

CLIMATE CHANGE IN THE AMERICAN MIND

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YALE PROGRAM ON
Climate Change
Communication



GEORGE MASON UNIVERSITY
CENTER for CLIMATE CHANGE
COMMUNICATION

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Introduction

This report is based on findings from a nationally representative survey – *Climate Change in the American Mind* – conducted by the [Yale Program on Climate Change Communication \(climatecommunication.yale.edu\)](http://climatecommunication.yale.edu) and the [George Mason University Center for Climate Change Communication \(climatechangecommunication.org\)](http://climatechangecommunication.org). Interview dates: October 20 – November 1, 2017. Interviews: 1,304 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 MacArthur Foundation.

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Executive Summary

This report documents an upward trend in Americans' concern about global warming, as reflected in several key indicators tracked since 2008, including substantial increases in Americans' certainty that global warming is happening and harming people in the United States now. The percentage of Americans that are very worried about global warming has more than doubled since its lowest point in 2011. Increasing numbers of Americans say they have personally experienced global warming and that the issue is personally important to them. Details on these and other measures of global warming beliefs and attitudes are described below:

- **Seven in ten Americans (71%) think global warming is happening, an increase of eight percentage points since March 2015.** Only about one in eight Americans (13%) think global warming is not happening. **Americans who think global warming is happening outnumber those who think it is not by more than 5 to 1.**
- Americans are also becoming certain global warming is happening – 47% are "extremely" or "very" sure it is happening, an increase of 10 percentage points since March 2015. By contrast, far fewer – 7% – are "extremely" or "very sure" global warming is not happening.
- **Over half of Americans (54%) understand that global warming is mostly human-caused.** By contrast, one in three (33%) say it is due mostly to natural changes in the environment.
- Only about one in seven Americans (15%) understand that nearly all climate scientists (more than 90%) are convinced that human-caused global warming is happening.
- More than six in ten Americans (63%) say they are at least "somewhat worried" about global warming. **About one in five (22%) are "very worried" about it** – the highest levels since our surveys began, and **twice the proportion that were "very worried" in March 2015.**
- Two in three Americans feel "interested" in global warming (67%), and more than half feel "disgusted" (55%) or "helpless" (52%). Fewer than half feel "hopeful" (44%).
- **Nearly two in three Americans (64%) think global warming is affecting weather in the United States, and one in three think weather is being affected "a lot" (33%), an increase of 8 percentage points since May 2017.**
- **A majority of Americans think global warming made several extreme events in 2017 worse, including the heat waves in California (55%) and Arizona (51%), hurricanes Harvey, Irma, and Maria (54%), and wildfires in the western U.S. (52%).**
- More than three in four Americans (78%) are interested in learning about how global warming is or is not affecting extreme weather events.
- **More than four in ten Americans (44%) say they have personally experienced the effects of global warming, an increase of 13 percentage points since March 2015.**
- **Four in ten Americans (42%) think people in the United States are being harmed by global warming "right now."** The proportion that believes people are being harmed "right now" has increased by 10 percentage points since March 2015.

- **Half of Americans think they (50%) or their family (54%) will be harmed by global warming.** Even more think global warming will harm people in the U.S. (67%), the world's poor or people in developing countries (both 71%), future generations of people (75%) or plant and animal species (75%).
- Most Americans think global warming will have future impacts, causing more melting glaciers (67%), severe heat waves (64%), droughts and water shortages (63%), floods (61%), and other impacts over the next 20 years.
- **Two in three Americans (67%) say the issue of global warming is either "extremely" (12%), "very" (19%), or "somewhat" (37%) important to them personally,** while one in three (33%) say it is either "not too" (19%) or "not at all" (14%) important personally. The proportion that say it is personally important **has increased by 11 percentage points since March 2015.**
- **Nearly four in ten Americans (38%) say they discuss global warming with family and friends "often" or "occasionally," an increase of 12 percentage points since March 2015.** However, more say they "rarely" or "never" discuss it (62%). Additionally, half of Americans (51%) say they hear about global warming in the media at least once a month, and one in four (25%) say they hear people they know talk about global warming at least once a month.
- More than half of Americans (54%) say they have thought "a lot" (22%) or "some" (32%) about global warming. Fewer say they have thought about global warming just "a little" (32%) or "not at all" (14%).
- Few Americans are confident that humans will reduce global warming. Nearly half (48%) say humans could reduce global warming, but it's unclear at this point whether we will do what is necessary, and one in four (25%) say we won't reduce global warming because people are unwilling to change their behavior. Only 5% say humans can and will successfully reduce global warming.
- Large majorities of Americans think of global warming as an environmental (78%), scientific (71%), agricultural (66%), severe weather (65%), health (62%), economic (60%), or political issue (60%). Fewer think it is a moral (41%), national security (29%), poverty (28%), social justice (26%), or religious issue (9%).

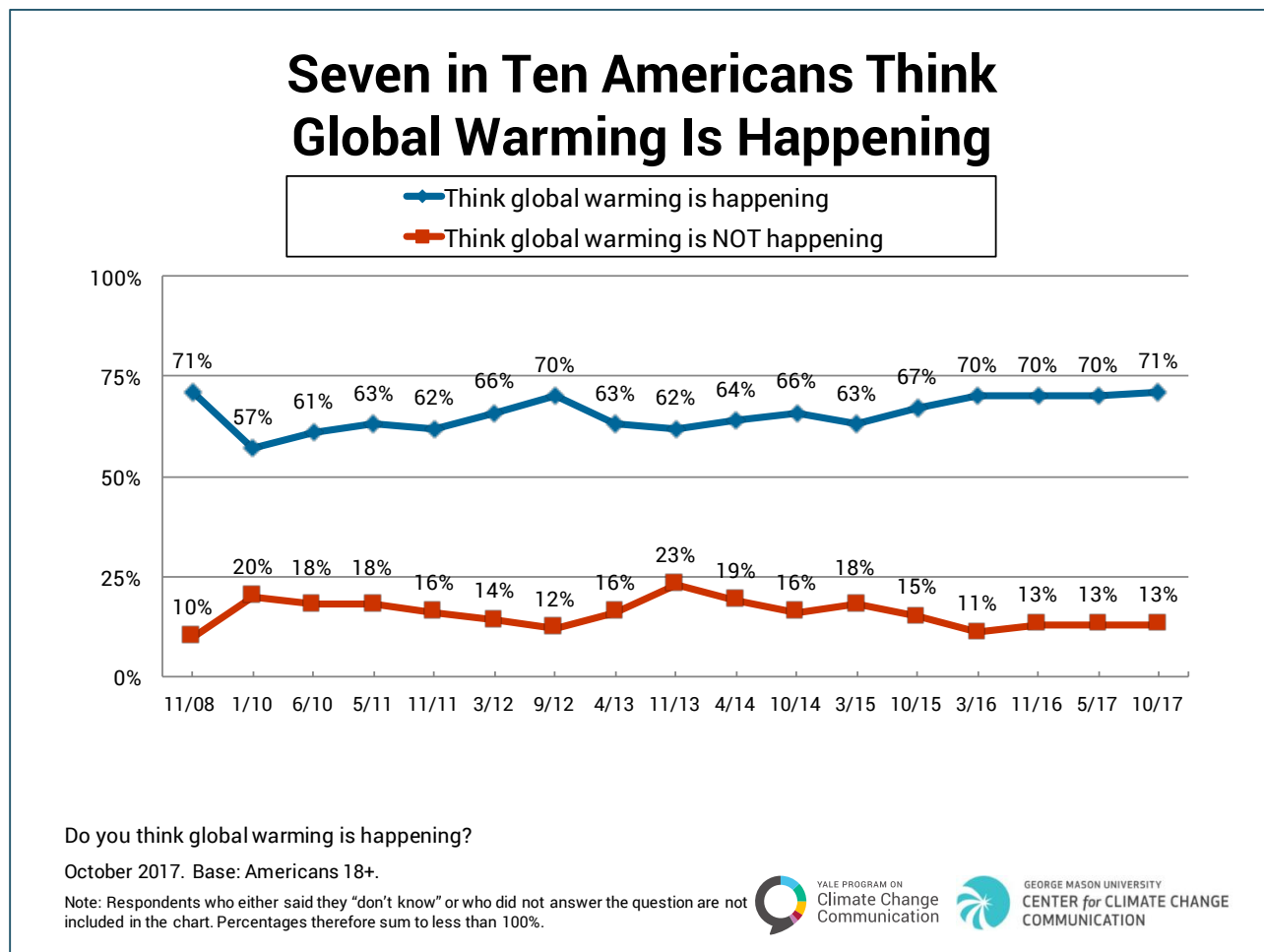
1. Global Warming Beliefs

1.1. Seven in ten Americans think global warming is happening.

Americans who think global warming is happening outnumber those who think it is not by more than 5 to 1.

Seven in ten Americans (71%) think global warming is happening. By contrast, only about one in eight Americans (13%) think global warming is not happening.

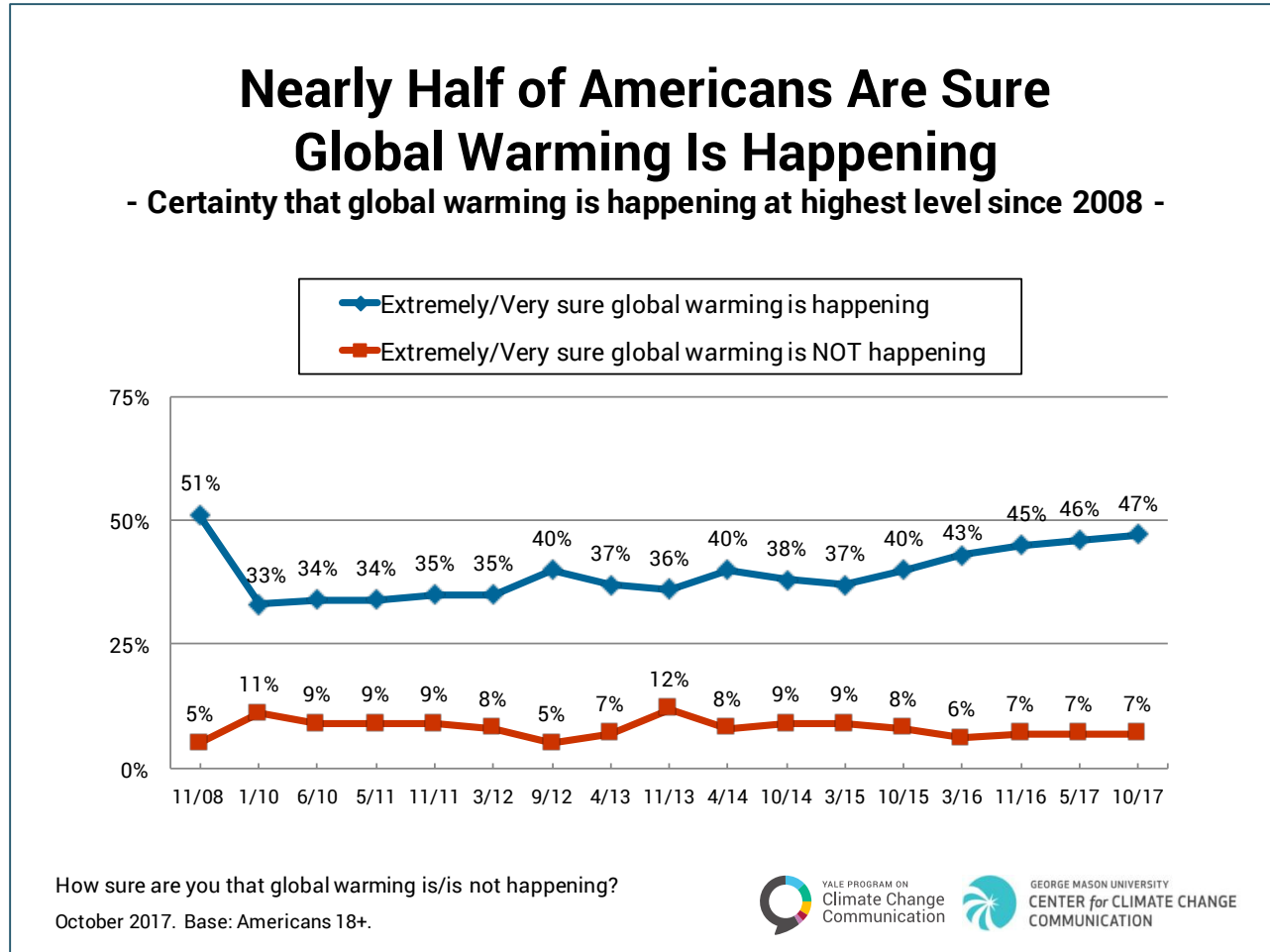
The percentage of Americans who think global warming is happening has remained steady since March 2016, and now matches its highest level since our surveys began in November 2008.



1.2. Nearly half of Americans are sure global warming is happening. Fewer than one in ten are sure it is not happening.

Forty-seven percent of Americans are either "extremely" or "very" sure global warming is happening. Far fewer – 7% – are "extremely" or "very sure" global warming is not happening.

The percentage who are sure global warming is happening has risen steadily over the past two years, and is now at its highest level since November 2008.

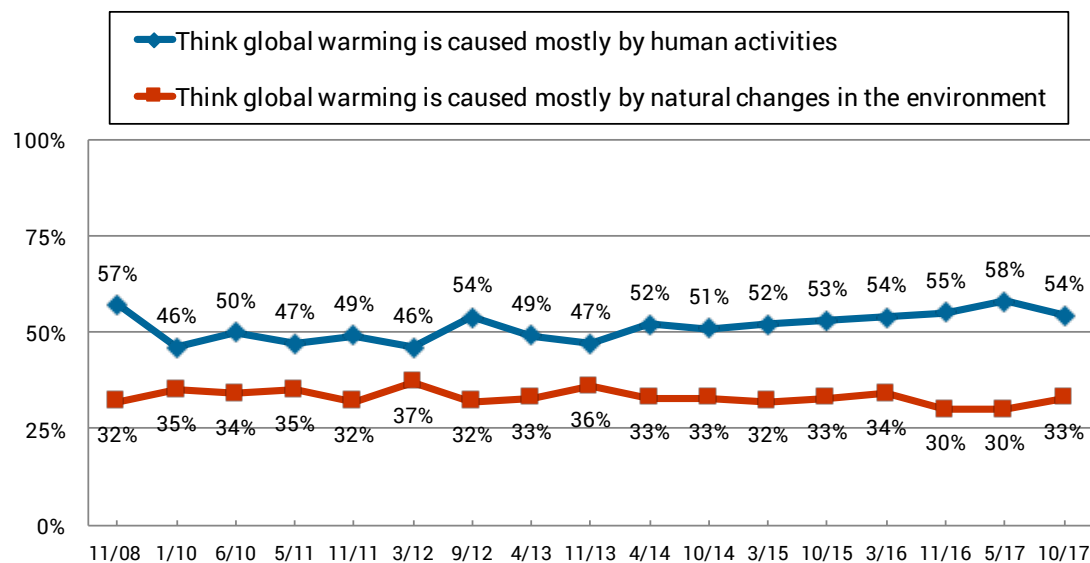


1.3. More than half of Americans think global warming is mostly human-caused.

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).¹

A majority of Americans (54%) understand that global warming is mostly human-caused, a decrease of four percentage points from our previous survey in May 2017. By contrast, one in three (33%) say it is due mostly to natural changes in the environment, an increase of three percentage points from May.

