

CLIMATE CHANGE IN THE AMERICAN MIND

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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 Program on Climate Change Communication (<http://environment.yale.edu/climate-communication>) and the George Mason University Center for Climate Change Communication (<http://www.climatechangecommunication.org>). Interview dates: September 30–October 19, 2015. Interviews: 1,330 Adults (18+). Average margin of error: +/- 3 percentage points at the 95% confidence level. The research was funded by the 11th Hour Project, the Energy Foundation, the Grantham Foundation, and the V.K. Rasmussen Foundation.

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Key Findings

- Two in three (67%) Americans think global warming is happening. By contrast, only about one in six Americans (16%) thinks global warming is not happening.
- About half of Americans (53%) think that global warming, if it is happening, is mostly human caused. One in three (33%) say they believe it is due mostly to natural changes in the environment.
- Only about one in ten Americans understands that nearly all climate scientists (over 90%) are convinced that human-caused global warming is happening.
- Over half of Americans (57%) say they are at least “somewhat worried” about global warming, but only 16% say they are “very worried.” Worry about global warming has increased 5 points since spring 2015, an increase that is driven mostly by people who now say they are “very worried” (+5 points since the spring).
- Only about one in three Americans (34%) thinks people in the U.S. are being harmed “right now” by global warming.
- Since spring 2015, however, the number of Americans who think climate change will cause harm has increased substantially. More think global warming will harm them personally (42%, +6 percentage points since spring 2015), people in the U.S. (56%, +7 points), people in developing countries (61%, +9 points), and future generations (70%, +7 points).
- Majorities of Americans say global warming is a major environmental (69%), scientific (62%), or agricultural issue (56%). About half consider it a major health (49%) or economic issue (47%). Fewer consider it to be a major moral (24%), poverty (17%), social justice (17%), national security (14%), spiritual (8%), or religious issue (7%).
- Few Americans (4%) say they have changed their opinion about global warming in the past year, while most—85 percent—say they have not.
- The number of Americans who say they discuss global warming with family and friends at least occasionally increased by 9 percentage points over the past six months, from 26% in spring 2015 to 35% in fall.
- About four in ten Americans (42%, -7 percentage points since fall 2012) think “humans could reduce global warming, but it’s unclear at this point whether we will do what is necessary.” This decline signals a growing pessimism that people will successfully address climate change. For example, whereas only 4% say humans can and will successfully reduce global warming, about one in four (26%) says we won’t because people are unwilling to change their behavior, and about one in five (18%, +6 points since spring 2015) says humans can’t reduce global warming even if it is happening.

- At least two in three Americans say corporations and industry (72%), citizens themselves (67%), and the United States (64%) should be doing “much more” or “more” to address global warming. Moreover, many also think the U.S. Congress (59%) and/or President Obama (49%) should be doing more.
- In a separate study¹ conducted concurrently with the survey detailed in this report, we found that many Americans’ views of global warming, especially Catholic Americans, have recently been influenced by Pope Francis’s teachings about global warming. In this survey we found many of the same results. We call this “The Francis Effect.”
- For example, Catholics were especially likely to say: “I trust Pope Francis as an information source on global warming” (77% of Catholics versus 56% of non-Catholics); “The Pope’s position on global warming had an influence on my own views about global warming” (20% versus 5%, respectively); and “The Pope’s position on global warming has made me more concerned about global warming” (19% versus 5%).

¹ Maibach, E., Leiserowitz, A., Roser-Renouf, C., Myers, T., Rosenthal, S. & Feinberg, G. (2015) *The Francis Effect: How Pope Francis Changed the Conversation about Global Warming*. George Mason University and Yale University. Fairfax, VA: George Mason University Center for Climate Change Communication

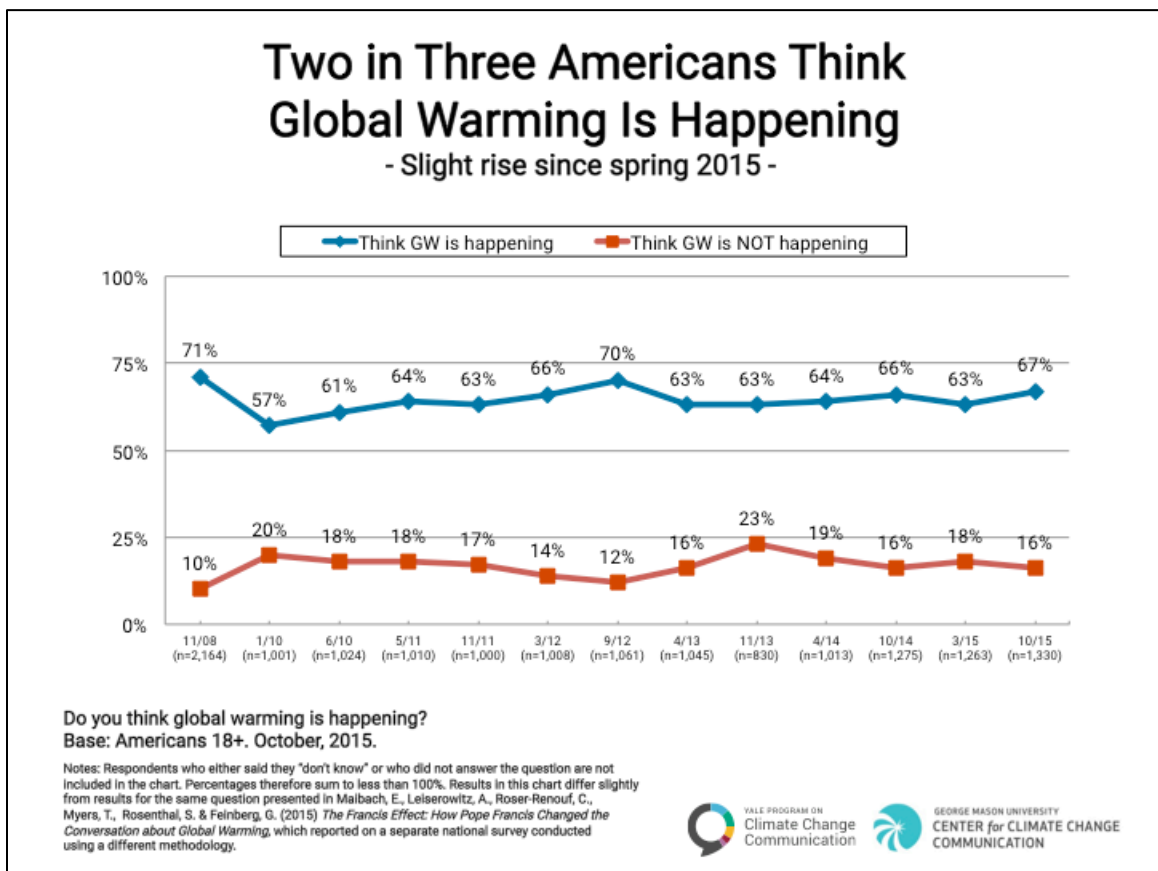
1. Global Warming Beliefs

1.1. Two in three Americans think global warming is happening.

Four times as many Americans think global warming is happening as think it is not.

Two in three (67%) Americans think global warming is happening. By contrast, only about one in six Americans (16%) thinks global warming is not happening.

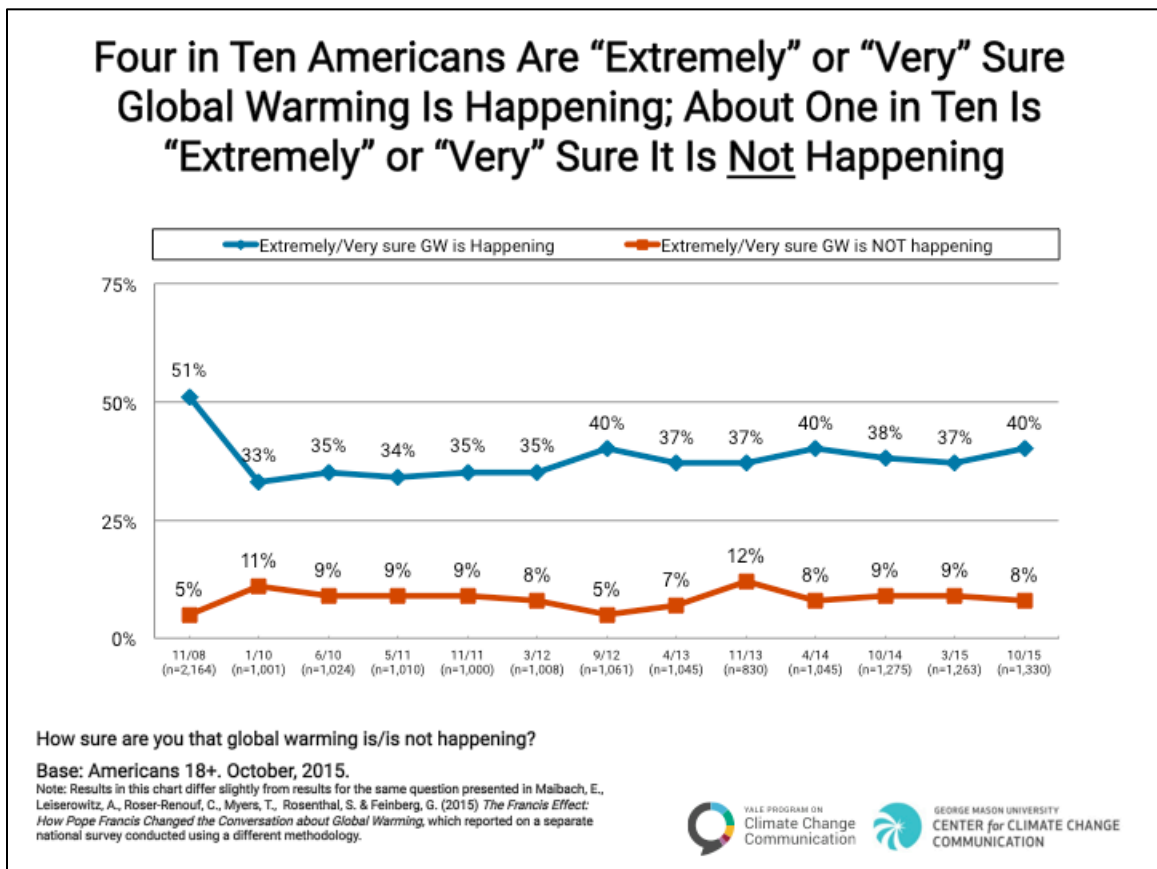
Majorities of Americans across age, sex, and education levels think global warming is happening.



1.2. Four in ten Americans are “extremely” or “very” sure global warming is happening. About one in ten is “extremely” or “very” sure it is not happening.

