Flood Sensitivity, Risk Perception, and Support for Climate Action in the United States*

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Abstract

Despite increasing evidence of the effects of climate change and scientific consensus about its threat, significant political barriers to climate action remain in the US. American public opinion about climate change is generally perceived as stable and sharply divided along partisan lines. However, less is known about the relationship between flood sensitivity and public opinion about climate change. Combining the ND-GAIN Urban Adaptation Assessment data of American cities with public opinion data from the Yale Program on Climate Change Communication, this paper demonstrates the positive association between flood sensitivity and beliefs about climate change, risk perceptions, and support for climate action. These results have important implications for the understanding of public opinion about climate change, suggesting that flood sensitivity shapes perceptions of climate change. The results also have important implications for advocates of political action, suggesting that making flood sensitivity salient could help mobilize public support for climate action.

Keywords: public opinion, flood sensitivity, risk perception, climate change, floods
Word count: 6,977 words (all inclusive)

*Earlier versions of this paper was presented at the US Political Resistance to Climate Action Workshop at the University of Notre Dame and the 2019 Natural Hazards Researchers Meeting in Bloomfield, Colorado. I would especially like to thank Lazarus Adua, Dontá Council, Matthew Dowiatt, Oronde Drakes, Rachel Gurney, Alan Hamlet, Feng Hao, Sara Hughes, Drew Marcantonio, Adam Mayer, Patrick Regan, Ragan Sernel, and participants in the panels for excellent comments and suggestions. Any errors that remain are my own responsibility.

1 Introduction

Despite increasing evidence of the effects of climate change and scientific consensus about its threat, significant political barriers to climate action remain in the United States. Although the US signed the 2015 Paris Agreement, the Trump Administration subsequently withdrew from the agreement, and despite the Biden Administration's return to the agreement, partisan appointments to environmentally-focused federal departments further limit the chances of climate action in the near future.

Furthermore, US public opinion continues to lag behind scientific evidence. For example, in 2017 just 71 percent of Americans believed climate change is happening, 56 percent believed it is caused by humans, and 53 percent believed there is scientific consensus about climate change (Ballew et al., 2019; Mildenberger and Tingley, 2017). Public opinion about climate change is relatively stable, and sharply divided along partisan lines (Egan and Mullin, 2017). Furthermore, recent research suggests that beliefs about climate change among Republicans might even be overstated (Motta et al., 2019). In short, the prospects of climate action through public opinion in the US appear to be limited.

However, the prospect of political change may not be so remote. While some may be pessimistic about the prospects of bottom-up climate action (McAdam, 2017), prior research demonstrates that elected officials are broadly responsive to the policy preferences of their constituents (Drews and Bergh, 2016; Hagemann, Hobolt and Wratil, 2017; Page and Shapiro, 1983), and as the effects of climate change continue to affect Americans' lives, the public may demand climate action. Accordingly, public opinion could help create the conditions where politicians pass legislation that addresses climate change or face being forced out of office at the next election.

In many ways, climate change may have once appeared to be distant for many Americans, who may perceive there are few incentives to devote their scarce attention to learning about climatic change in their daily lives. However, for people who are particularly vulnerable to the effects of climate change, this calculus might shift with exposure to its effects. Instead, people who are likely to be most affected by these changes may be particularly aware of the dangers presented by the effects of climate change to their lives (Ansolabehere and Konisky, 2014; Bernauer and McGrath, 2016).

This paper uses data from the ND-GAIN Urban Adaptation Assessment and the Yale Program on Climate Change Communication to demonstrate the positive association between flood sensitivity and 1) beliefs about climate change, 2) risk perceptions about climate change, and 3) support for climate action. These results have important implications for the understanding of US public opinion about climate change, suggesting that a city's flood sensitivity shapes their perceptions of climate change. The results also have important implications for advocates of political action, suggesting that making flood sensitivity salient could help mobilize public support for climate action.

2 US Public Opinion about Climate Change

As described by Egan and Mullin (2017), public opinion about climate change is somewhat unusual because the extent of the problem and the underlying causes are disputed in the US, and climate change is arguably more remote to people's daily lives which might prevent people from making connections between events that they might make in different policy issues.

