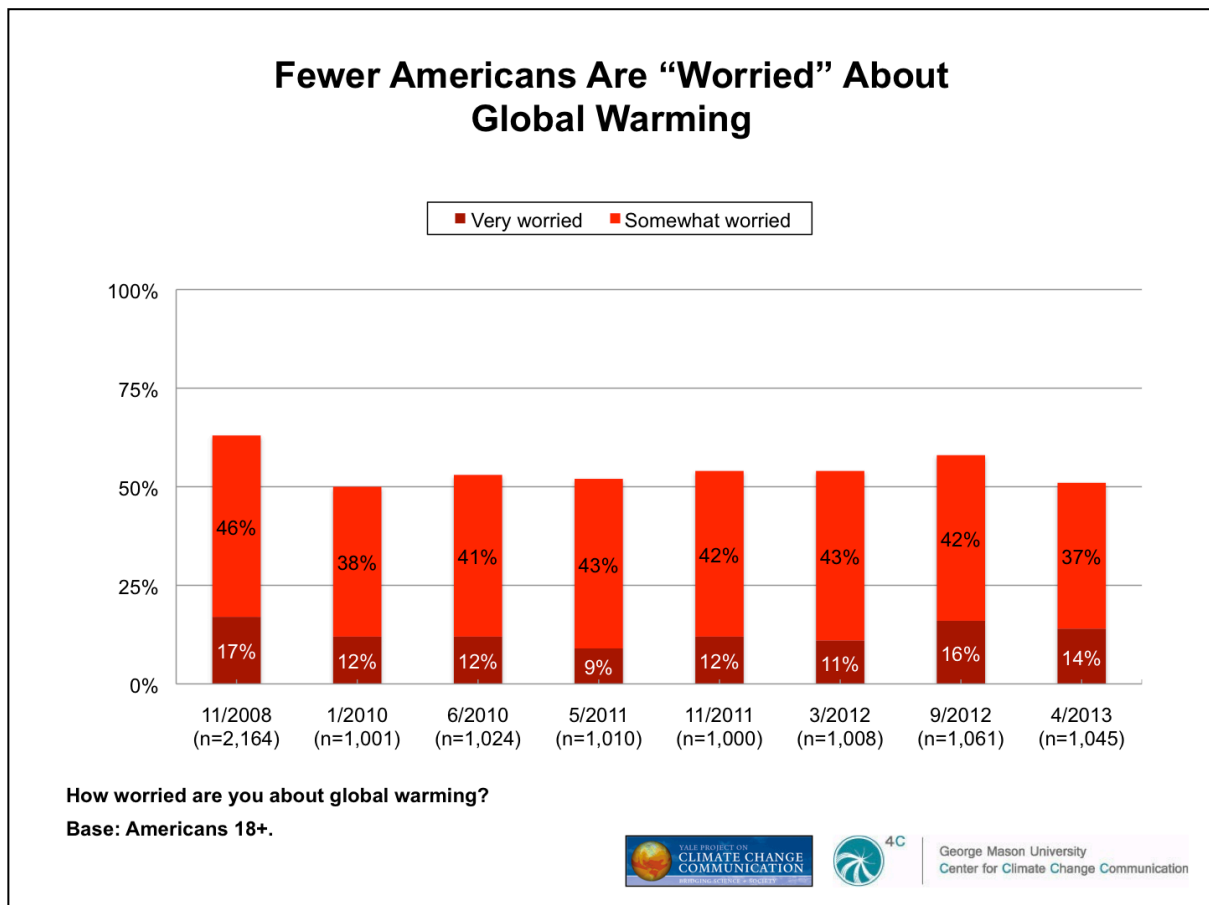




## 2. Perceived Threat

### Fewer Americans are “worried” about global warming.

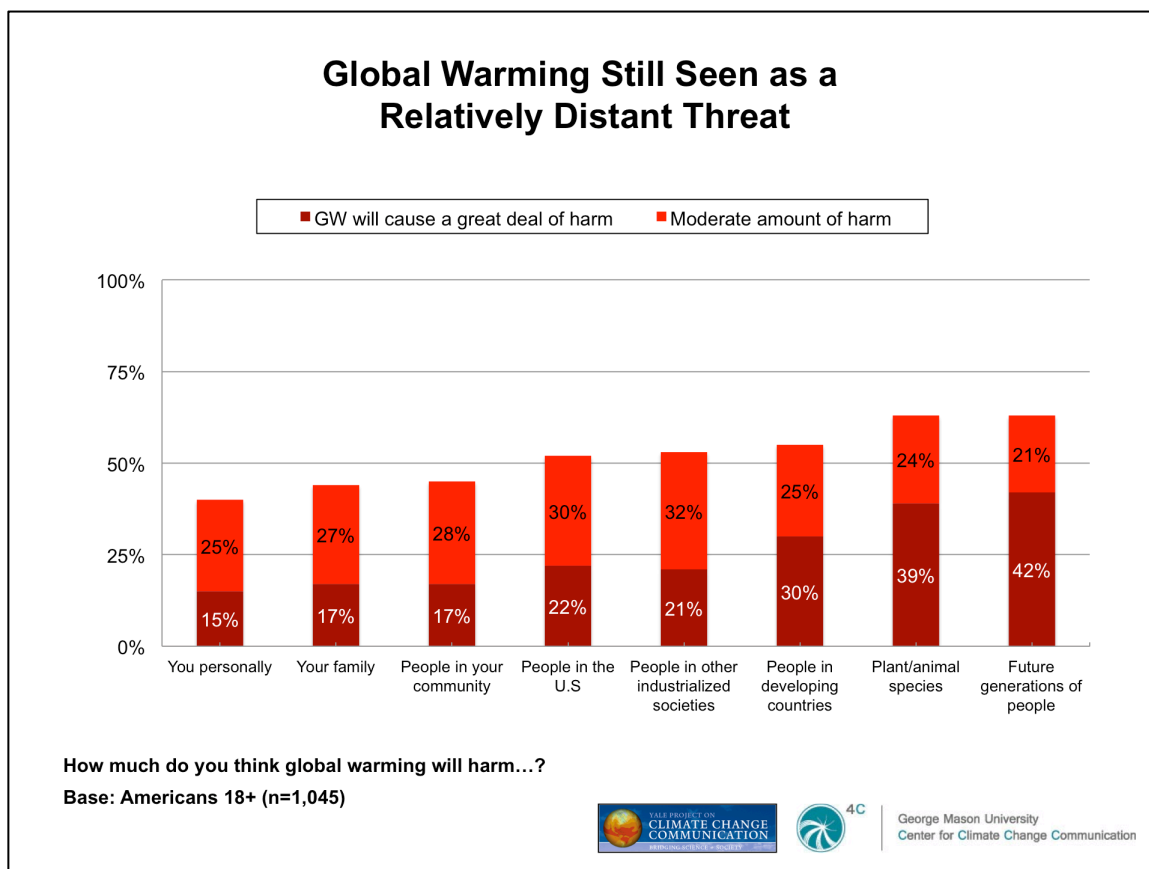
Today about half of Americans (51%) say they are “somewhat” (37%) or “very worried” (14%) about global warming, a 7 percentage-point decline in worry since Fall 2012.



