# CLIMATE CHANGE IN THE AMERICAN MIND

Americans' Global Warming Beliefs and Attitudes in May 2011





George Mason University Center for Climate Change Communication





### Climate Change in the American Mind: Americans' Global Warming Beliefs and Attitudes in May 2011

Interview dates: April 23, 2011 – May 12, 2011 Interviews: 1,010 Adults (18+) Margin of error: +/- 3 percentage points at the 95% confidence level. NOTE: All results show percentages among all respondents, unless otherwise labeled. Totals may occasionally sum to more than 100 percent due to rounding.

This study was conducted by the Yale Project on Climate Change Communication and the George Mason University Center for Climate Change Communication, and was funded by the Surdna Foundation, the 11th Hour Project, and the Grantham Foundation for the Protection of the Environment.

#### **Principal Investigators:**

Anthony Leiserowitz, PhD Yale Project on Climate Change Communication School of Forestry and Environmental Studies, Yale University (203) 432-4865 <u>anthony.leiserowitz@yale.edu</u>

Edward Maibach, MPH, PhD Center for Climate Change Communication Department of Communication, George Mason University (703) 993-1587 <u>emaibach@gmu.edu</u>

Connie Roser-Renouf, PhD Center for Climate Change Communication Department of Communication, George Mason University (707) 825-0601 <u>croserre@gmu.edu</u>

Nicholas Smith, PhD Yale Project on Climate Change Communication School of Forestry and Environmental Studies, Yale University (203) 432-1208 <u>nicholas.smith@yale.edu</u>

Cite as: Leiserowitz, A., Maibach, E., Roser-Renouf, C., & Smith, N. (2011) *Climate change in the American Mind: Americans' global warming beliefs and attitudes in May 2011*. Yale University and George Mason University. New Haven, CT: Yale Project on Climate Change Communication. <u>http://environment.yale.edu/climate/files/ClimateBeliefsMay2011.pdf</u> Q47<sup>1</sup>. 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?

|            | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|------------|----------|-----------|----------|----------|
| Yes        | 64       | 61        | 57       | 71       |
| No         | 18       | 18        | 20       | 10       |
| Don't Know | 18       | 21        | 23       | 19       |

People who answered yes to question 47 (i.e. those who believe global warming is happening) were asked the following question.

Q48. How sure are you that global warming is happening?

|                 | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-----------------|----------|-----------|----------|----------|
| Extremely sure  | 21       | 20        | 24       | 35       |
| Very sure       | 33       | 37        | 35       | 37       |
| Somewhat sure   | 40       | 40        | 37       | 24       |
| Not at all sure | 6        | 3         | 5        | 4        |

People who answered no to question 47 (i.e. those who do not believe global warming is happening) were asked the following question.

Q49. How sure are you that global warming is not happening?

|                 | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-----------------|----------|-----------|----------|----------|
| Extremely sure  | 21       | 20        | 28       | 26       |
| Very sure       | 31       | 31        | 31       | 28       |
| Somewhat sure   | 38       | 44        | 34       | 38       |
| Not at all sure | 11       | 4         | 7        | 8        |

<sup>&</sup>lt;sup>1</sup> Items are listed in the order they were asked despite occasional non-sequential item numbers. Items not shown in this report are being released separately.

Q50. Assuming global warming is happening, do you think it is...

|   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---|----------|-----------|----------|----------|
| Caused mostly by human activities                                 | 47       | 50        | 47       | 57       |
| Caused mostly by natural changes in the environment               | 35       | 34        | 36       | 32       |
| None of the above because global warming isn't happening          | 8        | 6         | 9        | 4        |
| Caused by both human activities and natural changes (volunteered) | 8        | 7         | 6        | 5        |
| Other   | 1        | 1         | 1        | 1        |
| Don't know (volunteered)  | 1        | 1         | 1        | 1        |

Q54. Personally, how well informed do you feel you are about global warming?