More Than Half of Americans Think Global Warming Is Mostly Human-Caused



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

October 2017. Base: Americans 18+.



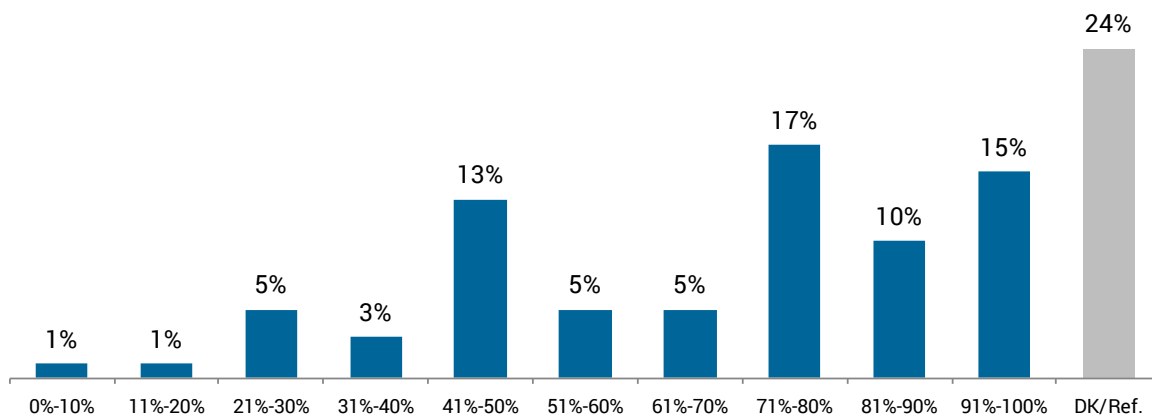
¹ <http://nca2014.globalchange.gov/report>

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

A recent review study by John Cook and colleagues² found that six, independent, peer-reviewed studies about the extent of the scientific consensus about global warming have reached similar conclusions: between 90% and 100% of climate scientists are convinced that human-caused climate change is happening. The most rigorous of these studies found that 97% of climate scientists are convinced that human-caused climate change is happening.

Only about one in seven Americans (15%) understand that nearly all climate scientists (more than 90%) are convinced that human-caused global warming is happening. While a majority of the public (52%) believes that more than half of climate scientists think human-caused global warming is happening, the most common response – given by one in four Americans (24%) – is that they "don't know."³

Only About One in Seven Americans Understand That Almost All Climate Scientists (More Than 90%) Have Concluded Human-Caused Global Warming Is Happening



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 slider does not work, you can enter a number in the number box.

October 2017. Base: Americans 18+ (n=1,304).



² Cook, J., Oreskes, N., Doran, P. T., Anderegg, W. R. I., Verheggen, B., Maibach, E. W., Carlton, J. S., Lewendowski, S., Skuce, A. G., Green, S. A., Nuccitelli, D., Jacobs, P., Richardson, M., Winkler, B., Painting, R., & Rice, K. (2016). Consensus on consensus: A synthesis of consensus estimates on human-caused global warming. *Environmental Research Letters* 11(4). doi: [10.1088/1748-9326/11/4/048002](https://doi.org/10.1088/1748-9326/11/4/048002)

³ 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 allowed respondents to move the marker from "0%" on the left to "100% on the right, or to any whole number between the two. A "don't know" response option appeared below the slider bar.

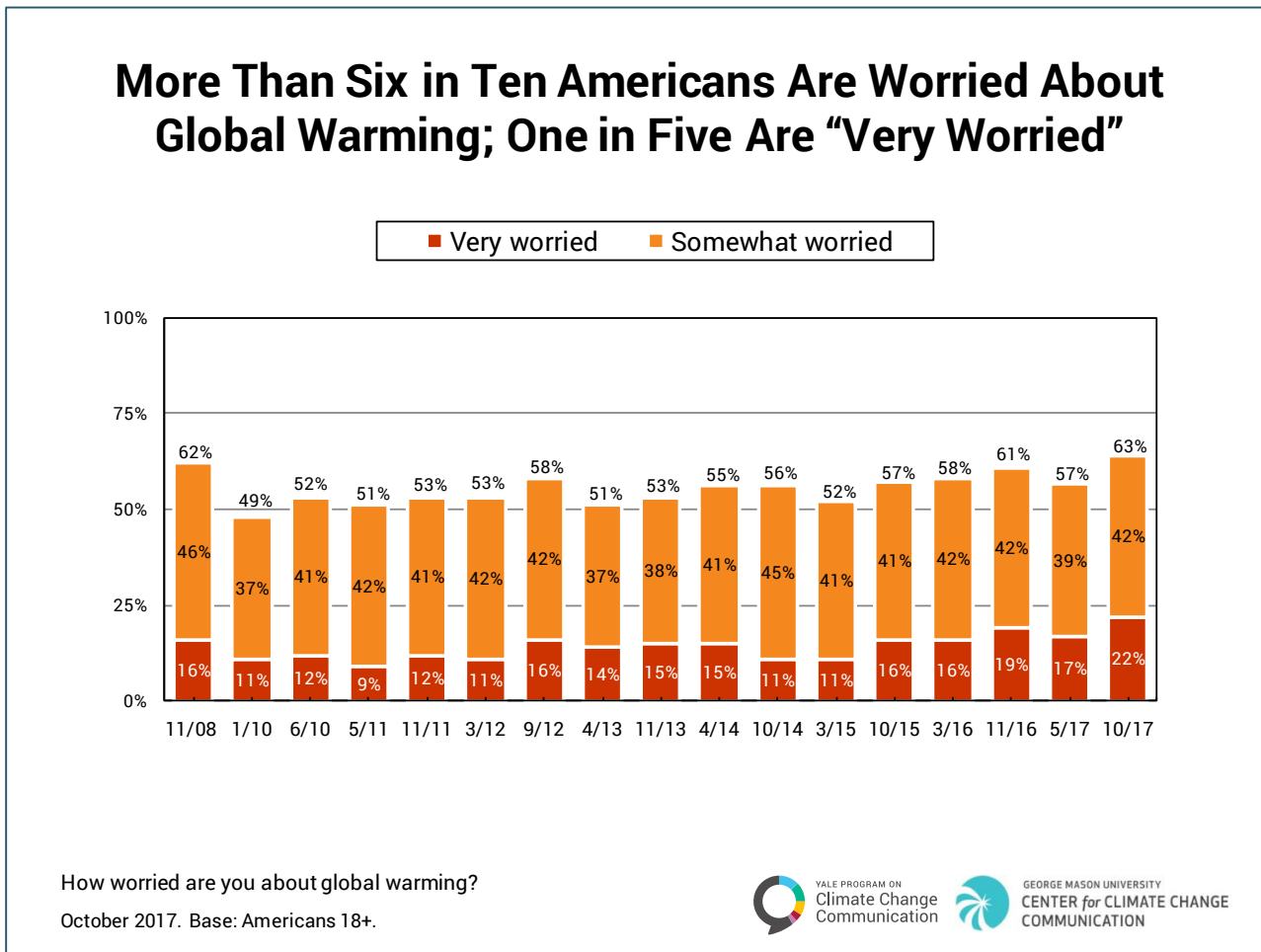
Public misunderstanding of the scientific consensus – which has been found in each of our surveys since 2008 – has significant consequences. Other research has identified public understanding of the scientific consensus as an important "gateway belief" that influences other important beliefs (i.e., global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

For more information, see: van der Linden, S. L., Leiserowitz, A. A., Feinberg, G. D., & Maibach, E. W. (2015). The scientific consensus on climate change as a gateway belief: Experimental evidence. *PLoS ONE*, 10(2). [doi: 10.1371/journal.pone.0118489](https://doi.org/10.1371/journal.pone.0118489)

2. Emotional Responses to Global Warming

2.1. More than six in ten Americans are worried about global warming; one in five are "very worried."

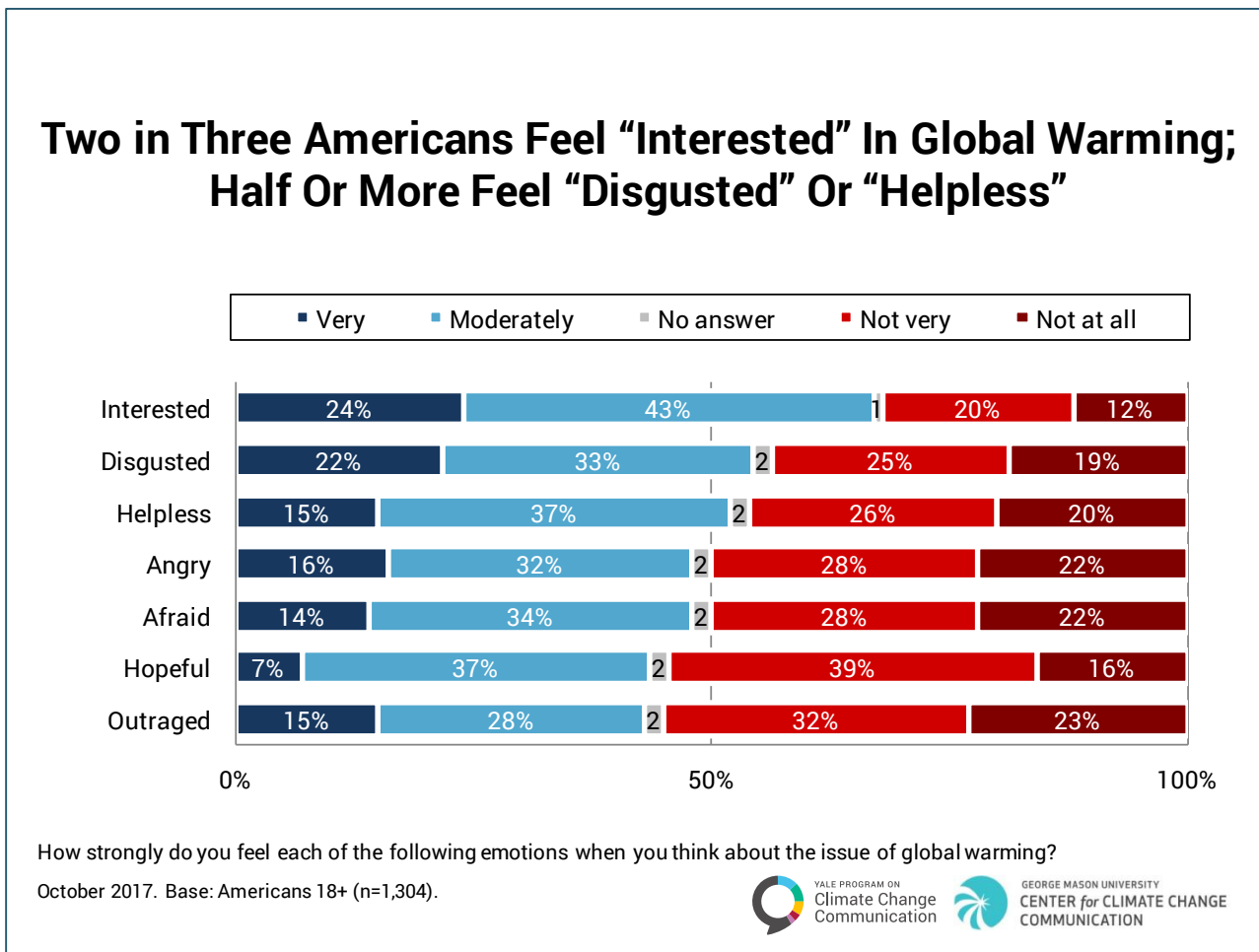
More than six in ten Americans (63%) say they are at least "somewhat worried" about global warming, an increase of 6 percentage points from our previous survey in May 2017, and the highest level since our surveys began in 2008. About one in five Americans (22%) are "very worried," a five-point increase since May, and also the highest level since our surveys began.



2.2. Two in three Americans feel "interested" in global warming; half or more feel "disgusted" or "helpless."

When asked how strongly they feel various emotions when they think about global warming, two in three Americans (67%) say they feel very or moderately "interested" in it, followed by half or more who say they feel "disgusted" (55%), or "helpless" (52%).

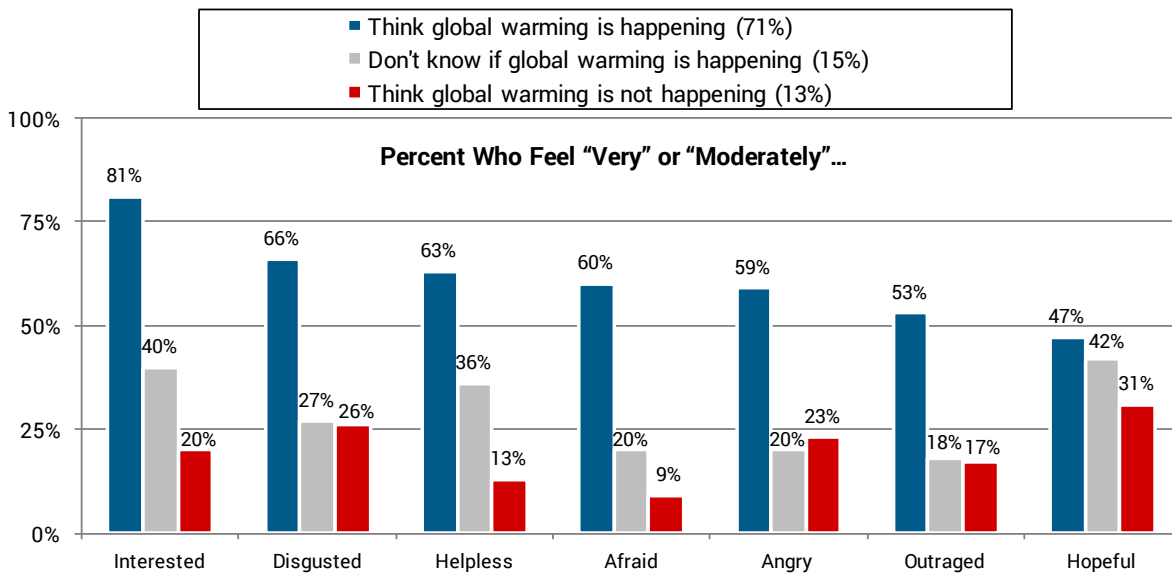
Four in ten or more Americans also feel "angry" (48%), "afraid" (47%), "hopeful" (44%), or "outraged" (43%) when they think about global warming.



