CLIMATE CHANGE IN THE AMERICAN MIND

Americans' Global Warming Beliefs and Attitudes in September 2012





George Mason University Center for Climate Change Communication

Table of Contents

E	xecutive Summary	3
1.	Climate Change Beliefs A growing majority of Americans believe global warming is happening Those who believe global warming is happening are more certain than those who do not A new majority believes global warming is human caused More Americans believe scientists agree global warming is happening	4 5 6
2.	Perceived Threat More are "very worried" about global warming Global warming still seen as a relatively distant threat However, Americans increasingly perceive global warming as a growing threat to themselves, their families, and their local communities Global warming is also perceived as a growing threat to others Global warming also perceived as a growing threat to future generations and other species More say global warming is harming people now	8 9 10 11 12
	Need for More Information Fewer Americans say they could easily change their mind about global warming Fewer Americans say they need more information about global warming Trust Climate scientists are Americans' most trusted source of information	14 15 16
Aj	ppendix I: Data Tables	17
Aj	ppendix II: Survey Method	28
Aj	ppendix III: Sample Demographics	29





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: August 31, 2012 – September 12, 2012. Interviews: 1,061 Adults (18+). Total average margin of error: +/- 3 percentage points at the 95% confidence level. The study was funded by the Surdna Foundation, the 11th Hour Project, the Grantham Foundation, and the V.K. Rasmussen Foundation.

Principal Investigators:

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

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

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

Geoff Feinberg Yale Project on Climate Change Communication School of Forestry & Environmental Studies Yale University (203) 432-7438 geoffrey.feinberg@yale.edu

Peter Howe, PhD Yale Project on Climate Change Communication School of Forestry & Environmental Studies Yale University peter.howe@yale.edu

Cite as: Leiserowitz, A., Maibach, E., Roser-Renouf, C., Feinberg, G., & Howe, P. (2012) *Climate change in the American mind: Americans' global warming beliefs and attitudes in September, 2012.* Yale University and George Mason University. New Haven, CT: Yale Project on Climate Change Communication. http://environment.yale.edu/climate/files/Climate-Beliefs-September-2012.pdf





Executive Summary

- Americans' belief in the reality of global warming has increased by 13 percentage points over the past two and a half years, from 57 percent in January 2010 to 70 percent in September 2012.
- At the same time, the number of Americans who say global warming is not happening has declined nearly by half, from 20 percent in January 2010 to 12 percent today.
- Those who believe global warming is happening are more certain than those who do not. Over half of Americans who believe global warming is happening (57%) say they are "very" (30%) or "extremely sure" (27%).
- By contrast, for the first time since 2008, fewer than 50 percent of the unconvinced are very (27%) or extremely sure of their view (15%), a decrease of 15 percentage points since March 2012.
- For the first time since 2008, more than half of Americans (54%) believe global warming is caused mostly by human activities, an increase of 8 points since March 2012. The proportion of Americans who say it is caused mostly by natural changes in the environment has declined to 30 percent (from 37% in March).
- For the first time since November 2008, Americans are more likely to believe most scientists agree that global warming is happening than believe there is disagreement on the subject (44% versus 36%, respectively). This is an increase of 9 points since March 2012.
- Today over half of Americans (58%) say they are "somewhat" or "very worried" now at its highest level since November 2008.
- Americans increasingly perceive global warming as a threat to themselves (42%, up 13 points since March 2012), their families (46%, up 13 points), and/or people in their communities (48%, up 14 percentage points).
- Global warming is also perceived as a growing threat to people in the United States (57%, up 11 points since March 2012), in other modern industrialized countries (57%, up 8 points since March), and in developing countries (64%, up 12 points since March).
- A growing number of Americans believe global warming is already harming people both at home and abroad. Four in ten say people around the world are being harmed *right now* by climate change (40%, up 8 percentage points since March 2012), while 36 percent say global warming is currently harming people in the United States (up 6 points since March).
- Three out of four Americans (76%) say they trust climate scientists as a source of information about global warming, making them the most trusted source asked about in the survey. Scientists (who do not specialize in climate) are also trusted by a majority of Americans (67%), as are TV weather reporters (60%).