|                        | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|------------------------|----------|-----------|----------|----------|
| Very well informed     | 10       | 12        | -        | -        |
| Fairly well informed   | 51       | 49        | -        | -        |
| Not very well informed | 34       | 35        | -        | -        |
| Not at all informed    | 5        | 3         | -        | -        |

Q59. Which comes closer to your own view?

|   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---|----------|-----------|----------|----------|
| Most scientists think global warming is happening   | 39       | 34        | 34       | 47       |
| Most scientists think global warming is not happening   | 4        | 4         | 5        | 3        |
| There is a lot of disagreement among scientists about<br>whether or not global warming is happening | 40       | 45        | 40       | 33       |
| Don't know enough to say  | 18       | 17        | 22       | 18       |

Q30. To the best of your knowledge, what proportion of climate scientists think that global warming is happening?

|                          | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|--------------------------|----------|-----------|----------|----------|
| 81 to 100%               | 13       | -         | -        | -        |
| 61 to 80%                | 19       | -         | -        | -        |
| 41 to 60%                | 23       | -         | -        | -        |
| 21 to 40%                | 12       | -         | -        | -        |
| 0 to 20%                 | 3        | -         | -        | -        |
| Don't know enough to say | 31       | -         | -        | -        |

|                          | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|--------------------------|----------|-----------|----------|----------|
| 81 to 100%               | 15       | -         | -        | -        |
| 61 to 80%                | 18       | -         | -        | -        |
| 41 to 60%                | 18       | -         | -        | -        |
| 21 to 40%                | 12       | -         | -        | -        |
| 0 to 20%                 | 7        | -         | -        | -        |
| Don't know enough to say | 32       | -         | -        | -        |

Q31. To the best of your knowledge, what proportion of climate scientists think that global warming is caused mostly by human activities?

Q60. How worried are you about global warming?

|                    | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|--------------------|----------|-----------|----------|----------|
| Very worried       | 9        | 12        | 12       | 17       |
| Somewhat worried   | 43       | 41        | 38       | 46       |
| Not very worried   | 28       | 30        | 27       | 24       |
| Not at all worried | 20       | 18        | 23       | 13       |

Q62. How much do you think global warming will harm you personally?

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 11       | 10        | 14       | 10       |
| A moderate amount | 18       | 21        | 23       | 22       |
| Only a little     | 28       | 27        | 22       | 24       |
| Not at all        | 25       | 24        | 31       | 22       |
| Don't know        | 18       | 18        | 11       | 23       |

Q63. How much do you think global warming will harm your family?

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 13       | 11        | 15       | 11       |
| A moderate amount | 21       | 25        | 25       | 24       |
| Only a little     | 26       | 24        | 21       | 23       |
| Not at all        | 23       | 21        | 28       | 19       |
| Don't know        | 18       | 19        | 11       | 23       |

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 12       | 11        | 15       | 13       |
| A moderate amount | 22       | 25        | 27       | 26       |
| Only a little     | 26       | 24        | 22       | 20       |
| Not at all        | 22       | 21        | 24       | 17       |
| Don't know        | 18       | 19        | 12       | 23       |

Q64. How much do you think global warming will harm people in your community?

Q65. How much do you think global warming will harm people in the United States?

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 16       | 16        | 22       | 21       |
| A moderate amount | 26       | 28        | 29       | 28       |
| Only a little     | 23       | 22        | 16       | 15       |
| Not at all        | 17       | 17        | 22       | 14       |
| Don't know        | 18       | 18        | 12       | 22       |

Q66. How much do you think global warming will harm people in other modern industrialized countries?

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 17       | 17        | 23       | 22       |
| A moderate amount | 25       | 28        | 29       | 28       |
| Only a little     | 23       | 21        | 16       | 13       |
| Not at all        | 17       | 15        | 19       | 13       |
| Don't know        | 19       | 18        | 13       | 24       |

Q67. How much do you think global warming will harm people in developing countries?