Emotional reactions to global warming may be felt for different reasons, and signify different meanings depending on an individual’s beliefs about global warming. For instance, someone who thinks global warming is happening may feel "disgusted" about it for different reasons than someone who thinks global warming is *not* happening. For that reason, we looked separately at people’s emotional reactions to global warming depending on whether they think it *is* happening, don’t know whether or not it’s happening, or think it is *not* happening.

Eight in ten (81%) Americans who think global warming is happening say they are very or moderately "interested" in it. Half or more feel negative emotions, including "disgusted" (66%), "helpless" (63%), "afraid" (60%), and/or "angry" (59%). Slightly fewer than half feel "hopeful" (47%).

A Majority of Americans Who Think Global Warming is Happening Feel “Interested,” “Disgusted,” “Helpless,” “Afraid,” “Angry,” and/or “Outraged” - Fewer than half feel “hopeful” -



How strongly do you feel each of the following emotions when you think about the issue of global warming?

October 2017. Base: Americans 18+ (n=1,304).

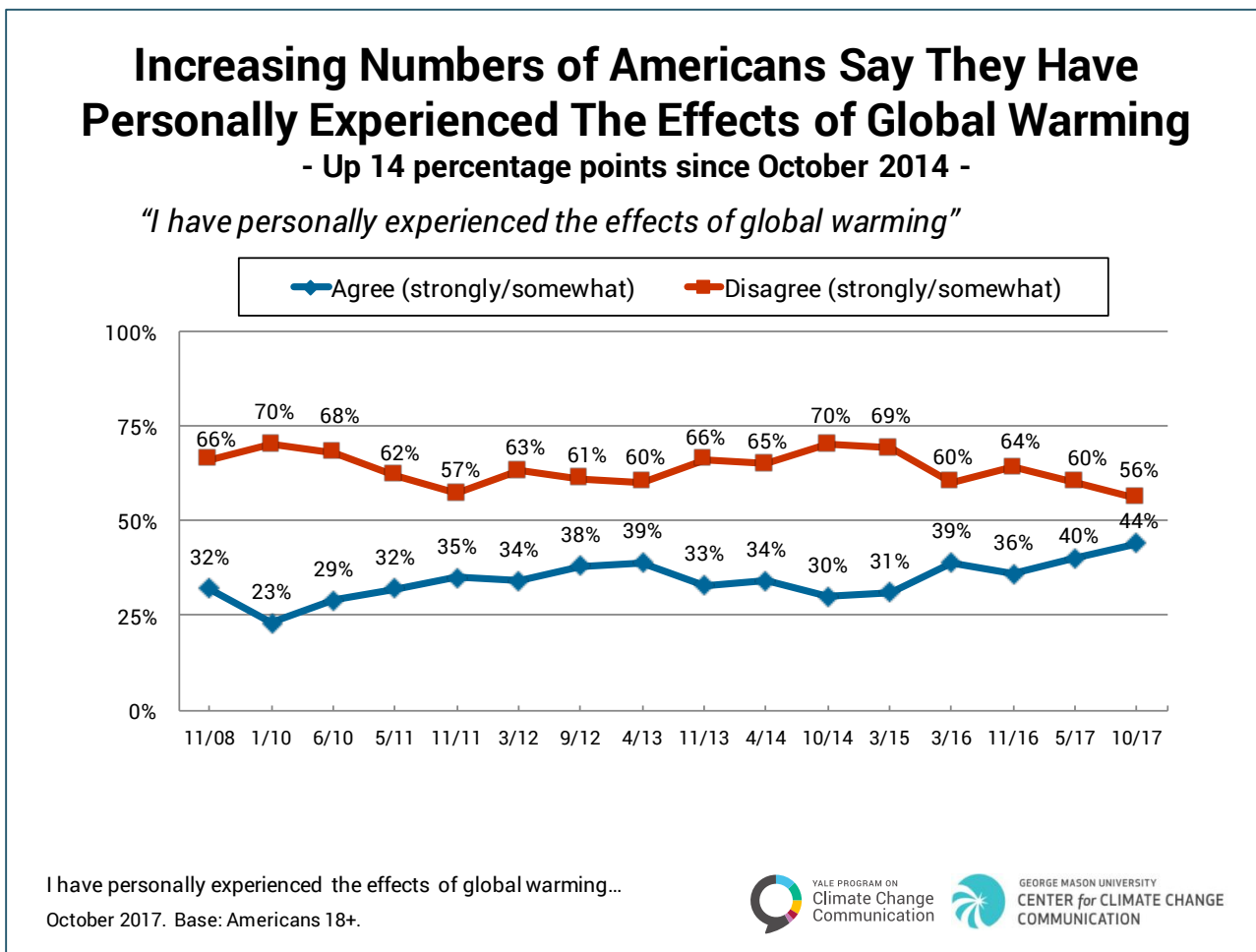


3. Perceived Risks of Global Warming

3.1. Increasing numbers of Americans say they have personally experienced the effects of global warming.

More than four in ten Americans (44%) say they have personally experienced the effects of global warming, while over half (56%) say they have not.

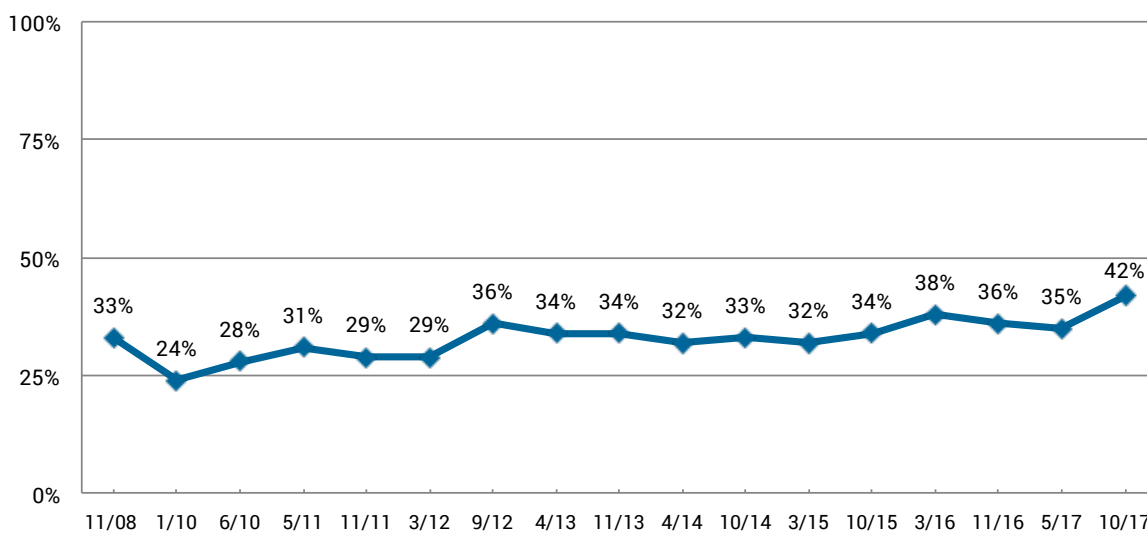
The number of Americans who say they have personally experienced the effects of global warming is at its highest level since our surveys began in 2008, and has increased by 14 percentage points over the past three years.



3.2. Four in ten Americans think people in the U.S. are being harmed "right now" by global warming.

About four in ten Americans (42%) think people in the U.S. are being harmed by global warming "right now," the highest level since our surveys began in 2008 and seven percentage points higher than in our May 2017 survey.

Four in Ten Americans Think People in the U.S. Are Being Harmed "Right Now" by Global Warming

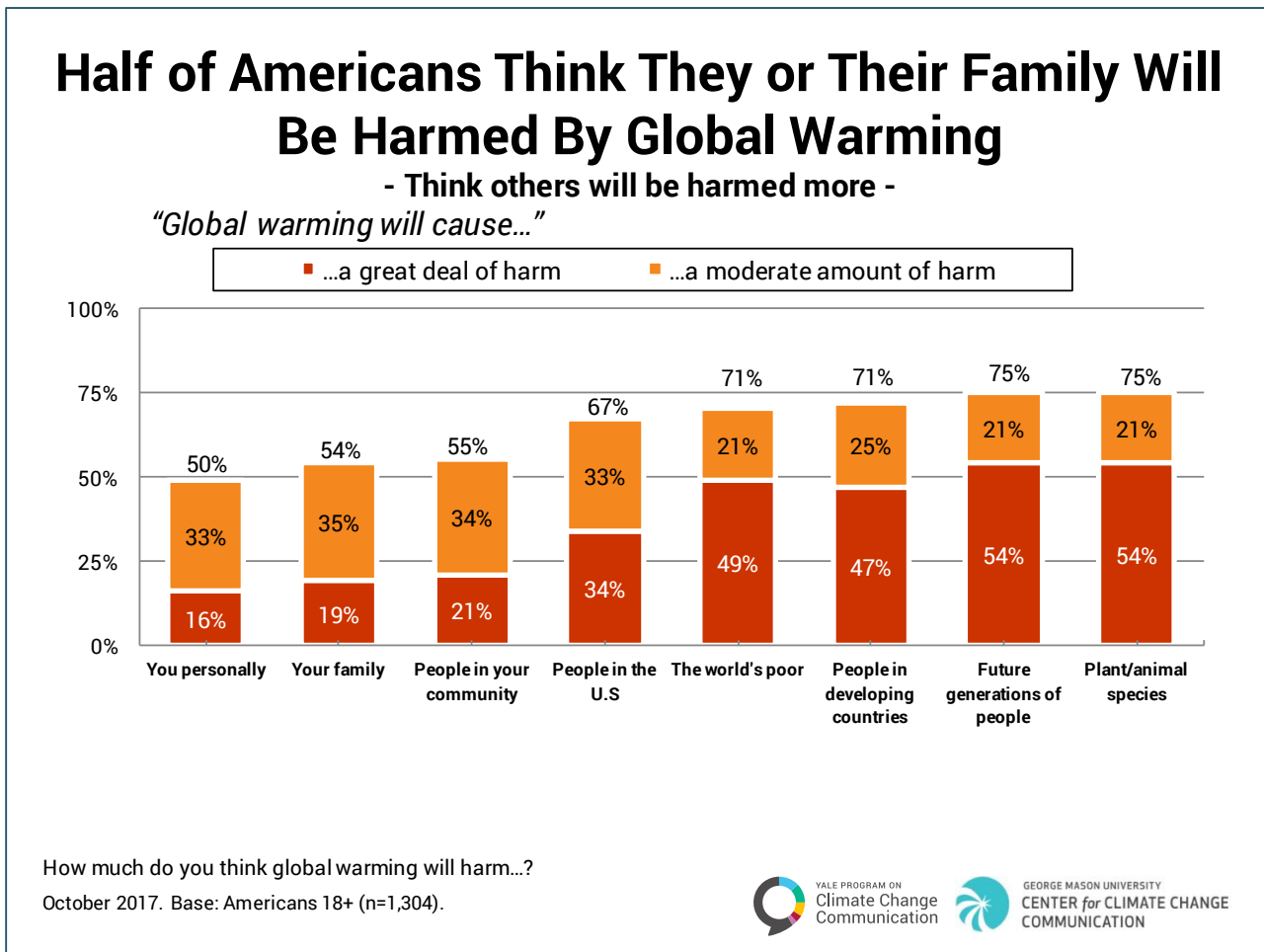


When do you think global warming will start to harm people...?
 October 2017. Base: Americans 18+.



3.3. Half of Americans think they or their family will be harmed by global warming, although they think others will be harmed more.

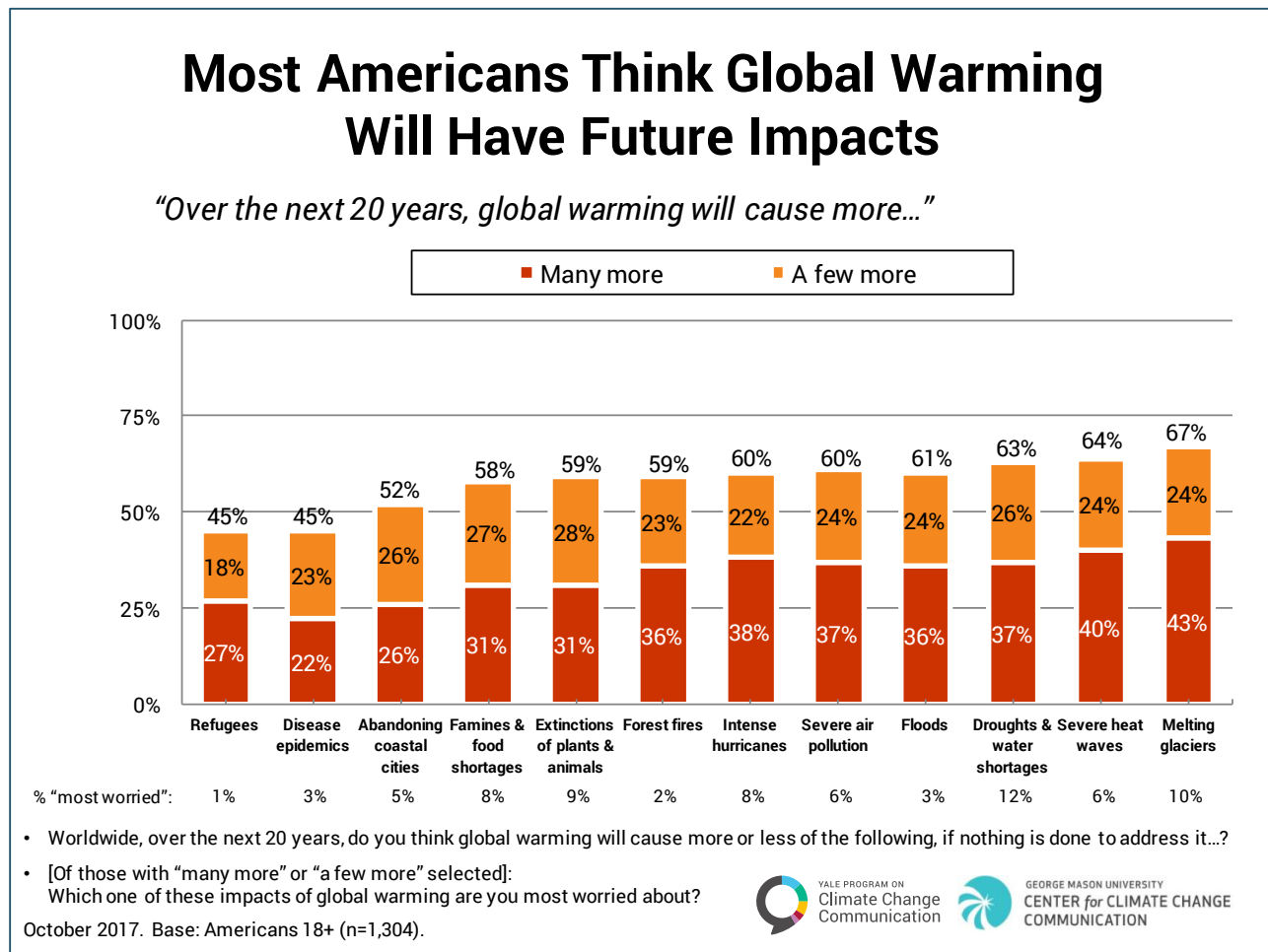
Increasing numbers of Americans understand that global warming will cause harm. They are most likely to think that plant and animal species (75%, +4 percentage points since our last survey in May 2017), future generations of people (75%, +4 points), people in developing countries (71%, +9 points), the world’s poor (71%, +9 points), and people in the U.S. (67%, +9 points) will be harmed a "great deal" or a "moderate amount" by global warming. Half or more also think people in their community (55%, +7 points), their family (54%, +7 points), and they themselves (50%, +7 points since May 2017) will be harmed. These levels of perceived risk are the highest since our survey began in 2008.



