# CLIMATE CHANGE IN THE AMERICAN MIND

March 2021

VALE 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 <u>Yale Program on Climate Change Communication</u> (climatecommunication.yale.edu) and the <u>George Mason University Center for Climate Change</u> <u>Communication (climatechangecommunication.org</u>). Interview dates: March 18 – 29, 2021. Interviews: 1,037 adults (18+). Average margin of error for registered voters: +/- 3 percentage points at the 95% confidence level. The research was funded by the 11th Hour Project, the Energy Foundation, the MacArthur Foundation, and the Grantham Foundation.

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#### **Executive Summary**

Drawing on a nationally representative survey (n = 1,037), this report describes Americans' beliefs and attitudes about global warming. The survey was fielded from March 18 – 29, 2021. This report builds on two previous reports based on data from this same survey that focused on <u>public support for U.S.</u> domestic climate policy and <u>public support for international climate action</u>. Among the key findings of this report:

- Americans who think global warming is happening outnumber those who think it is not happening by a ratio of more than 4 to 1 (70% versus 15%). Those who are "very" or "extremely" sure global warming is happening outnumber those who are "very" or "extremely" sure it is not by more than 5 to 1 (50% versus 9%).
- More than half of Americans (57%) understand that global warming is mostly human-caused. Three in ten (30%) think it is due mostly to natural changes in the environment.
- More than half of Americans (57%) understand that most scientists think global warming is happening. However, only about one in five (22%) understand how strong the level of consensus among scientists is (i.e., that more than 90% of climate scientists think human-caused global warming is happening).
- A majority of Americans (64%) say they are at least "somewhat worried" about global warming. One in four (25%) are "very worried."
- More than four in ten Americans think people in the United States are being harmed by global warming "right now" (45%), and about four in ten say they have personally experienced the effects of global warming (42%).
- More than four in ten Americans (45%) think they will be harmed by global warming, and nearly half think their family (48%) will be harmed. Half or more Americans think global warming will harm people in their community (50%), people in the U.S. (63%), people in developing countries (68%), the world's poor (68%), future generations of people (71%), and plant and animal species (71%).
- Two in three Americans (67%) say they "rarely" or "never" discuss global warming with family and friends, while one in three (33%) say they do so "occasionally" or "often."
- Nearly half of Americans (48%) say they hear about global warming in the media at least once a month. Fewer (20%) say they hear people they know talk about global warming at least once a month.
- Two in three Americans (67%) say the issue of global warming is either "extremely," "very," or "somewhat" important to them personally, while one in three (33%) say it is either "not too" or "not at all" personally important.
- Fewer than half of Americans think their friends and family expect them to take action, or take action themselves, on global warming: 42% think it is at least "moderately" important to their family and friends that they take action (an injunctive norm). Fewer (36%) say their family and friends make at least "a moderate amount of effort" to reduce global warming (a descriptive norm).
- About two in three Americans (65%) feel a personal sense of responsibility to help reduce global warming.
- Few Americans (12%) agree with the statement "it's already too late to do anything about global warming," while about six in ten (63%) disagree.







- Six in ten Americans (60%) *disagree* with the statement "the actions of a single individual won't make any difference in global warming," while four in ten (40%) agree.
- A majority of Americans (54%) *disagree* with the statement "new technologies can solve global warming without individuals having to make big changes to their lives."
- About six in ten Americans (61%) think global warming is affecting weather in the United States; three in ten think it is being affected "a lot" (31%).
- About two in three Americans (65%) either "strongly" (29%) or "somewhat" (36%) agree that wildfires have increased around the world as a result of global warming.
- A majority of Americans (55%) think extreme weather poses either a "high" (14%) or "moderate" (41%) risk to their community over the next 10 years.
- A majority of Americans are worried about harm from a range of environmental hazards in their local area including water pollution (73%), air pollution (72%), extreme heat (68%), agricultural pests and diseases (65%), droughts (61%), water shortages (56%), flooding (56%), and tornados (53%).





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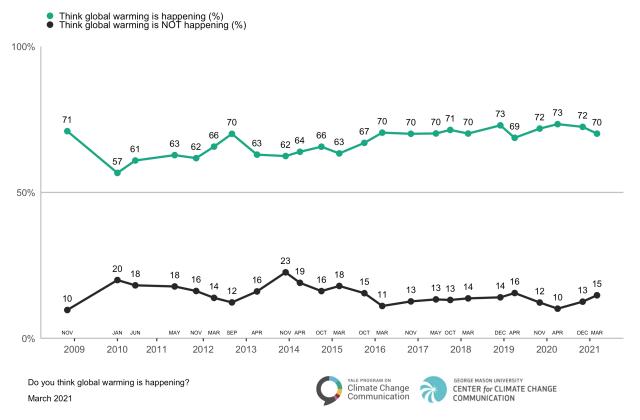
#### 1. Global Warming Beliefs

#### 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 happening by a ratio of more than 4 to 1.

Seven in ten Americans (70%) think global warming is happening. By contrast, 15% of Americans think global warming is not happening.

#### Seven in ten Americans think global warming is happening





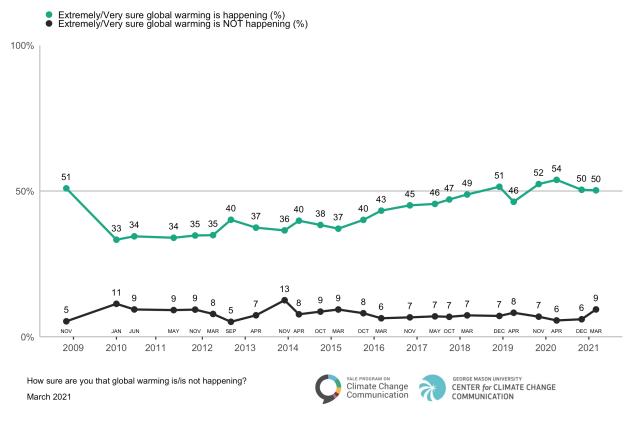


### **1.2.** Half of Americans are "extremely" or "very" sure global warming is happening. About one in ten are as sure it isn't happening.

Half of Americans (50%) are either "extremely" or "very" sure global warming is happening. Far fewer (9%) are "extremely" or "very" sure global warming is not happening.

Over the last five years (since our March 2016 survey), the percentage of Americans who are "extremely" or "very" sure global warming is happening has increased by seven percentage points.

### Half of Americans are "extremely" or "very" sure global warming is happening





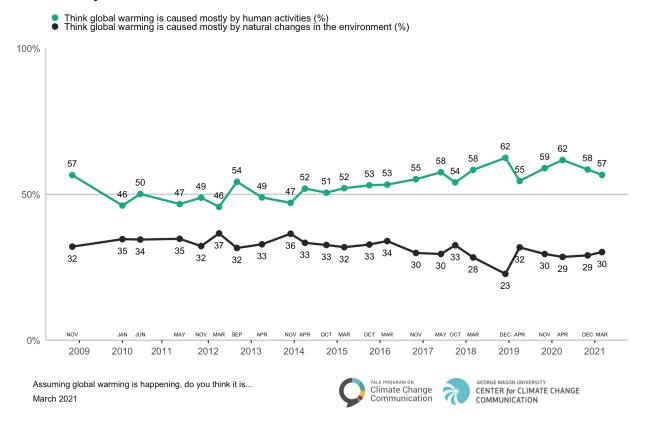


#### 1.3. A majority of Americans think global warming is mostly human-caused.

The 2018 U.S. National Climate Assessment (written and reviewed by hundreds of climate experts over the course of four years) states: "Greenhouse gas emissions from human activities are the only factors that can account for the observed warming over the last century; there are no credible alternative human or natural explanations supported by the observational evidence" (pp. 39-40).<sup>1</sup>

A majority of Americans (57%) understand that global warming is mostly human-caused. By contrast, three in ten (30%) think it is due mostly to natural changes in the environment.

### A majority of Americans think global warming is mostly human-caused







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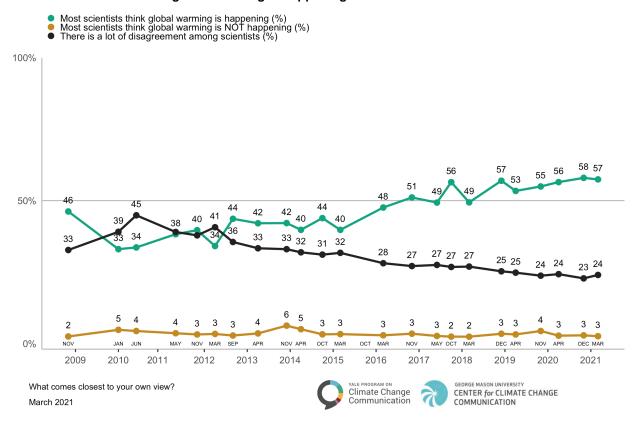
<sup>&</sup>lt;sup>1</sup> <u>http://nca2018.globalchange.gov</u>

### **1.4.** More than half of Americans understand that most scientists think global warming is happening.

A review by John Cook and colleagues<sup>2</sup> found that six independent, peer-reviewed studies examining the extent of the scientific consensus about global warming have concluded that between 90% and 100% of climate scientists are convinced that human-caused global warming is happening. The most rigorous of these studies found that 97% of climate scientists are convinced that global warming is happening and human-caused.

A majority of Americans (57%) understand that most scientists think global warming is happening. By contrast, about one in four Americans (24%) think there is a lot of disagreement among scientists about whether or not global warming is happening. Very few Americans (3%) believe that most scientists think global warming is not happening.