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 23       | 22        | 29       | 31       |
| A moderate amount | 22       | 28        | 25       | 22       |
| Only a little     | 20       | 17        | 14       | 11       |
| Not at all        | 17       | 15        | 19       | 13       |
| Don't know        | 19       | 18        | 13       | 24       |

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 37       | 39        | 42       | 44       |
| A moderate amount | 22       | 22        | 22       | 17       |
| Only a little     | 10       | 11        | 9        | 7        |
| Not at all        | 12       | 12        | 15       | 10       |
| Don't know        | 19       | 16        | 12       | 22       |

Q68. How much do you think global warming will harm future generations of people?

Q69. How much do you think global warming will harm plant and animal species?

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 39       | 40        | 43       | 45       |
| A moderate amount | 19       | 21        | 19       | 17       |
| Only a little     | 12       | 12        | 11       | 8        |
| Not at all        | 13       | 13        | 15       | 9        |
| Don't know        | 18       | 15        | 12       | 20       |

Q69A. How much do you think global warming will harm native plants in your area?

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 25       | -         | -        | -        |
| A moderate amount | 25       | -         | -        | -        |
| Only a little     | 17       | -         | -        | -        |
| Not at all        | 16       | -         | -        | -        |
| Don't know        | 18       | -         | -        | -        |

Q69B. How much do you think global warming will harm wild animals in your area?

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 25       | -         | -        | -        |
| A moderate amount | 23       | -         | -        | -        |
| Only a little     | 18       | -         | -        | -        |
| Not at all        | 16       | -         | -        | -        |
| Don't know        | 18       | -         | -        | -        |

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 26       | -         | -        | -        |
| A moderate amount | 23       | -         | -        | -        |
| Only a little     | 18       | -         | -        | -        |
| Not at all        | 16       | -         | -        | -        |
| Don't know        | 18       | -         | -        | -        |

Q69C. How much do you think global warming will harm wild birds in your area?

Q69D. How much do you think global warming will harm crops in your area?

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 28       | -         | -        | -        |
| A moderate amount | 22       | -         | -        | -        |
| Only a little     | 19       | -         | -        | -        |
| Not at all        | 14       | -         | -        | -        |
| Don't know        | 17       | -         | -        | -        |

Q69E. How much do you think global warming will harm pets in your area?

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 20       | -         | -        | -        |
| A moderate amount | 19       | -         | -        | -        |
| Only a little     | 22       | -         | -        | -        |
| Not at all        | 21       | -         | -        | -        |
| Don't know        | 19       | -         | -        | -        |

Q69F. How much do you think global warming will harm people's private property (e.g., homes, cars, boats) in your area?

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 11       | -         | -        | -        |
| A moderate amount | 18       | -         | -        | -        |
| Only a little     | 25       | -         | -        | -        |
| Not at all        | 27       | -         | -        | -        |
| Don't know        | 20       | -         | -        | -        |

Q69G. How much do you think global warming will harm public property (e.g., roads, schools, sewer systems and public buildings) in your area?

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 13       | -         | -        | -        |
| A moderate amount | 20       | -         | -        | -        |
| Only a little     | 22       | -         | -        | -        |
| Not at all        | 25       | -         | -        | -        |
| Don't know        | 20       | -         | -        | -        |

Q69H. How much do you think global warming will harm outdoor recreational places (e.g., parks, beaches, lakes, rivers, forests) in your area?