3.4. Most Americans think global warming will have future impacts.

The majority of Americans think global warming will have significant impacts over the next 20 years. Six in ten or more think global warming will cause more melting glaciers (67%), severe heat waves (64%), droughts and water shortages (63%), floods (61%), severe air pollution (60%), or intense hurricanes (60%). At least half think global warming will cause more forest fires (59%), extinction of plant and animal species (59%), famines and food shortages (58%), or abandoning of large coastal cities due to rising sea levels (52%).

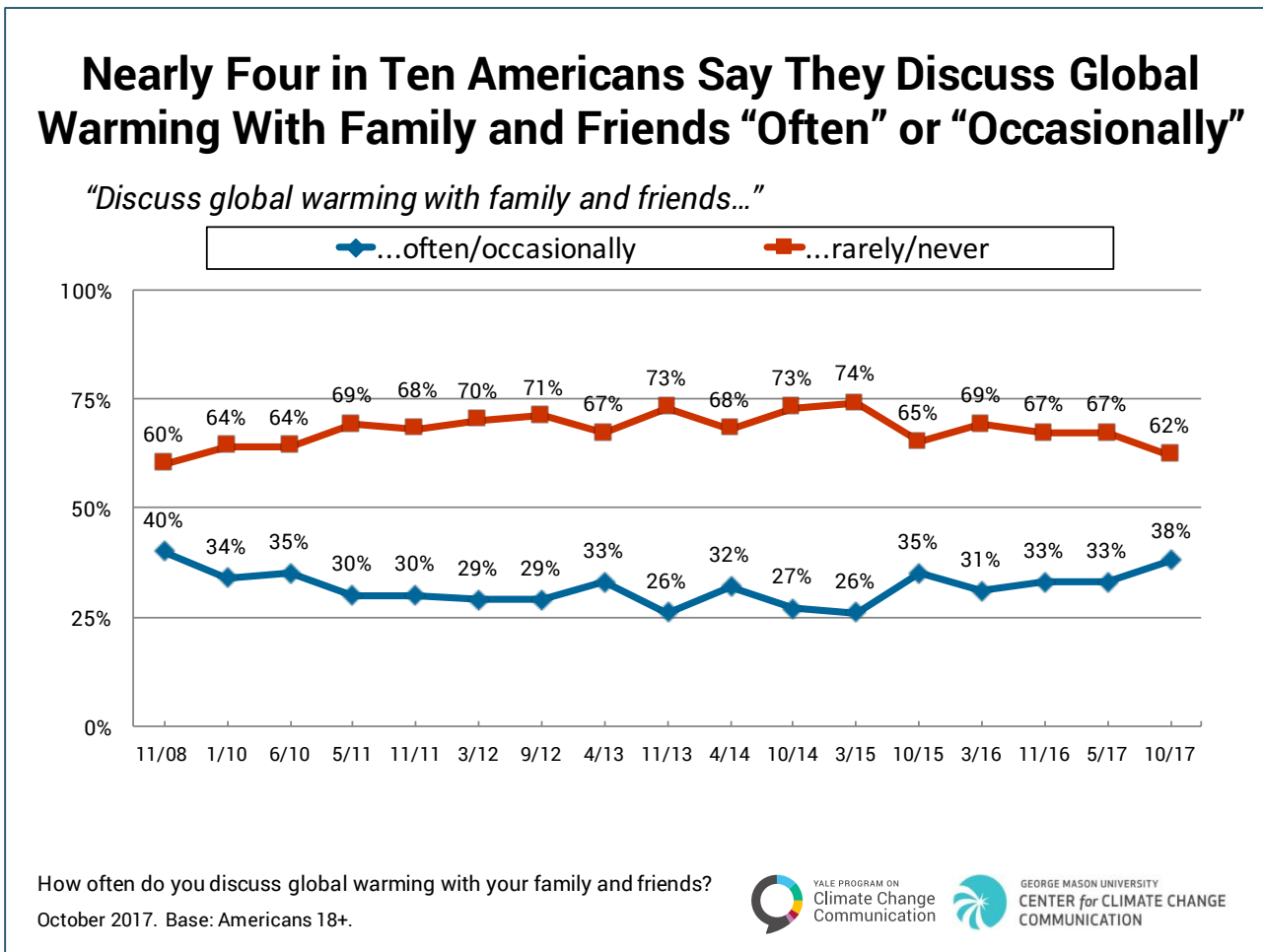
When asked which one impact they are *most* worried about, Americans say droughts and water shortages (12%), melting glaciers (10%), extinctions (9%), intense hurricanes (8%), and famines and food shortages (8%).



4. Personal and Social Engagement with Global Warming

4.1. Nearly four in ten Americans say they discuss global warming with family and friends "often" or "occasionally."

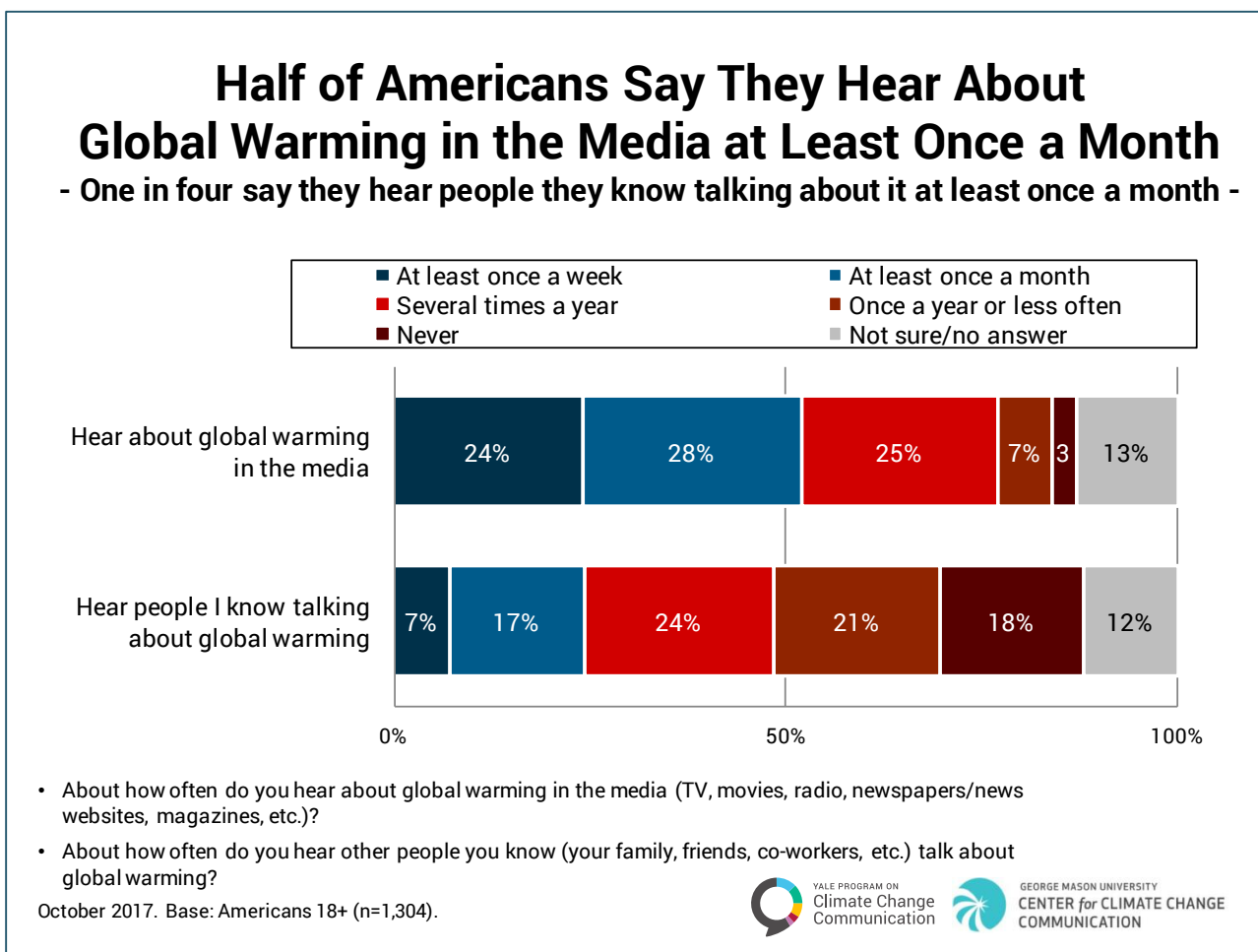
Thirty-eight percent of Americans say they discuss global warming with family and friends at least occasionally, an increase of 5 percentage points since our last survey in May 2017.



4.2. Half of Americans say they hear about global warming in the media at least once a month; one in four say they hear people they know talking about it at least once a month.

Half of Americans (51%) say they hear about global warming in the media once a month or more frequently, an increase of 8 percentage points since our last survey in May 2017. About one in three Americans (32%) say they hear about global warming in the media only several times a year or less, and an additional 3% say they never hear about it.

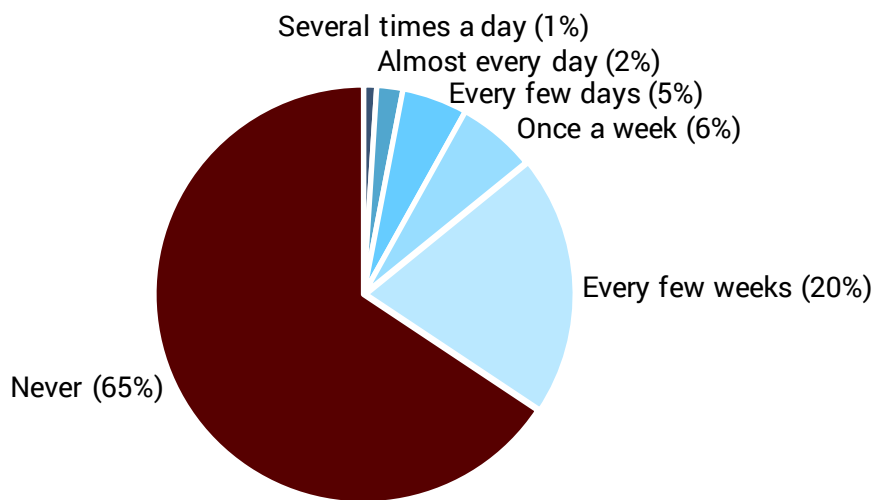
One in four Americans (25%, +6 percentage points) say they hear people they know talking about global warming once a month or more. In contrast, 45% say they hear people they know talking about it only several times a year or less, and about one in five (18%, a decrease of 10 percentage points) say they never hear people they know talk about global warming.



4.3. One in three Americans say they share news stories about global warming on social media.

One in three Americans (34%) say they share news stories about global warming on social media, including one in five (20%) who say they share stories every few weeks and 14% who say they do so once a week or more often. Two in three Americans (65%) say they never share a news story, headline, or story about global warming on social media.

Two in Three Americans Never Share News Stories About Global Warming on Social Media



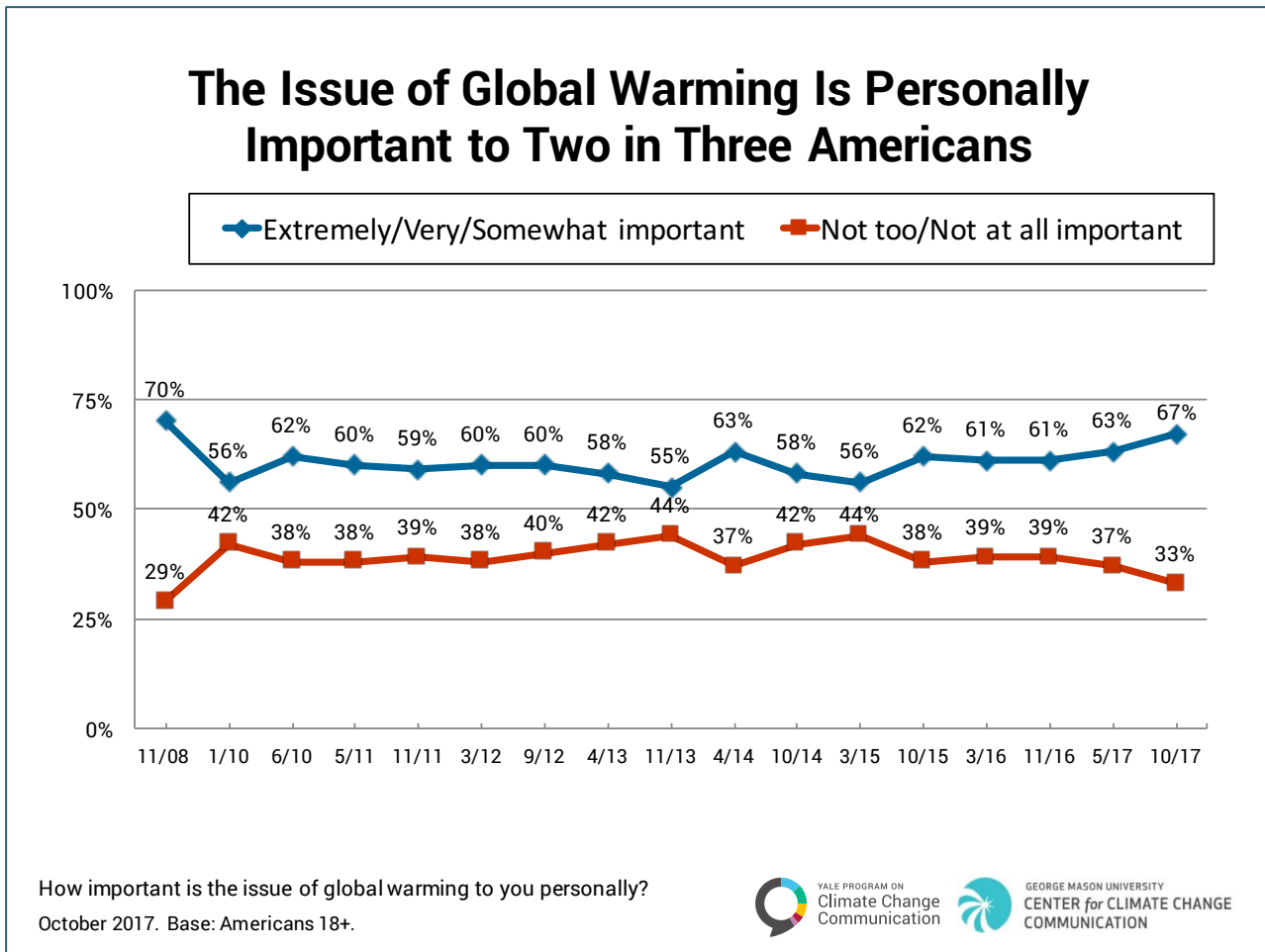
When you use social media, how often do you share a news story, headline, or story about global warming that you have read or seen on other websites?