#### More than half of Americans understand that most scientists think global warming is happening



<sup>&</sup>lt;sup>2</sup> Cook, J., Oreskes, N., Doran, P. T., Anderegg, W. R. I., Verheggen, B., Maibach, E. W., Carlton, J. S., Lewandowsky, 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



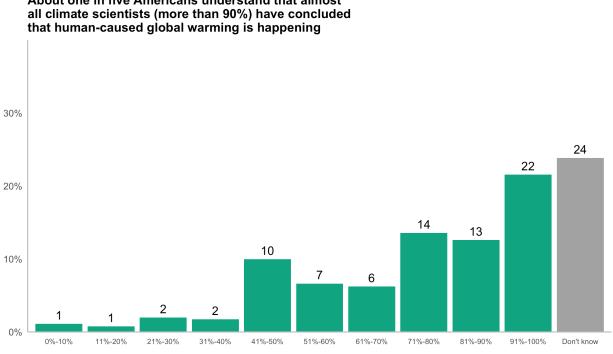
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#### **1.5.** About one in five Americans understand that almost all climate scientists (more than 90%) have concluded that human-caused global warming is happening.

Although the majority of Americans now understand that most scientists think global warming is happening, fewer understand just how strong the level of consensus among scientists is. Only about one in five Americans (22%) understand that nearly all climate scientists (more than 90%) are convinced that human-caused global warming is happening. However, that number has doubled over the last five years (since March 2016; see Data Tables).

About one in four Americans (24%) say they "don't know" what percentage of climate scientists think human-caused global warming is happening.<sup>3</sup>



About one in five Americans understand that almost

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.

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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., that global warming is happening, human-caused, and worrisome) and support for action.<sup>4</sup>

<sup>&</sup>lt;sup>4</sup> 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). https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0118489





<sup>&</sup>lt;sup>3</sup> Respondents were asked to estimate the percentage of climate scientists who have concluded that human-caused global warming is happening by moving a 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.

#### 2. Emotional Responses to Global Warming

#### 2.1. Most Americans are at least "somewhat worried" about global warming.

Most Americans (64%) say they are at least "somewhat worried" about global warming, an increase of six percentage points over the past five years (since March 2016). One in four Americans (25%) are "very worried," an increase of nine percentage points over the past five years.

#### Most Americans are at least "somewhat worried" about global warming Very worried Somewhat worried 100% 69 66 66 66 64 63 62 62 62 61 58 57 58 57 56 55 53 53 53 52 52 51 51 49 50% 41 29 27 26 16 16 16 14 12 12 11 11 11 0% 3/15 10/15 3/16 11/08 1/10 6/10 5/11 11/11 3/12 9/12 4/13 11/13 4/14 10/14 11/16 5/17 10/17 3/18 12/18 4/19 11/19 4/20 12/20 3/21

How worried are you about global warming? March 2021



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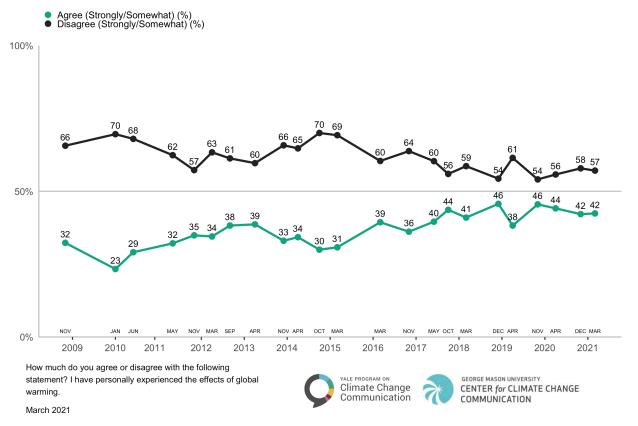


#### 3. Perceived Risks of Global Warming

### **3.1.** About four in ten Americans say they have personally experienced the effects of global warming.

About four in ten Americans (42%) say they have personally experienced the effects of global warming, while more than half (57%) say they have not.

### About four in ten Americans say they have personally experienced the effects of global warming



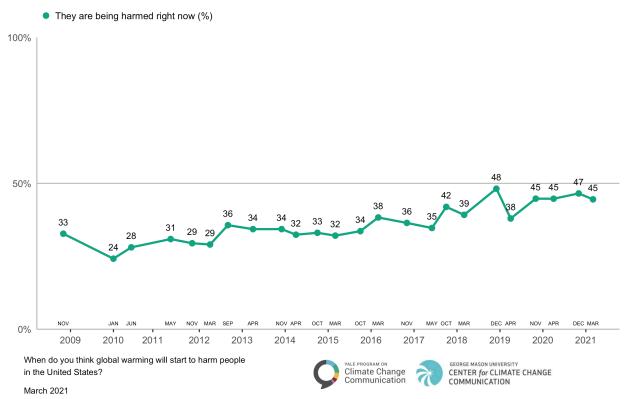




### **3.2.** More than four in ten Americans think people in the U.S. are being harmed "right now" by global warming.

More than four in ten Americans (45%) think people in the U.S. are being harmed by global warming "right now," an increase of seven percentage points over the last five years (since March 2016).

### More than four in ten Americans think people in the U.S. are being harmed "right now" by global warming

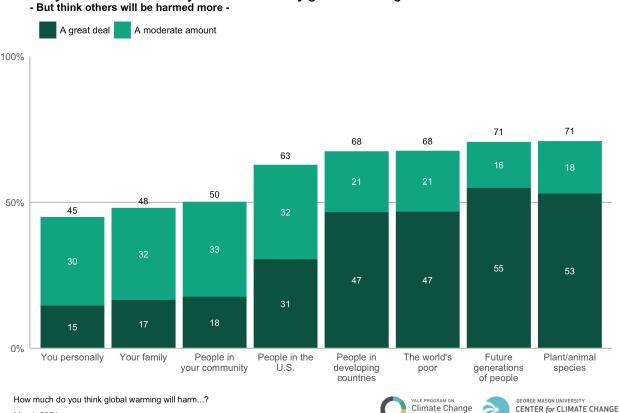






#### 3.3. Many Americans think they will be harmed by global warming, but think others will be harmed more.

Many Americans understand that global warming will cause harm. Americans are most likely to think that plant and animal species (71%) and future generations of people (71%) will be harmed "a great deal" or "a moderate amount" by global warming. Six in ten or more think the world's poor (68%), people in developing countries (68%), and people in the U.S. (63%) will be harmed, and half think people in their community (50%) will be harmed. Four in ten or more think their family (48%), and they themselves (45%) will be harmed.



Many Americans think they will be harmed by global warming

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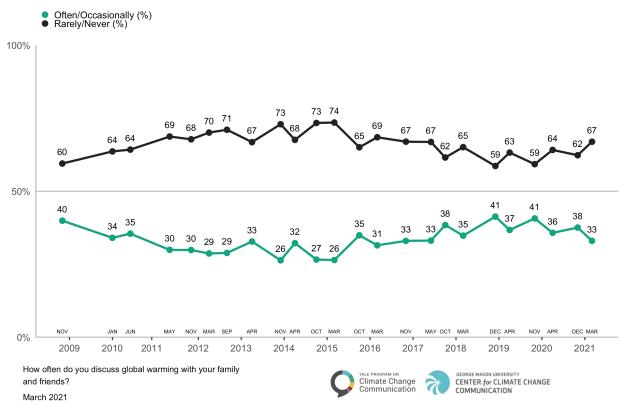
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#### 4. Personal and Social Engagement with Global Warming

#### 4.1. Most Americans "rarely" or "never" discuss global warming with family and friends.

Two in three Americans (67%) say they "rarely" or "never" discuss global warming with family and friends. Only one in three (33%) say they discuss global warming "occasionally" or "often."

### Most Americans "rarely" or "never" discuss global warming with family and friends



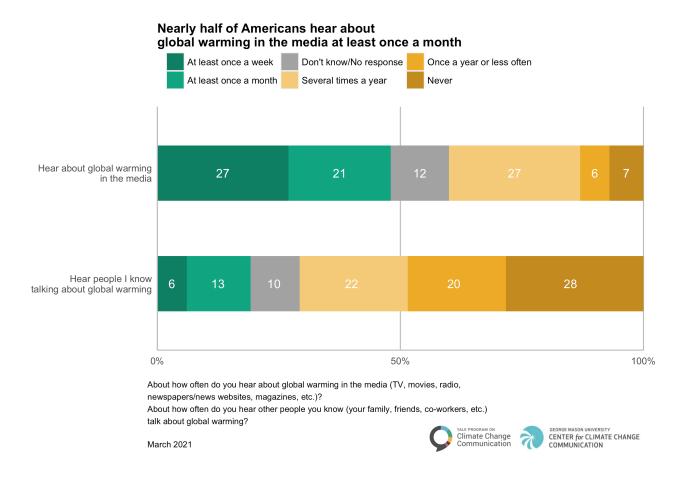




### 4.2. Nearly half of Americans hear about global warming in the media at least once a month; fewer hear people they know talking about it at least once a month.

Nearly half of Americans (48%) say they hear about global warming in the media once a month or more often, while about four in ten (41%) say they hear about global warming in the media several times a year or less often, including seven percent who say they never hear about global warming in the media.

Only one in five Americans (20%) say they hear people they know talk about global warming once a month or more often. In contrast, seven in ten (70%) say they hear people they know talk about it several times a year or less often, including 28% who say they never hear people they know talk about global warming.