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| A great deal      | 20       | -         | -        | -        |
| A moderate amount | 24       | -         | -        | -        |
| Only a little     | 20       | -         | -        | -        |
| Not at all        | 18       | -         | -        | -        |
| Don't know        | 19       | -         | -        | -        |

Q70. When do you think global warming will start to harm people in the United States?

|                           | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---------------------------|----------|-----------|----------|----------|
| They are being harmed now | 32       | 29        | 25       | 34       |
| In 10 years               | 12       | 12        | 12       | 13       |
| In 25 years               | 13       | 12        | 14       | 13       |
| In 50 years               | 12       | 13        | 13       | 13       |
| In 100 years              | 11       | 15        | 13       | 12       |
| Never                     | 20       | 19        | 23       | 15       |

Q71. When do you think global warming will start to harm other people around the world?

|                           | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---------------------------|----------|-----------|----------|----------|
| They are being harmed now | 34       | 32        | 28       | 38       |
| In 10 years               | 12       | 11        | 13       | 13       |
| In 25 years               | 12       | 13        | 12       | 12       |
| In 50 years               | 12       | 12        | 12       | 12       |
| In 100 years              | 11       | 13        | 13       | 11       |
| Never                     | 19       | 18        | 22       | 14       |

Q61. How concerned are you about the impact of global warming on your health? (Measured on a scale from 1-7, with one being "not at all concerned" and seven being "extremely concerned".

|                             | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-----------------------------|----------|-----------|----------|----------|
| Seven (Extremely concerned) | 11       | 8         | 7        | -        |
| Six                         | 8        | 9         | 7        | -        |
| Five                        | 14       | 14        | 14       | -        |
| Four                        | 18       | 22        | 17       | -        |
| Three                       | 13       | 9         | 12       | -        |
| Two                         | 13       | 14        | 13       | -        |
| One (Not at all concerned)  | 25       | 25        | 29       | -        |

Q61A. How concerned are you about the impact of global warming on the health of other Americans?

|                             | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-----------------------------|----------|-----------|----------|----------|
| Seven (Extremely concerned) | 11       | -         | -        | -        |
| Six                         | 8        | -         | -        | -        |
| Five                        | 15       | -         | -        | -        |
| Four                        | 17       | -         | -        | -        |
| Three                       | 12       | -         | -        | -        |
| Two                         | 13       | -         | -        | -        |
| One (Not at all concerned)  | 24       | -         | -        | -        |

Q61B – Q61J. In the United States over the next 20 years, do you think global warming will cause more or less of the following, if nothing is done to address it:

Deaths and injuries from hurricanes

|               | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---------------|----------|-----------|----------|----------|
| Many more     | 30       | -         | -        | -        |
| A few more    | 25       | -         | -        | -        |
| No difference | 23       |           |          |          |
| A few less    | 1        | -         | -        | -        |
| Many less     | 2        | -         | -        | -        |
| Don't know    | 20       | -         | -        | -        |

Deaths and injuries from floods

|               | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---------------|----------|-----------|----------|----------|
| Many more     | 31       | -         | -        | -        |
| A few more    | 24       | -         | -        | -        |
| No difference | 24       |           |          |          |
| A few less    | 1        | -         | -        | -        |
| Many less     | 2        | -         | -        | -        |
| Don't know    | 18       | -         | -        | -        |

Deaths and injuries from severe winter storms

|               | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---------------|----------|-----------|----------|----------|
| Many more     | 29       | -         | -        | -        |
| A few more    | 24       | -         | -        | -        |
| No difference | 25       |           |          |          |
| A few less    | 1        | -         | -        | -        |
| Many less     | 2        | -         | -        | -        |
| Don't know    | 19       | -         | -        | -        |

Asthma and other diseases of the lungs

|               | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---------------|----------|-----------|----------|----------|
| Many more     | 24       | -         | -        | -        |
| A few more    | 23       | -         | -        | -        |
| No difference | 27       |           |          |          |
| A few less    | 2        | -         | -        | -        |
| Many less     | 2        | -         | -        | -        |
| Don't know    | 22       | -         | -        | -        |