### Global warming is still seen as a relatively distant threat.

Over many years of research, we have consistently found that, on average, Americans view climate change as a threat distant in space and time – a risk that will affect far away places, other species, or future generations more than people here and now.

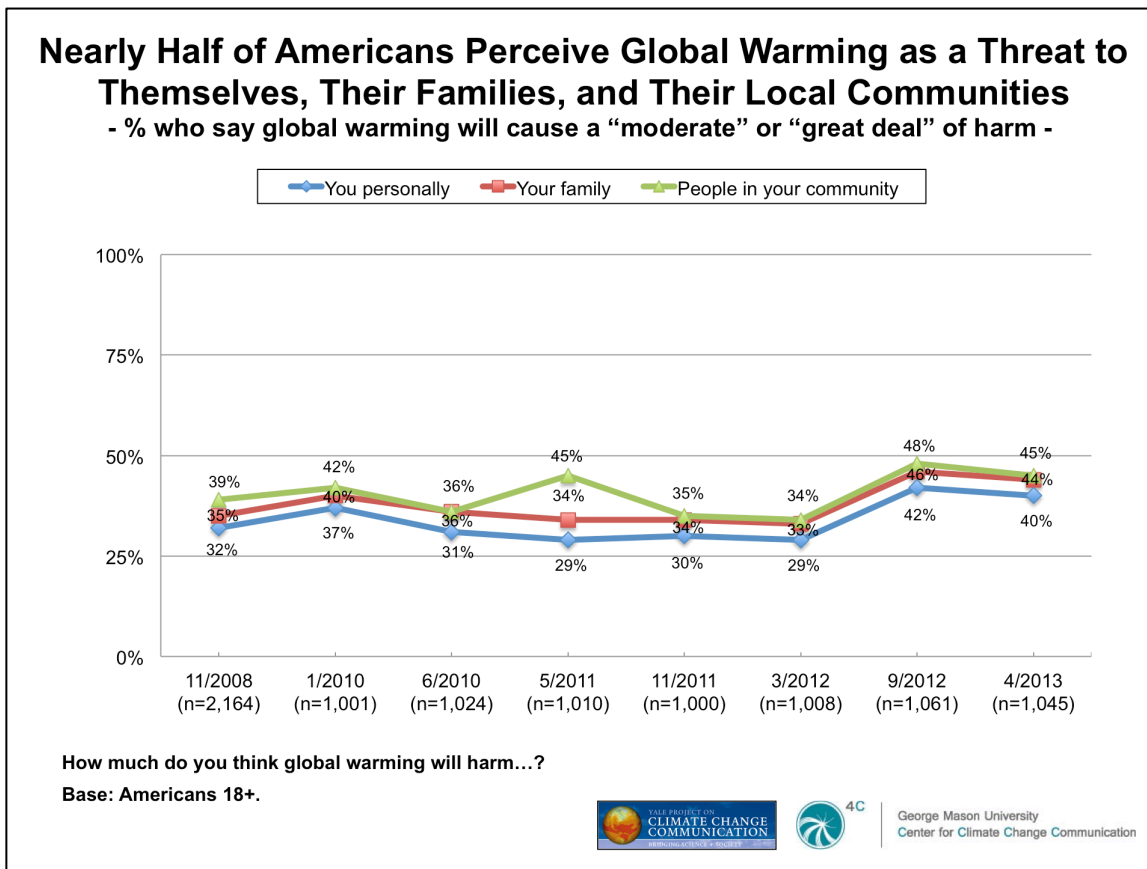
We still find this same pattern, in which fewer than half of Americans (40%) believe they personally will be harmed a “moderate amount” or a “great deal” by global warming. By contrast, half or more believe that global warming will harm future generations of people (63%), plant and animal species (63%), people in developing countries (55%), people in other industrialized societies (53%), or people in the U.S. (52%).



**Nearly half of Americans perceive global warming as a threat to themselves, their families, and their local communities.**