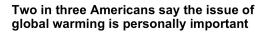


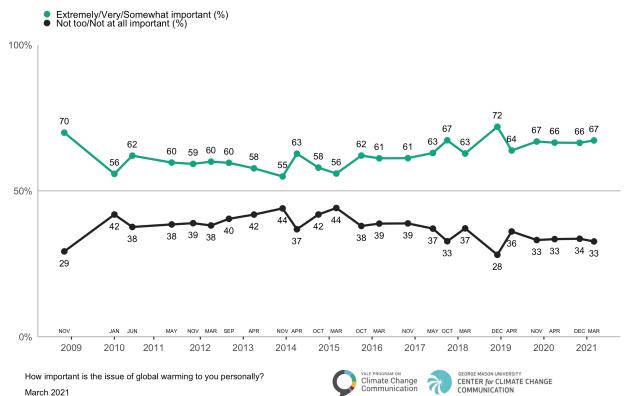




#### 4.3. Two in three Americans say the issue of global warming is personally important.

Two in three Americans (67%) say the issue of global warming is either "extremely" (13%), "very" (22%), or "somewhat" (33%) important to them personally. One in three (33%) say global warming is either "not too" (16%) or "not at all" (17%) personally important.





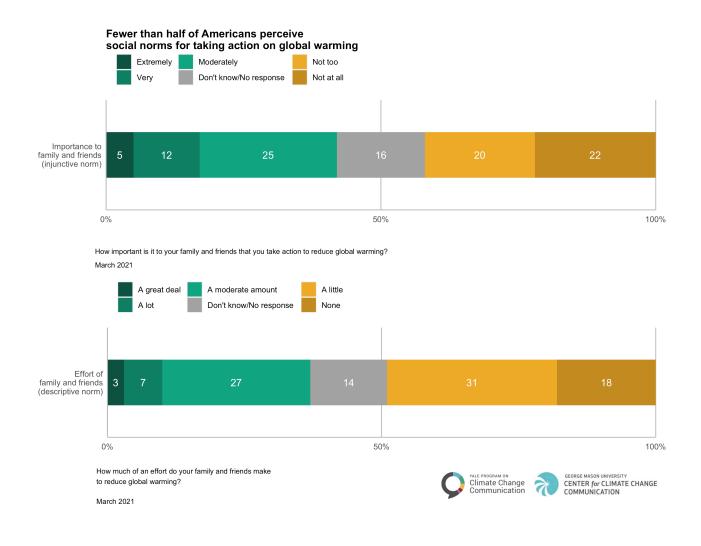




#### 4.4. Fewer than half of Americans perceive social norms for taking action on global warming.

Social science research has shown that two types of social norms can have a powerful influence on people's behavior: injunctive norms (the belief that friends and family expect you to behave in a given way) and descriptive norms (the belief that friends and family are themselves behaving in that way).<sup>5</sup>

Forty-two percent of Americans perceive an injunctive norm, saying it is either "extremely" (5%), "very" (12%), or "moderately" important (25%) to their family and friends that they take action to reduce global warming. Fewer Americans (36%) perceive a descriptive norm, saying their family and friends make either "a great deal of effort" (3%), "a lot of effort" (7%), or "a moderate amount of effort" (27%) to reduce global warming.



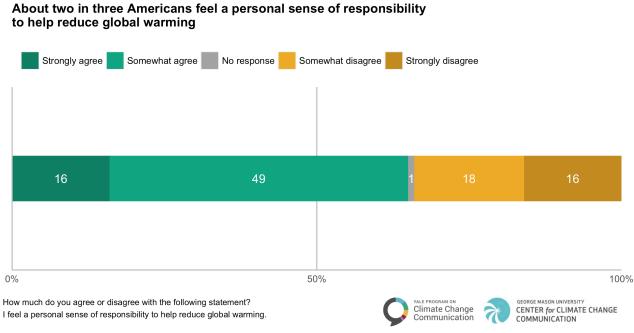
<sup>&</sup>lt;sup>5</sup> Schultz, P. W., Nolan, J. M., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2007). The constructive, destructive, and reconstructive power of social norms. *Psychological Science*, *18*(5), 429-434. https://journals.sagepub.com/doi/10.1111/j.1467-9280.2007.01917.x





#### 4.5. About two in three Americans feel a personal sense of responsibility to help reduce global warming.

About two in three Americans (65%) agree either "strongly" (16%) or "somewhat" (49%) that they feel a personal sense of responsibility to help reduce global warming.



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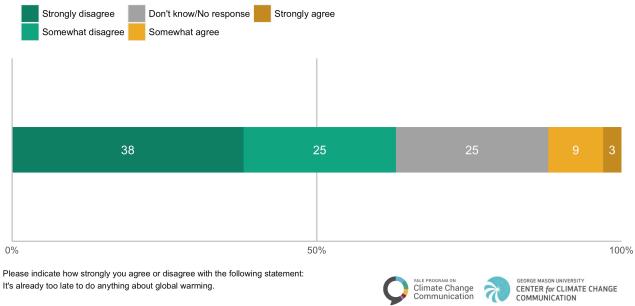
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#### 5. Efficacy Beliefs

#### 5.1. Few Americans think it is too late to do anything about global warming.

Only 12% of Americans either "strongly" (3%) or "somewhat" (9%) agree with the statement "it's already too late to do anything about global warming." In contrast, about six in ten Americans (63%) are more optimistic – they either "strongly" (38%) or "somewhat" (25%) *disagree* that it's already too late to do anything about global warming.

#### Few Americans think it is too late to do anything about global warming



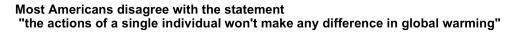
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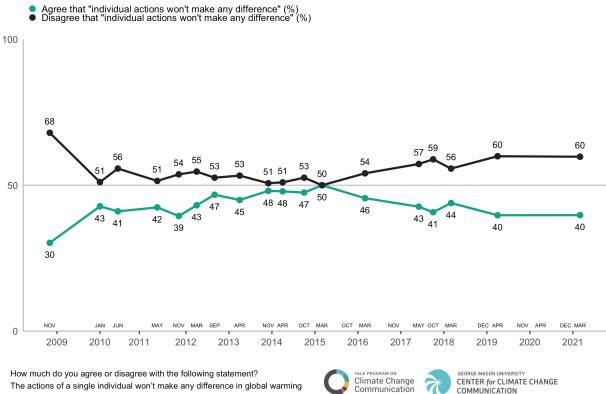




#### 5.2. Most Americans disagree with the statement "the actions of a single individual won't make any difference in global warming."

Four in ten Americans (40%) either "strongly" (16%) or "somewhat" (24%) agree with the statement "the actions of a single individual won't make any difference in global warming." In contrast, about six in ten Americans (60%) either "strongly" (21%) or "somewhat" (38%) disagree that individual actions won't make a difference.





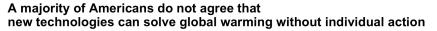
The actions of a single individual won't make any difference in global warming March 2021

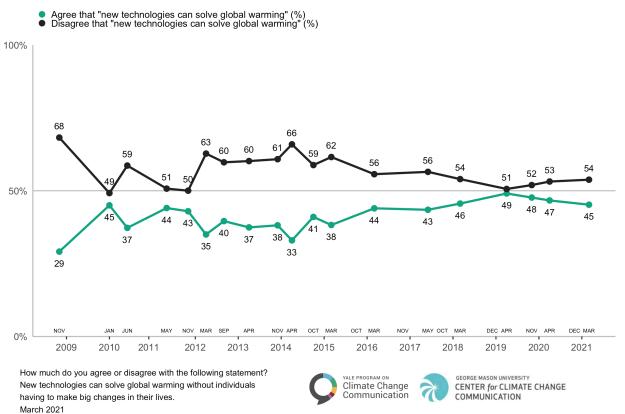




### 5.3. A majority of Americans do not agree that new technologies can solve global warming without individual action.

Many Americans (45%) either "strongly" or "somewhat" agree that "new technologies can solve global warming without individuals having to make big changes in their lives," while 54% of Americans either "strongly" or "somewhat" disagree.





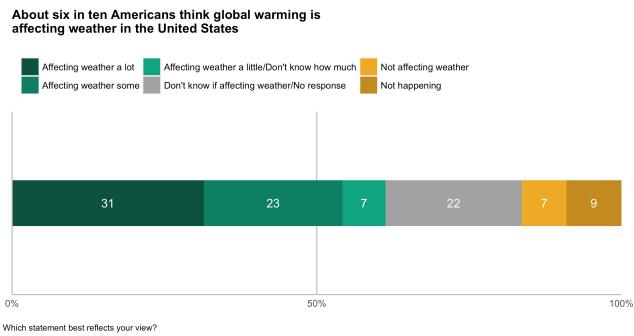




#### 6. Impacts of Global Warming

#### 6.1. About six in ten Americans think global warming is affecting weather in the United States.

About six in ten Americans (61%) think global warming is affecting weather in the United States, including more than half (54%) who think global warming is affecting U.S. weather either "a lot" (31%) or "some" (23%).



(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.?

March 2021

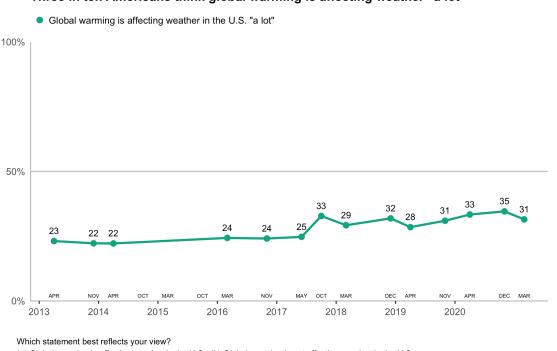


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As noted above, 31% of Americans think global warming is affecting weather "a lot." The percentage of Americans who think global warming is affecting the weather "a lot" is eight percentage points higher than when we first asked this question in April 2013.