Four in ten Americans are either “extremely” or “very” sure global warming is happening (40%). About one in ten Americans is “extremely” or “very sure” global warming is not happening (8%).

The percentage who are sure global warming is happening ticked up slightly since the spring, while the percentage who are sure global warming is not happening has remained relatively steady over the past several years.

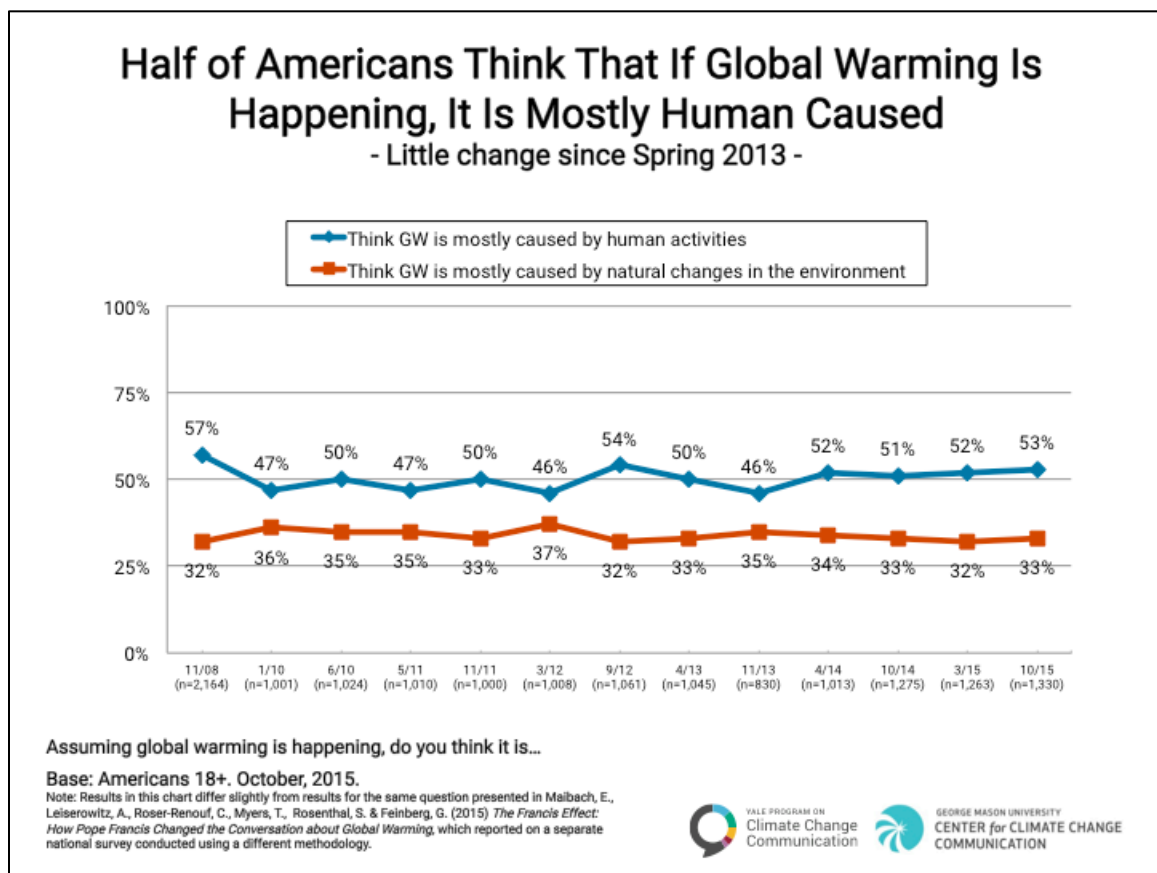


1.3. Half of Americans think that if global warming is happening, it is mostly human caused.

The 2014 U.S. National Climate Assessment (written and reviewed by hundreds of climate experts over the course of four years) states: “the global warming of the past 50 years is primarily due to human activities, predominantly the burning of fossil fuels. Many independent lines of evidence confirm that human activities are affecting climate in unprecedented ways” (p. 15).²

Moreover, in a recent study investigating the degree of scientific consensus on climate change, Cook and colleagues (2013)³ examined nearly 12,000 peer-reviewed papers in the climate science literature and found that of those papers that stated a position on the reality of human-caused global warming, 97% said it is happening and at least partly human caused.

Public understanding of climate change, however, is starkly different than the expert consensus.



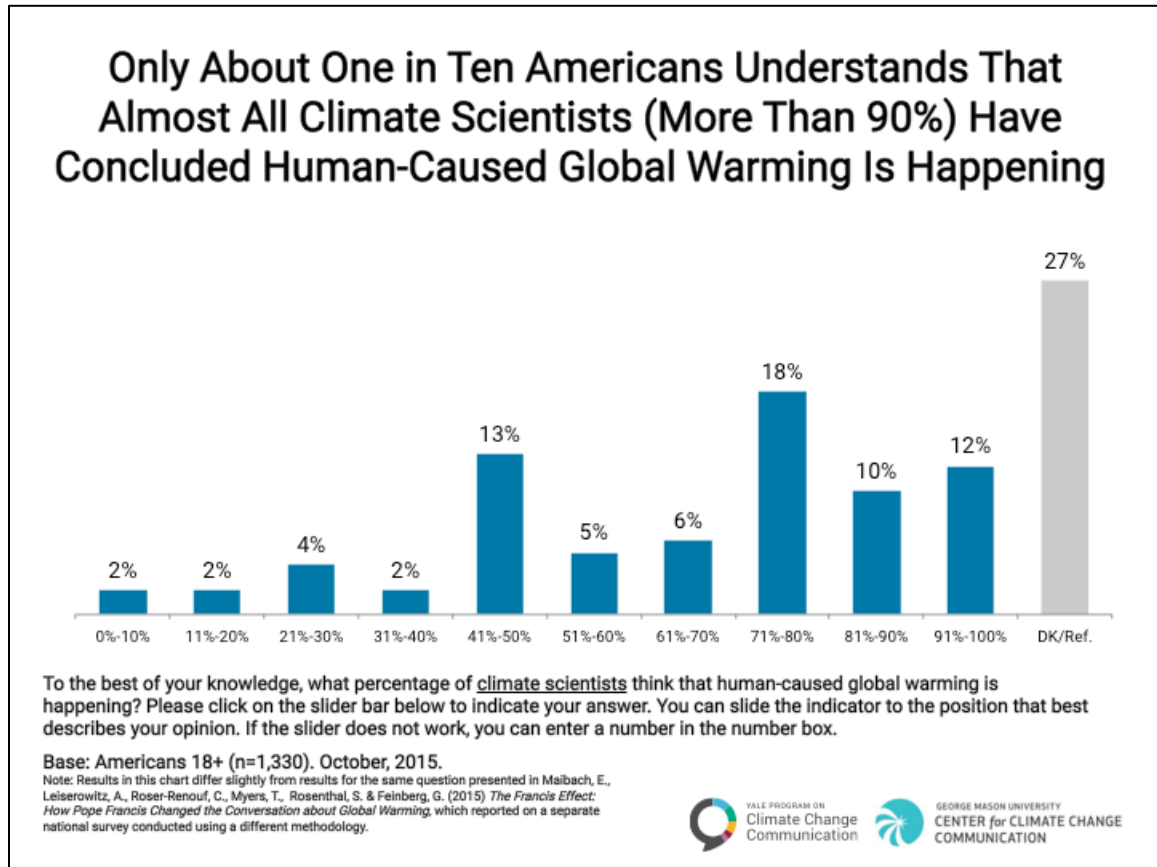
² <http://nca2014.globalchange.gov/report>

³ Cook, J., Nuccitelli, D., Green, S. A., Richardson, M., Winkler, B., Painting, R., Way, R., Jacobs, P., & Skuce, A. (2013). Quantifying the consensus on anthropogenic global warming in the scientific literature. *Environmental Research Letters*, 8. doi:10.1088/1748-9326/8/2/024024

Currently, about half of Americans (53%) think that global warming, if it is happening, is mostly human caused, a finding that has held steady since April 2014. By contrast, one in three (33%) say they believe it is due mostly to natural changes in the environment.

1.4. Only about one in ten Americans understands that almost all climate scientists (more than 90%) have concluded human-caused global warming is happening.

Only about one in ten Americans understands that nearly all climate scientists (over 90%) are convinced that human-caused global warming is happening, and just half (50%, up 5 percentage points since spring 2015) believe a majority do.⁴



This public misunderstanding of the scientific consensus – which has been found in each of our surveys since 2008 – has significant consequences. Other research has identified public understanding of the scientific consensus as a critical “gateway belief” that influences other important beliefs (i.e., global warming is happening, human caused, a serious problem, and solvable) and support for action.

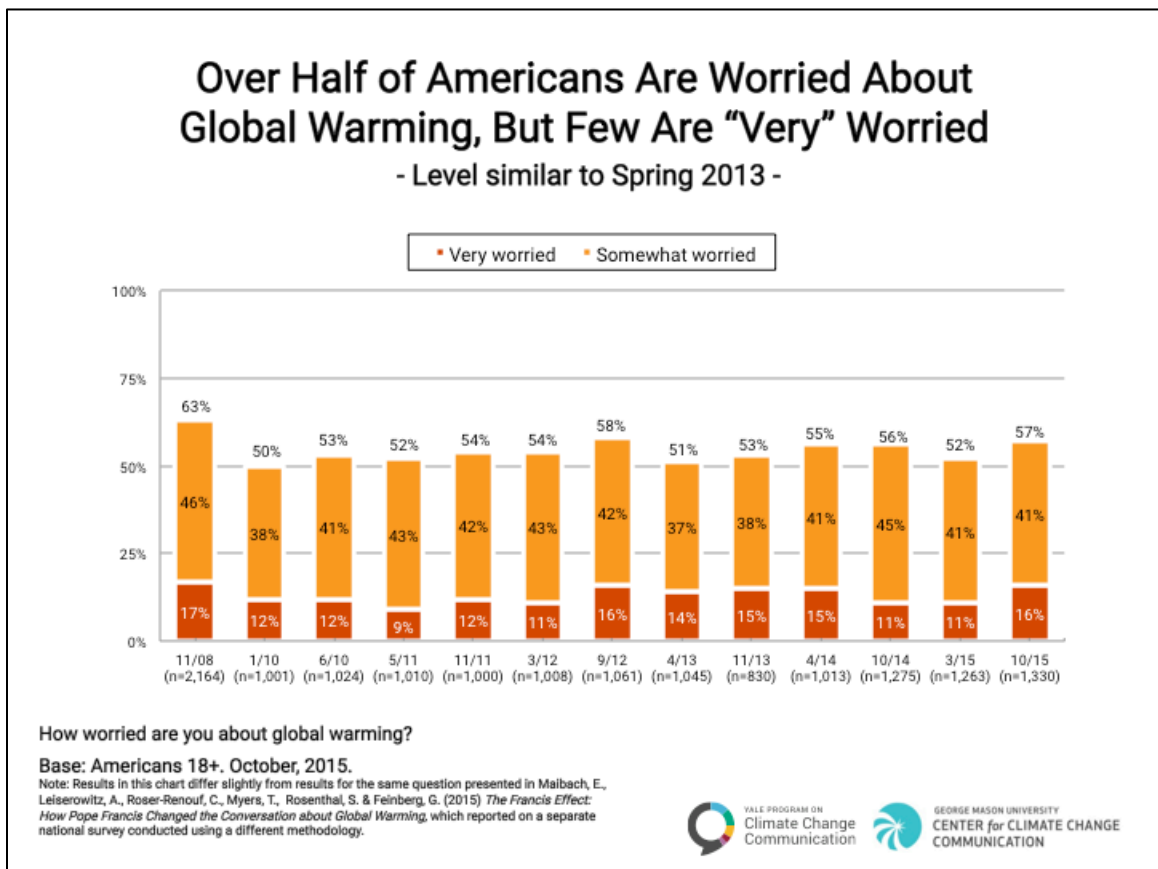
For more information, see: van der Linden, S., Leiserowitz, A., Feinberg, G., & Maibach, E. (2015). *The Scientific Consensus on Climate Change as a Gateway Belief: Experimental Evidence*. PLoS ONE, 10(2). doi: 10.1371/journal.pone.0118489