October 2017. Base: Americans 18+ (n=1,304).



4.4. The issue of global warming is personally important to two in three Americans.

Two in three Americans (67%) say the issue of global warming is either "extremely" (12%), "very" (19%), or "somewhat" (37%) important to them personally, the highest levels since our first survey in 2008. One in three (33%) say global warming is either "not too" (19%) or "not at all" (14%) important personally.

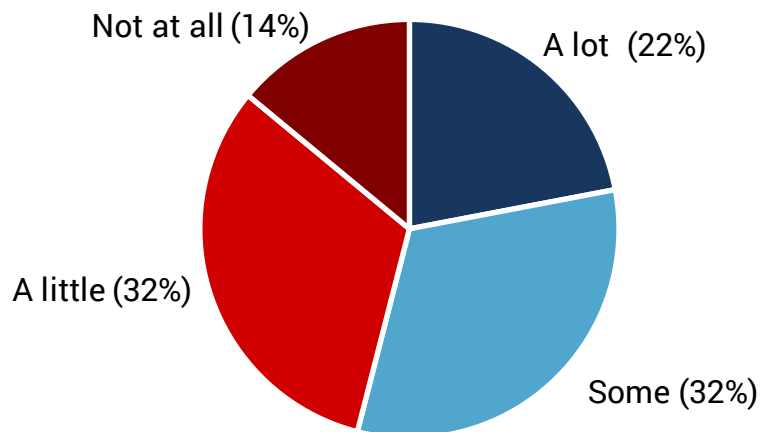


4.5. More than half of Americans have thought about global warming at least "some."

More than half of Americans say they have thought about global warming before today either "a lot" (22%, four percentage points higher than in May 2017) or "some" (32%). Fewer say they have thought about global warming just "a little" (32%) or "not at all" (14%).

More Than Half of Americans Have Thought About Global Warming At Least "Some"

How much had you thought about global warming before today?



How much had you thought about global warming before today?
October 2017. Base: Americans 18+ (n=1,304).



5. Can Humans Reduce Global Warming?

5.1. A majority of Americans think humans can reduce global warming; but few are optimistic that we will.

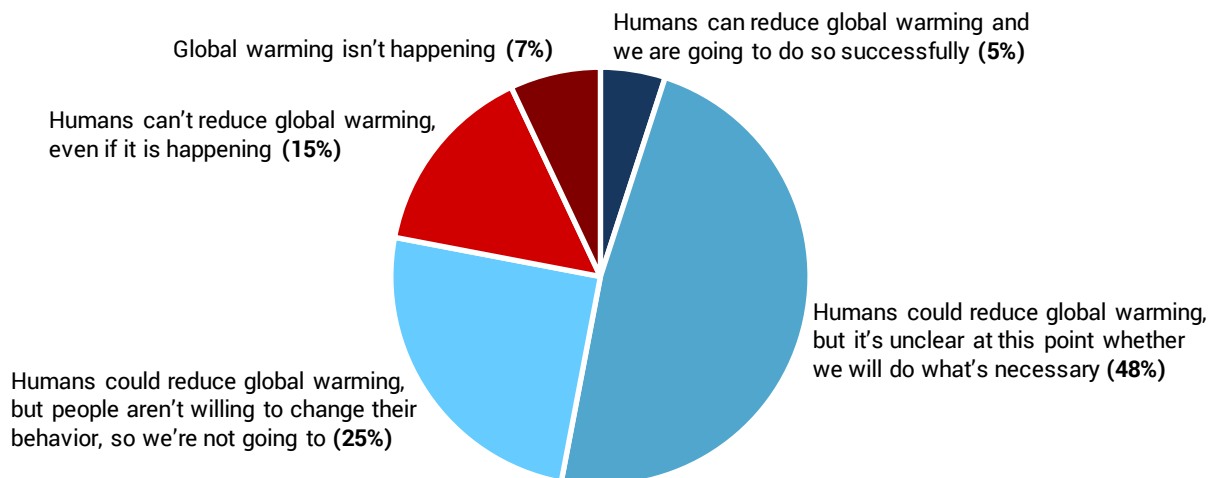
Nearly half of Americans (48%) say humans could reduce global warming, but it's unclear at this point whether we will do what is necessary.

Only 5% say humans can and will successfully reduce global warming. One in four (25%) say we won't because people are unwilling to change their behavior, and 15% say humans can't reduce global warming even if it is happening.

A Majority of Americans Think Humans Can Reduce Global Warming

- But few are optimistic that we will -

Which of the following comes closest to your view?



Which of the following comes closest to your view?

October 2017. Base: Americans 18+ (n=1,304).



6. How Americans Conceptualize Global Warming

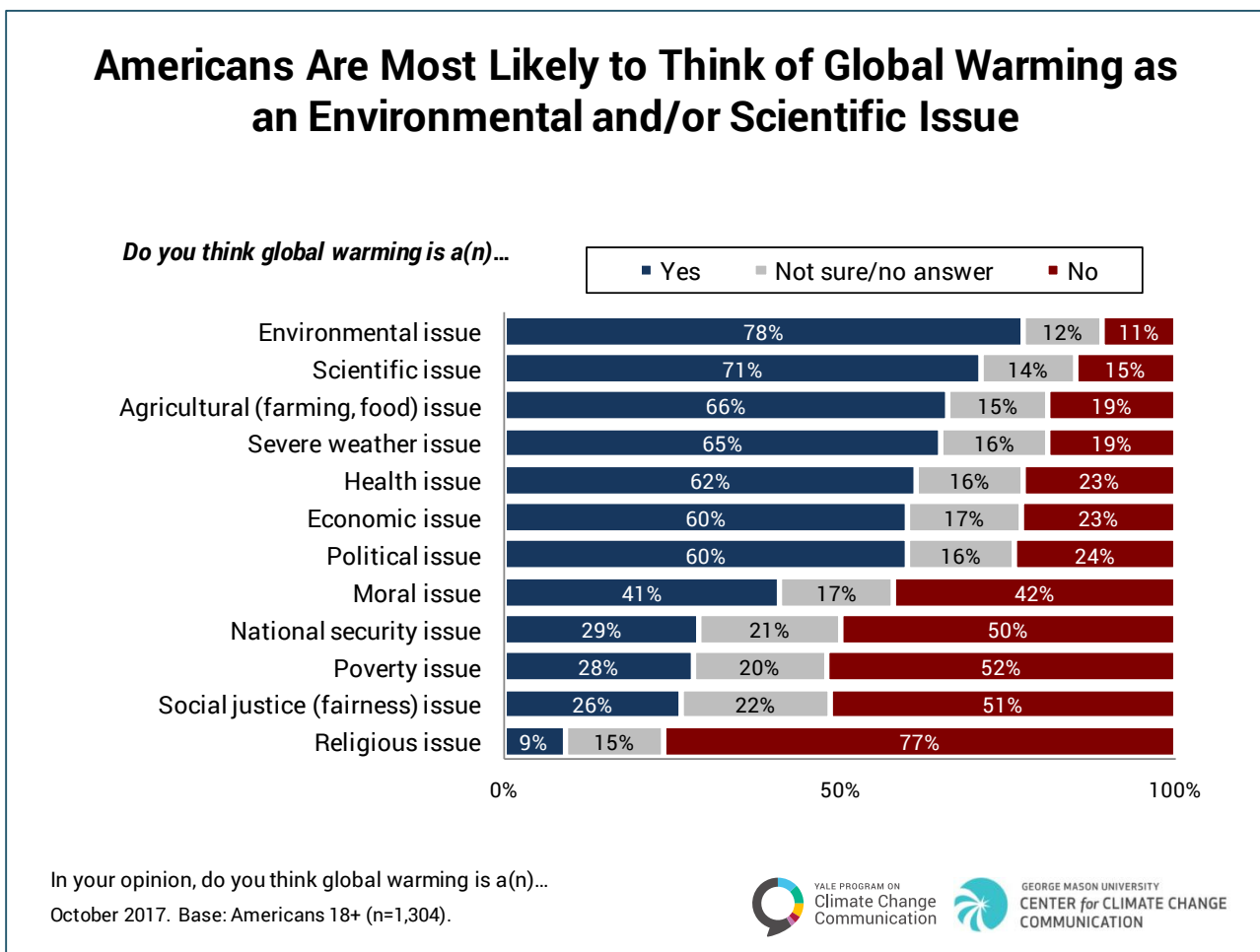
6.1. Americans are most likely to think of global warming as an environmental and/or scientific issue.

Global warming is a complex challenge 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.

A large majority of Americans (78%) say global warming is an environmental issue, and seven in ten (71%) say it is a scientific issue. Majorities also say global warming is an agricultural (66%), severe weather (65%), health (62%), economic (60%), and/or political (60%) issue.

Fewer consider global warming a moral (41%), national security (29%), poverty (28%), social justice (26%), or religious issue (9%).



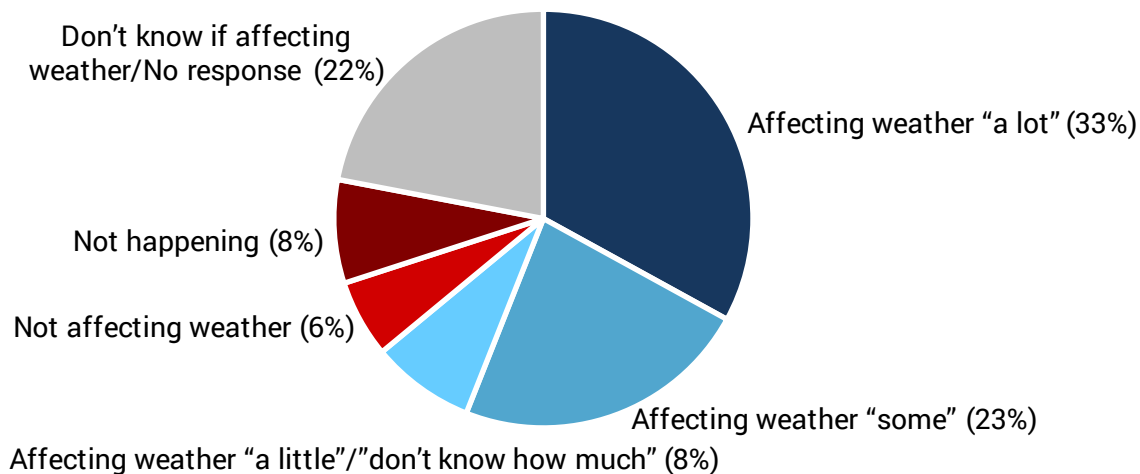
7. Global Warming and Severe Weather

7.1. Nearly two in three Americans think global warming is affecting weather in the United States.

As reported in the previous section, about two in three Americans (65%) think global warming is a severe weather issue (see p. 23). Similarly, 64% of Americans think global warming is affecting weather in the United States, including more than half (56%) who either think global warming is affecting U.S. weather "a lot" (33%) or "some" (23%).

Nearly Two in Three Americans Think Global Warming Is Affecting Weather in the United States

"Global warming is..."



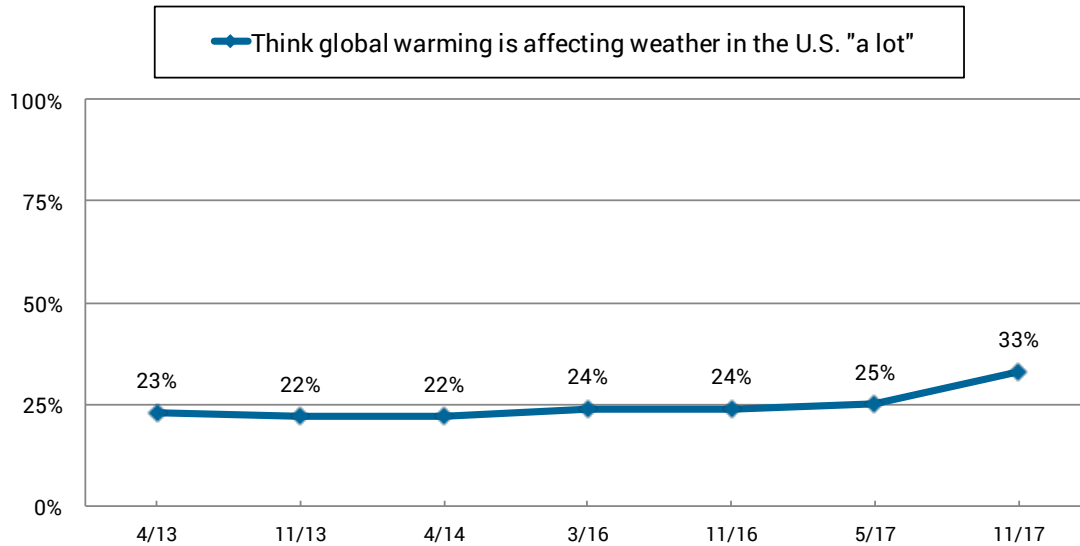
- Which statement best reflects your view...? (a) Global warming is affecting weather in the U.S.; (b) Global warming is *not* affecting weather in the U.S.; (c) Global warming isn't happening; (d) Don't know; (e) Prefer not to answer.
- [If (a) selected]: How much do you think global warming is affecting weather in the U.S.?

October 2017. Base: Americans 18+ (n=1,304).



The percentage of Americans who think global warming is affecting weather in the United States has increased since our last survey in May 2017. The percentage who say global warming is affecting the weather "a lot" increased by eight percentage points since May, and is at its highest level since we first asked the question in 2013.

One in Three Americans Think Global Warming Is Affecting Weather in the U.S. "A Lot"



- Which statement best reflects your view...? (a) Global warming is affecting weather in the United States; (b) Global warming is not affecting weather in the United States; (c) Global warming isn't happening; (d) Don't know; (e) Prefer not to answer.
- If (a) selected: How much do you think global warming is affecting weather in the United States?

October 2017. Base: Americans 18+.