In spite of, or perhaps because of these unique properties of the climate change debate in the US, American attitudes about climate change have remained remarkably stable (Brulle, Carmichael and Jenkins, 2012; Egan and Mullin, 2017; Hamilton et al., 2015). Democrats and politically liberal individuals are considerably more likely to believe in climate change and support climate action (Krosnick, Holbrook and Visser, 2000; McCright and Dunlap, 2011), a symptom of the divergence between the two major parties on environmental issues since since the 1970s (Lindaman and Haider-Markel, 2002; Shipan and Lowry, 2001).

Climate change skepticism has also arguably grown due to misinformation campaigns to dispute the underlying science on the political right (Elsasser and Dunlap, 2013; Jacques, Dunlap and Freeman, 2008; McCright and Dunlap, 2003; Oreskes and Conway, 2011), journalists' use of climate skeptics in the pursuit of balance in news coverage (Boykoff, 2007, 2008; Boykoff and Boykoff, 2007; McCright and Dunlap, 2003), and the Democratic Party's inability to pursue a coherent approach (Dunlap and McCright, 2008; McCright and Dunlap, 2003).

Beyond demographic factors, risk perception shapes attitudes to climate change. Hierarchical orientation (Hornsey et al., 2016; Kahan et al., 2012; Leiserowitz, 2006), and trust in science predict attitudes about climate change. However, if people perceive risk to themselves, they might be more likely to favor climate policies (Lorenzoni, Nicholson-Cole and Whitmarsh, 2007; Scannell and Gifford, 2013; Spence et al., 2011; Spence, Poortinga and Pidgeon, 2012; Weber, 2006), even if support of this contention is mixed (Brügger et al., 2015; Scannell and Gifford, 2013; Schoenefeld and McCauley, 2016; Shwom, Dan and Dietz, 2008; Spence and Pidgeon, 2010; Spence, Poortinga and Pidgeon, 2012). Furthermore, these interventions may even decrease support for climate action (Schoenefeld and McCauley, 2016; Spence and Pidgeon, 2010).

Recent research demonstrates that personal experience and vulnerability to climate change affect public opinion. Exposure to symptoms of climate change such as warmer temperatures, extreme weather, and natural hazards are potentially associated with increased belief in the existence of climate change (Deryugina, 2013; Druckman, 2015; Egan and Mullin, 2012; Joireman, Barnes Truelove and Duell, 2010; Konisky, Hughes and Kaylor, 2016; Zaval et al., 2014), although the duration of these effects might be limited (Druckman and Shafranek, 2016; Konisky, Hughes and Kaylor, 2016).

While excellent work has explored the effects of physical vulnerability to climate change on support for climate action (Brody et al., 2008; Harlan and Ruddell, 2011; Zahran et al., 2006), less is known about how *social* vulnerability shapes perceptions of climate change. Like many other threats to human security, people who are already vulnerable are likely to be disproportionately affected by climate change, and this could shape public opinion about climate change (Kim and Wolinsky-Nahmias, 2014). In this paper, I seek to explore this gap in the considerable literature on US public opinion about climate change in order to better understand how to overcome political barriers to climate action.

3 Flood Sensitivity and Public Opinion about Climate Change

While public opinion about climate change and political action might generally be stable over time, it is possible that flood sensitivity affects how people perceive the threat of climate change.

Previous research demonstrates that the people who suffer most from disasters are those who are already marginalized in society (Cutter, Boruff and Shirley, 2003; Thomas et al., 2013). In short, people who are most vulnerable to crisis in their everyday lives are also particularly vulnerable to disasters. This vulnerability likely affects how they interpret environmental issues, particularly regarding natural hazards and climate change (Füssel, 2007; Kelly and Adger, 2000*b*). Because of their increased vulnerability to the effects of disasters, people facing hardship are likely to be more aware of the environmental risks they face than people without this increased vulnerability.

Similarly, the greatest effects of climate change will be disproportionately felt by people who are already vulnerable (Adger and Kelly, 1999; Bohle, Downing and Watts, 1994; Diffenbaugh and Burke, 2019; Füssel, 2007; Kelly and Adger, 2000*a*; Kim and Wolinsky-Nahmias, 2014; Ribot, Magalhães and Panagides, 2005). As a result of their increased vulnerability to natural hazards, and to the effects of climate change, socially vulnerable people are likely to perceive incentives to learn about climate change that might not be apparent to other members of society who are less exposed to the the consequences of climate change and better able to cope with them.