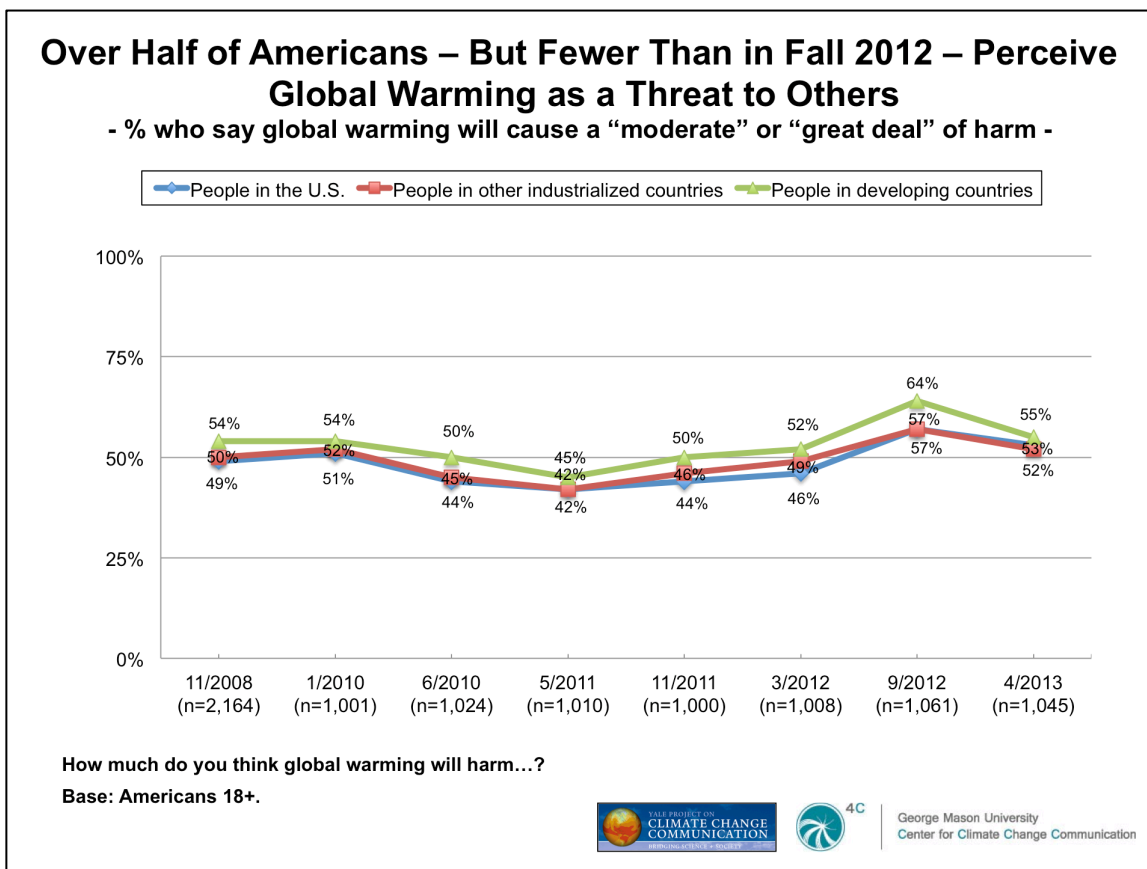
At least four out of ten Americans say global warming will harm people in their community (45%), their family (44%), or themselves (42%).

Though Americans today, compared to Fall 2012, are slightly less likely to perceive these threats of harm, they are much more likely to do so today than they were a year ago.



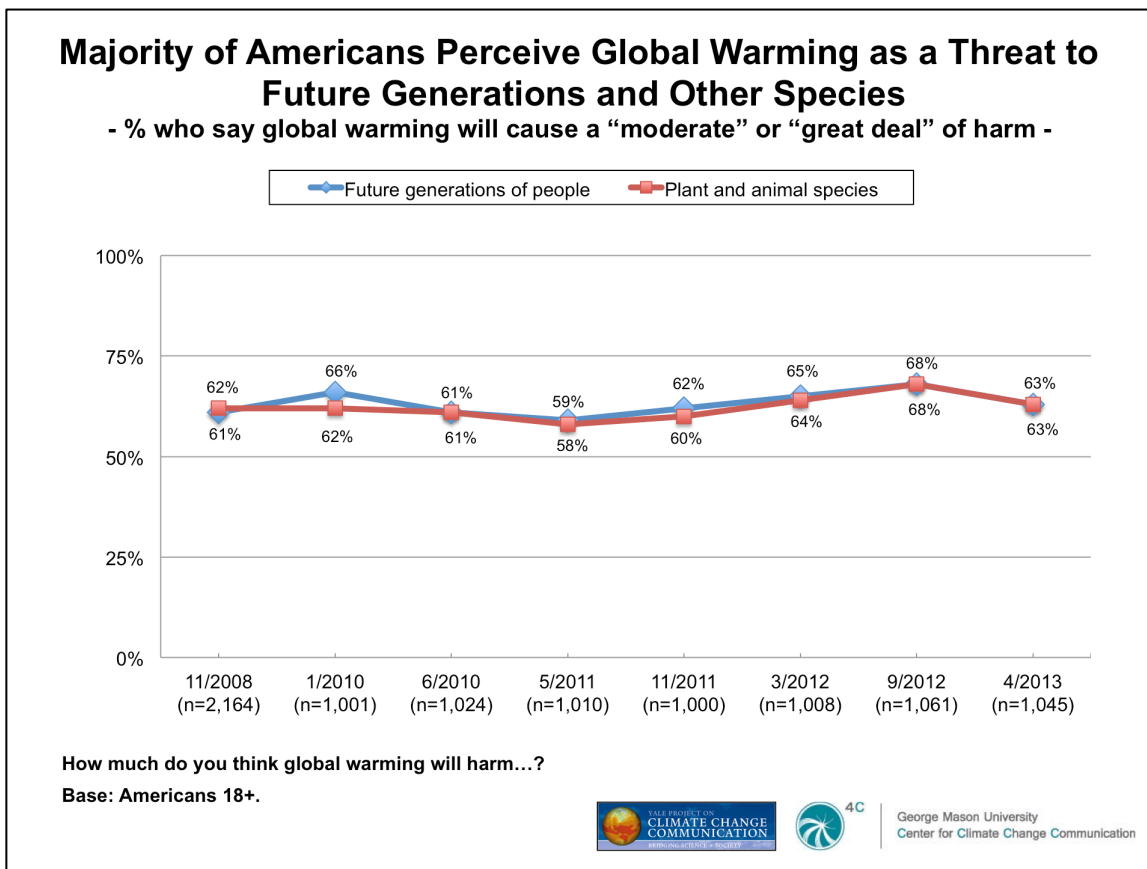
**Over half of Americans – but fewer than in Fall 2012 – perceive global warming as a threat to others.**

About half of Americans think that global warming will harm people in developing countries (55%, down 9 points since September 2012 and similar to March 2012), in other modern industrialized countries (53%, down 4 points since September but up 4 points since March 2012), or in the United States (52%, down 5 points since September but up 6 points since March 2012).