Cholera and other diseases carried by infected water

|               | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---------------|----------|-----------|----------|----------|
| Many more     | 21       | -         | -        | -        |
| A few more    | 22       | -         | -        | -        |
| No difference | 31       |           |          |          |
| A few less    | 2        | -         | -        | -        |
| Many less     | 2        | -         | -        | -        |
| Don't know    | 22       | -         | -        | -        |

|               | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---------------|----------|-----------|----------|----------|
| Many more     | 21       | -         | -        | -        |
| A few more    | 24       | -         | -        | -        |
| No difference | 29       |           |          |          |
| A few less    | 1        | -         | -        | -        |
| Many less     | 2        | -         | -        | -        |
| Don't know    | 22       | -         | -        | -        |

Diseases carried by insects, such as Lyme disease, West Nile virus and dengue fever

#### Heat stroke

|               | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---------------|----------|-----------|----------|----------|
| Many more     | 26       | -         | -        | -        |
| A few more    | 27       | -         | -        | -        |
| No difference | 25       |           |          |          |
| A few less    | 1        | -         | -        | -        |
| Many less     | 2        | -         | -        | -        |
| Don't know    | 20       | -         | -        | -        |

Deaths and injuries from wildfires

|               | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---------------|----------|-----------|----------|----------|
| Many more     | 26       | -         | -        | -        |
| A few more    | 28       | -         | -        | -        |
| No difference | 25       |           |          |          |
| A few less    | 1        | -         | -        | -        |
| Many less     | 2        | -         | -        | -        |
| Don't know    | 18       | -         | -        | -        |

Increased malnutrition as a result of spikes in food prices

|               | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---------------|----------|-----------|----------|----------|
| Many more     | 27       | -         | -        | -        |
| A few more    | 23       | -         | -        | -        |
| No difference | 26       |           |          |          |
| A few less    | 2        | -         | -        | -        |
| Many less     | 2        | -         | -        | -        |
| Don't know    | 21       | -         | -        | -        |

Q62A – Q62F. Some people say that global warming is already impacting the United States. Do you agree or disagree that global warming is already causing or making the following things worse, or do you not know?

Rivers flooding

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 17       | -         | -        | -        |
| Somewhat agree    | 31       | -         | -        | -        |
| Somewhat disagree | 14       | -         | -        | -        |
| Strongly disagree | 14       | -         | -        | -        |
| Don't know        | 25       | -         | -        | -        |

Coastline erosion and flooding

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 17       | -         | -        | -        |
| Somewhat agree    | 35       | -         | -        | -        |
| Somewhat disagree | 12       | -         | -        | -        |
| Strongly disagree | 14       | -         | -        | -        |
| Don't know        | 23       | -         | -        | -        |

#### Wildfires

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 17       | -         | -        | -        |
| Somewhat agree    | 28       | -         | -        | -        |
| Somewhat disagree | 16       | -         | -        | -        |
| Strongly disagree | 15       | -         | -        | -        |
| Don't know        | 25       | -         | -        | -        |

#### Hurricanes

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 19       | -         | -        | -        |
| Somewhat agree    | 30       | -         | -        | -        |
| Somewhat disagree | 14       | -         | -        | -        |
| Strongly disagree | 14       | -         | -        | -        |
| Don't know        | 23       | -         | -        | -        |

Droughts

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 19       | -         | -        | -        |
| Somewhat agree    | 31       | -         | -        | -        |
| Somewhat disagree | 13       | -         | -        | -        |
| Strongly disagree | 14       | -         | -        | -        |
| Don't know        | 23       | -         | -        | -        |

Damage from pine-bark beetles

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 9        | -         | -        | -        |
| Somewhat agree    | 17       | -         | -        | -        |
| Somewhat disagree | 15       | -         | -        | -        |
| Strongly disagree | 14       | -         | -        | -        |
| Don't know        | 46       | -         | -        | -        |

Q72. How much had you thought about global warming before today?

|            | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|------------|----------|-----------|----------|----------|
| A lot      | 12       | 18        | 15       | 20       |
| Some       | 33       | 37        | 31       | 35       |
| A little   | 38       | 32        | 36       | 33       |
| Not at all | 16       | 13        | 18       | 12       |