4

1. Climate Change Beliefs

A growing majority of Americans believe global warming is happening.

Seven in ten Americans (70%) believe global warming is happening. Relatively few – only 12 percent – believe it is not.

Americans' belief in the reality of global warming has increased by 13 percentage points over the past two and a half years, from 57 percent in January 2010 to 70 percent in September 2012. At the same time, the number of Americans who say global warming is not happening has declined nearly by half, from 20 percent in January 2010 to 12 percent today.

Additional analysis is required to determine why Americans increasingly believe that global warming is happening, but it is likely due to a number of factors, including the record number of extreme weather events that have occurred over the past two years, including heat waves, widespread drought, floods, wildfires, and violent storms. Indeed, our *Extreme Weather and Climate Change in the American Mind* report (September 2012) found that more Americans think the weather in the United States is getting worse.







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

Over half of Americans who believe global warming is happening (57%) say they are "very" (30%) or "extremely sure" (27%), an increase of 4 percentage points since our last survey in March 2012. More specifically, those Americans who say they are "extremely sure" global warming is happening increased by 8 percentage points since last March.

By contrast, however, some of those who do *not* believe global warming is happening have become less convinced: For the first time since 2008, fewer than 50 percent of the unconvinced are very (27%) or extremely sure of their view (15%), a decrease of 15 percentage points since our last survey.







A new majority believes global warming is human caused.

For the first time since 2008, a more than half of Americans (54%) believe global warming – if it is happening – is caused mostly by human activities, an increase of 8 points since March 2012.

Several years ago, the proportion of Americans holding this belief fell sharply (down 10 points from 57% in November 2008 to 47% in January 2010), but has risen back to near-2008 levels in the past six months (from 46% in March up to 54% today).

At the same time, belief that global warming is due mostly to natural changes in the environment is at its lowest level since our tracking surveys began (30%).







More Americans believe scientists agree global warming is happening.

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

Understanding of scientific agreement about the existence of global warming today appears to be on the rise. For the first time since 2008, Americans are more likely to believe most scientists agree that global warming is happening than believe there is widespread disagreement on the subject (44% versus 36%, respectively). This is an increase of 9 percentage points since March 2012.

This finding reverses a prior trend, in which Americans were more likely to believe scientists disagreed than agreed about the phenomenon.







2. Perceived Threat

More Americans are "very worried" about global warming.

Today over half of Americans (58%) say they are "somewhat" or "very worried" about global warming, and the number who say they are "very worried" has risen 5 percentage points over the past six months, from 11 percent in March to 16 percent in September 2012.

The number of Americans worried about global warming – in total and those "very worried" – is now at its highest level since November 2008.







Global warming 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 primarily 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 (42%) believe they personally will be harmed a "moderate amount" or a "great deal". By contrast, over half believe that global warming will harm future generations of people (68%), plant and animal species (68%), people in developing countries (64%), people in the U.S. (57%), and people in other industrialized societies (57%).







However, Americans increasingly perceive global warming as a growing threat to themselves, their families, and local communities.

A growing number of Americans say they or someone near them will be personally harmed by global warming. More than four out of ten now say global warming will harm themselves (42%, up 13 points since March 2012), their family (46%, up 13 points), and/or people in their community (48%, up 14 percentage points).







Global warming is also perceived as a growing threat to others.

Americans are also increasingly think that global warming will harm people in the United States (57%, up 11 points since March 2012), in other modern industrialized countries (57%, up 8 points since March), and in developing countries (64%, up 12 points since March).







Global warming also perceived as a growing 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 (68%, up 3 points since March 2012) and/or to plant and animal species (68%, up 4 points since March).







More Americans say global warming is harming people now.

A growing number 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 (40%, up 8 percentage points since March, 2012), while 36 percent say global warming is currently harming people in the United States (up 6 points since March).