**A majority of Americans perceive global warming as a threat to future generations and other species.**

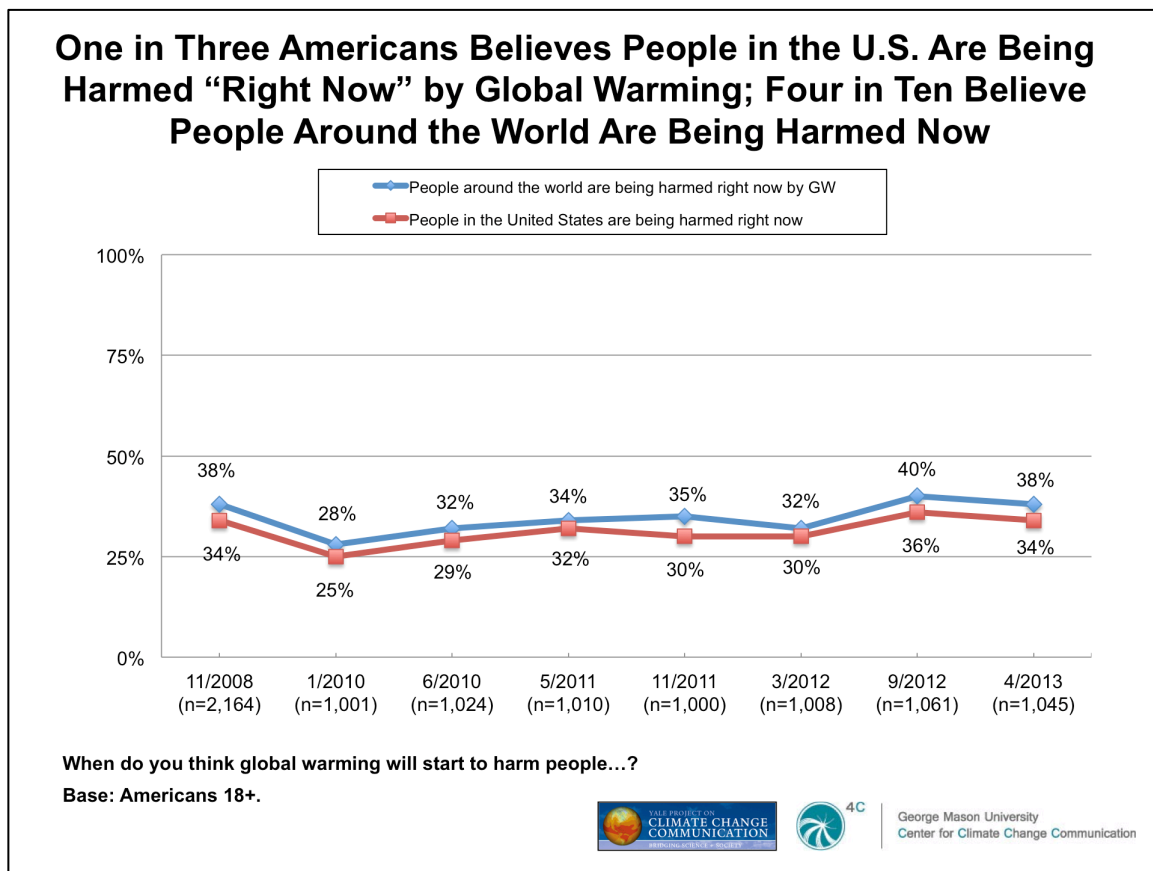
Americans also think global warming will cause a “moderate amount” or “great deal of harm” to future generations of people (63%, down 5 points since September 2012) or to plant and animal species (63%, down 5 points since September).



**One in three Americans believes people in the U.S. are being harmed “right now” by global warming; four in ten believe people around the world are being harmed now.**

Only a minority of Americans believe global warming is already harming people both at home and abroad.

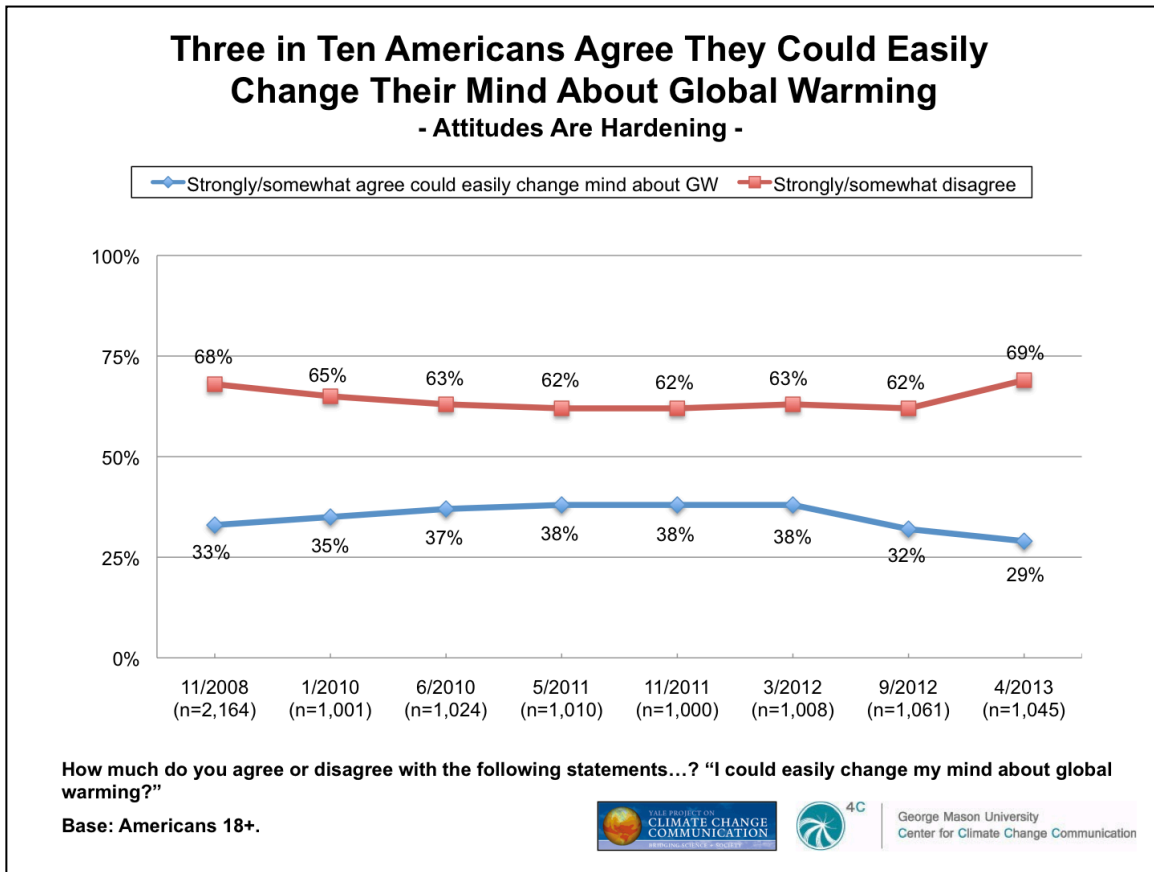
Today, four in ten say people around the world are being harmed *right now* by climate change (38%), while 34 percent say global warming is currently harming people in the United States.