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#### Three in ten Americans think global warming is affecting weather "a lot"

(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.?

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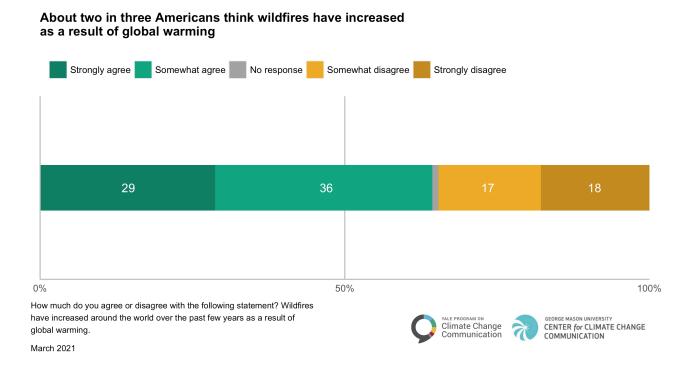




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#### 6.2. About two in three Americans think wildfires have increased as a result of global warming.

About two in three Americans either "strongly" (29%) or "somewhat" (36%) agree that wildfires have increased around the world as a result of global warming.



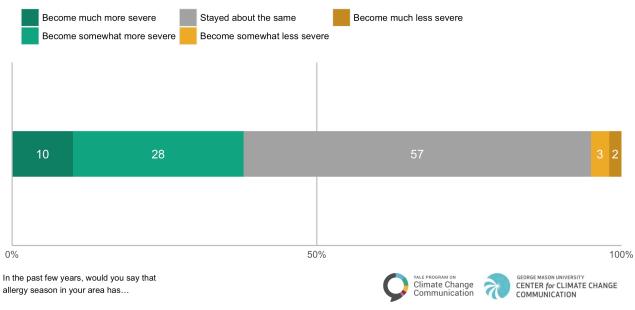




#### 6.3. More than one in three Americans think allergy season has become more severe in their area.

Although the majority of Americans (57%) think allergy season in their area has stayed about the same in the past few years, more than one in three (38%) think it has become more severe, while very few (4%) think it has become less severe.

### More than one in three Americans think allergy season has become more severe in their area



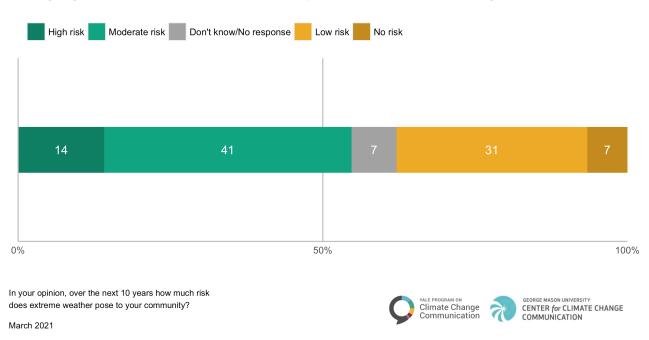
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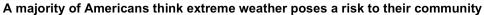




#### 6.4. A majority of Americans think extreme weather poses a risk to their community.

A majority of Americans (55%) think extreme weather poses either a "high" (14%) or "moderate" (41%) risk to their community over the next 10 years. Fewer think extreme weather poses either a "low" risk (31%) or "no" risk (7%).



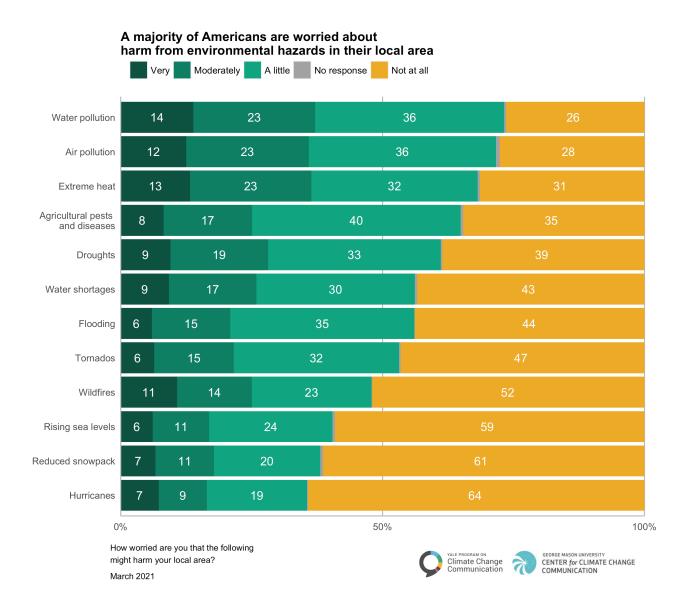






## 6.5. A majority of Americans are worried about harm from environmental hazards in their local area.

A majority of Americans are at least "a little worried" about environmental hazards in their local areas, including water pollution (73%), air pollution (72%), extreme heat (68%), agricultural pests and diseases (65%), droughts (61%), water shortages (56%), flooding (56%), and tornados (53%). Fewer are worried about wildfires (48%), rising sea levels (40%), reduced snowpack (38%), and hurricanes (36%).







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### Appendix I: Data Tables

Note: Percentages reported are weighted to match U.S. Census parameters. NaN = "No available number" (i.e., the question was not asked in that survey wave).

#### (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?

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
Yes (%)	71	57	61	63	62	66	70	63
No (%)	10	20	18	18	16	14	12	16
Don't Know (%)	19	22	21	18	19	20	18	20
Refused (%)	0	1	0	1	3	1	0	1

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	1,330	1,204	1,226	1,266
Yes (%)	62	64	66	63	67	70	70	70
No (%)	23	19	16	18	15	11	13	13
Don't Know (%)	14	17	18	19	18	18	17	16
Refused (%)	1	0	0	0	0	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Yes (%)	71	70	73	69	72	73	72	70
No (%)	13	14	14	16	12	10	13	15
Don't Know (%)	15	16	13	16	16	16	15	15
Refused (%)	0	0	0	0	0	0	0	0





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

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013	-
(Unweighted Base)	1,537	567	624	634	617	662	743	658	-
Extremely sure (%)	35	24	20	21	22	19	27	27	-
Very sure (%)	37	35	36	33	34	34	30	33	
Somewhat sure (%)	24	37	40	40	38	42	40	37	
Not at all sure (%)	4	5	3	6	5	5	3	4	
Refused (%)	0	0	1	0	1	0	0	0	-
	NI 2012	A 2014	0.0014	16 2015	0.001	16 201	<u> </u>		2015
	Nov 2013	Apr 2014	Oct 2014	Mar 2015					2017
(Unweighted Base)	518	647	837	800	891	849	859	8	89
Extremely sure (%)	27	30	24	27	28	30	35	3	31
Very sure (%)	31	32	34	31	32	31	30	3	34
Somewhat sure (%)	39	33	38	38	37	34	32	3	33
Not at all sure (%)	3	4	4	3	3	4	4		2
Refused (%)	0	0	0	0	0	0	0		0
	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	0 Apr 202	0 Dec 20	20 Mar 2	2021
(Unweighted Base)	931	897	813	887	937	755	751	72	27
Extremely sure (%)	34	41	42	39	43	44	42	3	9
Very sure (%)	31	29	28	28	30	29	27	3	2
Somewhat sure (%)	32	27	27	29	24	24	28	2	7
Not at all sure (%)	2	3	3	3	3	3	2	2	2
Refused (%)	0	0	0	0	0	0	0	(	)

#### How sure are you that global warming is happening?





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

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	210	200	186	179	162	140	131	168
Extremely sure (%)	26	27	20	21	21	15	14	18
Very sure (%)	28	30	31	30	37	41	27	28
Somewhat sure (%)	38	33	44	38	36	35	45	42
Not at all sure (%)	8	7	4	11	5	8	13	12
Refused (%)	0	4	0	0	1	0	0	0
	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	188	193	206	227	206	133	155	169
Extremely sure (%)	20	15	23	21	21	20	24	26
Very sure (%)	35	26	30	31	32	37	29	26
Somewhat sure (%)	36	47	35	37	36	34	39	41
Not at all sure (%)	9	12	11	11	12	9	8	7
Refused (%)	0	0	0	0	0	0	0	0
	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	171	175	156	200	160	104	130	153
Extremely sure (%)	19	15	20	22	32	17	19	27
Very sure (%)	33	39	30	31	24	38	28	37
Somewhat sure (%)	39	35	41	36	38	36	33	33
Not at all sure (%)	9	12	8	11	5	9	18	4
Refused (%)	0	0	0	0	1	0	1	0

#### How sure are you that global warming is not happening?





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

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
Caused mostly by human activities (%)	57	46	50	47	49	46	54	49
Caused mostly by natural changes (%)	32	35	34	35	32	37	32	33
Neither, because it isn't happening (%)	4	9	6	8	8	5	7	8
Other (caused by human activities and natural changes) (%)	5	6	7	7	6	9	5	7
Other (unclassified) (%)	1	1	1	1	2	2	1	2
Don't know (%)	1	1	1	1	1	1	1	0
Refused (%)	1	2	1	1	3	1	0	1

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	1,330	1,204	1,226	1,266
Caused mostly by human activities (%)	47	52	51	52	53	53	55	58
Caused mostly by natural changes (%)	36	33	33	32	33	34	30	30
Neither, because it isn't happening (%)	8	7	9	10	8	7	8	6
Other (caused by human activities and natural changes) (%)	5	5	6	4	5	5	5	6
Other (unclassified) (%)	3	1	1	1	1	1	1	1
Don't know (%)	0	1	1	1	0	1	1	1
Refused (%)	1	1	0	0	0	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Caused mostly by human activities (%)	54	58	62	55	59	62	58	57
Caused mostly by natural changes (%)	33	28	23	32	30	29	29	30
Neither, because it isn't happening (%)	6	7	8	6	5	5	5	8
Other (caused by human activities and natural changes) (%)	6	5	6	6	5	5	6	5
Other (unclassified) (%)	1	1	0	1	1	0	1	0
Don't know (%)	0	0	0	1	0	0	0	0
Refused (%)	0	0	0	0	0	0	0	0