⁴ Respondents were asked to estimate the percentage of climate scientists who have concluded that human-caused global warming is happening by moving a simulated “slider bar” which appeared on the screen of their computer. This slider bar allowed respondents to move a marker from one end to the other, where placing the marker all the way to the left recorded a “0%” response, all the way to the right a “100%” response, and any other whole number response at points in between.

2. Global Warming Attitudes

2.1. Over half of Americans are worried about global warming, but few are “very” worried.

Over half of Americans (57%) say they are at least “somewhat worried” about global warming, but only 16% say they are “very worried.” Worry about global warming has increased 5 points since spring 2015, an increase that is driven mostly by people who now say they are “very worried” (+5 points since the spring).

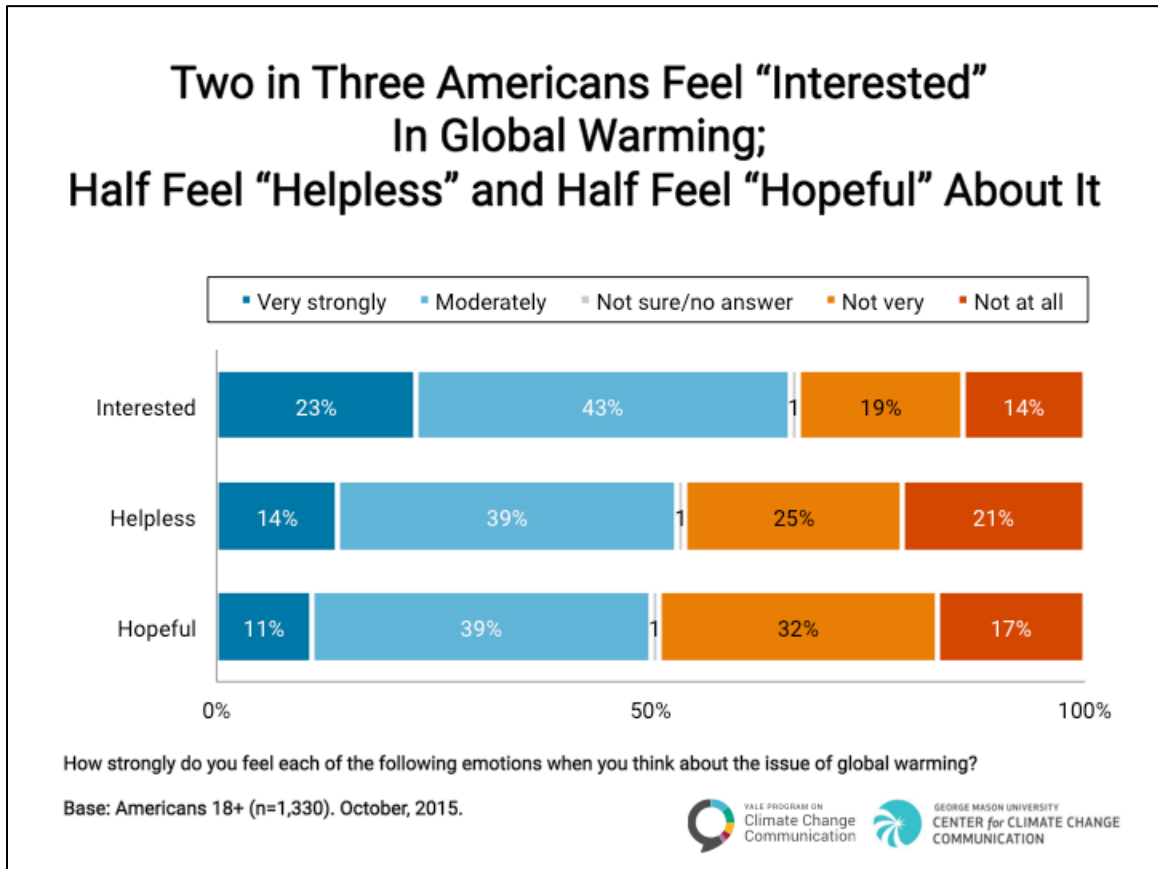


Likewise, over half of Americans (62%) say global warming is at least “somewhat” important to them personally, but only one in four (26%) says it is “extremely” or “very” important. About four in ten (38%) say the issue is “not too” or “not at all” important to them.

2.2. Two in three Americans feel “interested” in global warming; half feel “helpless” and half feel “hopeful” about it.

When asked whether or not they feel specific emotions when thinking about the issue of global warming, two in three say they feel very or moderately “interested” (67%).

Half say they feel “hopeful” about global warming (50%), but a similar number say they feel “helpless” (53%).



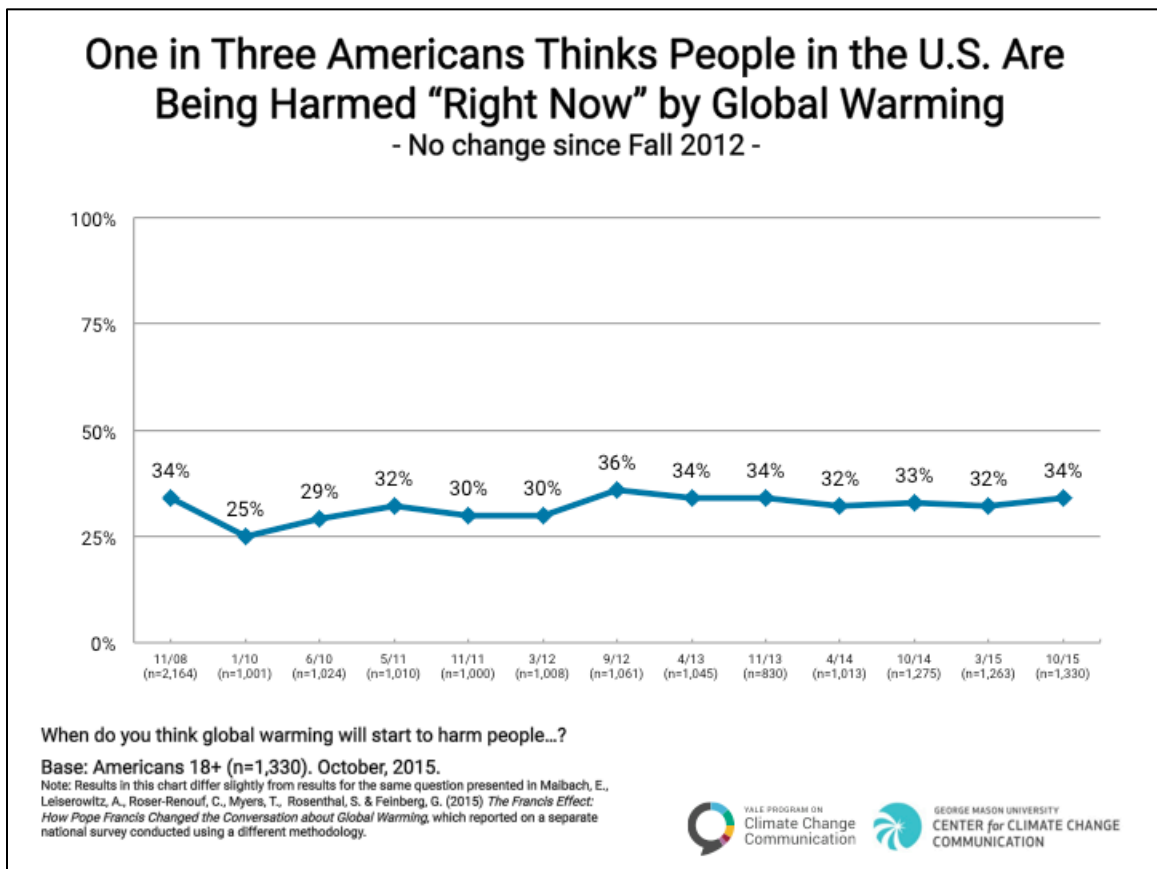
3. Perceived Risks of Global Warming

3.1. One in three Americans thinks people in the U.S. are currently being harmed by global warming.

The impacts of global warming are starting to be felt in the United States. According to the 2014 U.S. National Climate Assessment:⁵

“Residents of some coastal cities see their streets flood more regularly during storms and high tides. Inland cities near large rivers also experience more flooding, especially in the Midwest and Northeast. Insurance rates are rising in some vulnerable locations, and insurance is no longer available in others. Hotter and drier weather and earlier snow melt mean that wildfires in the West start earlier in the spring, last later into the fall, and burn more acreage. In Arctic Alaska, the summer sea ice that once protected the coasts has receded, and autumn storms now cause more erosion, threatening many communities with relocation” (p. 1).

Yet only about one in three Americans (34%) thinks people in the U.S. are being harmed “right now” by global warming, a number that has remained steady over the past several years.