### 3. Need for More Information

**Three in ten Americans agree they could easily change their mind about global warming.**

Three in ten Americans (29%) agree that they could easily change their mind about global warming, a 3-point drop since September 2012 and a 9-point drop since March 2012.

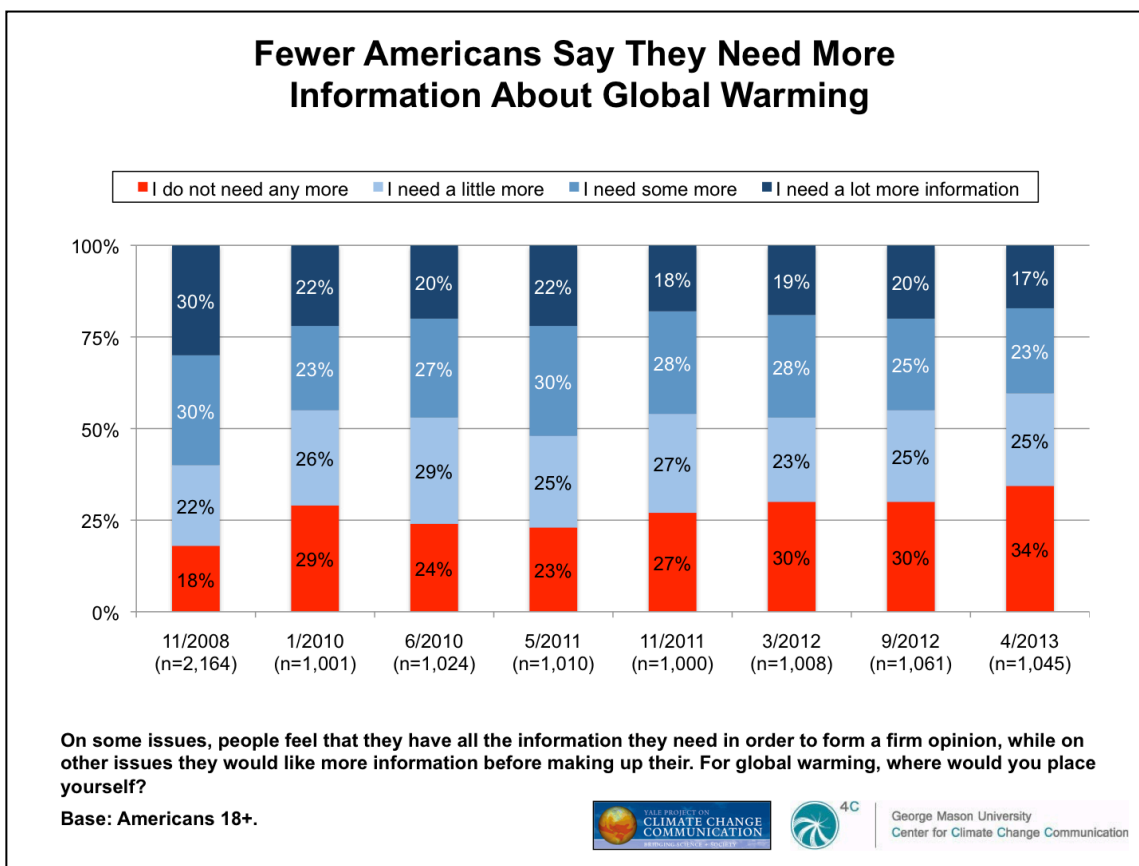


### Fewer Americans say they need more information about global warming.

Over the past two years, a growing number of Americans have said that they have all the information they need to form a firm opinion about global warming, from 23 percent in May 2011 to 34 percent today.

In the same time period, the number who say they need “some” or “a lot more” information on the subject declined 12 percentage points, from 52 percent in May 2011, to 40 percent today. These findings suggest that more people are making up their minds about global warming.

Nonetheless, a solid majority of Americans – 65 percent – say they would like at least a “little more” information about the subject.





## Appendix I: Data Tables

### Questions cited in the report

(Base: Americans 18+)

Recently, you may have noticed that *global warming* has been getting some attention in the news. Global warming refers to the idea that the world's average temperature has been increasing over the past 150 years, may be increasing more in the future, and that the world's climate may change as a result.

What do you think: Do you think that global warming is happening?

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| Yes               | 63            | 70           | 66            | 63          | 64          | 61           | 57          | 71          |
| No                | 16            | 12           | 14            | 17          | 18          | 18           | 20          | 10          |
| Don't know        | 20            | 18           | 20            | 20          | 18          | 21           | 23          | 19          |

(Base: Americans 18+ who say global warming is happening)

How sure are you that global warming is happening?

|                   | Sept<br>2012 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|--------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (674)        | (722)        | (658)         | (619)       | (614)       | (622)        | (558)       | (1,745)     |
|                   | %            | %            | %             | %           | %           | %            | %           | %           |
| Extremely sure    | 27           | 27           | 19            | 22          | 21          | 20           | 24          | 35          |
| Very sure         | 33           | 30           | 34            | 35          | 33          | 37           | 35          | 37          |
| Somewhat sure     | 37           | 40           | 42            | 39          | 40          | 40           | 37          | 24          |
| Not at all sure   | 4            | 3            | 5             | 5           | 6           | 3            | 5           | 4           |

(Base: Americans 18+ who say global warming is not happening)

How sure are you that global warming is not happening?