#### What comes closest to your view?

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
Most scientists think global	46	33	34	38	40	34	44	42
warming is happening (%)								
Most scientists think global	2	5	4	4	3	3	3	4
warming is not happening (%)								
There is a lot of disagreement	33	39	45	39	38	41	36	33
among scientists about whether								
or not global warming is								
happening (%)								
Don't know enough to say (%)	18	21	17	18	17	21	18	20
Refused (%)	1	2	0	1	2	1	0	1

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	0	1,204	1,226	1,266
Most scientists think global warming is happening (%)	42	40	44	40	NaN	48	51	49
Most scientists think global warming is not happening (%)	6	5	3	3	NaN	3	3	3
There is a lot of disagreement among scientists about whether or not global warming is happening (%)	33	32	31	32	NaN	28	27	27
Don't know enough to say (%)	18	23	22	25	NaN	21	18	21
Refused (%)	1	0	0	0	NaN	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Most scientists think global	56	49	57	53	55	56	58	57
warming is happening (%)								
Most scientists think global	2	2	3	3	4	3	3	3
warming is not happening (%)								
There is a lot of disagreement	27	27	25	25	24	24	23	24
among scientists about whether								
or not global warming is								
happening (%)								
Don't know enough to say (%)	14	21	14	19	17	16	16	16
Refused (%)	0	0	0	0	0	0	0	0



YALE PROGRAM ON Climate Change Communication



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.

	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	1,013	1,275	1,263	1,330	1,204	1,226	1,266
0%-10% (%)	1	1	1	2	1	2	2
11%-20% (%)	1	1	1	2	1	1	1
21%-30% (%)	5	4	4	4	4	7	4
31%-40% (%)	3	2	2	2	2	3	3
41%-50% (%)	15	15	14	12	13	13	13
51%-60% (%)	8	7	6	5	6	6	7
61%-70% (%)	7	7	8	6	8	7	6
71%-80% (%)	14	17	15	18	15	17	14
81%-90% (%)	7	7	8	10	8	9	10
91%-100% (%)	9	9	9	12	11	15	13
Don't know enough to say	28	29	31	27	32	21	28

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,113	1,291	1,303	1,029	1,036	1,037
0%-10% (%)	1	1	1	1	2	1	1	1
11%-20% (%)	1	1	1	1	1	1	1	1
21%-30% (%)	5	4	1	2	2	2	1	2
31%-40% (%)	3	1	2	3	3	2	3	2
41%-50% (%)	13	10	15	17	10	11	10	10
51%-60% (%)	5	4	6	7	8	10	8	7
61%-70% (%)	5	5	6	7	8	6	7	6
71%-80% (%)	17	15	15	12	12	13	14	14
81%-90% (%)	10	10	11	10	11	11	13	13
91%-100% (%)	15	15	20	17	22	21	20	22
Don't know enough to say	24	34	22	21	21	22	22	24





#### How worried are you about global warming?

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
Very worried (%)	16	11	12	9	12	11	16	14
Somewhat worried (%)	46	37	41	42	41	42	42	37
Not very worried (%)	24	27	30	28	30	30	25	30
Not at all worried (%)	13	22	18	20	15	16	17	19
Refused (%)	1	2	0	1	2	1	0	0

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	1,330	1,204	1,226	1,266
Very worried (%)	15	15	11	11	16	16	19	17
Somewhat worried (%)	38	41	45	41	41	42	42	39
Not very worried (%)	26	27	26	29	27	25	24	27
Not at all worried (%)	20	18	18	19	16	18	15	17
Refused (%)	1	0	0	0	0	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Very worried (%)	22	21	29	23	30	26	27	25
Somewhat worried (%)	42	41	40	39	36	40	39	40
Not very worried (%)	23	22	19	23	19	22	20	19
Not at all worried (%)	14	16	13	14	15	12	14	17
Refused (%)	0	0	0	0	0	0	0	0





How much do you agree with the following statements?

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

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
Strongly Agree (%)	4	4	5	5	7	5	4	6
Somewhat Agree (%)	28	19	24	27	28	30	34	33
Somewhat Disagree (%)	42	32	34	32	34	30	30	29
Strongly Disagree (%)	24	37	34	30	23	33	31	31
Refused (%)	2	7	3	6	8	2	0	2

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	0	1,204	1,226	1,266
Strongly Agree (%)	6	5	4	4	NaN	7	7	5
Somewhat Agree (%)	27	29	26	27	NaN	33	29	34
Somewhat Disagree (%)	30	29	29	29	NaN	29	29	29
Strongly Disagree (%)	36	35	41	40	NaN	31	35	31
Refused (%)	1	1	0	0	NaN	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Strongly Agree (%)	8	5	11	6	10	9	12	7
Somewhat Agree (%)	36	36	35	32	35	35	30	36
Somewhat Disagree (%)	30	27	24	28	23	26	24	26
Strongly Disagree (%)	26	32	31	33	31	30	34	31
Refused (%)	0	0	0	0	0	0	0	1





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

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
They are being harmed now (%)	33	24	28	31	29	29	36	34
In 10 years (%)	13	12	12	11	10	11	13	11
In 25 years (%)	13	13	11	13	13	13	11	12
In 50 years (%)	13	12	13	12	15	14	12	12
In 100 years (%)	12	13	14	11	15	15	13	13
Never (%)	14	23	19	19	16	15	15	17
Refused (%)	3	2	3	2	3	2	1	1

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	1,330	1,204	1,226	1,266
They are being harmed now (%)	34	32	33	32	34	38	36	35
In 10 years (%)	10	9	10	10	13	12	14	11
In 25 years (%)	14	14	14	13	14	13	15	13
In 50 years (%)	11	15	12	11	11	12	10	13
In 100 years (%)	12	14	13	13	10	10	9	13
Never (%)	18	16	18	20	18	14	16	15
Refused (%)	2	1	0	0	0	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
They are being harmed now (%)	42	39	48	38	45	45	47	45
In 10 years (%)	12	11	7	10	12	13	12	11
In 25 years (%)	12	12	14	13	12	12	10	10
In 50 years (%)	11	12	7	11	9	9	9	8
In 100 years (%)	11	11	9	12	9	8	9	9
Never (%)	12	15	14	15	14	13	14	16
Refused (%)	0	0	0	0	0	0	0	0





## How much do you think global warming will harm...?

#### You personally

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
A great deal (%)	9	13	10	11	9	11	16	15
Moderate amount (%)	22	23	21	18	20	18	26	25
Only a little (%)	24	21	27	27	28	30	25	26
Not at all (%)	22	30	24	25	24	29	20	23
Don't know (%)	23	11	18	17	16	11	13	11
Refused (%)	1	2	0	2	3	1	0	1

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	1,330	1,204	1,226	1,266
A great deal (%)	13	13	12	10	14	12	14	13
Moderate amount (%)	25	25	24	26	27	28	27	29
Only a little (%)	27	26	26	26	26	24	25	26
Not at all (%)	26	25	27	25	20	23	25	22
Don't know (%)	8	10	11	13	12	12	8	9
Refused (%)	1	1	0	0	0	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
A great deal (%)	16	14	22	14	18	13	15	15
Moderate amount (%)	33	28	27	29	26	29	28	30
Only a little (%)	24	27	20	24	24	26	24	24
Not at all (%)	19	20	20	25	22	21	23	22
Don't know (%)	7	11	10	8	11	10	10	10
Refused (%)	0	0	0	0	0	0	0	0





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

## Your family

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
A great deal (%)	11	15	11	12	10	12	18	17
Moderate amount (%)	24	25	25	21	23	21	28	27
Only a little (%)	23	21	23	25	27	28	23	23
Not at all (%)	18	27	21	23	21	26	17	20
Don't know (%)	23	11	19	17	17	12	14	11
Refused (%)	1	2	0	2	2	1	0	1

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	0	1,204	1,226	1,266
A great deal (%)	17	16	15	13	NaN	15	17	16
Moderate amount (%)	25	27	28	28	NaN	30	30	31
Only a little (%)	25	24	23	23	NaN	22	24	25
Not at all (%)	24	21	23	22	NaN	21	21	19
Don't know (%)	8	11	11	13	NaN	12	8	9
Refused (%)	1	1	0	0	NaN	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
A great deal (%)	19	17	27	18	21	16	19	17
Moderate amount (%)	35	30	29	30	28	30	30	32
Only a little (%)	22	25	17	22	22	24	20	22
Not at all (%)	16	17	17	22	18	19	21	19
Don't know (%)	8	12	9	9	11	11	10	10
Refused (%)	0	0	0	0	0	0	0	0





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

#### People in your community

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
A great deal (%)	13	15	11	12	10	12	19	17
Moderate amount (%)	26	27	25	21	23	21	29	28
Only a little (%)	20	21	23	25	26	29	23	23
Not at all (%)	17	24	21	21	20	24	15	18
Don't know (%)	23	11	19	18	17	13	13	13
Refused (%)	1	3	0	2	3	2	0	1