⁵ <http://nca2014.globalchange.gov/downloads>

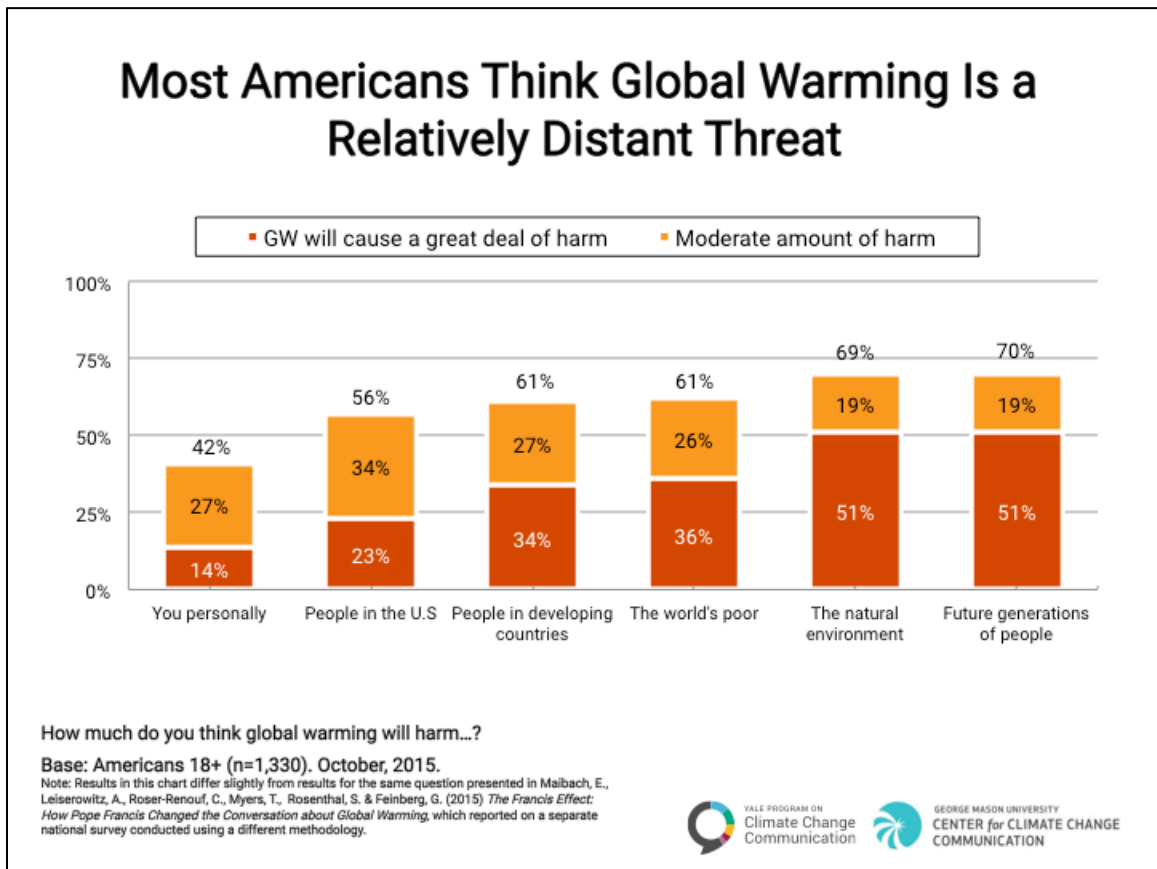
3.2. Most Americans think global warming is a relatively distant threat.

Americans are more likely to think that future generations of people (70%) will be harmed a “great deal” or a “moderate amount” by global warming than will people living in developing countries (61%), or the U.S. (56%).

They are least likely to think that they themselves (42%) will be harmed.

Although Americans over the years have perceived the threat of harm from global warming to be more distant than personal, since spring 2015, the number of Americans who think climate change will cause harm has increased substantially. More think global warming will harm:

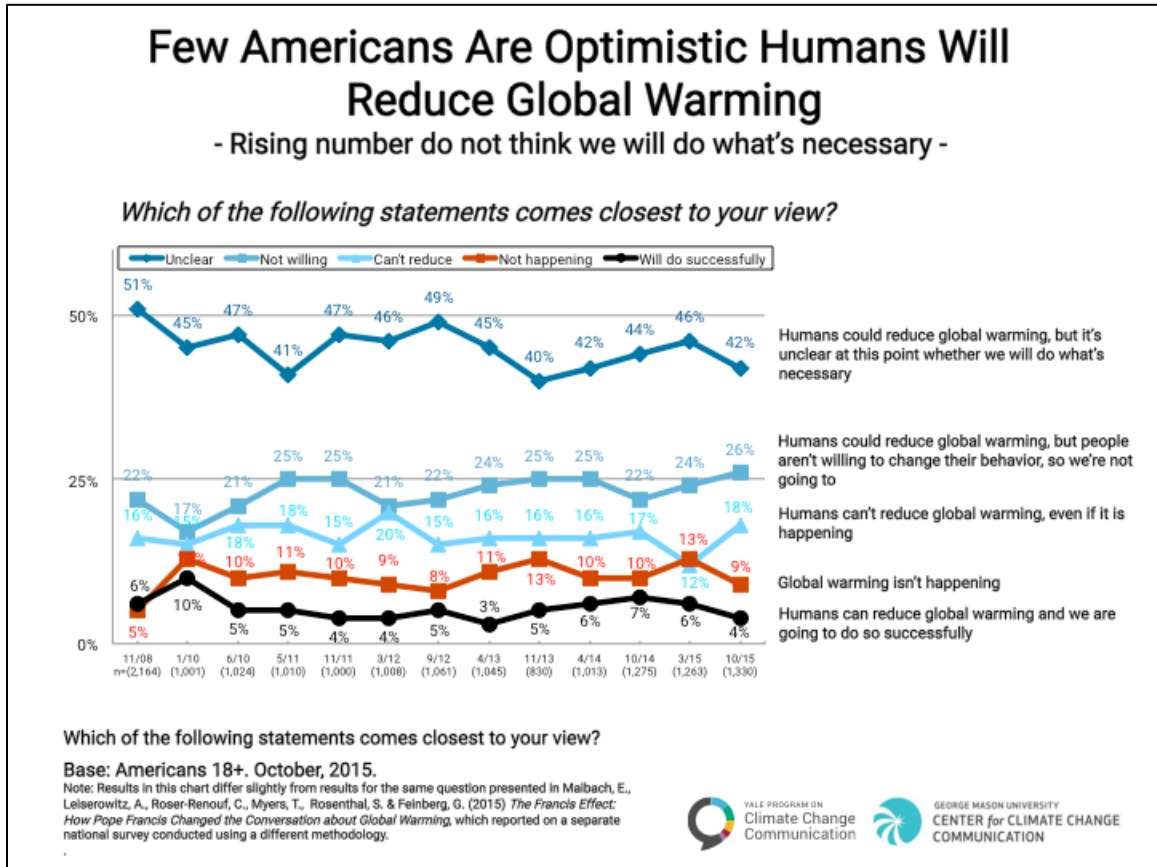
- Me personally (42%, +6 percentage points since spring 2015)
- People in the U.S. (56%, +7 points)
- People in developing countries (61%, +9 points)
- People of future generations (70%, +7 points)



3.3. Few Americans are optimistic humans will reduce global warming.

About four in ten Americans (42%, -7 percentage points since fall 2012) say humans could reduce global warming, but it's unclear at this point whether we will do what is necessary. This decline signals a growing lack of optimism that people will successfully address climate change.

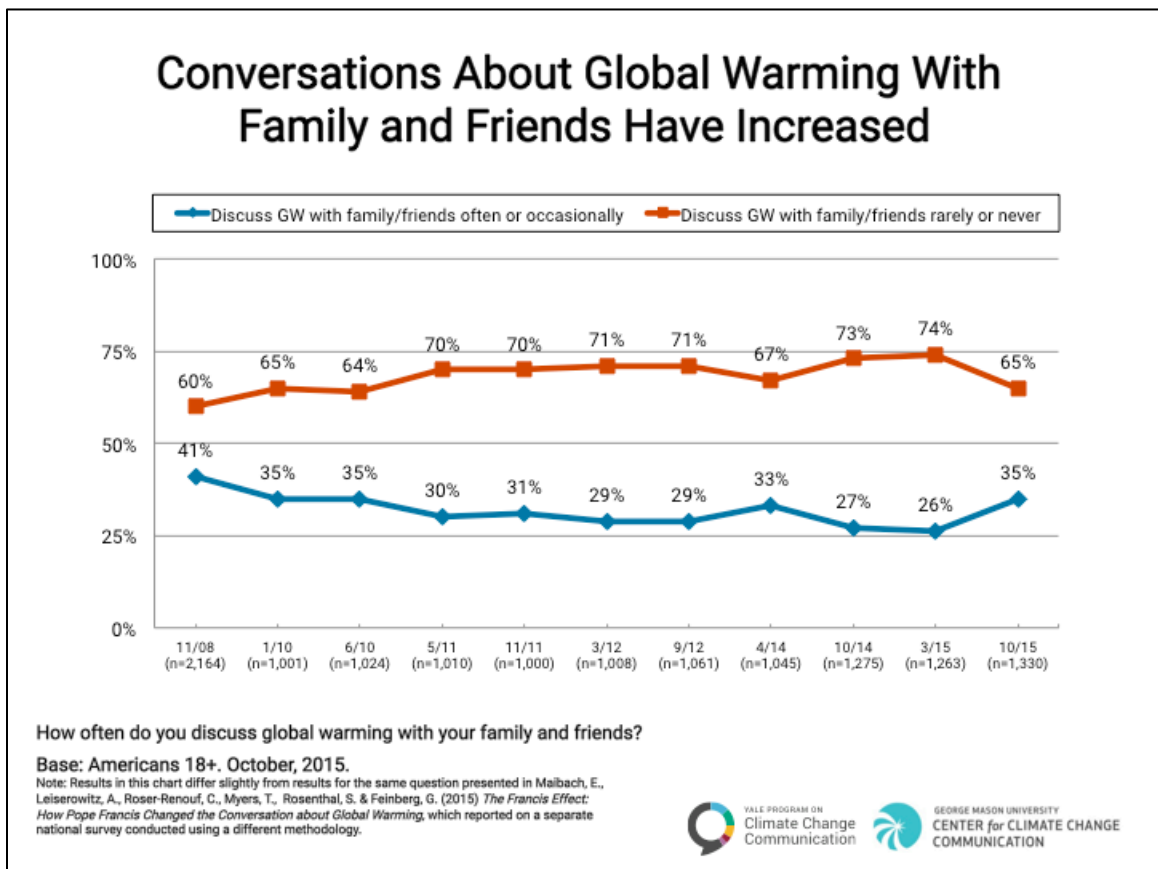
Whereas only 4% say humans can and will successfully reduce global warming, about one in four (26%) says we won't because people are unwilling to change their behavior, and about one in five (18%, +6 points since spring 2015) says humans can't reduce global warming even if it is happening.



4. Talking About Global Warming

Conversations about global warming with family and friends have increased.