|                   | Sept<br>2012 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|--------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (164)        | (160)        | (156)         | (175)       | (188)       | (199)        | (227)       | (301)       |
|                   | %            | %            | %             | %           | %           | %            | %           | %           |
| Extremely sure    | 18           | 15           | 15            | 21          | 21          | 20           | 28          | 26          |
| Very sure         | 28           | 27           | 41            | 37          | 31          | 31           | 31          | 28          |
| Somewhat sure     | 42           | 45           | 35            | 37          | 38          | 44           | 34          | 38          |
| Not at all sure   | 12           | 13           | 8             | 5           | 11          | 4            | 7           | 8           |

**(Base: Americans 18+)****Assuming global warming is happening, do you think it is...**

|   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011  | May<br>2011  | June<br>2010 | Jan<br>2010  | Nov<br>2008  |
|---|---------------|--------------|---------------|--------------|--------------|--------------|--------------|--------------|
| (Unweighted base)   | (1,045)<br>%  | (1,061)<br>% | (1,008)<br>%  | (1,000)<br>% | (1,010)<br>% | (1,024)<br>% | (1,001)<br>% | (2,164)<br>% |
| Caused mostly by human activities                                 | 49            | 54           | 46            | 50           | 47           | 50           | 47           | 57           |
| Caused mostly by natural changes in the environment               | 33            | 30           | 37            | 33           | 35           | 34           | 36           | 32           |
| None of the above because global warming isn't happening          | 8             | 7            | 5             | 8            | 8            | 6            | 9            | 4            |
| Caused by both human activities and natural changes (volunteered) | 10            | 6            | 9             | 6            | 8            | 7            | 6            | 5            |
| Other   | 1             | 2            | 2             | 2            | 1            | 1            | 1            | 1            |

**(Base: Americans 18+)****Which comes closest to your own view?**

|  | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011  | May<br>2011  | June<br>2010 | Jan<br>2010  | Nov<br>2008  |
|--|---------------|--------------|---------------|--------------|--------------|--------------|--------------|--------------|
| (Unweighted base)  | (1,045)<br>%  | (1,061)<br>% | (1,008)<br>%  | (1,000)<br>% | (1,010)<br>% | (1,024)<br>% | (1,001)<br>% | (2,164)<br>% |
| Most scientists think global warming is happening  | 42            | 44           | 35            | 41           | 39           | 34           | 34           | 47           |
| Most scientists think global warming is not happening  | 4             | 3            | 3             | 3            | 4            | 4            | 5            | 3            |
| There is a lot of disagreement among scientists about whether or not global warming is happening | 33            | 36           | 41            | 39           | 40           | 45           | 40           | 33           |
| Don't know enough to say   | 20            | 18           | 21            | 18           | 18           | 17           | 22           | 18           |

**(Base: Americans 18+)****How worried are you about global warming?**

|                    | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|--------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base)  | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                    | %             | %            | %             | %           | %           | %            | %           | %           |
| Very worried       | 14            | 16           | 11            | 12          | 9           | 12           | 12          | 17          |
| Somewhat worried   | 37            | 42           | 43            | 42          | 43          | 41           | 38          | 46          |
| Not very worried   | 30            | 25           | 30            | 31          | 28          | 30           | 27          | 24          |
| Not at all worried | 19            | 17           | 16            | 15          | 20          | 18           | 23          | 13          |

**(Base: Americans 18+)****How much do you think global warming will harm...?****You personally**

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| A great deal      | 15            | 16           | 11            | 9           | 11          | 10           | 14          | 10          |
| A moderate amount | 25            | 26           | 18            | 21          | 18          | 21           | 23          | 22          |
| Only a little     | 26            | 25           | 30            | 28          | 28          | 27           | 22          | 24          |
| Not at all        | 23            | 20           | 29            | 25          | 25          | 24           | 31          | 22          |
| Don't know        | 11            | 13           | 11            | 17          | 18          | 18           | 11          | 23          |

**Your family**

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| A great deal      | 17            | 18           | 12            | 10          | 13          | 11           | 15          | 11          |
| A moderate amount | 27            | 28           | 21            | 24          | 21          | 25           | 25          | 24          |
| Only a little     | 23            | 23           | 29            | 27          | 26          | 24           | 21          | 23          |
| Not at all        | 20            | 17           | 26            | 21          | 23          | 21           | 28          | 19          |
| Don't know        | 12            | 14           | 12            | 18          | 18          | 19           | 11          | 23          |

**(Base: Americans 18+)****How much do you think global warming will harm...? (Cont'd.)****People in your community**

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| A great deal      | 17            | 19           | 12            | 11          | 12          | 11           | 15          | 13          |
| A moderate amount | 28            | 29           | 22            | 24          | 33          | 25           | 27          | 26          |
| Only a little     | 23            | 23           | 29            | 27          | 26          | 24           | 22          | 20          |
| Not at all        | 18            | 15           | 24            | 21          | 22          | 21           | 24          | 17          |
| Don't know        | 13            | 13           | 13            | 18          | 18          | 19           | 12          | 23          |

**People in the United States**

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| A great deal      | 22            | 26           | 18            | 15          | 16          | 16           | 22          | 21          |
| A moderate amount | 30            | 31           | 28            | 29          | 26          | 28           | 29          | 28          |
| Only a little     | 19            | 17           | 24            | 23          | 23          | 22           | 16          | 15          |
| Not at all        | 16            | 12           | 18            | 17          | 17          | 17           | 22          | 14          |
| Don't know        | 12            | 13           | 12            | 16          | 18          | 18           | 12          | 22          |

**People in other modern industrialized countries**

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| A great deal      | 21            | 26           | 20            | 17          | 17          | 17           | 23          | 22          |
| A moderate amount | 32            | 31           | 29            | 29          | 25          | 28           | 29          | 28          |
| Only a little     | 18            | 18           | 21            | 22          | 23          | 21           | 16          | 13          |
| Not at all        | 15            | 11           | 17            | 15          | 17          | 15           | 19          | 13          |
| Don't know        | 13            | 15           | 13            | 17          | 19          | 18           | 13          | 24          |

**(Base: Americans 18+)****How much do you think global warming will harm...? (Cont'd.)****People in developing countries**

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| A great deal      | 30            | 35           | 26            | 22          | 23          | 22           | 29          | 31          |
| A moderate amount | 25            | 29           | 26            | 28          | 22          | 28           | 25          | 22          |
| Only a little     | 18            | 10           | 19            | 17          | 20          | 17           | 14          | 11          |
| Not at all        | 13            | 11           | 16            | 15          | 17          | 15           | 19          | 13          |
| Don't know        | 13            | 15           | 14            | 18          | 19          | 18           | 13          | 24          |