3. Need for More Information

Fewer Americans say they could easily change their mind about global warming.

Only three in ten Americans (32%) agree that they could easily change their mind about global warming, a 6-point drop since March 2012.







Fewer Americans say they need more information about global warming.

Over the past year and a half, a growing number of Americans say they have all the information they need to form a firm opinion about global warming, from 23 percent in May 2011, to 30 percent today.

In the same time period, the number who say they need "some" or "a lot more" information on the subject declined 7 percentage points, from 52 percent in May, 2011, to 45 percent today. These findings suggest that more people are making up their minds about global warming.

Nonetheless, a solid majority of Americans – 70 percent – say they would like at least a "little more" information about the subject.







Climate scientists are Americans' most trusted source of information.

Three out of four Americans (76%) say they trust climate scientists as a source of information about global warming, making them the most trusted source asked about in the survey. Scientists (who do not specialize in climate) are also trusted by a majority of Americans (67%), as are TV weather reporters (60%).

President Obama is trusted by 51 percent of Americans, Mitt Romney by 29 percent, and the mainstream news media by 37 percent. Note, however, that the survey was conducted prior to the Presidential debates, and that the numbers for Obama and Romney may have changed since the survey was conducted.







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?

	Sept	March	Nov	May	June	Jan	Nov
	2012	2012	2011	2011	2010	2010	2008
(Unweighted base)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%
Yes	70	66	63	64	61	57	71
No	12	14	17	18	18	20	10
Don't know	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	March	Nov	May	June	Jan	Nov
	2012	2012	2011	2011	2010	2010	2008
(Unweighted base)	(722)	(658)	(619)	(614)	(622)	(558)	(1,745)
	%	%	%	%	%	%	%
Extremely sure	27	19	22	21	20	24	35
Very sure	30	34	35	33	37	35	37
Somewhat sure	40	42	39	40	40	37	24
Not at all sure	3	5	5	6	3	5	4

(Base: Americans 18+ who say global warming is <u>not</u> happening) How sure are you that global warming is not happening?

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





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

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

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

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





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

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

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

You personally

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

Your family

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





People in your community

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

(Base: Americans 18+)

How much do you think global warming will harm ...? (Cont'd.)

People in the United States

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

People in other modern industrialized countries

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





People in developing countries

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

(Base: Americans 18+)

How much do you think global warming will harm ...? (Cont'd.)

Future generations of people

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

Plant and animal species

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

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

People around the world

	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%
They are being harmed now	40	32	35	34	32	28	38
In 10 years	11	12	9	12	11	13	13
In 25 years	10	14	14	12	13	12	12
In 50 years	12	13	13	12	12	12	12
In 100 years	12	14	14	11	13	13	11
Never	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

	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%
Strongly agree	3	3	4	6	5	5	5
Somewhat agree	29	35	34	32	32	30	28
Somewhat disagree	40	36	36	33	36	31	34
Strongly disagree	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?

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

(Base: Americans 18+)

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

Television weather reporters

	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%
Strongly trust	6	6	6	5	5	5	6
Somewhat trust	54	56	52	47	56	51	60
Somewhat distrust	29	25	30	34	28	30	25
Strongly distrust	9	13	12	14	11	14	10

The mainstream news media

	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%
Strongly trust	2	3	2	4	3	3	3
Somewhat trust	35	40	36	34	42	33	43
Somewhat distrust	36	31	40	37	34	35	33
Strongly distrust	24	26	22	25	22	29	20





(Base: Americans 18+) How much do you trust or distrust the following as a source of information about global warming? (Cont'd.)