The number of Americans who say they discuss global warming with family and friends at least occasionally has increased by 9 percentage points over the past six months, from 26% in spring 2015 to 35% in the fall. Although most Americans rarely or never discuss it (65%), this proportion has decreased 9 points (from 74%) since last spring.



5. Taking Action

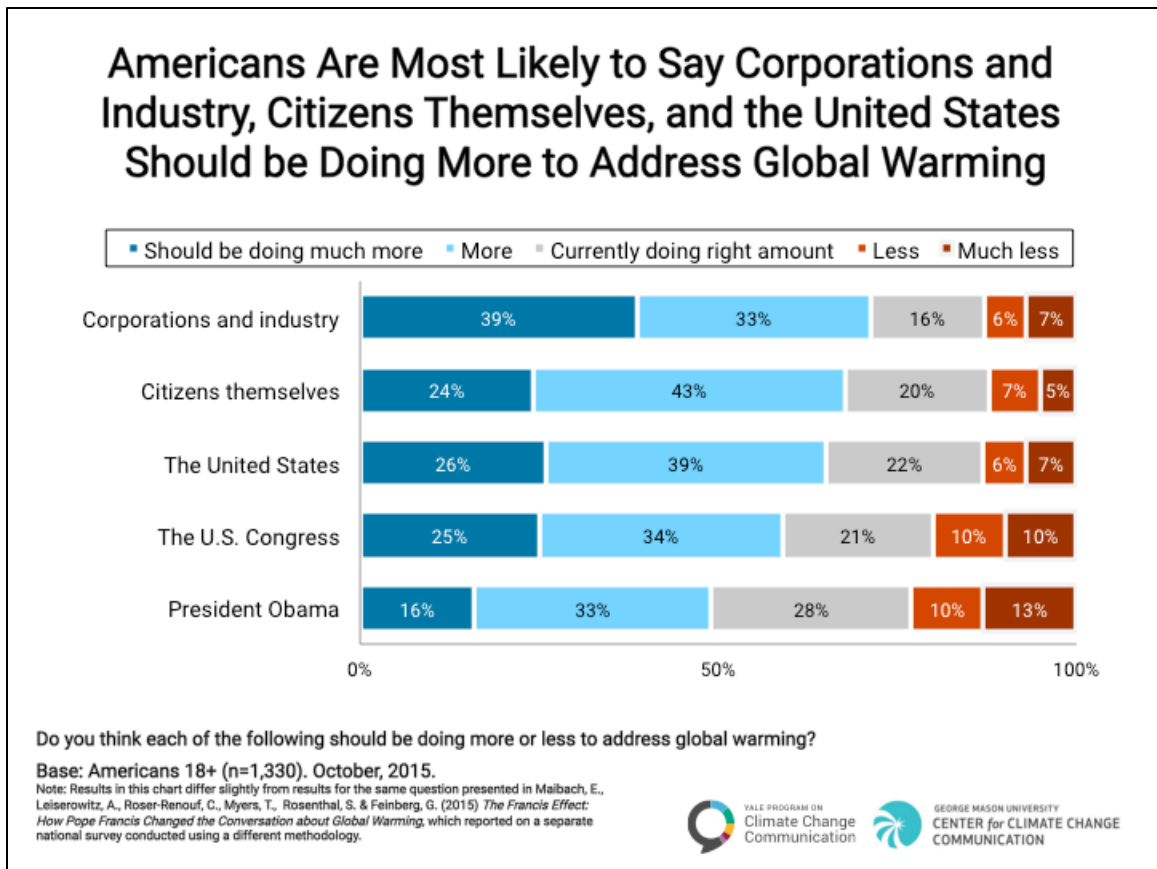
Americans are most likely to say corporations and industry, citizens themselves, and the United States should be doing more to address global warming.

Americans think both the private and public sectors should be doing more to address global warming.

At least two in three Americans say corporations and industry (72%), citizens themselves (67%), and the United States (64%) should be doing “much more” or “more” to address global warming.

Half or more also believe the Federal Government should be doing more:

- The U.S. Congress (59%)
- President Obama (49%)

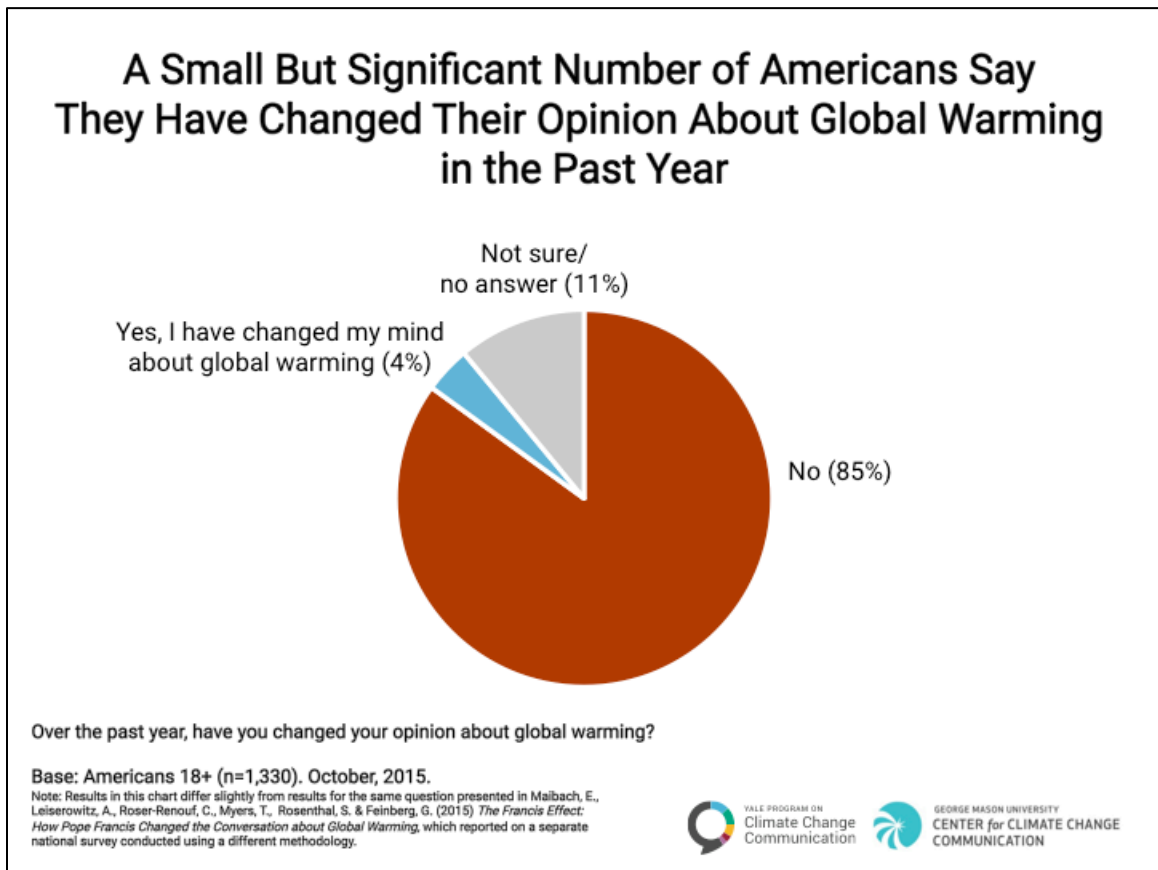


Six in ten Americans (62%) say the U.S. should reduce its own greenhouse gas emissions, regardless of what other countries do. Relatively few (12%) say the U.S. should reduce its emissions only if other industrialized and/or developing countries do – and only 6% of Americans say the U.S. should not reduce its greenhouse gas emissions at all.

6. Evolving Opinions About Global Warming

A small but significant number of Americans say they have changed their opinion about global warming in the past year.

Few Americans (4%) say they have changed their opinion about global warming in the past year, while most—85 percent—say they have not.



7. The Ethical Dimensions of Global Warming

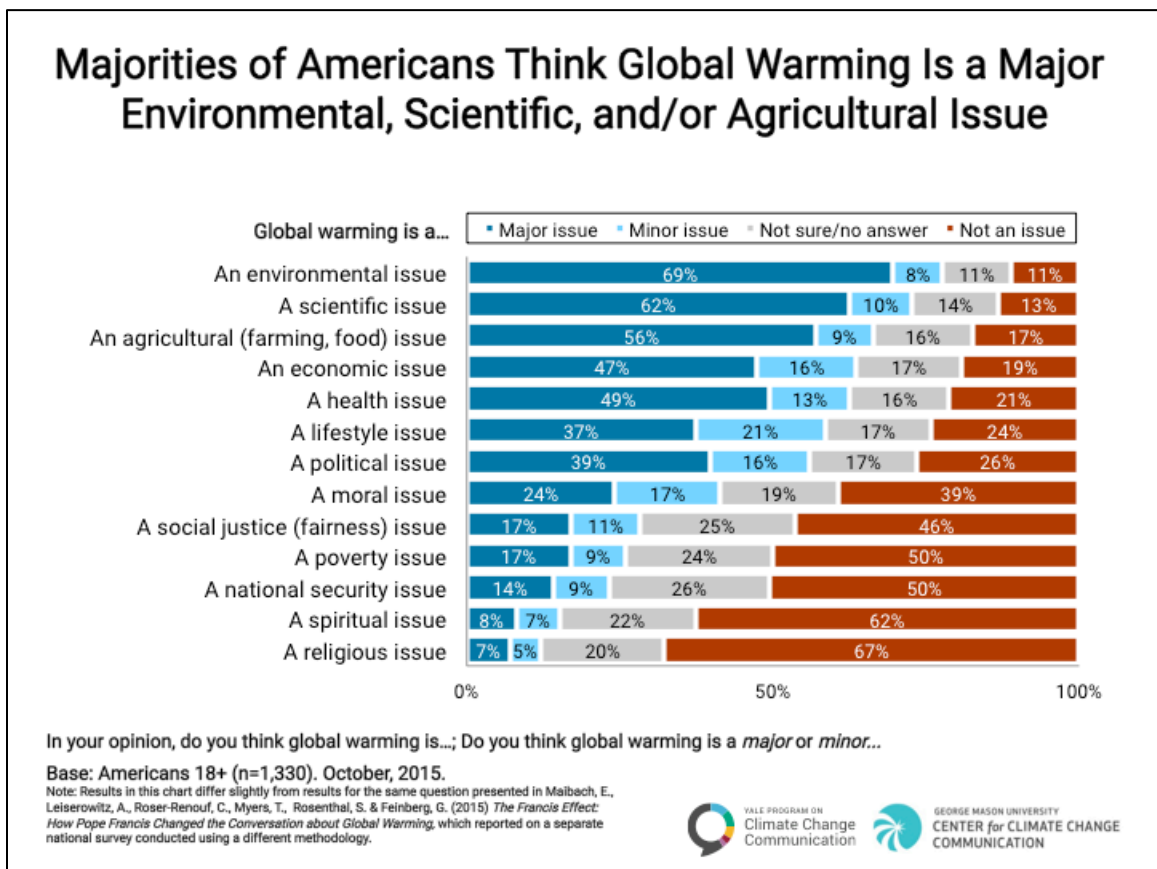
7.1. Majorities of Americans think global warming is a major environmental, scientific, and/or agricultural issue.