**Future generations of people**

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| A great deal      | 42            | 47           | 43            | 40          | 37          | 39           | 42          | 44          |
| A moderate amount | 21            | 21           | 22            | 22          | 22          | 22           | 22          | 17          |
| Only a little     | 12            | 9            | 12            | 13          | 10          | 11           | 9           | 7           |
| Not at all        | 12            | 8            | 11            | 10          | 12          | 12           | 15          | 10          |
| Don't know        | 12            | 14           | 13            | 16          | 19          | 16           | 12          | 22          |

**Plant and animal species**

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| A great deal      | 39            | 43           | 43            | 41          | 39          | 40           | 43          | 45          |
| A moderate amount | 24            | 25           | 21            | 19          | 19          | 21           | 19          | 17          |
| Only a little     | 13            | 11           | 13            | 16          | 12          | 12           | 11          | 8           |
| Not at all        | 13            | 8            | 10            | 10          | 13          | 13           | 15          | 9           |
| Don't know        | 10            | 13           | 12            | 15          | 18          | 15           | 12          | 20          |

**(Base: Americans 18+)****When do you think global warming will start to harm...?****People in the United States**

|                           | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|---------------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base)         | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                           | %             | %            | %             | %           | %           | %            | %           | %           |
| They are being harmed now | 34            | 36           | 30            | 30          | 32          | 29           | 25          | 34          |
| In 10 years               | 11            | 13           | 12            | 10          | 12          | 12           | 12          | 13          |
| In 25 years               | 12            | 11           | 14            | 13          | 13          | 12           | 14          | 13          |
| In 50 years               | 12            | 12           | 14            | 15          | 12          | 13           | 13          | 13          |
| In 100 years              | 13            | 13           | 15            | 15          | 11          | 15           | 13          | 12          |
| Never                     | 17            | 15           | 16            | 16          | 20          | 19           | 23          | 15          |

**People around the world**

|                           | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|---------------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base)         | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                           | %             | %            | %             | %           | %           | %            | %           | %           |
| They are being harmed now | 38            | 40           | 32            | 35          | 34          | 32           | 28          | 38          |
| In 10 years               | 11            | 11           | 12            | 9           | 12          | 11           | 13          | 13          |
| In 25 years               | 11            | 10           | 14            | 14          | 12          | 13           | 12          | 12          |
| In 50 years               | 13            | 12           | 13            | 13          | 12          | 12           | 12          | 12          |
| In 100 years              | 11            | 12           | 14            | 14          | 11          | 13           | 13          | 11          |
| Never                     | 16            | 14           | 15            | 15          | 19          | 18           | 22          | 14          |

**(Base: Americans 18+)****How much do you agree or disagree with the following statements?****I could easily change my mind about global warming**

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| Strongly agree    | 2             | 3            | 3             | 4           | 6           | 5            | 5           | 5           |
| Somewhat agree    | 27            | 29           | 35            | 34          | 32          | 32           | 30          | 28          |
| Somewhat disagree | 37            | 40           | 36            | 36          | 33          | 36           | 31          | 34          |
| Strongly disagree | 32            | 29           | 26            | 27          | 29          | 27           | 34          | 34          |

**(Base: Americans 18+)**

**On some issues, people feel that they have all the information they need in order to form a firm opinion, while on other issues they would like more information before making up their mind. For global warming, where would you place yourself?**

|                                    | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|------------------------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base)                  | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                                    | %             | %            | %             | %           | %           | %            | %           | %           |
| I need a lot more information      | 17            | 20           | 19            | 18          | 22          | 20           | 22          | 30          |
| I need some more information       | 23            | 25           | 28            | 28          | 30          | 27           | 23          | 30          |
| I need a little more information   | 25            | 25           | 23            | 27          | 25          | 29           | 26          | 22          |
| I do not need any more information | 34            | 30           | 30            | 27          | 23          | 24           | 29          | 18          |

**Other questions****(Base: Americans 18+)****How much had you thought about global warming before today?**

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| A lot             | 16            | 17           | 15            | 15          | 12          | 18           | 15          | 20          |
| Some              | 30            | 32           | 30            | 30          | 33          | 37           | 31          | 35          |
| A little          | 37            | 34           | 39            | 39          | 38          | 32           | 36          | 33          |
| Not at all        | 16            | 17           | 16            | 16          | 16          | 13           | 18          | 12          |

**(Base: Americans 18+)****How important is the issue of global warming to you personally?**

|                      | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|----------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base)    | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                      | %             | %            | %             | %           | %           | %            | %           | %           |
| Extremely important  | 8             | 6            | 6             | 6           | 7           | 6            | 5           | 11          |
| Very important       | 13            | 17           | 14            | 13          | 15          | 18           | 15          | 21          |
| Somewhat important   | 36            | 36           | 41            | 41          | 38          | 39           | 38          | 40          |
| Not too important    | 24            | 24           | 23            | 25          | 25          | 24           | 23          | 18          |
| Not at all important | 18            | 17           | 16            | 15          | 14          | 14           | 20          | 11          |



**(Base: Americans 18+)****How much do you agree or disagree with the following statements?****The actions of a single individual won't make any difference in global warming**

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| Strongly agree    | 16            | 19           | 18            | 11          | 15          | 13           | 17          | 9           |
| Somewhat agree    | 29            | 28           | 26            | 31          | 31          | 29           | 29          | 22          |
| Somewhat disagree | 35            | 34           | 35            | 43          | 36          | 43           | 37          | 45          |
| Strongly disagree | 19            | 19           | 21            | 15          | 19          | 15           | 17          | 24          |

**New technologies can solve global warming without individuals having to make big changes in their lives**

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| Strongly agree    | 6             | 5            | 6             | 7           | 7           | 6            | 6           | 4           |
| Somewhat agree    | 32            | 34           | 30            | 40          | 40          | 33           | 42          | 26          |
| Somewhat disagree | 35            | 35           | 36            | 37          | 33          | 40           | 33          | 46          |
| Strongly disagree | 25            | 25           | 28            | 16          | 21          | 21           | 19          | 25          |