Climate scientists

	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%
Strongly trust	25	22	24	-	-	-	-
Somewhat trust	51	52	50	-	-	-	-
Somewhat distrust	13	17	19	-	-	-	-
Strongly distrust	6	9	8	-	-	-	-

Other kinds of scientists (that is, not climate scientists)

	Sept	March	Nov	May	June	Jan	Nov
	2012	2012	2011	2011	2010	2010	2008
(Unweighted base)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%
Strongly trust	10	9	8	-	-	-	-
Somewhat trust	57	56	57	-	-	-	-
Somewhat distrust	23	27	28	-	-	-	-
Strongly distrust	6	8	7	-	-	-	-

President Obama

	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	⁰∕₀
Strongly trust	14	12	10	11	-	16	13
Somewhat trust	37	35	38	35	-	35	38
Somewhat distrust	20	23	26	24	-	21	23
Strongly distrust	26	30	26	30	-	28	26

Mitt Romney

	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%
Strongly trust	4	2	2	-	-	-	-
Somewhat trust	25	19	24	-	-	-	-
Somewhat distrust	32	39	44	-	-	-	-
Strongly distrust	36	39	31	-	-	-	-





Other questions

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

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

(Base: Americans 18+)

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

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

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

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

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

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

	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%
Strongly agree	4	4	3	4	5	5	4
Somewhat agree	38	41	43	41	47	43	44
Somewhat disagree	38	38	40	38	36	37	40
Strongly disagree	17	17	14	18	12	14	11

I have personally experienced the effects of global warming

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





(Unweighted base)	Sept 2012 (1,061) %	March 2012 (1,008) %	Nov 2011 (1,000) %	May 2011 (1,010) %	June 2010 (1,024) %	Jan 2010 (1,001) %	Nov 2008 (2,164) %
Humans can reduce global warming, and we are going to do so successfully	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	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	22	21	25	25	21	17	22
Humans can't reduce global warming, even if it is happening	15	20	15	18	18	15	16
Global warming isn't happening	8	9	10	11	10	13	5

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





Appendix II: Survey Method

The data in this report are based on a nationally representative survey of 1,061 American adults, aged 18 and older, conducted from August 31 – September 12, 2012. All questionnaires were self-administered by respondents in a web-based environment. The survey took, on average, about 25 minutes to complete.

The sample was drawn from Knowledge Networks's KnowledgePanel[®], 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:

- 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

Total(unweighted) 1,061(weighted)Total1,061100Sex \cdot Men54748Women51452Age \cdot Generation Y (18-29)16521Generation X (30-47)28530Baby Boomers (48-66)42035WWII (67+)1015Education \cdot Less than high school7312High school graduate30230Some college/tech31929College graduate14811Household Income \cdot <\$25K16319\$25K - <\$50K24523\$50K - <\$75K21719\$75K - <\$100K16515\$100K - <\$175K22619\$175K+454Hispanic \cdot \cdot Yets15214Race/Ethnicity \cdot \cdot White, non-Hispanic12312Other non-Hispanic656Region \cdot 19418Midwest239215South3803636West24823 \cdot		Ν	%
Sex 547 48 Men 547 48 Women 514 52 Age \cdot \cdot Generation Y (18-29) 165 21 Generation X (30-47) 285 30 Baby Boomers (48-66) 420 35 WWII (67+) 10 15 Education \cdot \cdot Less than high school 73 12 High school graduate 302 30 Some college/tech 319 29 College graduate 148 11 Household Income \cdot \cdot <\$25K <\$50K 245 23 \$50K - <\$75K 217 19 $$75K - <$100K$ 165 15 \$100K - <\$175K 226 19 $$175K + 45 4 Hispanic \cdot Yes 152 14 Mace/Ethnicity \cdot \cdot 123 12 Other non-Hispanic 65 $			· · · ·
Men 547 48 Women 514 52 Age		1,061	100
Women 514 52 Age			
AgeGeneration Y (18-29)16521Generation X (30-47)28530Baby Boomers (48-66)42035WWII (67+)1015Education 10 15Education 10 15Education 10 15Less than high school7312High school graduate30230Some college/tech31929College graduate21918Post graduate14811Household Income 163 19 $\$25K - <\$50K$ 24523 $\$50K - <\$75K$ 21719 $\$75K - <\$100K$ 16515 $\$100K - <\$175K$ 22619 $\$175K +$ 454Hispanic70767Yes15214Race/Ethnicity V 123 White, non-Hispanic12312Other non-Hispanic656Region V 194 18Midwest23921South38036			
Generation Y (18-29)16521Generation X (30-47)28530Baby Boomers (48-66)42035WWII (67+)1015EducationLess than high school7312High school graduate30230Some college/tech31929College graduate21918Post graduate14811Household Income<\$25K		514	52
Generation X (30-47)28530Baby Boomers (48-66)42035WWII (67+)1015Education 10 15Less than high school7312High school graduate30230Some college/tech31929College graduate21918Post graduate14811Household Income 426 23 $\leq 25K$ 16319 $\leq 25K$ 24523 $\leq 50K$ 24523 $\leq 50K$ 24523 $\leq 50K$ 24515 $\leq 100K$ 16515 $\$100K - <\$175K$ 22619 $\$175K+$ 454Hispanic70767Yes15214Race/Ethnicity 103 12White, non-Hispanic12312Other non-Hispanic656Region 194 18Midwest23921South38036			
Baby Boomers (48-66)42035WWII (67+)1015Education 10 15Less than high school7312High school graduate30230Some college/tech31929College graduate21918Post graduate14811Household Income 163 19 $\leq 25K$ 16319 $\leq 25K$ 24523 $\leq 50K$ 24523 $\leq 50K$ 24515 $\leq 100K$ 16515 $\leqslant 100K - < \$175K$ 22619 $\$175K+$ 454Hispanic 707 67Yes15214Race/Ethnicity V 123White, non-Hispanic656Region656Northeast19418Midwest23921South38036			
WWII (67+)1015Education 73 12High school graduate 302 30 Some college/tech 319 29 College graduate 219 18 Post graduate 148 11 Household Income 163 19 $<$25K$ 163 19 $$25K - <$50K$ 245 23 $$50K - <$75K$ 217 19 $$75K - <$100K$ 165 15 $$100K - <$175K$ 226 19 $$175K + 45$ 45 4 Hispanic 707 67 Black, African-American non-Hispanic 123 12 Other non-Hispanic 65 6 Region V 194 18 Midwest 239 21 380 South 380 36 36	Generation X (30-47)	285	30
EducationLess than high school7312High school graduate 302 30 Some college/tech 319 29 College graduate 219 18 Post graduate 148 11 Household Income $<$25K$	Baby Boomers (48-66)	420	35
Less than high school7312High school graduate 302 30 Some college/tech 319 29 College graduate 219 18 Post graduate 148 11 Household Income<\$25K	WWII (67+)	10	15
High school graduate 302 30 Some college/tech 319 29 College graduate 219 18 Post graduate 148 11 Household Income<\$25K	Education		