Global warming is a complex challenge to humanity with many dimensions. Understanding how people conceptualize the issue is critical to formulating effective communication strategies.

To better understand how Americans think about global warming, we asked respondents to indicate what kind of issue, if any, they consider it to be: environmental, scientific, economic, health, moral, religious, etc. For each category of the issue they selected, we then asked if they consider it to be a major or minor issue.

Majorities of Americans say global warming is a major environmental (69%), scientific (62%), or agricultural issue (56%). About half consider it a major health (49%) or economic issue (47%).

Fewer currently consider it to be a major moral (24%), poverty (17%), social justice (17%), national security (14%), spiritual (8%), or religious issue (7%).



7.2. More than half of Americans think that if the U.S. takes steps to reduce global warming, it will provide a better life for our children and grandchildren, improve people’s health, and save many plant and animal species from extinction.

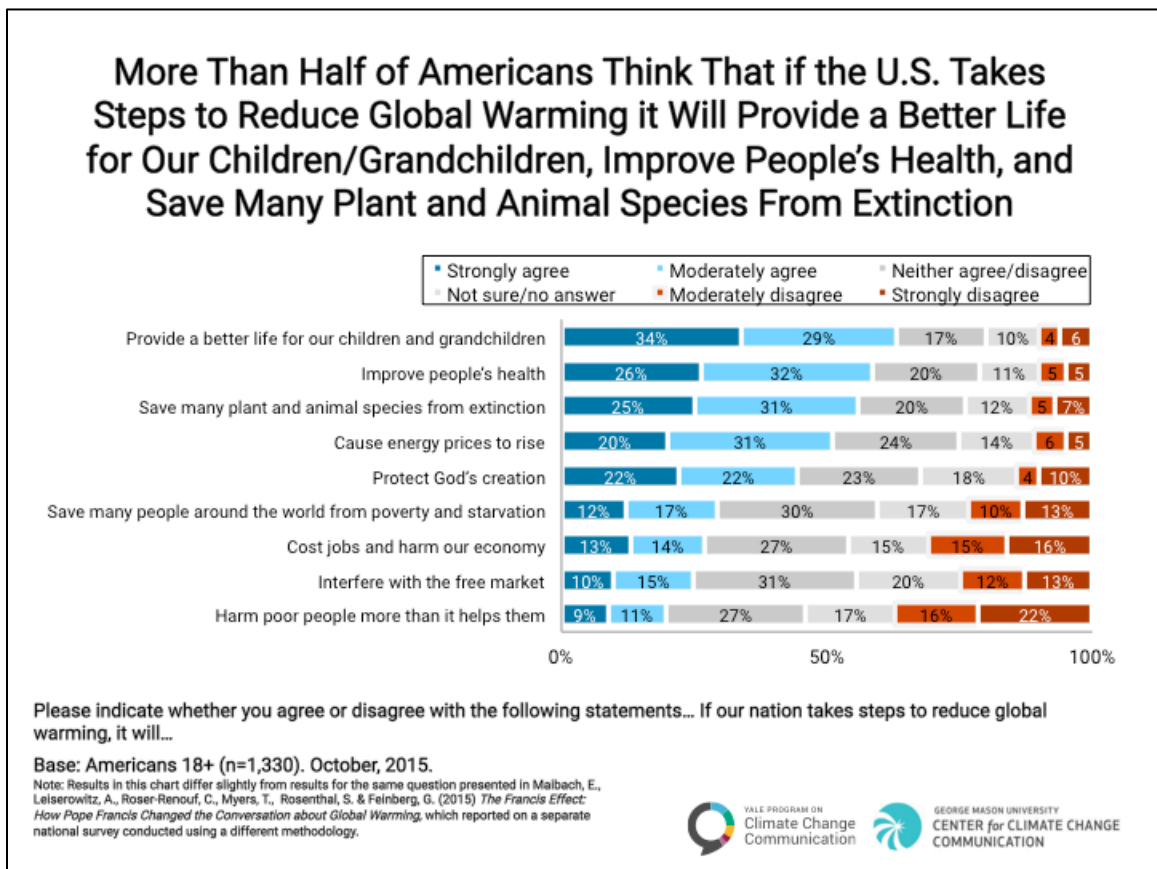
Generally, Americans are more likely to think that taking action to reduce global warming will provide benefits than it will drawbacks, with majorities agreeing strongly or moderately that if the U.S. takes action, it will:

- Provide a better life for our children and grandchildren (63%)
- Improve people’s health (58%)
- Save many plant and animal species from extinction (56%)

Others believe taking action will:

- Protect God’s creation (45%)
- Save many people around the world from poverty and starvation (29%)

Relatively few agree taking action will have negative consequences, such as costing jobs and harming our economy (26%), interfering with the free market (24%), or harming poor people more than it helps them (19%). Half, however, agree that it would cause energy prices to rise (51%).



8. The Francis Effect

8.1. Pope Francis's teachings about global warming have had an impact on the views of Americans, especially Catholics.

In June of 2015, Pope Francis issued an encyclical titled *Laudato Si': On Care for Our Common Home* intended to draw Catholics into a dialogue with one another, and with all of humanity, about the implications of climate change and other forms of environmental destruction. In the encyclical, Francis presented a strong moral call to action: people and nations should come together and take the actions necessary to protect the Earth – and thereby protect the world's poorest and most vulnerable people from climate change. In September, Pope Francis visited the United States for five days to meet with President Obama, address a joint session of the U.S. Congress, address the General Assembly of the United Nations, and meet, talk, pray and hold Mass with ordinary Americans. During several of these events, he urged the nations of the world to come together to address climate change. His views were covered broadly by the American news media.

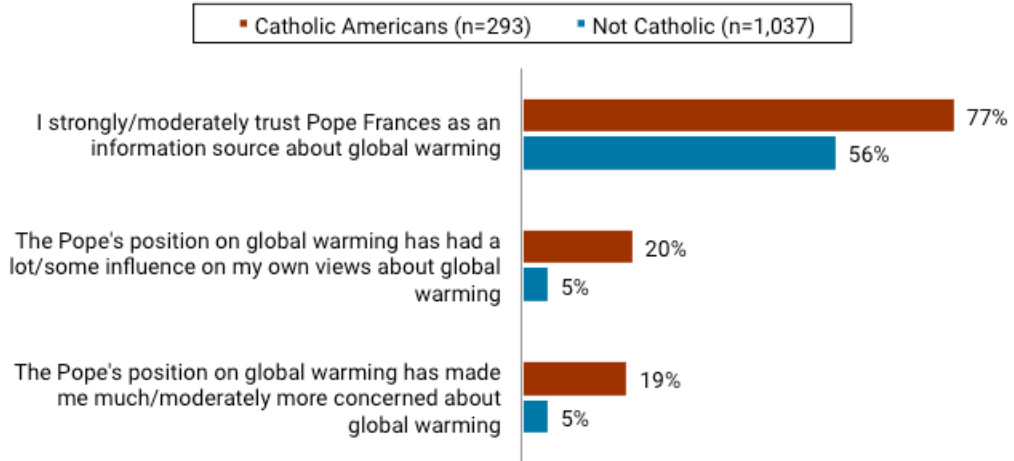
In a separate study that we conducted concurrently with this survey⁶, we found that many Americans' views of global warming have recently been influenced by Pope Francis's teachings about global warming, especially Catholic Americans. In this current survey we found many of the same results. We call this "The Francis Effect."

For example, Catholics were especially likely to say:

- I trust Pope Francis as an information source on global warming (77% of Catholics versus 56% of non-Catholics)
- The Pope's position on global warming had an impact on my own views about global warming (20% versus 5%, respectively)
- The Pope's position on global warming has made me more concerned about global warming (19% versus 5%)

⁶ Maibach, E., Leiserowitz, A., Roser-Renouf, C., Myers, T., Rosenthal, S. & Feinberg, G. (2015) *The Francis Effect: How Pope Francis Changed the Conversation about Global Warming*. George Mason University and Yale University. Fairfax, VA: George Mason University Center for Climate Change Communication

Pope Francis's Teachings About Global Warming Have Had an Impact on Americans, Especially Catholics



How much do you trust or distrust the following as a source of information about global warming...?
 How much impact, if any, has the Pope's position on global warming had on your own views about global warming?
 Has the Pope's position on global warming made you..?

Base: Americans 18+ (n=1,330). October, 2015.

Note: Results in this chart differ slightly from results for the same question presented in Malbach, E., Leiserowitz, A., Roser-Renouf, C., Myers, T., Rosenthal, S. & Feinberg, G. (2015) *The Francis Effect: How Pope Francis Changed the Conversation about Global Warming*, which reported on a separate national survey conducted using a different methodology.