**I have personally experienced the effects of global warming**

|                   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|-------------------|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base) | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|                   | %             | %            | %             | %           | %           | %            | %           | %           |
| Strongly agree    | 6             | 4            | 5             | 7           | 5           | 5            | 5           | 4           |
| Somewhat agree    | 33            | 34           | 30            | 31          | 29          | 25           | 21          | 29          |
| Somewhat disagree | 29            | 30           | 31            | 37          | 34          | 35           | 35          | 43          |
| Strongly disagree | 31            | 31           | 34            | 25          | 32          | 35           | 40          | 24          |

**(Base: Americans 18+)****Which of the following statements comes closest to your view?**

|   | April<br>2013 | Sept<br>2012 | March<br>2012 | Nov<br>2011 | May<br>2011 | June<br>2010 | Jan<br>2010 | Nov<br>2008 |
|---|---------------|--------------|---------------|-------------|-------------|--------------|-------------|-------------|
| (Unweighted base)   | (1,045)       | (1,061)      | (1,008)       | (1,000)     | (1,010)     | (1,024)      | (1,001)     | (2,164)     |
|   | %             | %            | %             | %           | %           | %            | %           | %           |
| Humans can reduce global warming, and we are going to do so successfully                                      | 3             | 5            | 4             | 4           | 5           | 5            | 10          | 6           |
| Humans could reduce global warming, but it's unclear at this point whether we will do what's needed           | 45            | 49           | 46            | 47          | 41          | 47           | 45          | 51          |
| Humans could reduce global warming, but people aren't willing to change their behavior, so we're not going to | 24            | 22           | 21            | 25          | 25          | 21           | 17          | 22          |
| Humans can't reduce global warming, even if it is happening   | 16            | 15           | 20            | 15          | 18          | 18           | 15          | 16          |
| Global warming isn't happening  | 11            | 8            | 9             | 10          | 11          | 10           | 13          | 5           |

## Appendix II: Survey Method

The data in this report are based on a nationally representative survey of 1,045 American adults, aged 18 and older, conducted from April 8 – 15, 2013. All questionnaires were self-administered by respondents in a web-based environment. The survey took, on average, about 27 minutes to complete.

The sample was drawn from GfK's KnowledgePanel<sup>®</sup>, an online panel of members drawn using probability sampling methods. Prospective members are recruited using a combination of random digit dial and address-based sampling techniques that cover virtually all (non-institutional) resident phone numbers and addresses in the United States. Those contacted who would choose to join the panel but do not have access to the Internet are loaned computers and given Internet access so they may participate. The sample therefore includes a representative cross-section of American adults – irrespective of whether they have Internet access, use only a cell phone, etc. Key demographic variables were weighted, post survey, to match US Census Bureau norms.

The survey instrument was designed by Anthony Leiserowitz and Geoff Feinberg of Yale University, and Edward Maibach and Connie Roser-Renouf of George Mason University.

### Margins of error

All samples are subject to some degree of sampling error—that is, statistical results obtained from a sample can be expected to differ somewhat from results that would be obtained if every member of the target population was interviewed. Average margins of error, at the 95% confidence level, are as follows:

- April 2013: Fielded April 8-15 with 1,045 American adults. The margin of sampling error is plus or minus 3 percentage points.
- September 2012: Fielded August 31 through September 12, 2012 with 1,061 American adults. The margin of sampling error is plus or minus 3 percentage points.
- March 2012: Fielded March 12 through March 30, 2012 with 1,008 American adults. The margin of sampling error is plus or minus 3 points.
- November 2011: Fielded October 20 through November 16 with 1,000 American adults. The margin of sampling error is plus or minus 3 points.
- May 2011: Fielded April 23 through May 12 with 1,010 American adults. The margin of sampling error is plus or minus 3 points.
- June 2010: Fielded May 14 through June 1 with 1,024 American adults. The margin of sampling error is plus or minus 3 points.
- January 2010: Fielded December 24, 2009 through January 3, 2010 with 1,001 American adults. The margin of sampling error is plus or minus 3 points.
- November 2008: Fielded October 7 through November 12 with 2,164 American adults. Data was collected in two waves: wave 1 from October 7 through October 20 and wave 2 from October 24 through November 12. The margin of sampling error is plus or minus 2 points.

### Rounding error

For tabulation purposes, percentage points are rounded off to the nearest whole number. As a result, percentages in a given chart may total slightly higher or lower than 100%.

**Appendix III: Sample Demographics**

|                                      | N<br>(unweighted) | %<br>(weighted) |
|--------------------------------------|-------------------|-----------------|
| <b>Total</b>                         | <b>1,045</b>      | <b>100</b>      |
| <b>Sex</b>                           |                   |                 |
| Men                                  | 520               | 48%             |
| Women                                | 525               | 52%             |
| <b>Age</b>                           |                   |                 |
| Generation Y (18-30)                 | 145               | 22%             |
| Generation X (31-48)                 | 268               | 30%             |
| Baby Boomers (49-67)                 | 444               | 36%             |
| WWII (68+)                           | 188               | 12%             |
| <b>Education</b>                     |                   |                 |
| Less than high school                | 74                | 12%             |
| High school graduate                 | 311               | 30%             |
| Some college/tech                    | 289               | 29%             |
| College graduate                     | 228               | 18%             |
| Post graduate                        | 143               | 12%             |
| <b>Household Income</b>              |                   |                 |
| <\$25K                               | 167               | 19%             |
| \$25K - <\$50K                       | 244               | 24%             |
| \$50K - <\$75K                       | 216               | 19%             |
| \$75K - <\$100K                      | 153               | 15%             |
| \$100K - <\$125K                     | 125               | 12%             |
| \$125K+                              | 140               | 12%             |
| <b>Hispanic</b>                      |                   |                 |
| Yes                                  | 82                | 14%             |
| <b>Race/Ethnicity</b>                |                   |                 |
| White, non-Hispanic                  | 808               | 67%             |
| Black, African-American non-Hispanic | 94                | 12%             |
| Other non-Hispanic                   | 61                | 7%              |
| <b>Region</b>                        |                   |                 |
| Northeast                            | 180               | 18%             |
| Midwest                              | 253               | 22%             |
| South                                | 378               | 37%             |
| West                                 | 234               | 23%             |