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	0	1,204	1,226	1,266
A great deal (%)	14	16	16	14	NaN	15	19	16
Moderate amount (%)	29	28	27	29	NaN	31	30	32
Only a little (%)	24	24	23	24	NaN	23	22	23
Not at all (%)	23	20	22	20	NaN	19	20	18
Don't know (%)	9	11	11	14	NaN	12	9	10
Refused (%)	1	1	0	0	NaN	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
A great deal (%)	21	17	27	19	22	17	19	18
Moderate amount (%)	34	32	30	30	29	31	32	33
Only a little (%)	22	22	16	22	20	23	19	21
Not at all (%)	15	16	16	21	17	17	19	18
Don't know (%)	8	12	10	8	11	11	10	11
Refused (%)	0	0	0	0	0	0	0	0





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

#### People in the United States

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
A great deal (%)	21	22	16	16	15	18	26	22
Moderate amount (%)	28	28	28	26	28	28	31	30
Only a little (%)	15	15	21	22	23	23	17	18
Not at all (%)	13	21	17	17	16	17	12	16
Don't know (%)	22	12	17	18	16	12	13	12
Refused (%)	1	3	0	2	3	2	0	1

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	1,330	1,204	1,226	1,266
A great deal (%)	23	23	23	19	23	24	28	25
Moderate amount (%)	30	30	30	30	33	35	32	33
Only a little (%)	19	18	20	20	18	16	17	19
Not at all (%)	20	18	17	17	14	15	15	15
Don't know (%)	7	10	11	14	12	10	8	9
Refused (%)	1	1	0	0	0	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
A great deal (%)	34	28	38	30	35	29	32	31
Moderate amount (%)	33	30	27	28	30	33	30	32
Only a little (%)	14	18	12	15	12	16	14	13
Not at all (%)	11	12	13	17	13	12	13	14
Don't know (%)	7	12	10	9	10	10	11	9
Refused (%)	0	0	0	0	0	0	0	0





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

#### People in developing countries

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
A great deal (%)	31	28	22	23	22	26	35	30
Moderate amount (%)	21	24	27	21	27	25	29	25
Only a little (%)	10	14	17	19	17	18	10	18
Not at all (%)	13	19	15	16	15	16	11	13
Don't know (%)	24	13	18	18	17	14	15	13
Refused (%)	1	2	0	2	3	2	0	1

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	1,330	1,204	1,226	1,266
A great deal (%)	32	31	29	27	34	36	40	37
Moderate amount (%)	24	24	26	26	27	27	25	25
Only a little (%)	17	17	16	17	13	12	12	16
Not at all (%)	19	16	17	15	13	13	13	13
Don't know (%)	8	11	12	15	13	12	11	9
Refused (%)	1	1	0	0	0	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
A great deal (%)	47	38	48	42	48	44	46	47
Moderate amount (%)	25	24	20	22	19	22	21	21
Only a little (%)	10	12	8	11	8	10	10	9
Not at all (%)	10	12	11	15	12	10	10	12
Don't know (%)	9	13	13	10	12	14	13	11
Refused (%)	0	0	0	0	0	0	0	0





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

#### The world's poor

Not at all (%)

Refused (%)

Don't know (%)

	NI 2000	1 2010	1 2010	16 2011	N. 2011	14 2012	0.0010	
	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	0	0	0	0	0	0	0	0
A great deal (%)	NaN							
Moderate amount (%)	NaN							
Only a little (%)	NaN							
Not at all (%)	NaN							
Don't know (%)	NaN							
Refused (%)	NaN							
							÷	
	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Pase)	0	0	0	1,259	1,330	1,204	1,226	/
(Unweighted Base)	-	-	-	· ·	/	'		1,266
A great deal (%)	NaN	NaN	NaN	30	36	40	43	39
Moderate amount (%)	NaN	NaN	NaN	23	25	22	21	23
Only a little (%)	NaN	NaN	NaN	16	12	12	11	15
Not at all (%)	NaN	NaN	NaN	16	13	13	13	13
Don't know (%)	NaN	NaN	NaN	15	13	14	12	10
Refused (%)	NaN	NaN	NaN	0	0	0	0	0
	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
A great deal (%)	49	40	50	44	50	46	48	47
Moderate amount (%)	21	22	17	20	16	21	18	21
Only a little (%)	10	13	8	11	9	11	10	9
11 (0)				1				





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

#### Future generations of people

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
A great deal (%)	43	41	39	36	40	42	47	42
Moderate amount (%)	17	21	22	22	21	22	21	21
Only a little (%)	7	9	11	10	13	12	9	12
Not at all (%)	10	15	12	11	9	11	8	12
Don't know (%)	22	12	16	18	15	13	14	12
Refused (%)	2	3	1	3	2	1	0	1

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	1,330	1,204	1,226	1,266
A great deal (%)	46	49	46	42	51	48	53	50
Moderate amount (%)	19	18	18	21	19	22	18	20
Only a little (%)	11	10	11	10	8	8	9	10
Not at all (%)	15	11	13	12	11	10	10	11
Don't know (%)	9	11	13	15	11	11	10	8
Refused (%)	1	1	0	0	0	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
A great deal (%)	54	52	59	52	57	53	55	55
Moderate amount (%)	21	18	16	17	15	20	17	16
Only a little (%)	8	9	6	9	7	9	8	8
Not at all (%)	9	9	9	13	10	7	8	11
Don't know (%)	8	12	10	9	11	11	12	10
Refused (%)	0	0	0	0	0	0	0	0





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

#### Plant and animal species

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
A great deal (%)	45	41	40	38	40	43	43	39
Moderate amount (%)	17	19	20	18	18	21	25	24
Only a little (%)	8	10	12	12	15	13	11	13
Not at all (%)	9	15	13	12	9	10	8	13
Don't know (%)	20	12	15	17	14	12	13	10
Refused (%)	2	3	1	2	3	1	0	1

	NI 0012	A 2014	0 . 0014	16 2015	0.0015	14 2016	NI 2016	16 2017
	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	0	1,204	1,226	1,266
A great deal (%)	46	47	44	42	NaN	48	50	49
Moderate amount (%)	19	19	20	21	NaN	23	19	22
Only a little (%)	11	12	10	12	NaN	9	10	10
Not at all (%)	15	12	13	12	NaN	11	11	11
Don't know (%)	7	10	12	13	NaN	10	9	8
Refused (%)	1	1	0	0	NaN	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
A great deal (%)	54	53	58	52	57	54	55	53
Moderate amount (%)	21	18	16	19	16	19	18	18
Only a little (%)	9	9	8	10	7	9	9	9
Not at all (%)	8	9	9	11	10	8	8	11
Don't know (%)	7	10	9	8	10	10	10	9
Refused (%)	0	0	0	0	0	0	0	0





## How often do you discuss global warming with your family and friends?

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
Often (%)	5	6	5	4	4	5	3	4
Occasionally (%)	35	29	30	26	26	24	26	28
Rarely (%)	33	34	39	41	39	40	38	39
Never (%)	26	30	25	28	29	30	34	28
Refused (%)	1	2	0	1	2	1	0	0

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	1,330	1,204	1,226	1,266
Often (%)	3	4	3	3	5	4	6	5
Occasionally (%)	23	28	24	23	29	27	27	28
Rarely (%)	38	39	36	38	33	36	36	36
Never (%)	34	29	37	36	32	32	31	31
Refused (%)	1	0	0	0	0	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Often (%)	6	5	8	6	9	5	6	6
Occasionally (%)	32	30	34	31	32	31	32	27
Rarely (%)	37	34	33	33	32	38	31	34
Never (%)	25	31	26	30	27	26	32	33
Refused (%)	0	0	0	0	0	0	0	0





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

	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017	Oct 2017	Mar 2018
(Unweighted Base)	1,263	1,330	1,204	0	1,266	1,304	1,278
At least once a week (%)	19	25	22	NaN	23	24	20
At least once a month (%)	21	23	22	NaN	20	28	23
Several times a year (%)	30	26	26	NaN	26	25	28
Once a year or less often (%)	8	8	8	NaN	9	7	9
Never (%)	6	6	7	NaN	9	3	7
Not sure (%)	15	11	15	NaN	11	13	12
Refused (%)	0	1	0	NaN	1	1	1

	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,114	1,291	1,303	1,029	1,036	1,037
At least once a week (%)	34	31	35	24	27	27
At least once a month (%)	22	20	21	24	23	21
Several times a year (%)	22	21	19	24	24	27
Once a year or less often (%)	5	6	6	8	7	6
Never (%)	6	8	6	8	7	7
Not sure (%)	8	13	13	12	10	11
Refused (%)	2	1	1	1	1	1





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

	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017	Oct 2017	Mar 2018
(Unweighted Base)	1,263	1,330	1,204	0	1,266	1,304	1,278
At least once a week (%)	4	6	5	NaN	6	7	5
At least once a month (%)	12	15	13	NaN	13	17	15
Several times a year (%)	23	22	25	NaN	21	24	24
Once a year or less often (%)	21	22	19	NaN	22	21	20
Never (%)	25	26	24	NaN	28	18	22
Not sure (%)	14	9	13	NaN	10	12	13
Refused (%)	0	1	1	NaN	1	1	1

	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,114	1,291	1,303	1,029	1,036	1,037
At least once a week (%)	9	8	8	6	5	6
At least once a month (%)	17	15	16	16	16	13
Several times a year (%)	24	23	23	24	23	22
Once a year or less often (%)	19	16	15	23	21	20
Never (%)	22	24	25	24	28	28
Not sure (%)	7	12	12	8	7	9
Refused (%)	1	1	1	1	0	1





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

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
Extremely important (%)	10	5	6	7	6	6	6	8
Very important (%)	20	14	18	15	13	14	17	13
Somewhat important (%)	39	37	38	37	40	40	36	36
Not too important (%)	18	23	24	24	24	23	24	24
Not at all important (%)	11	19	14	14	15	16	17	18
Refused (%)	1	2	0	2	2	2	0	0