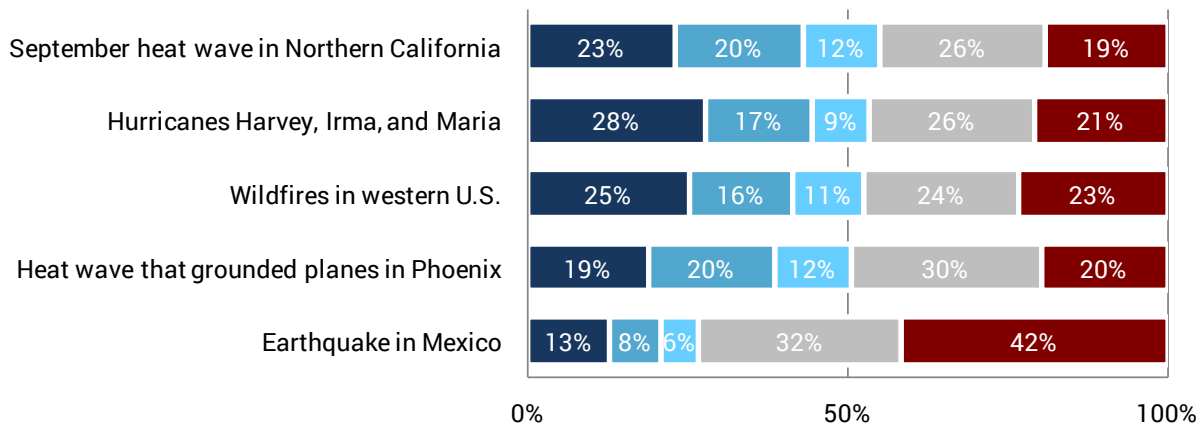


7.2. A majority of Americans think global warming made several extreme events in 2017 worse.

A majority of Americans think global warming made several extreme weather events in 2017 worse, including the heat wave in northern California in September (55%; 23% "a lot" worse), hurricanes Harvey, Irma, and Maria (54%; 28% "a lot"), the summer and fall wildfires in the western U.S. (52%; 25% "a lot"), and the heat wave that grounded planes in Phoenix, Arizona in June (51%; 19% "a lot"). About one in four (27%) think, incorrectly, that global warming made the September earthquake in Mexico City worse.

The Majority of Americans Think Global Warming Made Several Extreme Weather Events in 2017 Worse

■ A lot worse ■ Moderately worse ■ A little worse/DK how much ■ Don't know/No response ■ Not worse



- Do you think global warming made each of the following worse or not...?
- [If "yes" selected]: Do you think global warming made each of the following a little worse, moderately worse or a lot worse?

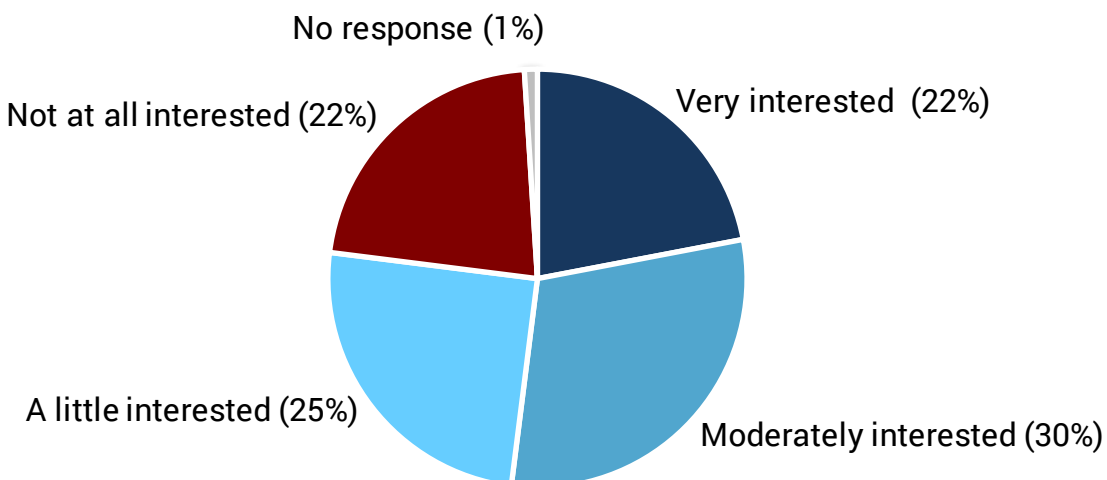
October 2017. Base: Americans 18+ (n=1,304).



7.3. Most Americans are interested in learning about how global warming is or is not affecting extreme weather events.

More than three in four Americans (78%) are either "very" interested (22%), "moderately" interested (30%), or "a little" interested (25%) in learning more about how global warming is or is not affecting extreme weather events. About one in five (22%) are not interested.

Most Americans Are Interested In Learning About How Global Warming Is Or Is Not Affecting Extreme Weather Events



How interested would you be in learning more about how global warming is or is not affecting extreme weather events?

October 2017. Base: Americans 18+ (n=1,304).



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 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 71 | 70 | 70 | 70 | 67 | 63 | 66 | 64 | 62 | 63 | 70 | 66 | 62 | 63 | 61 | 57 | 71 |
| No | 13 | 13 | 13 | 11 | 15 | 18 | 16 | 19 | 23 | 16 | 12 | 14 | 16 | 18 | 18 | 20 | 10 |
| Don't know | 15 | 16 | 17 | 18 | 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 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (927) | (889) | (859) | (855) | (899) | (793) | (815) | (649) | (521) | (674) | (722) | (658) | (619) | (614) | (622) | (558) | (1,745) |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Extremely sure | 34 | 31 | 35 | 30 | 28 | 27 | 24 | 30 | 27 | 27 | 27 | 19 | 22 | 21 | 20 | 24 | 35 |
| Very sure | 32 | 34 | 30 | 31 | 32 | 32 | 35 | 32 | 31 | 33 | 30 | 34 | 35 | 33 | 36 | 35 | 37 |
| Somewhat sure | 32 | 33 | 32 | 34 | 37 | 38 | 38 | 33 | 39 | 37 | 40 | 42 | 39 | 40 | 40 | 37 | 24 |
| Not at all sure | 2 | 2 | 4 | 4 | 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 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (178) | (169) | (155) | (144) | (215) | (251) | (228) | (196) | (179) | (164) | (160) | (156) | (175) | (188) | (199) | (227) | (301) |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Extremely sure | 19 | 26 | 24 | 20 | 21 | 21 | 23 | 15 | 20 | 18 | 15 | 15 | 21 | 21 | 20 | 28 | 26 |
| Very sure | 33 | 26 | 29 | 37 | 32 | 31 | 30 | 26 | 35 | 28 | 27 | 41 | 37 | 30 | 31 | 31 | 28 |
| Somewhat sure | 39 | 41 | 39 | 34 | 36 | 37 | 35 | 47 | 36 | 42 | 45 | 35 | 37 | 38 | 44 | 34 | 38 |
| Not at all sure | 9 | 7 | 8 | 9 | 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 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 54 | 58 | 55 | 54 | 53 | 52 | 51 | 52 | 47 | 49 | 54 | 46 | 49 | 47 | 50 | 46 | 57 |
| Caused mostly by natural changes in the environment | 33 | 30 | 30 | 34 | 33 | 32 | 33 | 33 | 36 | 33 | 32 | 37 | 32 | 35 | 34 | 35 | 32 |
| Neither because global warming isn't happening | 6 | 6 | 8 | 7 | 8 | 10 | 9 | 8 | 8 | 8 | 7 | 5 | 8 | 8 | 6 | 9 | 4 |
| Other (please specify), caused by human activities and natural changes | 6 | 6 | 5 | 5 | 5 | 5 | 6 | 5 | 9 | 7 | 5 | 9 | 6 | 7 | 7 | 6 | 5 |
| Other (please specify), unclassified | 1 | 1 | 1 | 1 | 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 2017 | May 2017 | Nov 2016 | March 2016 | Oct 2015 | March 2015 | Oct 2014 |
|---|----------|----------|----------|------------|----------|------------|----------|
| (Unweighted base) | (1,304) | (1,266) | (1,226) | (1,204) | (1,330) | (1,263) | (1,275) |
| | % | % | % | % | % | % | % |
| 0% - 10% | 1 | 2 | 2 | 1 | 2 | 1 | 1 |
| 11% - 20% | 1 | 1 | 1 | 1 | 2 | 1 | 1 |
| 21% - 30% | 5 | 4 | 7 | 4 | 4 | 4 | 4 |
| 31% - 40% | 3 | 3 | 3 | 2 | 2 | 2 | 2 |
| 41% - 50% | 13 | 13 | 13 | 13 | 12 | 14 | 15 |
| 51% - 60% | 5 | 7 | 6 | 6 | 5 | 6 | 7 |
| 61% - 70% | 5 | 6 | 7 | 8 | 6 | 8 | 7 |
| 71% - 80% | 17 | 14 | 17 | 15 | 18 | 15 | 17 |
| 81% - 90% | 10 | 10 | 9 | 8 | 10 | 8 | 7 |
| 91% - 100% | 15 | 13 | 15 | 11 | 12 | 9 | 9 |
| Don't know enough to say | 24 | 28 | 21 | 32 | 27 | 31 | 30 |
| Of those who provided an estimate: | | | | | | | |
| Mean | 68 | 67 | 66 | 67 | 67 | 64 | 65 |
| Median | 75 | 73 | 74 | 71 | 74 | 68 | 67 |

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

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 22 | 17 | 19 | 16 | 16 | 11 | 11 | 15 | 15 | 14 | 16 | 11 | 12 | 9 | 12 | 11 | 16 |
| Somewhat worried | 42 | 39 | 42 | 42 | 41 | 41 | 45 | 41 | 38 | 37 | 42 | 42 | 41 | 42 | 41 | 37 | 46 |
| Not very worried | 23 | 27 | 24 | 25 | 27 | 29 | 25 | 27 | 25 | 30 | 25 | 30 | 30 | 28 | 30 | 27 | 24 |
| Not at all worried | 14 | 17 | 15 | 18 | 16 | 19 | 18 | 18 | 20 | 19 | 17 | 16 | 15 | 20 | 18 | 22 | 13 |

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

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | Global Warming is Happening, Oct 2017 | Don't Know if Global Warming is Happening, Oct 2017 | Global Warming is <i>Not</i> Happening, Oct 2017 |
|-------------------|----------|----------|------------|----------|---------------------------------------|---|--|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | (927) | (199) | (178) |
| | % | % | % | % | % | % | % |
| Very | 24 | 23 | 22 | 23 | 32 | 2 | 6 |
| Moderately | 43 | 43 | 45 | 43 | 49 | 39 | 15 |
| Not very | 20 | 15 | 16 | 19 | 14 | 35 | 33 |
| Not at all | 12 | 18 | 16 | 14 | 3 | 24 | 46 |

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

| | Oct 2017 | Nov 2016 | March 2016 | | Global Warming is Happening, Oct 2017 | Don't Know if Global Warming is Happening, Oct 2017 | Global Warming is <i>Not</i> Happening, Oct 2017 |
|-------------------|----------|----------|------------|--|---------------------------------------|---|--|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | | (927) | (199) | (178) |
| | % | % | % | | % | % | % |
| Very | 22 | 15 | 14 | | 27 | 7 | 12 |
| Moderately | 33 | 28 | 34 | | 39 | 20 | 14 |
| Not very | 25 | 28 | 25 | | 24 | 36 | 18 |
| Not at all | 19 | 28 | 26 | | 9 | 35 | 54 |

Helpless

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | | Global Warming is Happening, Oct 2017 | Don't Know if Global Warming is Happening, Oct 2017 | Global Warming is <i>Not</i> Happening, Oct 2017 |
|-------------------|----------|----------|------------|----------|--|---------------------------------------|---|--|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | | (927) | (199) | (178) |
| | % | % | % | % | | % | % | % |
| Very | 15 | 12 | 13 | 14 | | 18 | 10 | 3 |
| Moderately | 37 | 34 | 36 | 39 | | 45 | 26 | 10 |
| Not very | 26 | 26 | 23 | 25 | | 26 | 33 | 20 |
| Not at all | 20 | 26 | 27 | 21 | | 10 | 28 | 66 |

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

| | Oct 2017 | Nov 2016 | March 2016 | Global Warming is Happening, Oct 2017 | Don't Know if Global Warming is Happening, Oct 2017 | Global Warming is <i>Not</i> Happening, Oct 2017 |
|-------------------|----------|----------|------------|---------------------------------------|---|--|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (927) | (199) | (178) |
| | % | % | % | % | % | % |
| Very | 16 | 12 | 12 | 20 | 3 | 8 |
| Moderately | 32 | 26 | 29 | 39 | 17 | 15 |
| Not very | 28 | 31 | 29 | 28 | 39 | 17 |
| Not at all | 22 | 30 | 29 | 11 | 40 | 59 |

Afraid

| | Oct 2017 | Nov 2016 | March 2016 | Global Warming is Happening, Oct 2017 | Don't Know if Global Warming is Happening, Oct 2017 | Global Warming is <i>Not</i> Happening, Oct 2017 |
|-------------------|----------|----------|------------|---------------------------------------|---|--|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (927) | (199) | (178) |
| | % | % | % | % | % | % |
| Very | 14 | 12 | 11 | 18 | 1 | 3 |
| Moderately | 34 | 30 | 31 | 42 | 19 | 6 |
| Not very | 28 | 27 | 26 | 27 | 40 | 21 |
| Not at all | 22 | 29 | 30 | 11 | 37 | 67 |

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

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | Global Warming is Happening, Oct 2017 | Don't Know if Global Warming is Happening, Oct 2017 | Global Warming is <i>Not</i> Happening, Oct 2017 |
|-------------------|----------|----------|------------|----------|---------------------------------------|---|--|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | (927) | (199) | (178) |
| | % | % | % | % | % | % | % |
| Very | 7 | 11 | 10 | 11 | 8 | 4 | 9 |
| Moderately | 37 | 38 | 38 | 39 | 39 | 37 | 22 |
| Not very | 39 | 30 | 30 | 32 | 42 | 34 | 23 |
| Not at all | 16 | 21 | 20 | 17 | 9 | 22 | 45 |

Outraged

| | Oct 2017 | Nov 2016 | March 2016 | Global Warming is Happening, Oct 2017 | Don't Know if Global Warming is Happening, Oct 2017 | Global Warming is <i>Not</i> Happening, Oct 2017 |
|-------------------|----------|----------|------------|---------------------------------------|---|--|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (927) | (199) | (178) |
| | % | % | % | % | % | % |
| Very | 15 | 12 | 12 | 19 | 3 | 9 |
| Moderately | 28 | 24 | 29 | 34 | 15 | 8 |
| Not very | 32 | 32 | 28 | 31 | 44 | 20 |
| Not at all | 23 | 31 | 30 | 13 | 37 | 61 |

(Base: Americans 18+)**How much do you agree with the following statements?****I have personally experienced the effects of global warming.**