Q73. How important is the issue of global warming to you personally?

|                      | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|----------------------|----------|-----------|----------|----------|
| Extremely important  | 7        | 6         | 5        | 11       |
| Very important       | 15       | 18        | 15       | 21       |
| Somewhat important   | 38       | 39        | 38       | 40       |
| Not too important    | 25       | 24        | 23       | 18       |
| Not at all important | 14       | 14        | 20       | 11       |

Q74. 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?

|                                    | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|------------------------------------|----------|-----------|----------|----------|
| I need a lot more information      | 22       | 20        | 22       | 30       |
| I need some more information       | 30       | 27        | 23       | 30       |
| I need a little more information   | 25       | 29        | 26       | 22       |
| I do not need any more information | 23       | 24        | 29       | 18       |

Q75. How much do you agree or disagree with the following statement? "I could easily change my mind about global warming."

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 6        | 5         | 5        | 5        |
| Somewhat agree    | 32       | 32        | 30       | 28       |
| Somewhat disagree | 33       | 36        | 31       | 34       |
| Strongly disagree | 29       | 27        | 34       | 34       |

Q135. Which of the following statements comes closest to your view?

|   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|---|----------|-----------|----------|----------|
| Humans can reduce global warming, and we are going to do so successfully                                      | 5        | 5         | 10       | 6        |
| Humans could reduce global warming, but it's unclear at<br>this point whether we will do what's needed        | 41       | 47        | 45       | 51       |
| Humans could reduce global warming, but people aren't willing to change their behavior, so we're not going to | 25       | 21        | 17       | 22       |
| Humans can't reduce global warming, even if it is happening   | 18       | 18        | 15       | 16       |
| Global warming isn't happening  | 11       | 10        | 13       | 5        |

## Q161. How much do you trust or distrust the following as a source of information about global warming?

Television weather reporters

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly trust    | 5        | 5         | 5        | 6        |
| Somewhat trust    | 47       | 56        | 51       | 60       |
| Somewhat distrust | 34       | 28        | 30       | 25       |
| Strongly distrust | 14       | 11        | 14       | 10       |

The mainstream news media

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly trust    | 4        | 3         | 3        | 4        |
| Somewhat trust    | 34       | 42        | 33       | 43       |
| Somewhat distrust | 37       | 34        | 35       | 33       |
| Strongly distrust | 25       | 22        | 29       | 20       |

Scientists

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly trust    | 21       | 26        | 22       | 28       |
| Somewhat trust    | 55       | 55        | 52       | 54       |
| Somewhat distrust | 19       | 15        | 19       | 14       |
| Strongly distrust | 5        | 4         | 7        | 4        |

President Obama

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly trust    | 11       | -         | 16       | 13       |
| Somewhat trust    | 35       | -         | 35       | 38       |
| Somewhat distrust | 24       | -         | 21       | 23       |
| Strongly distrust | 30       | -         | 28       | 26       |

#### Your U.S. Congressman/Congresswoman

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly trust    | 2        | -         | -        | -        |
| Somewhat trust    | 34       | -         | -        | -        |
| Somewhat distrust | 39       | -         | -        | -        |
| Strongly distrust | 24       | -         | -        | -        |

The U.S. Environmental Protection Agency (EPA)

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly trust    | 15       | -         | -        | -        |
| Somewhat trust    | 47       | -         | -        | -        |
| Somewhat distrust | 26       | -         | -        | -        |
| Strongly distrust | 12       | -         | -        | -        |

The U.S. Department of Energy (DOE)

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly trust    | 11       | -         | -        | -        |
| Somewhat trust    | 48       | -         | -        | -        |
| Somewhat distrust | 28       | -         | -        | -        |
| Strongly distrust | 13       | _         | -        | -        |