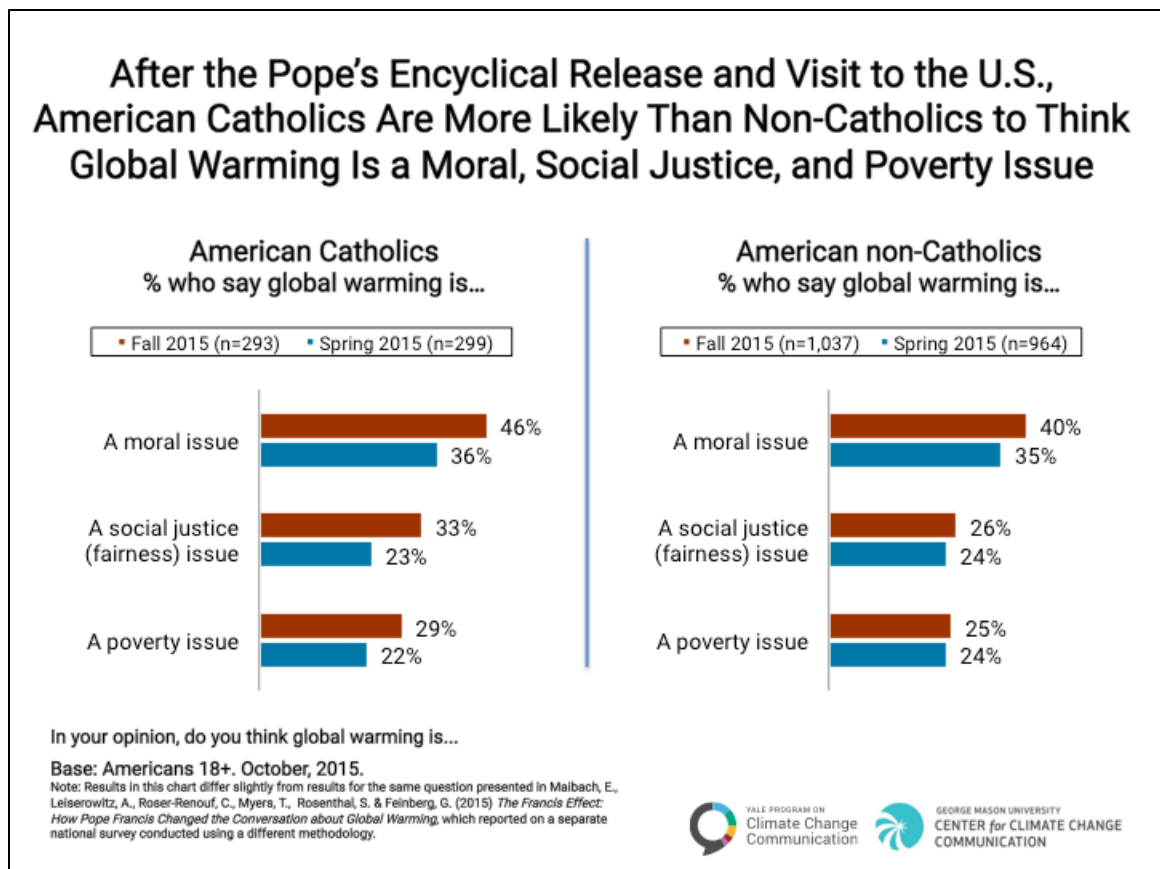
8.2. After the Pope's encyclical release and visit to the U.S., American Catholics are more likely than non-Catholics to think global warming is a moral, social justice, and poverty issue.

Pope Francis has consistently emphasized the moral and social justice dimensions of global warming in his call for action on climate change. His words have resonated with some American Catholics, who are more likely now than prior to his encyclical release and U.S. visit, to see global warming as:

- A moral issue (46% versus 36% in spring 2015, +10 percentage points)
- A social justice (fairness) issue (33% versus 23%, respectively, +10 points)
- A poverty issue (29% versus 22%, +7 points)

More non-Catholics also now view global warming as a moral issue, although this increase was smaller than among Catholics:

- A moral issue (40% versus 35% in spring 2015, +5 percentage points)
- A social justice (fairness) issue (26% versus 24%, respectively, +2 points)
- A poverty issue (25% versus 24%, +1 point)



Appendix I: Data Tables

(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?

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	Sept 2012	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
Yes	67	63	66	64	63	63	70	66	63	64	61	57	71
No	16	18	16	19	23	16	12	14	17	18	18	20	10
Don't know	18	19	18	17	14	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?

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	Sept 2012	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(899)	(793)	(815)	(649)	(521)	(674)	(722)	(658)	(619)	(614)	(622)	(558)	(1,745)
	%	%	%	%	%	%	%	%	%	%	%	%	%
Extremely sure	28	27	24	30	27	27	27	19	22	21	20	24	35
Very sure	32	32	35	32	31	33	30	34	35	33	37	35	37
Somewhat sure	37	38	38	33	39	37	40	42	39	40	40	37	24
Not at all sure	3	3	4	5	3	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?**

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	Sept 2012	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(215)	(251)	(228)	(196)	(179)	(164)	(160)	(156)	(175)	(188)	(199)	(227)	(301)
	%	%	%	%	%	%	%	%	%	%	%	%	%
Extremely sure	21	21	23	15	20	18	15	15	21	21	20	28	26
Very sure	32	31	30	26	36	28	27	41	37	31	31	31	28
Somewhat sure	36	37	35	47	36	42	45	35	37	38	44	34	38
Not at all sure	12	11	11	12	9	12	13	8	5	11	4	7	8

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

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
Caused mostly by human activities	53	52	51	52	46	50	54	46	50	47	50	47	57
Caused mostly by natural changes in the environment	33	32	33	34	35	33	32	37	33	35	35	36	32
Neither because global warming isn't happening	8	10	9	8	8	8	7	5	8	8	6	9	4
Other (please specify), caused by human activities and natural changes	5	5	6	5	9	7	5	9	6	8	7	6	5
Other (please specify), unclassified	1	2	1	1	3	2	1	2	2	1	1	1	1

(Base: Americans 18+)

To the best of your knowledge, what percentage of climate scientists think that human-caused global warming is happening? Please click on the slider bar below to indicate your answer. You can slide the indicator to the position that best describes your opinion. If the indicator does not work, you can enter a number in the number box.

	Oct 2015	March 2015	Oct 2014
	(1,330)	(1,263)	(1,275)
	%	%	%
Of those who provided a rating:			
Mean	67	64	65
Median	74	68	67
Percent who did not provide a rating (Don't know/Refused)	27	32	30

(Base: Americans 18+)

How worried are you about global warming?

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
Very worried	16	11	11	15	15	14	16	11	12	9	12	11	17
Somewhat worried	41	41	45	41	39	37	42	43	41	42	41	37	46
Not very worried	27	29	25	27	25	30	25	30	30	28	30	27	24
Not at all worried	16	19	18	18	20	19	17	16	15	20	18	22	13

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

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
Extremely important	7	6	5	8	8	8	6	6	6	7	6	5	11
Very important	18	15	16	17	14	13	17	14	13	15	18	15	21
Somewhat important	37	35	37	38	33	36	36	41	41	38	39	38	40
Not too important	21	24	24	21	26	24	24	23	25	25	24	23	18
Not at all important	17	20	18	16	19	18	17	16	15	14	14	20	11

(Base: Americans 18+)**How strongly do you feel each of the following emotions when you think about the issue of global warming?**

Oct 2015 (unweighted base, 1,330)		Very	Moderately	Not very	Not at all	Refused
Interested	%	23	43	19	14	1
Helpless	%	14	39	25	21	1
Hopeful	%	11	39	32	17	1

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

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
They are being harmed right now	34	32	33	32	34	34	36	30	30	32	29	25	34
In 10 years	13	11	10	9	10	11	13	12	10	12	12	12	13
In 25 years	14	13	14	14	14	12	11	14	13	13	12	14	13
In 50 years	11	11	12	15	11	12	12	14	15	12	13	13	13
In 100 years	11	13	13	14	12	13	13	15	15	11	15	13	12
Never	18	20	18	16	18	17	15	16	16	20	19	23	15

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

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
A great deal	14	10	12	13	13	15	16	11	9	11	10	14	10
A moderate amount	27	26	24	25	25	25	26	18	21	18	21	23	22
Only a little	26	26	26	26	27	26	25	30	28	28	27	22	24
Not at all	20	25	27	25	26	23	20	29	25	25	24	31	22
Don't know	12	13	11	11	8	11	13	11	17	18	18	11	23

People in the United States

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
A great deal	23	19	23	23	23	22	26	18	15	16	16	22	21
A moderate amount	34	30	30	30	30	30	31	28	29	26	28	29	28
Only a little	18	20	20	18	19	19	17	24	23	23	22	16	15
Not at all	14	17	17	18	20	16	12	18	17	17	17	22	14
Don't know	12	14	11	11	8	12	13	12	16	18	18	12	22

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

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
A great deal	34	27	29	31	32	30	35	26	22	23	22	29	31
A moderate amount	27	26	26	24	24	25	29	26	28	22	28	25	22
Only a little	13	17	16	17	17	18	10	19	17	20	17	14	11
Not at all	13	15	17	16	19	13	11	16	15	17	15	19	13
Don't know	13	15	12	12	9	13	15	14	18	19	18	13	24

Future generations of people

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
A great deal	51	42	46	49	46	42	47	43	40	37	39	42	44
A moderate amount	19	21	18	18	19	21	21	22	22	22	22	22	17
Only a little	8	10	11	10	11	12	9	12	13	10	11	9	7
Not at all	11	12	13	12	15	12	8	11	10	12	12	15	10
Don't know	11	15	13	11	9	12	14	13	16	19	16	12	22

(Base: Americans 18+)**How much do you think global warming will harm...? (Cont'd.)****The world's poor**

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
A great deal	36	30
A moderate amount	26	23
Only a little	12	16
Not at all	13	16
Don't know	13	15

The natural environment

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
A great deal	51	44
A moderate amount	19	21
Only a little	9	10
Not at all	11	12
Don't know	11	13

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

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(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	4	6	7	6	5	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	42	46	44	42	40	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	26	24	22	25	25	24	22	21	25	25	21	17	22
Humans can't reduce global warming, even if it is happening	18	12	17	16	16	16	15	20	15	18	18	15	16
Global warming isn't happening	9	13	10	10	13	11	8	9	10	11	10	13	5

(Base: Americans 18+)**How often do you discuss global warming with your family and friends?**

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
Often	5	3	3	4	3	4	3	5	4	4	5	6	5
Occasionally	30	23	24	28	23	28	26	24	26	26	30	29	35
Rarely	33	38	36	39	39	39	38	40	39	41	39	34	33
Never	32	36	37	29	34	28	34	30	29	28	25	30	26

(Base: Americans 18+)**Do you think each of the following should be doing more or less to address global warming?****The U.S. Congress**

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
Much more	25	26	21	25	26	25	24	23	20	19	19	19	26
More	34	33	36	31	26	32	36	35	35	38	35	35	41
Currently doing the right amount	21	23	23	24	26	20	22	21	25	20	26	23	20
Less	10	9	10	8	9	11	8	12	11	11	10	10	6
Much less	10	9	11	10	13	10	9	9	8	12	9	15	7

President Obama

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008+
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
Much more	16	18	16	18	18	18	18	19	19	19	20	17	28
More	33	34	34	31	28	34	35	35	33	35	32	33	38
Currently doing the right amount	28	26	26	29	31	24	29	25	28	22	30	26	21
Less	10	8	9	7	7	12	7	10	10	10	9	9	6
Much less	13	13	13	13	14	12	10	11	11	14	10	15	7

+President George W. Bush

(Base: Americans 18+)**Do you think each of the following should be doing more or less to address global warming?****(Cont'd.)****Corporations and industry**

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
Much more	39	38	35	36	40	39	39	40	37	34	38	33	41
More	33	30	32	30	25	31	32	30	30	31	28	31	32
Currently doing the right amount	16	20	20	20	20	18	18	18	20	18	22	21	17
Less	6	6	5	6	5	5	6	7	6	8	7	7	5
Much less	7	6	7	7	8	5	5	5	6	9	6	9	6

Citizens themselves

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
Much more	24	25	23	23	27	24	25	27	26	28	31	27	30
More	43	39	39	42	34	39	41	40	39	35	33	36	42
Currently doing the right amount	20	23	23	22	23	25	23	22	24	21	24	23	20
Less	7	6	6	6	6	6	5	7	6	9	7	7	5
Much less	5	7	8	6	8	5	4	5	6	7	5	8	5

(Base: Americans 18+)**Do you think each of the following should be doing more or less to address global warming?****(Cont'd.)****The United States**

	Oct 2015
(Unweighted base)	(1,330)
	%
Much more	26
More	39
Currently doing the right amount	22
Less	6
Much less	7

(Base: Americans 18+)

People disagree whether the United States should reduce greenhouse gas emissions on its own, or make reductions only if other countries do so. Which of the following statements comes closest to your own point of view? The United States should reduce its greenhouse gas emissions...