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	1,330	1,204	1,226	1,266
Extremely important (%)	8	8	5	6	7	9	10	10
Very important (%)	14	17	16	15	18	17	17	16
Somewhat important (%)	33	38	37	35	37	35	34	38
Not too important (%)	25	21	24	24	21	21	22	22
Not at all important (%)	18	16	18	20	17	17	16	15
Refused (%)	1	0	0	0	0	0	0	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Extremely important (%)	12	10	16	12	18	13	13	13
Very important (%)	19	18	24	18	24	24	24	22
Somewhat important (%)	37	35	32	33	26	29	30	33
Not too important (%)	19	22	15	19	18	20	17	16
Not at all important (%)	14	15	14	17	16	13	16	17
Refused (%)	0	0	0	0	0	0	0	0





## How much of an effort do your family and friends make to reduce global warming?

	May 2017	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,266	0	0	1,114	1,291	1,303	1,029	1,036	1,037
A great deal of effort	3	NaN	NaN	4	3	3	2	3	3
(%)									
A lot of effort (%)	8	NaN	NaN	7	8	7	6	7	7
A moderate amount of	31	NaN	NaN	29	30	30	37	26	27
effort (%)									
A little effort (%)	29	NaN	NaN	29	24	28	29	31	31
No effort (%)	19	NaN	NaN	16	19	16	12	19	18
Don't know (%)	10	NaN	NaN	14	15	15	14	13	13
Refused (%)	0	NaN	NaN	1	1	1	0	0	1





How important is it to your family and friends that you take action to reduc	global warming	?
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	May 2017	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,266	0	0	1,114	1,291	1,303	1,029	1,036	1,037
Extremely important	5	NaN	NaN	6	5	6	5	6	5
(%)									
Very important (%)	13	NaN	NaN	13	14	11	12	12	12
Somewhat important	27	NaN	NaN	27	26	26	30	27	25
(%)									
Not too important (%)	23	NaN	NaN	19	17	20	20	21	20
Not at all important	20	NaN	NaN	18	19	19	17	21	22
(%)									
Don't know (%)	11	NaN	NaN	16	17	17	15	12	15
Refused (%)	0	NaN	NaN	1	2	1	0	0	1





#### Please indicate how strongly you agree or disagree with the following statement:

#### I feel a personal sense of responsibility to help reduce global warming

	May 2017	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	0	0	0	0	0	0	1,029	1,036	1,037
Strongly agree (%)	NaN	NaN	NaN	NaN	NaN	NaN	22	22	16
Somewhat agree (%)	NaN	NaN	NaN	NaN	NaN	NaN	44	42	49
Somewhat disagree (%)	NaN	NaN	NaN	NaN	NaN	NaN	18	17	18
Strongly disagree (%)	NaN	NaN	NaN	NaN	NaN	NaN	16	19	16
Refused (%)	NaN	NaN	NaN	NaN	NaN	NaN	0	0	1





#### Please indicate how strongly you agree or disagree with the following statement:

It's already too late to do anything about global warming

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	726	0	0	0	0	0	0	0
Strongly disagree (%)	30	NaN						
Somewhat disagree (%)	32	NaN						
Somewhat agree (%)	12	NaN						
Strongly agree (%)	2	NaN						
Don't know (%)	17	NaN						
Prefer not to answer (%)	3	NaN						
Refused (%)	3	NaN						

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	0	0	1,114	1,291	1,303	1,029	1,036	1,037
Strongly disagree (%)	NaN	NaN	38	39	38	44	44	38
Somewhat disagree (%)	NaN	NaN	28	25	28	24	24	25
Somewhat agree (%)	NaN	NaN	12	9	9	9	11	9
Strongly agree (%)	NaN	NaN	2	3	3	2	3	3
Don't know (%)	NaN	NaN	15	17	16	14	15	18
Prefer not to answer (%)	NaN	NaN	4	5	5	6	3	5
Refused (%)	NaN	NaN	1	1	1	0	0	1





#### How much do you agree with the following statements?

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

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
Strongly disagree (%)	24	16	15	18	13	21	19	19
Somewhat disagree (%)	44	35	41	34	40	34	34	35
Somewhat agree (%)	22	27	28	29	29	25	28	29
Strongly agree (%)	9	15	13	14	11	18	19	16
Refused (%)	2	6	3	6	7	2	1	2

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,273	1,263	0	1,204	0	1,266
Strongly disagree (%)	16	17	20	17	NaN	22	NaN	20
Somewhat disagree (%)	34	34	32	33	NaN	32	NaN	37
Somewhat agree (%)	31	32	29	33	NaN	31	NaN	26
Strongly agree (%)	17	15	19	17	NaN	15	NaN	17
Refused (%)	1	1	0	0	NaN	0	NaN	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,304	1,278	0	1,291	0	0	0	1,037
Strongly disagree (%)	22	20	NaN	23	NaN	NaN	NaN	21
Somewhat disagree (%)	37	36	NaN	37	NaN	NaN	NaN	38
Somewhat agree (%)	26	29	NaN	25	NaN	NaN	NaN	24
Strongly agree (%)	15	15	NaN	15	NaN	NaN	NaN	16
Refused (%)	0	0	NaN	0	NaN	NaN	NaN	0





#### How much do you agree with the following statements?

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

	Nov 2008	Jan 2010	Jun 2010	May 2011	Nov 2011	Mar 2012	Sep 2012	Apr 2013
(Unweighted Base)	2,164	1,001	1,024	1,010	1,000	1,008	1,061	1,045
Strongly Agree (%)	4	5	6	7	6	6	5	5
Somewhat Agree (%)	25	40	31	37	37	29	34	32
Somewhat Disagree (%)	44	32	38	31	35	35	35	35
Strongly Disagree (%)	24	18	20	20	15	27	25	25
Refused (%)	3	6	4	5	7	2	1	2

	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016	May 2017
(Unweighted Base)	830	1,013	1,275	1,263	0	1,204	0	1,266
Strongly Agree (%)	6	4	6	6	NaN	8	NaN	7
Somewhat Agree (%)	32	29	35	33	NaN	36	NaN	37
Somewhat Disagree (%)	34	39	33	36	NaN	33	NaN	37
Strongly Disagree (%)	26	27	26	25	NaN	22	NaN	19
Refused (%)	1	1	0	0	NaN	0	NaN	0

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	0	1,278	0	1,291	1,303	1,029	0	1,037
Strongly Agree (%)	NaN	8	NaN	10	12	7	NaN	8
Somewhat Agree (%)	NaN	38	NaN	39	36	39	NaN	38
Somewhat Disagree (%)	NaN	33	NaN	33	31	34	NaN	32
Strongly Disagree (%)	NaN	21	NaN	18	21	19	NaN	22
Refused (%)	NaN	0	NaN	0	0	0	NaN	1





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]

[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?

	Apr 2013	Nov 2013	Apr 2014	Oct 2014	Mar 2015	Oct 2015	Mar 2016	Nov 2016
(Unweighted Base)	5	5	5	NaN	NaN	NaN	5	4
Global warming is	58	56	57	NaN	NaN	NaN	60	59
affecting weather in the								
United States (%)								
Affecting weather a lot	23	22	22	NaN	NaN	NaN	24	24
(%)								
Affecting weather some	27	26	25	NaN	NaN	NaN	28	26
(%)								
Affecting weather a little	6	6	8	NaN	NaN	NaN	7	8
(%)								
Don't know (%)	1	2	1	NaN	NaN	NaN	1	2
Prefer not to answer (%)	0	0	0	NaN	NaN	NaN	0	0
Global warming is not	7	7	8	NaN	NaN	NaN	5	7
affecting weather in the								
United States (%)								
Global warming isn't	10	13	10	NaN	NaN	NaN	9	9
happening (%)								
Don't know (%)	19	17	19	NaN	NaN	NaN	20	21
Refused (%)	1	2	1	NaN	NaN	NaN	0	0

	May 2017	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	5	5	6	4	3	4	4	2	5
Global warming is	59	64	61	65	60	64	66	63	61
affecting weather in the									
United States (%)									
Affecting weather a lot (%)	25	33	29	32	28	31	33	35	31
Affecting weather some (%)	27	23	25	26	22	25	25	21	23
Affecting weather a little (%)	5	6	6	5	7	6	6	6	5
Don't know (%)	1	1	1	1	2	2	1	0	2
Prefer not to answer (%)	0	0	0	0	0	0	0	0	0
Global warming is not	5	6	5	6	7	6	5	8	7
affecting weather in the									
United States (%)									
Global warming isn't	10	8	9	8	11	9	7	8	9
happening (%)									
Don't know (%)	21	18	18	15	18	16	17	18	16
Refused (%)	1	0	1	2	1	1	0	1	1





How much do you agree or disagree with the following statement: Wildfires have increased around the world over the past few years as a result of global warming.

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	0	0	0	0	0	1,029	1,036	1,037
Strongly agree (%)	NaN	NaN	NaN	NaN	NaN	28	33	29
Somewhat agree (%)	NaN	NaN	NaN	NaN	NaN	38	32	36
Somewhat disagree (%)	NaN	NaN	NaN	NaN	NaN	18	18	17
Strongly disagree (%)	NaN	NaN	NaN	NaN	NaN	15	16	18
Refused (%)	NaN	NaN	NaN	NaN	NaN	0	0	1





In the past few years, would you say that allergy season in your area has...