The U.S. Centers for Disease Control & Prevention (CDC)

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly trust    | 14       | -         | -        | -        |
| Somewhat trust    | 55       | -         | -        | -        |
| Somewhat distrust | 23       | -         | -        | -        |
| Strongly distrust | 8        | -         | -        | -        |

The National Oceanic and Atmospheric Administration (NOAA)

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly trust    | 22       | -         | -        | -        |
| Somewhat trust    | 54       | -         | -        | -        |
| Somewhat distrust | 18       | -         | -        | -        |
| Strongly distrust | 6        | -         | -        | -        |

The National Park Service

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly trust    | 12       | -         | -        | -        |
| Somewhat trust    | 61       | -         | -        | -        |
| Somewhat distrust | 20       | -         | -        | -        |
| Strongly distrust | 6        | -         | -        | -        |

Q235. The actions of a single individual won't make any difference in global warming.

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 15       | 13        | 17       | 9        |
| Somewhat agree    | 31       | 29        | 29       | 22       |
| Somewhat disagree | 36       | 43        | 37       | 45       |
| Strongly disagree | 19       | 15        | 17       | 24       |

Q237. New technologies can solve global warming, without individuals having to make big changes in their lives.

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 7        | 6         | 6        | 4        |
| Somewhat agree    | 40       | 33        | 42       | 26       |
| Somewhat disagree | 33       | 40        | 33       | 46       |
| Strongly disagree | 21       | 21        | 19       | 25       |

Q238. Most of my friends are trying to act in ways that reduce global warming.

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 4        | 5         | 5        | 4        |
| Somewhat agree    | 41       | 47        | 43       | 44       |
| Somewhat disagree | 38       | 36        | 37       | 40       |
| Strongly disagree | 18       | 12        | 14       | 11       |

Q238A. With the economy in such bad shape, the US can't afford to reduce global warming.

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 15       | 13        | -        | -        |
| Somewhat agree    | 37       | 30        | -        | -        |
| Somewhat disagree | 33       | 42        | -        | -        |
| Strongly disagree | 16       | 15        | -        | -        |

Q238B. The record heat waves last summer in the United States strengthened my belief that global warming is occurring.

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 13       | -         | -        | -        |
| Somewhat agree    | 41       | -         | -        | -        |
| Somewhat disagree | 26       | -         | -        | -        |
| Strongly disagree | 20       | -         | -        | -        |

Q238C. The record snowstorms this winter in the eastern United States make me question whether global warming is occurring.

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 13       | 17        | -        | -        |
| Somewhat agree    | 34       | 35        | -        | -        |
| Somewhat disagree | 30       | 29        | -        | -        |
| Strongly disagree | 24       | 20        | -        | -        |

|                   | May 2011 | June 2010 | Jan 2010 | Nov 2008 |
|-------------------|----------|-----------|----------|----------|
| Strongly agree    | 5        | 5         | 5        | 4        |
| Somewhat agree    | 29       | 25        | 21       | 29       |
| Somewhat disagree | 34       | 35        | 35       | 43       |
| Strongly disagree | 32       | 35        | 40       | 24       |

Q236. I have personally experienced the effects of global warming.

#### Methodology

These results come from nationally representative surveys of American adults, aged 18 and older. The samples were weighted to correspond with US Census Bureau parameters for the United States. The surveys were designed by Anthony Leiserowitz of Yale University and Edward Maibach and Connie Roser-Renouf of George Mason University and conducted by Knowledge Networks, using an online research panel of American adults.

- May 2011: Fielded April 23 through May 12 with 1,010 American adults. The margin of sampling error is plus or minus 3 percent, with 95 percent confidence.
- June 2010: Fielded May 14 through June 1 with 1,024 American adults. The margin of sampling error is plus or minus 3 percent, with 95 percent confidence.
- 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 percent, with 95 percent confidence.
- 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 percent, with 95 percent confidence.