	Oct 2015	March 2015	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,330)	(1,263)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%	%	%
Regardless of what other countries do	62	56	57	58	60	59	61	63	60	61	65	57	67
Only if other industrialized countries (such as England, Germany, and Japan) reduce their emissions	2	4	3	3	4	3	2	3	3	3	3	3	2
Only if other industrialized countries and developing countries (such as China, India, and Brazil) reduce their emissions	9	8	9	9	8	7	7	8	7	8	8	7	7
The U.S. should not reduce its emissions	6	6	6	6	6	6	6	5	5	6	5	7	4
Don't know/Refused	21	26	24	23	22	25	25	21	25	23	19	25	20

(Base: Americans 18+)

Over the past year, have you changed your opinion about global warming?

	Oct 2015
(Unweighted base)	(1,330)
	%
Yes	4
No	85
Not sure	11
Refused	*

(Base: Americans 18+)

In your opinion, do you think global warming is...

(If “yes”) Do you think global warming is a *major* or *minor*...

An environmental issue

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
Yes	78	76
Major	69	68
Minor	8	8
No	11	11
Not sure	11	12
No answer	1	1

A moral issue

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
Yes	41	35
Major	24	21
Minor	17	14
No	39	44
Not sure	19	19
No answer	1	2

A religious issue

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
Yes	12	10
Major	7	6
Minor	5	4
No	67	71
Not sure	20	18
No answer	1	2

(Base: Americans 18+)

In your opinion, do you think global warming is... (Cont'd.)

(If “yes”) Do you think global warming is a *major* or *minor*... (Cont'd.)

A spiritual issue

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
Yes	15	13
Major	8	7
Minor	7	6
No	62	65
Not sure	22	20
No answer	1	2

A social justice (fairness issue)

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
Yes	27	23
Major	17	15
Minor	11	9
No	46	53
Not sure	25	22
No answer	1	2

A political issue

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
Yes	56	54
Major	39	37
Minor	16	17
No	26	27
Not sure	17	17
No answer	1	2

(Base: Americans 18+)**In your opinion, do you think global warming is... (Cont'd.)****(If "yes") Do you think global warming is a *major* or *minor*... (Cont'd.)****A scientific issue**

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
Yes	73	71
Major	62	60
Minor	10	11
No	13	13
Not sure	14	15
No answer	1	2

A health issue

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
Yes	62	58
Major	49	44
Minor	13	14
No	21	24
Not sure	16	17
No answer	1	2

A lifestyle issue

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
Yes	58	56
Major	37	38
Minor	21	18
No	24	26
Not sure	17	16
No answer	1	2

(Base: Americans 18+)**In your opinion, do you think global warming is... (Cont'd.)****(If “yes”) Do you think global warming is a *major* or *minor*... (Cont'd.)****An economic issue**

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
Yes	63	60
Major	47	46
Minor	16	14
No	19	22
Not sure	17	16
No answer	1	2

A national security issue

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
Yes	23	26
Major	14	16
Minor	9	9
No	50	53
Not sure	26	20
No answer	1	1

An agricultural (farming, food) issue

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
Yes	65	64
Major	56	55
Minor	9	9
No	17	19
Not sure	16	16
No answer	1	2

(Base: Americans 18+)**In your opinion, do you think global warming is... (Cont'd.)****(If “yes”) Do you think global warming is a *major* or *minor*... (Cont'd.)****A poverty issue**

	Oct 2015	March 2015
(Unweighted base)	(1,330)	(1,263)
	%	%
Yes	26	24
Major	17	16
Minor	9	8
No	50	53
Not sure	24	21
No answer	1	2

(Base: Americans 18+)**If our nation takes steps to reduce global warming it will...**

		Strongly agree	Moderately agree	Neither agree nor disagree	Moderately disagree	Strongly disagree	Don't know	Prefer not to answer
Oct 2015 (unweighted base, 1,330)								
Provide a better life for our children and grandchildren	%	34	29	17	4	6	8	3
Improve people's health	%	26	32	20	5	5	8	3
Save many plant and animal species from extinction	%	25	31	20	5	7	9	3
Cause energy prices to rise	%	20	31	24	6	5	11	3
Protect God's creation	%	22	22	23	4	10	10	7
Save many people around the world from poverty and starvation	%	12	17	30	10	13	14	3
Cost jobs and harm our economy	%	13	14	27	15	16	12	3
Interfere with the free market	%	10	15	31	12	13	17	3
Harm poor people more than it helps them	%	9	11	27	16	22	13	3

(Base: Americans 18+)**How much do you trust or distrust Pope Francis as a source of information about global warming?**

	Oct 2015			March 2015		
	Catholics	Non-Catholics	Total Americans	Catholics	Non-Catholics	Total Americans
(Unweighted base)	(293)	(1,037)	(1,330)	(299)	(964)	(1,263)
	%	%	%	%	%	%
Strongly trust	27	10	14	21	10	12
Somewhat trust	49	46	46	46	37	39
Somewhat distrust	16	23	22	21	30	28
Strongly distrust	7	19	16	9	20	17

(Base: Americans 18+)**How much impact, if any, has the Pope's position on global warming had on your own views about global warming?**

	Catholics	Non-Catholics	Total Americans
(Unweighted base)	(293)	(1,037)	(1,330)
	%	%	%
A lot	9	2	3
Some	11	3	5
A little	13	8	9
None at all	54	71	67
Not sure	13	15	15

(Base: Americans 18+ who say the Pope's position on global warming had a lot/some/a little impact on their own views)**Has the Pope's position on global warming made you...?**

	Catholics	Non-Catholics	Total Americans
(Unweighted base)	(293)	(1,037)	(1,330)
	%	%	%
Much more concerned about global warming	9	2	3
Moderately more concerned about global warming	10	4	5
Neither more nor less concerned about global warming	11	7	8
Moderately less concerned about global warming	1	1	1
Much less concerned about global warming	--	--	--

(Base: Americans 18+)

In your opinion, do you think global warming is...

(If “yes”) Do you think global warming is a *major* or *minor*...

A moral issue

	Oct 2015			March 2015		
	Catholics	Non-Catholics	Total Americans	Catholics	Non-Catholics	Total Americans
(Unweighted base)	(293)	(1,037)	(1,330)	(299)	(964)	(1,263)
	%	%	%	%	%	%
Yes	46	40	41	36	35	35
Major	25	24	24	22	20	21
Minor	20	16	17	14	14	14
No	41	39	39	45	44	44
Not sure	13	20	19	17	19	19
No answer	0	2	1	2	2	2

A social justice (fairness) issue

	Oct 2015			March 2015		
	Catholics	Non-Catholics	Total Americans	Catholics	Non-Catholics	Total Americans
(Unweighted base)	(293)	(1,037)	(1,330)	(299)	(964)	(1,263)
	%	%	%	%	%	%
Yes	33	26	27	23	24	23
Major	19	16	17	15	14	15
Minor	14	10	11	7	9	9
No	46	46	46	53	53	53
Not sure	20	27	25	23	22	22
No answer	*	1	1	1	2	2

A poverty issue

	Oct 2015			March 2015		
	Catholics	Non-Catholics	Total Americans	Catholics	Non-Catholics	Total Americans
(Unweighted base)	(293)	(1,037)	(1,330)	(299)	(964)	(1,263)
	%	%	%	%	%	%
Yes	29	25	26	22	24	24
Major	21	16	17	14	16	16
Minor	8	9	9	8	8	8
No	54	49	50	56	53	53
Not sure	17	26	24	21	21	21
No answer	*	1	1	1	2	2

Appendix II: Survey Method

The data in this report are based on a nationally representative survey of 1,330 American adults, aged 18 and older, conducted September 30 - October 19, 2015. All questionnaires were self-administered by respondents in a web-based environment. The survey took, on average, about 24 minutes to complete.

The sample was drawn from GfK'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, Geoff Feinberg, and Seth Rosenthal 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 were interviewed. Average margins of error each wave, at the 95% confidence level, are plus or minus 3 percentage points except where noted.

- October 2015: Fielded September 30–October 19 (n=1,330).
- March 2015: Fielded February 27–March 10 (n=1,263).
- October 2014: Fielded October 17–28 (n=1,275).
- April 2014: Fielded April 21–24 (n=1,013).
- November 2013: Fielded November 23–December 9 (n=830).
- April 2013: Fielded April 8–15 (n=1,045).
- September 2012: Fielded August 31–September 12 (n=1,061).
- March 2012: Fielded March 12–March 30 (n=1,008).
- November 2011: Fielded October 20–November 16 (n=1,000).
- May 2011: Fielded April 23–May 12 (n=1,010).
- June 2010: Fielded May 14–June 1 (n=1,024).
- January 2010: Fielded December 24, 2009–January 3, 2010 (n=1,001).
- November 2008: Fielded October 7–November 12 (n=2,164). Data were collected over two periods: from October 7–October 20 and from October 24–November 12. The average margin of sampling error at the 95% confidence level is plus or minus 2 percentage 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%. Summed response categories (e.g., “strongly trust” + “somewhat trust”) are also rounded.

Appendix III: Sample Demographics

	N (unweighted)	% (weighted)
Total	1,330	100
Sex		
Men	609	48
Women	721	52
Age		
Millennials (18-30)	231	23
Generation X (31-48)	333	28
Baby Boomers (49-67)	536	36
WWII (68+)	230	13
Education		
Less than high school	110	12
High school graduate	363	30
Some college/tech	398	29
College graduate	254	17
Post graduate	205	13
Household Income		
<\$25K	221	18
\$25K - <\$50K	296	23
\$50K - <\$75K	253	19
\$75K - <\$100K	187	14
\$100K - <\$125K	175	13
\$125K+	198	14
Hispanic		
Yes	144	15
Race/Ethnicity		
White, non-Hispanic	965	66
Black, African-American non-Hispanic	129	12
Other or 2+ Races non-Hispanic	92	8
Region		
Northeast	250	18
Midwest	320	21
South	447	37
West	313	23