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (1,263) | (1,275) | (1,013) | (830) | (1,045) | (1,061) | (1,008) | (1,000) | (1,010) | (1,024) | (1,001) | (2,164) |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Strongly/ Somewhat Agree | 44 | 40 | 36 | 39 | 31 | 30 | 34 | 33 | 39 | 38 | 34 | 35 | 32 | 29 | 23 | 32 |
| Strongly Agree | 8 | 5 | 7 | 7 | 4 | 4 | 5 | 6 | 6 | 4 | 5 | 7 | 5 | 5 | 4 | 4 |
| Somewhat Agree | 36 | 34 | 29 | 33 | 27 | 26 | 29 | 27 | 33 | 34 | 30 | 28 | 27 | 24 | 19 | 28 |
| Strongly/ Somewhat Disagree | 56 | 60 | 64 | 60 | 69 | 70 | 65 | 66 | 60 | 61 | 63 | 57 | 62 | 68 | 70 | 66 |
| Somewhat Disagree | 30 | 29 | 29 | 29 | 29 | 29 | 29 | 30 | 29 | 30 | 30 | 34 | 32 | 34 | 32 | 42 |
| Strongly Disagree | 26 | 31 | 35 | 31 | 40 | 41 | 35 | 36 | 31 | 31 | 33 | 23 | 30 | 34 | 37 | 24 |

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

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 42 | 35 | 36 | 38 | 34 | 32 | 33 | 32 | 34 | 34 | 36 | 29 | 29 | 31 | 28 | 24 | 33 |
| In 10 years | 12 | 11 | 14 | 12 | 13 | 11 | 10 | 9 | 10 | 11 | 13 | 12 | 10 | 11 | 12 | 12 | 13 |
| In 25 years | 12 | 13 | 15 | 13 | 14 | 13 | 14 | 14 | 14 | 12 | 11 | 14 | 13 | 13 | 12 | 14 | 13 |
| In 50 years | 11 | 13 | 10 | 12 | 11 | 11 | 12 | 15 | 11 | 12 | 12 | 14 | 15 | 12 | 13 | 13 | 13 |
| In 100 years | 11 | 13 | 9 | 10 | 11 | 13 | 13 | 14 | 12 | 13 | 13 | 15 | 15 | 11 | 15 | 13 | 12 |
| Never | 12 | 15 | 16 | 14 | 18 | 20 | 18 | 16 | 18 | 17 | 15 | 16 | 16 | 19 | 19 | 23 | 15 |

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

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 16 | 13 | 14 | 12 | 14 | 10 | 12 | 13 | 13 | 15 | 16 | 11 | 9 | 11 | 10 | 14 | 10 |
| A moderate amount | 33 | 29 | 27 | 28 | 27 | 26 | 24 | 25 | 25 | 25 | 26 | 18 | 21 | 18 | 21 | 23 | 22 |
| Only a little | 24 | 26 | 25 | 24 | 26 | 26 | 26 | 26 | 27 | 26 | 25 | 30 | 28 | 27 | 27 | 22 | 24 |
| Not at all | 19 | 22 | 25 | 23 | 20 | 25 | 27 | 25 | 26 | 23 | 20 | 29 | 25 | 25 | 24 | 31 | 22 |
| Don't know | 7 | 9 | 8 | 12 | 12 | 13 | 11 | 11 | 8 | 11 | 13 | 11 | 17 | 17 | 18 | 11 | 23 |

Your family

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 19 | 16 | 17 | 15 | 13 | 15 | 16 | 17 | 17 | 18 | 12 | 10 | 12 | 11 | 15 | 11 |
| A moderate amount | 35 | 31 | 30 | 30 | 28 | 28 | 27 | 25 | 27 | 28 | 21 | 24 | 21 | 25 | 25 | 24 |
| Only a little | 22 | 25 | 24 | 22 | 23 | 23 | 24 | 25 | 23 | 23 | 29 | 27 | 25 | 24 | 21 | 23 |
| Not at all | 16 | 19 | 21 | 21 | 22 | 23 | 21 | 24 | 20 | 17 | 26 | 21 | 23 | 21 | 28 | 19 |
| Don't know | 8 | 9 | 8 | 12 | 13 | 11 | 11 | 9 | 12 | 14 | 12 | 18 | 17 | 19 | 11 | 23 |

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

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 21 | 16 | 19 | 15 | 14 | 16 | 17 | 14 | 17 | 19 | 12 | 11 | 12 | 11 | 15 | 13 |
| A moderate amount | 34 | 32 | 30 | 31 | 29 | 27 | 28 | 29 | 28 | 29 | 22 | 24 | 21 | 25 | 27 | 26 |
| Only a little | 22 | 23 | 22 | 23 | 24 | 23 | 24 | 24 | 23 | 23 | 29 | 27 | 25 | 24 | 22 | 20 |
| Not at all | 15 | 18 | 20 | 19 | 20 | 22 | 20 | 23 | 18 | 15 | 24 | 21 | 21 | 21 | 24 | 17 |
| Don't know | 8 | 10 | 9 | 12 | 14 | 11 | 11 | 10 | 13 | 13 | 13 | 18 | 18 | 19 | 12 | 23 |

People in the United States

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 25 | 28 | 24 | 23 | 19 | 23 | 23 | 23 | 22 | 26 | 18 | 15 | 16 | 16 | 22 | 21 |
| A moderate amount | 33 | 33 | 32 | 35 | 34 | 30 | 30 | 30 | 30 | 30 | 31 | 28 | 29 | 26 | 28 | 29 | 28 |
| Only a little | 14 | 19 | 17 | 16 | 18 | 20 | 20 | 18 | 19 | 19 | 17 | 24 | 23 | 22 | 22 | 16 | 15 |
| Not at all | 11 | 15 | 15 | 15 | 14 | 17 | 17 | 18 | 20 | 16 | 12 | 18 | 17 | 17 | 17 | 22 | 14 |
| Don't know | 7 | 9 | 8 | 10 | 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.)****The world's poor**

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | Oct 2015 | March 2015 |
|-------------------|----------|----------|----------|------------|----------|------------|
| (Unweighted base) | (1,304) | (1,266) | (1,226) | (1,204) | (1,330) | (1,263) |
| | % | % | % | % | % | % |
| A great deal | 49 | 39 | 43 | 40 | 36 | 30 |
| A moderate amount | 21 | 23 | 21 | 22 | 26 | 23 |
| Only a little | 10 | 15 | 11 | 12 | 12 | 16 |
| Not at all | 10 | 13 | 13 | 13 | 13 | 16 |
| Don't know | 9 | 10 | 12 | 14 | 13 | 15 |

People in developing countries

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 47 | 37 | 40 | 36 | 34 | 27 | 29 | 31 | 32 | 30 | 35 | 26 | 22 | 23 | 22 | 29 | 31 |
| A moderate amount | 25 | 25 | 25 | 27 | 27 | 26 | 26 | 24 | 24 | 25 | 29 | 26 | 28 | 21 | 28 | 25 | 22 |
| Only a little | 10 | 16 | 12 | 12 | 13 | 17 | 16 | 17 | 17 | 18 | 10 | 19 | 17 | 19 | 17 | 14 | 11 |
| Not at all | 10 | 13 | 13 | 13 | 13 | 15 | 17 | 16 | 19 | 13 | 11 | 16 | 15 | 16 | 15 | 19 | 13 |
| Don't know | 9 | 9 | 11 | 12 | 13 | 15 | 12 | 12 | 9 | 13 | 15 | 14 | 18 | 18 | 18 | 13 | 24 |

(Base: Americans 18+)**How much do you think global warming will harm...? (Cont'd.)****Future generations of people**

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 54 | 50 | 53 | 48 | 51 | 42 | 46 | 49 | 46 | 42 | 47 | 43 | 40 | 36 | 39 | 42 | 44 |
| A moderate amount | 21 | 20 | 18 | 22 | 19 | 21 | 18 | 18 | 19 | 21 | 21 | 22 | 22 | 22 | 22 | 22 | 17 |
| Only a little | 8 | 10 | 9 | 8 | 8 | 10 | 11 | 10 | 11 | 12 | 9 | 12 | 13 | 10 | 11 | 9 | 7 |
| Not at all | 9 | 11 | 10 | 10 | 11 | 12 | 13 | 12 | 15 | 12 | 8 | 11 | 10 | 11 | 12 | 15 | 10 |
| Don't know | 8 | 8 | 10 | 11 | 11 | 15 | 13 | 11 | 9 | 12 | 14 | 13 | 16 | 18 | 16 | 12 | 22 |

Plant and animal species

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 54 | 49 | 50 | 48 | 42 | 44 | 47 | 46 | 39 | 43 | 43 | 41 | 38 | 40 | 43 | 45 |
| A moderate amount | 21 | 22 | 19 | 23 | 21 | 20 | 19 | 19 | 24 | 25 | 21 | 19 | 18 | 21 | 19 | 17 |
| Only a little | 9 | 10 | 10 | 9 | 12 | 10 | 12 | 11 | 13 | 11 | 13 | 16 | 12 | 12 | 11 | 8 |
| Not at all | 8 | 11 | 11 | 11 | 12 | 13 | 12 | 15 | 13 | 8 | 10 | 10 | 12 | 13 | 15 | 9 |
| Don't know | 8 | 8 | 9 | 10 | 13 | 12 | 11 | 8 | 10 | 13 | 12 | 15 | 17 | 15 | 12 | 20 |

(Base: Americans 18+)

Worldwide, 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?

Refugees

| | Oct 2017 |
|-------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Many more | 27 |
| A few more | 18 |
| No difference | 25 |
| A few less | 2 |
| Many less | 1 |
| Don't know | 25 |

Disease epidemics

| | Oct 2017 |
|-------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Many more | 22 |
| A few more | 23 |
| No difference | 24 |
| A few less | 2 |
| Many less | 1 |
| Don't know | 26 |

Worldwide, 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? (Cont'd.)

Abandoning large coastal cities due to rising sea levels

| | Oct 2017 |
|-------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Many more | 26 |
| A few more | 26 |
| No difference | 22 |
| A few less | 2 |
| Many less | 1 |
| Don't know | 21 |

Famines and food shortages

| | Oct 2017 |
|-------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Many more | 31 |
| A few more | 27 |
| No difference | 17 |
| A few less | 1 |
| Many less | 1 |
| Don't know | 20 |

Worldwide, 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? (Cont'd.)

Extinctions of plant and animal species

| | Oct 2017 |
|-------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Many more | 31 |
| A few more | 28 |
| No difference | 17 |
| A few less | 1 |
| Many less | 1 |
| Don't know | 20 |

Forest fires

| | Oct 2017 |
|-------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Many more | 36 |
| A few more | 23 |
| No difference | 18 |
| A few less | 1 |
| Many less | 1 |
| Don't know | 19 |

Worldwide, 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? (Cont'd.)

Intense hurricanes

| | Oct 2017 |
|-------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Many more | 38 |
| A few more | 22 |
| No difference | 17 |
| A few less | 1 |
| Many less | 1 |
| Don't know | 19 |

Severe air pollution

| | Oct 2017 |
|-------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Many more | 37 |
| A few more | 24 |
| No difference | 17 |
| A few less | 2 |
| Many less | 1 |
| Don't know | 18 |

Worldwide, 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? (Cont'd.)

Floods

| | Oct 2017 |
|-------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Many more | 36 |
| A few more | 24 |
| No difference | 16 |
| A few less | 1 |
| Many less | 1 |
| Don't know | 19 |

Droughts and water shortages

| | Oct 2017 |
|-------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Many more | 37 |
| A few more | 26 |
| No difference | 15 |
| A few less | 1 |
| Many less | 1 |
| Don't know | 17 |

Worldwide, 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? (Cont'd.)

Severe heat waves

| | Oct 2017 |
|-------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Many more | 40 |
| A few more | 24 |
| No difference | 15 |
| A few less | 1 |
| Many less | 1 |
| Don't know | 17 |

Melting glaciers

| | Oct 2017 |
|-------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Many more | 43 |
| A few more | 24 |
| No difference | 13 |
| A few less | 1 |
| Many less | 1 |
| Don't know | 15 |

[Respondents were presented a list of impacts for which they selected "many more" or "a few more." If only one impact was endorsed, it was automatically entered as the impact most worried about. If no impacts were endorsed, this question was not asked.]

Which one of these impacts of global warming are you most worried about?

| | Oct 2017 |
|---|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Not asked (no response of "many more" or "a few more" for any of the impacts) | 27 |
| Droughts and water shortages | 12 |
| Melting glaciers | 9 |
| Extinctions of plants and animal species | 9 |
| Intense hurricanes | 8 |
| Famines and food shortages | 8 |
| Severe air pollution | 6 |
| Severe heat waves | 6 |
| Abandoning large coastal cities due to rising sea levels | 5 |
| Floods | 3 |
| Disease epidemics | 3 |
| Forest fires | 2 |
| Refugees | 1 |

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

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 6 | 5 | 6 | 4 | 5 | 3 | 3 | 4 | 3 | 4 | 3 | 5 | 4 | 4 | 5 | 5 | 5 |
| Occasionally | 32 | 28 | 27 | 27 | 30 | 23 | 24 | 28 | 23 | 28 | 26 | 24 | 26 | 26 | 30 | 29 | 35 |
| Rarely | 37 | 36 | 36 | 36 | 33 | 38 | 36 | 39 | 38 | 39 | 38 | 40 | 39 | 41 | 39 | 34 | 33 |
| Never | 25 | 31 | 31 | 32 | 32 | 36 | 37 | 29 | 34 | 28 | 34 | 30 | 29 | 28 | 25 | 30 | 26 |

(Base: Americans 18+)**About how often do you hear about global warming in the media (TV, movies, radio, newspapers/news websites, magazines, etc.)?**

| | Oct 2017 | May 2017 |
|---------------------------|----------|----------|
| (Unweighted base) | (1,304) | (1,266) |
| | % | % |
| At least once a week | 24 | 23 |
| At least once a month | 28 | 20 |
| Several times a year | 25 | 26 |
| Once a year or less often | 7 | 9 |
| Never | 3 | 9 |
| Not sure/No answer | 13 | 13 |

(Base: Americans 18+)

About how often do you hear other people you know (your family, friends, co-workers, etc.) talk about global warming?

| | Oct 2017 | May 2017 |
|---------------------------|-------------|-------------|
| (Unweighted base) | (1,304) | (1,266) |
| | % | % |
| At least once a week | 7 | 6 |
| At least once a month | 17 | 13 |
| Several times a year | 24 | 21 |
| Once a year or less often | 21 | 22 |
| Never | 18 | 28 |
| Not sure/No answer | 12 | 11 |

(Base: Americans 18+)

When you use social media, how often do you share a news story, headline, or story about global warming that you have read or seen on other websites?

| | Oct 2017 |
|---------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Several times a day | 1 |
| Almost every day | 2 |
| Every few days | 5 |
| Once a week | 6 |
| Every few weeks | 20 |
| Never | 65 |