Some college/tech 319 29 College graduate 219 18 Post graduate 148 11 Household Income $<$25K$ 163 19 \$25K - $<$50K$ 245 23 \$50K - $<$75K$ 217 19 \$75K - $<$100K$ 165 15 \$100K - $<$175K$ 226 19 \$175K+ 45 4 HispanicYes 152 14 Race/EthnicityWhite, non-Hispanic 707 67 Black, African-American non-Hispanic 123 12 Other non-Hispanic 65 6 Region 194 18 Midwest 239 21 South 380 36	Less than high school	73	12
College graduate21918Post graduate14811Household Income $<$ \$25K16319\$25K - <\$50K	High school graduate	302	30
Post graduate 148 11 Host graduate 148 11 Host graduate 163 19 \$25K - \$\$50K 245 23 \$50K - \$\$75K 217 19 \$75K - \$\$100K 165 15 \$100K - \$\$175K 226 19 \$175K+ 45 4 Hispanic Yes 152 14 Race/Ethnicity White, non-Hispanic 707 67 Black, African-American non-Hispanic 123 12 Other non-Hispanic 65 6 Northeast 194 18 Midwest 239 21 380 36	Some college/tech	319	29
Household Income $<$ \$25K16319 $$$ \$25K - $<$ \$50K24523 $$$ \$50K - $<$ \$75K21719 $$$ \$75K - $<$ \$100K16515 $$$ 100K - $<$ \$175K22619 $$$ \$175K+454HispanicYes15214Race/EthnicityWhite, non-Hispanic70767Black, African-American non-Hispanic12312Other non-Hispanic656RegionNortheast19418Midwest23921South38036	College graduate	219	18
<\$25K	Post graduate	148	11
$\begin{array}{ccccc} \$ 25 \mathrm{K} & < \$ 50 \mathrm{K} & & 245 & & 23 \\ \$ 50 \mathrm{K} & < \$ 75 \mathrm{K} & & 217 & & 19 \\ \$ 75 \mathrm{K} & < \$ 100 \mathrm{K} & & 165 & & 15 \\ \$ 100 \mathrm{K} & < \$ 175 \mathrm{K} & & 226 & & 19 \\ \$ 175 \mathrm{K} & & & 45 & & 4 \\ \hline \mathbf{Hispanic} & & & & \\ \hline \mathrm{Yes} & & & 152 & & 14 \\ \hline \mathbf{Race/Ethnicity} & & & & \\ \hline \mathrm{White, non-Hispanic} & & & 707 & & 67 \\ \mathrm{Black, African-American non-Hispanic} & & & 707 & & 67 \\ \mathrm{Black, African-American non-Hispanic} & & & 123 & & 12 \\ \mathrm{Other non-Hispanic} & & & & 65 & & 6 \\ \hline \mathbf{Region} & & & & \\ \hline \mathrm{Northeast} & & & 194 & & 18 \\ \mathrm{Midwest} & & & & 239 & & 21 \\ \mathrm{South} & & & & 380 & & 36 \\ \hline \end{array}$	Household Income		
	<\$25K	163	19
\$75K - <\$100K16515 $$100K - <$175K$ 22619 $$175K +$ 454HispanicYes15214Race/EthnicityWhite, non-Hispanic70767Black, African-American non-Hispanic12312Other non-Hispanic656RegionNortheast19418Midwest23921South38036	\$25K - <\$50K	245	23
\$100K - <\$175K	\$50K - <\$75K	217	19
\$175K+ 45 4 Hispanic 152 14 Yes 152 14 Race/Ethnicity 707 67 Black, African-American non-Hispanic 123 12 Other non-Hispanic 65 6 Region 194 18 Midwest 239 21 South 380 36	\$75K - <\$100K	165	15
HispanicYes15214Race/EthnicityWhite, non-Hispanic70767Black, African-American non-Hispanic12312Other non-Hispanic656RegionNortheast19418Midwest23921South38036	\$100K - <\$175K	226	19
Yes15214Race/Ethnicity70767White, non-Hispanic70767Black, African-American non-Hispanic12312Other non-Hispanic656RegionNortheast19418Midwest23921South38036	\$175K+	45	4
Yes15214Race/Ethnicity70767White, non-Hispanic70767Black, African-American non-Hispanic12312Other non-Hispanic656RegionNortheast19418Midwest23921South38036	Hispanic		
White, non-Hispanic70767Black, African-American non-Hispanic12312Other non-Hispanic656Region19418Northeast19418Midwest23921South38036		152	14
Black, African-American non-Hispanic12312Other non-Hispanic656Region19418Midwest23921South38036	Race/Ethnicity		
Black, African-American non-Hispanic12312Other non-Hispanic656Region19418Midwest23921South38036		707	67
Other non-Hispanic656Region19418Northeast19418Midwest23921South38036	-	123	12
RegionNortheast19418Midwest23921South38036	· · ·	65	6
Northeast 194 18 Midwest 239 21 South 380 36			
South 380 36		194	18
	Midwest	239	21
West 248 23	South	380	36
	West	248	23