	Oct 2017	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	0	0	0	0	0	0	1,036	1,037
Become much more severe	NaN	NaN	NaN	NaN	NaN	NaN	9	10
(%)								
Become somewhat more	NaN	NaN	NaN	NaN	NaN	NaN	28	28
severe (%)								
Stayed about the same (%)	NaN	NaN	NaN	NaN	NaN	NaN	59	57
Become somewhat less	NaN	NaN	NaN	NaN	NaN	NaN	4	3
severe (%)								
Become much less severe	NaN	NaN	NaN	NaN	NaN	NaN	1	2
(%)								
Refused (%)	NaN	NaN	NaN	NaN	NaN	NaN	1	0





In your opinion.	over the next 10	vears how mucl	h risk does extren	ie weather pose to	o vour community?
				· · · · · · · · · · · · · · · · · · ·	

	Mar 2016	Nov 2016	May 2017	Oct 2017	Mar 2018	Dec 2018
(Unweighted Base)	1,204	0	0	1,304	0	0
High risk (%)	10	NaN	NaN	15	NaN	NaN
Moderate risk (%)	40	NaN	NaN	42	NaN	NaN
Low risk (%)	33	NaN	NaN	30	NaN	NaN
No risk (%)	5	NaN	NaN	5	NaN	NaN
Don't know (%)	11	NaN	NaN	8	NaN	NaN
Refused (%)	0	NaN	NaN	0	NaN	NaN

	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	0	1,303	1,029	1,036	1,037
High risk (%)	NaN	18	16	13	14
Moderate risk (%)	NaN	38	40	42	41
Low risk (%)	NaN	31	33	34	31
No risk (%)	NaN	7	5	5	7
Don't know (%)	NaN	7	5	6	7
Refused (%)	NaN	0	0	0	0





## How worried are you that the following might harm your local area?

#### Extreme heat

	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Very worried (%)	13	11	13	14	12	11	13
Moderately worried (%)	21	21	23	22	22	21	23
A little worried (%)	29	29	34	28	32	33	32
Not at all worried (%)	36	39	30	36	33	35	31
Refused (%)	1	0	0	0	0	0	0

#### Flooding

	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Very worried (%)	7	6	9	9	6	7	6
Moderately worried (%)	22	17	19	19	17	12	15
A little worried (%)	31	38	32	30	37	33	35
Not at all worried (%)	39	39	40	41	40	47	44
Refused (%)	1	0	0	1	1	1	0

#### Wildfires

	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Very worried (%)	9	9	9	10	9	10	11
Moderately worried (%)	12	13	14	13	12	12	14
A little worried (%)	21	20	25	20	25	24	23
Not at all worried (%)	57	59	51	56	52	54	52
Refused (%)	1	0	0	0	1	0	0





## How worried are you that the following might harm your local area?

#### Hurricanes

	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Very worried (%)	9	8	9	9	8	8	7
Moderately worried (%)	12	12	14	13	13	12	9
A little worried (%)	17	20	16	18	20	19	19
Not at all worried (%)	62	59	60	59	58	61	64
Refused (%)	1	0	0	1	1	0	0

#### Drought

	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Very worried (%)	11	10	10	11	9	10	9
Moderately worried (%)	19	17	21	20	17	18	19
A little worried (%)	31	31	34	30	39	36	33
Not at all worried (%)	39	42	35	39	35	36	39
Refused (%)	1	0	0	1	0	0	0





## How worried are you that the following might harm your local area? (Cont'd)

#### Water shortages

	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Very worried (%)	9	8	10	9	10	9	9
Moderately worried (%)	17	14	17	18	15	15	17
A little worried (%)	25	29	31	27	31	30	30
Not at all worried (%)	48	49	41	45	44	45	43
Refused (%)	1	0	0	0	0	0	0

#### **Reduced snowpack**

	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	1,278	1,114	1,291	1,303	1,029	1,036	1,037
Very worried (%)	5	5	4	5	5	6	7
Moderately worried (%)	10	11	10	12	10	12	11
A little worried (%)	16	21	19	20	23	18	20
Not at all worried (%)	68	63	66	62	62	64	61
Refused (%)	1	0	0	1	0	0	1

#### **Rising sea levels**

	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	0	0	0	0	0	1,036	1,037
Very worried (%)	NaN	NaN	NaN	NaN	NaN	6	6
Moderately worried (%)	NaN	NaN	NaN	NaN	NaN	10	11
A little worried (%)	NaN	NaN	NaN	NaN	NaN	22	24
Not at all worried (%)	NaN	NaN	NaN	NaN	NaN	61	59
Refused (%)	NaN	NaN	NaN	NaN	NaN	0	0





## How worried are you that the following might harm your local area? (Cont'd)

#### Agricultural pests and diseases

	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	0	0	0	0	0	1,036	1,037
Very worried (%)	NaN	NaN	NaN	NaN	NaN	7	8
Moderately worried (%)	NaN	NaN	NaN	NaN	NaN	16	17
A little worried (%)	NaN	NaN	NaN	NaN	NaN	40	40
Not at all worried (%)	NaN	NaN	NaN	NaN	NaN	36	35
Refused (%)	NaN	NaN	NaN	NaN	NaN	0	0

#### Tornados

	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	0	0	0	0	0	1,036	1,037
Very worried (%)	NaN	NaN	NaN	NaN	NaN	7	6
Moderately worried (%)	NaN	NaN	NaN	NaN	NaN	16	15
A little worried (%)	NaN	NaN	NaN	NaN	NaN	30	32
Not at all worried (%)	NaN	NaN	NaN	NaN	NaN	46	47
Refused (%)	NaN	NaN	NaN	NaN	NaN	0	0





## How worried are you that the following might harm your local area? (Cont'd)

#### Air pollution

	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	0	0	0	0	0	1,036	1,037
Very worried (%)	NaN	NaN	NaN	NaN	NaN	12	12
Moderately worried (%)	NaN	NaN	NaN	NaN	NaN	24	23
A little worried (%)	NaN	NaN	NaN	NaN	NaN	37	36
Not at all worried (%)	NaN	NaN	NaN	NaN	NaN	26	28
Refused (%)	NaN	NaN	NaN	NaN	NaN	0	1

#### Water pollution

	Mar 2018	Dec 2018	Apr 2019	Nov 2019	Apr 2020	Dec 2020	Mar 2021
(Unweighted Base)	0	0	0	0	0	1,036	1,037
Very worried (%)	NaN	NaN	NaN	NaN	NaN	12	14
Moderately worried (%)	NaN	NaN	NaN	NaN	NaN	21	23
A little worried (%)	NaN	NaN	NaN	NaN	NaN	41	36
Not at all worried (%)	NaN	NaN	NaN	NaN	NaN	26	26
Refused (%)	NaN	NaN	NaN	NaN	NaN	0	0





# Appendix II: Survey Method

The data in this report are based on a nationally representative survey of 1,037 American adults, aged 18 and older. The survey was conducted March 18 – 29, 2021. All questionnaires were self-administered by respondents in a web-based environment. The survey took, on average, about 25 minutes to complete.

The sample was drawn from the Ipsos (formerly GfK) KnowledgePanel<sup>®</sup>, an online panel of members drawn using probability sampling methods. Prospective members are recruited using a combination of random digit dial and address-based sampling techniques that cover virtually all (non-institutional) resident phone numbers and addresses in the United States. Those contacted who would choose to join the panel but do not have access to the Internet are loaned computers and given Internet access so they may participate.

The sample therefore includes a representative cross-section of American adults – irrespective of whether they have Internet access, use only a cell phone, etc. Key demographic variables were weighted, post survey, to match US Census Bureau norms.

From November 2008 to December 2018, no KnowledgePanel<sup>®</sup> member participated in more than one *Climate Change in the American Mind* (CCAM) survey. Beginning with the April 2019 survey, panel members who have participated in CCAM surveys in the past, excluding the most recent two surveys, may be randomly selected for participation. In the current survey, 316 respondents participated in a previous CCAM survey.

The survey instrument was designed by Anthony Leiserowitz, Seth Rosenthal, Jennifer Carman, Matthew Goldberg, Karine Lacroix, and Jennifer Marlon of Yale University, and Edward Maibach and John Kotcher of George Mason University. The charts and tables were designed by Xinran Wang of Yale 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.

- March 2021: Fielded March 18 29 (*n* = 1,037)
- December 2020: Fielded December 3 16 (*n* = 1,036)
- April 2020: Fielded April 7 17 (*n* = 1,029)
- November 2019: Fielded November 8 November 20 (n = 1,303)
- April 2019: Fielded March 29 April 8 (*n* = 1,291)
- December 2018: Fielded November 28 December 11 (n = 1,114)
- March 2018: Fielded March 7 March 24 (*n* = 1,278)
- 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., 25.3% + 25.3% = 50.6%, which, after rounding, would be reported as 25% + 25% = 51%).





# Appendix III: Sample Demographics

	n (unweighted)	% (weighted)
Total	1,037	100
Male	504	48
Female	533	52
Generation Z (1997 - )	46	9
Millennials (1981 - 1996)	233	31
Generation X (1965 - 1980)	269	25
Baby Boomers (1946 - 1964)	400	30
Silent (1928 - 1945)	89	6
Less than high school	74	11
High school	264	27
Some college	307	30
Bachelor's degree or higher	392	31
<\$25K	89	12
\$25K-<\$50K	177	18
\$50K-<\$75K	186	17
\$75K-<\$100K	148	14
\$100K-<\$125K	139	12
\$125K+	298	26
White, Non-Hispanic	753	63
Black, Non-Hispanic	94	12
Hispanic	106	16
2+ Races, Non-Hispanic	33	2
Other, Non-Hispanic	51	7
Northeast	188	17
Midwest	223	21
South	391	38
West	235	24





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