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

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 12 | 10 | 10 | 9 | 7 | 6 | 5 | 8 | 8 | 8 | 6 | 6 | 6 | 7 | 6 | 5 | 10 |
| Very important | 19 | 16 | 17 | 17 | 18 | 15 | 16 | 17 | 14 | 13 | 17 | 14 | 13 | 15 | 18 | 14 | 20 |
| Somewhat important | 37 | 38 | 34 | 35 | 37 | 35 | 37 | 38 | 33 | 36 | 36 | 40 | 40 | 37 | 38 | 37 | 39 |
| Not too important | 19 | 22 | 22 | 22 | 21 | 24 | 24 | 21 | 25 | 24 | 24 | 23 | 24 | 24 | 24 | 23 | 18 |
| Not at all important | 14 | 15 | 16 | 17 | 17 | 20 | 18 | 16 | 18 | 18 | 17 | 15 | 15 | 14 | 14 | 19 | 11 |

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

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 lot/Some | 54 | 50 | 47 | 51 | 50 | 44 | 45 | 51 | 45 | 47 | 49 | 44 | 44 | 45 | 55 | 45 | 55 |
| A lot | 22 | 18 | 20 | 16 | 17 | 15 | 14 | 16 | 14 | 16 | 17 | 15 | 14 | 12 | 17 | 14 | 20 |
| Some | 32 | 31 | 27 | 35 | 34 | 29 | 31 | 35 | 31 | 30 | 32 | 30 | 30 | 33 | 37 | 30 | 35 |
| A little/Not at all | 46 | 50 | 53 | 49 | 50 | 56 | 55 | 49 | 54 | 53 | 51 | 55 | 54 | 53 | 45 | 53 | 45 |
| A little | 32 | 33 | 37 | 33 | 33 | 35 | 35 | 34 | 37 | 37 | 34 | 39 | 38 | 37 | 32 | 35 | 32 |
| Not at all | 14 | 17 | 16 | 16 | 17 | 21 | 20 | 15 | 17 | 16 | 17 | 16 | 16 | 16 | 13 | 18 | 12 |

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

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | 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) | (1,304) | (1,266) | (1,226) | (1,204) | (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 | 5 | 7 | 5 | 6 | 4 | 6 | 7 | 6 | 5 | 3 | 5 | 4 | 4 | 5 | 4 | 10 | 6 |
| Humans could reduce global warming, but it's unclear at this point whether we will do what's needed | 48 | 48 | 48 | 47 | 42 | 46 | 44 | 42 | 40 | 45 | 49 | 45 | 45 | 40 | 46 | 43 | 50 |
| Humans could reduce global warming, but people aren't willing to change their behavior, so we're not going to | 25 | 24 | 23 | 25 | 26 | 24 | 22 | 25 | 25 | 24 | 22 | 21 | 24 | 24 | 21 | 17 | 22 |
| Humans can't reduce global warming, even if it is happening | 15 | 12 | 15 | 13 | 18 | 12 | 17 | 16 | 16 | 16 | 15 | 19 | 15 | 18 | 18 | 15 | 16 |
| Global warming isn't happening | 7 | 8 | 9 | 8 | 9 | 13 | 10 | 10 | 13 | 11 | 8 | 9 | 9 | 10 | 10 | 13 | 5 |

(Base: Americans 18+)**In your opinion, do you think global warming is...****An environmental issue**

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | March 2015 |
|-------------------|-------------|-------------|---------------|-------------|---------------|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | (1,263) |
| | % | % | % | % | % |
| Yes | 78 | 76 | 78 | 78 | 76 |
| No | 11 | 11 | 10 | 11 | 11 |
| Not sure | 10 | 11 | 12 | 11 | 12 |
| No answer | 2 | 1 | 1 | 1 | 1 |

A scientific issue

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | March 2015 |
|-------------------|-------------|-------------|---------------|-------------|---------------|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | (1,263) |
| | % | % | % | % | % |
| Yes | 71 | 70 | 71 | 73 | 71 |
| No | 15 | 15 | 14 | 13 | 13 |
| Not sure | 13 | 14 | 14 | 14 | 15 |
| No answer | 2 | 1 | 1 | 1 | 2 |

An agricultural (farming, food) issue

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | March 2015 |
|-------------------|-------------|-------------|---------------|-------------|---------------|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | (1,263) |
| | % | % | % | % | % |
| Yes | 66 | 65 | 62 | 65 | 64 |
| No | 19 | 20 | 22 | 17 | 19 |
| Not sure | 14 | 15 | 15 | 16 | 16 |
| No answer | 1 | 1 | 1 | 1 | 2 |

A severe weather issue

| | Oct 2017 | Nov 2016 | March 2016 |
|-------------------|-------------|-------------|---------------|
| (Unweighted base) | (1,304) | (1,226) | (1,204) |
| | % | % | % |
| Yes | 65 | 61 | 63 |
| No | 19 | 23 | 19 |
| Not sure | 15 | 15 | 17 |
| No answer | 1 | 1 | 1 |

(Base: Americans 18+)**In your opinion, do you think global warming is... (Cont'd.)****A health issue**

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | March 2015 |
|-------------------|-------------|-------------|---------------|-------------|---------------|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | (1,263) |
| | % | % | % | % | % |
| Yes | 62 | 62 | 61 | 62 | 58 |
| No | 23 | 22 | 22 | 21 | 24 |
| Not sure | 13 | 15 | 16 | 16 | 17 |
| No answer | 2 | 1 | 1 | 1 | 2 |

An economic issue

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | March 2015 |
|-------------------|-------------|-------------|---------------|-------------|---------------|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | (1,263) |
| | % | % | % | % | % |
| Yes | 60 | 60 | 61 | 63 | 60 |
| No | 23 | 23 | 23 | 19 | 22 |
| Not sure | 15 | 16 | 15 | 17 | 16 |
| No answer | 2 | 1 | 1 | 1 | 2 |

A political issue

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | March 2015 |
|-------------------|-------------|-------------|---------------|-------------|---------------|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | (1,263) |
| | % | % | % | % | % |
| Yes | 60 | 56 | 56 | 56 | 54 |
| No | 24 | 28 | 27 | 26 | 27 |
| Not sure | 14 | 15 | 16 | 17 | 17 |
| No answer | 2 | 1 | 1 | 1 | 2 |

A moral issue

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | March 2015 |
|-------------------|-------------|-------------|---------------|-------------|---------------|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | (1,263) |
| | % | % | % | % | % |
| Yes | 41 | 37 | 39 | 41 | 35 |
| No | 42 | 45 | 41 | 39 | 44 |
| Not sure | 15 | 17 | 19 | 19 | 19 |
| No answer | 2 | 1 | 1 | 1 | 2 |

(Base: Americans 18+)**In your opinion, do you think global warming is... (Cont'd.)****A national security issue**

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | March 2015 |
|-------------------|-------------|-------------|---------------|-------------|---------------|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | (1,263) |
| | % | % | % | % | % |
| Yes | 29 | 27 | 26 | 23 | 26 |
| No | 50 | 53 | 51 | 50 | 53 |
| Not sure | 19 | 19 | 21 | 26 | 20 |
| No answer | 2 | 1 | 1 | 1 | 1 |

A poverty issue

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | March 2015 |
|-------------------|-------------|-------------|---------------|-------------|---------------|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | (1,263) |
| | % | % | % | % | % |
| Yes | 28 | 25 | 27 | 26 | 24 |
| No | 52 | 54 | 51 | 50 | 53 |
| Not sure | 18 | 20 | 22 | 24 | 21 |
| No answer | 2 | 1 | 1 | 1 | 2 |

A social justice (fairness issue)

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | March 2015 |
|-------------------|-------------|-------------|---------------|-------------|---------------|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | (1,263) |
| | % | % | % | % | % |
| Yes | 26 | 24 | 23 | 27 | 23 |
| No | 51 | 52 | 51 | 46 | 53 |
| Not sure | 20 | 22 | 25 | 25 | 22 |
| No answer | 2 | 1 | 1 | 1 | 2 |

A religious issue

| | Oct 2017 | Nov 2016 | March 2016 | Oct 2015 | March 2015 |
|-------------------|-------------|-------------|---------------|-------------|---------------|
| (Unweighted base) | (1,304) | (1,226) | (1,204) | (1,330) | (1,263) |
| | % | % | % | % | % |
| Yes | 9 | 8 | 10 | 12 | 10 |
| No | 77 | 73 | 71 | 67 | 71 |
| Not sure | 12 | 17 | 17 | 20 | 18 |
| No answer | 2 | 1 | 1 | 1 | 2 |

(Base: Americans 18+)**Which statement below best reflects your view?****[For those who respond "global warming is affecting weather in the United States]****How much do you think global warming is affecting weather in the United States?**

| | Oct 2017 | May 2017 | Nov 2016 | March 2016 | April 2014 | Nov 2013 | April 2013 |
|---|-------------|-------------|-------------|---------------|---------------|-------------|---------------|
| (Unweighted base) | (1,304) | (1,266) | (1,226) | (1,204) | (1,013) | (830) | (1,045) |
| | % | % | % | % | % | % | % |
| Global warming is affecting the weather in the United States (Total) | 64 | 59 | 60 | 60 | 57 | 56 | 58 |
| <i>A lot</i> | 33 | 25 | 24 | 24 | 22 | 22 | 23 |
| <i>Some</i> | 23 | 28 | 26 | 28 | 25 | 26 | 27 |
| <i>A little</i> | 6 | 5 | 8 | 7 | 9 | 6 | 6 |
| <i>Don't know/Refused</i> | 2 | 2 | 2 | 1 | 2 | 2 | 2 |
| Global warming is not affecting weather in the United States | 6 | 5 | 7 | 5 | 8 | 7 | 7 |
| Global warming isn't happening | 8 | 10 | 9 | 9 | 10 | 13 | 10 |
| Don't know | 18 | 21 | 21 | 20 | 19 | 17 | 19 |
| Prefer not to answer | 5 | 5 | 4 | 5 | 5 | 5 | 5 |

(Base: Americans 18+)**Do you think global warming made each of the following worse or not?****[If “yes” selected] Do you think global warming made each of the following a little worse, moderately worse, or a lot worse?****The heat wave in northern California in September, 2017**

| | Oct 2017 |
|---|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Yes, global warming made this worse (Total) | 55 |
| <i>A lot worse</i> | 23 |
| <i>Moderately worse</i> | 20 |
| <i>A little worse</i> | 10 |
| <i>Don't know</i> | 2 |
| No, global warming did not make this worse | 19 |
| Don't know | 24 |

Hurricanes Harvey, Irma, and Maria (which struck the U.S. in the summer and fall, 2017)

| | Oct 2017 |
|---|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Yes, global warming made this worse (Total) | 54 |
| <i>A lot worse</i> | 28 |
| <i>Moderately worse</i> | 17 |
| <i>A little worse</i> | 7 |
| <i>Don't know</i> | 1 |
| No, global warming did not make this worse | 21 |
| Don't know | 24 |

(Base: Americans 18+)**Do you think global warming made each of the following worse or not? (Cont'd.)**

[If “yes” selected] Do you think global warming made each of the following a little worse, moderately worse, or a lot worse? (Cont'd.)

Wildfires in the western U.S. in the summer and fall, 2017

| | Oct 2017 |
|---|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Yes, global warming made this worse (Total) | 52 |
| <i>A lot worse</i> | 25 |
| <i>Moderately worse</i> | 16 |
| <i>A little worse</i> | 8 |
| <i>Don't know</i> | 2 |
| No, global warming did not make this worse | 23 |
| Don't know | 24 |

The heat wave that grounded planes in Phoenix, Arizona in June, 2017

| | Oct 2017 |
|---|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Yes, global warming made this worse (Total) | 51 |
| <i>A lot worse</i> | 19 |
| <i>Moderately worse</i> | 20 |
| <i>A little worse</i> | 9 |
| <i>Don't know</i> | 2 |
| No, global warming did not make this worse | 19 |
| Don't know | 28 |

(Base: Americans 18+)**Do you think global warming made each of the following worse or not? (Cont'd.)**

[If “yes” selected] Do you think global warming made each of the following a little worse, moderately worse, or a lot worse? (Cont'd.)

The earthquake that struck Mexico in September, 2017

| | Oct 2017 |
|--|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Yes, global warming made this worse (Total) | 26 |
| <i>A lot worse</i> | 13 |
| <i>Moderately worse</i> | 8 |
| <i>A little worse</i> | 5 |
| <i>Don't know</i> | 1 |
| No, global warming did not make this worse | 42 |
| Don't know | 30 |

How interested would you be in learning more about how global warming is or is not affecting extreme weather events?

| | Oct 2017 |
|-------------------------|-------------|
| (Unweighted base) | (1,304) |
| | % |
| Very interested | 22 |
| Moderately interested | 30 |
| A little bit interested | 25 |
| Not at all interested | 22 |

Appendix II: Survey Method

The data in this report are based on a nationally representative survey of 1,304 American adults, aged 18 and older. The survey was conducted October 20 – November 1, 2017. All questionnaires were self-administered by respondents in a web-based environment. The survey took, on average, 23 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 U.S. Census Bureau norms.

The survey instrument was designed by Anthony Leiserowitz, Seth Rosenthal, and Matthew Cutler of Yale University, and Edward Maibach, Connie Roser-Renouf, and John Kotcher of George Mason University.

Sample details and 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 for each wave, at the 95% confidence level, are plus or minus 3 percentage points except where noted.

- October 2017: Fielded October 20 – November 1 (n=1,304)
- May 2017: Fielded May 18 – June 6 (n=1,266)
- November 2016: Fielded November 18 – December 1 (n=1,226).
- March 2016: Fielded March 18 – 31 (n=1,204).
- 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 15 – 22 (n=1,013).
- November 2013: Fielded November 23 – December 9 (n=830).
- April 2013: Fielded April 10 – 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. Margin of error plus or minus 2 percentage points.

Rounding error

For tabulation purposes, percentage points are rounded 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 agree" + "somewhat agree") are rounded after sums are calculated (e.g., 1.3% + 1.3% = 2.6%, which, after rounding = 3%).

Appendix III: Sample Demographics

| | N (unweighted) | % (weighted) |
|--|-------------------|-----------------|
| Total | 1,304 | 100 |
| Men | 637 | 48 |
| Women | 667 | 52 |
| Millennial (18-36) | 305 | 33 |
| Generation X (37-52) | 309 | 25 |
| Baby Boomer (53-71) | 532 | 33 |
| Silent Generation (72+) | 158 | 9 |
| Less than high school | 80 | 11 |
| High school graduate | 340 | 29 |
| Some college/Associate degree/Technical degree | 386 | 29 |
| College graduate | 269 | 17 |
| Post graduate | 229 | 15 |
| <\$25K | 167 | 15 |
| \$25K - <\$50K | 267 | 20 |
| \$50K - <\$75K | 225 | 17 |
| \$75K - <\$100K | 202 | 14 |
| \$100K - <\$125K | 156 | 11 |
| \$125K+ | 287 | 23 |
| White, non-Hispanic | 943 | 64 |
| Black, African-American non-Hispanic | 121 | 12 |
| Hispanic | 145 | 16 |
| Other non-Hispanic | 95 | 8 |
| Northeast | 227 | 18 |
| Midwest | 312 | 21 |
| South | 469 | 38 |
| West | 296 | 24 |