Prior research suggests that the perception of incentives for accuracy leads to improved political knowledge (Hill, 2017; Prior and Lupia, 2008), and improved accuracy in predicting future events (Jamieson and Weller, N.d.). It is likely that people who are particularly vulnerable to the effects of climate change perceive different incentives to learn about climate change than others. Social vulnerability could help foster a willingness among individuals to improve their knowledge about climate change to make informed decisions at the ballot box, which could overcome heuristics such as political ideology or party ID that could otherwise affect people's engagement with climate change (Kim and Wolinsky-Nahmias, 2014).

Among other hazards, urban flooding is likely to increase with climate change. Given people's incentives to learn about the risks they face in their area, people living in areas with high levels of flood sensitivity could be more attentive to climate change, and they could have different perceptions of climate change harm than those living in communities that are less vulnerable. The impact of flood sensitivity is measurable across three broad categories of public opinion at the city level: beliefs about climate change, risk perceptions about climate change, and support for climate action. As flood sensitivity in a city increases, we should expect to see increased belief in climate change, increased perception of the risks presented by climate change, and increased support for climate action to mitigate climate change. As such, the hypotheses are:

Hypothesis 1 *Flood Sensitivity and Beliefs Hypothesis*

As flood sensitivity increases, the number of people expressing belief in climate change increases.

Hypothesis 2 *Flood Sensitivity and Risk Perceptions Hypothesis*

As flood sensitivity increases, the number of people recognizing the risks of climate change increases.

Hypothesis 3 *Flood Sensitivity and Climate Action Hypothesis*

As flood sensitivity increases, the number of people expressing support for climate action increases.

4 Data and Methods

4.1 Case Selection: Floods in the United States

There are a number of different natural hazards that could lead people to become more cognizant of the threat posed by climate change, especially for those people with increased vulnerability relative to the rest of the population. However, of all hazards, floods present perhaps the best example of a hazard that could lead to increased awareness of the harm being caused by climate change. This paper examines how risk and vulnerability affects attitudes about climate change for several reasons.

First, floods are the most common natural hazard experienced by people in the US. In 2016 for example, the US suffered 36 floods that were called presidentially-declared disasters, with at least one of these events occurring in 25 states across the country. In short, floods affect large numbers of people across the US.

Second, floods have significant consequences. According to a recent Congressional Budget Office report, losses from storm-related flooding alone are expected to cost the US economy up to $47 billion every year (Congressional Budget Office, 2019). To put this figure in context, this constitutes over 0.2 percent of the entire US gross domestic product in 2019. As part of the National Flood Insurance Program, alongside others, the federal government is expected to pay at least $17 billion each year.

Third, there is considerable variation in the impacts of floods on communities around the United States, both in terms of direct economic losses and insured losses. Furthermore, floods are influenced by infrastructure policies, which can mitigate against them or exacerbate risk through levees, dams, flood banks, and related infrastructure.

Because floods occur throughout the country, and because they are so costly, they are a useful means to evaluate how people might respond to their own vulnerability and exposure to events to consider the harm of climate change in the US. If riverine and flash floods occur regularly despite being labelled "100" or "1000-year events," people might make connections between the hazards and the impact of broader climatic change on their communities.

4.2 Data

4.2.1 Dependent Variables: Public Opinion about Climate Change in the US

For all analysis, dependent variables are the estimated percentage of public opinion that corresponds with each statement about climate change in a given city in the United States. Data was collected in 2016 by the Yale Project on Climate Change Communication as part of their national surveys of public opinion about climate change, and the city-level estimates were generated through multilevel regression and post-stratification, which is described in detail in Howe et al. (2015). There are three broad categories of public opinion about climate change that hold particular importance for the prospects of climate action in the US: 1) beliefs about climate change; 2) risk perceptions about climate change; and 3) support for climate action.

Beliefs about climate change tap into people's perceptions of climate change and global warming. These beliefs are critical for understanding public opinion about climate action – beliefs frequently shape the way people filter information. Risk perceptions measure how people perceive risk and harm relating to climate change. Risk perceptions are also important to understand as they capture individuals' attitudes about the potential harm of climate change to themselves and their community.

Table 1: Operationalization of Public Opinion about Climate Change in the US.

Constructs and Measures
Beliefs about Climate Change
- Estimated percentage who think that global warming is happening
- Estimated percentage who think that global warming is caused mostly by human activities
- Estimated percentage who believe that most scientists think global warming is happening
- Estimated percentage who somewhat or strongly trust climate scientists as a source of information about global warming
Risk Perceptions about Climate Change
- Estimated percentage who are somewhat/very worried about global warming
- Estimated percentage who think global warming will harm them personally a moderate amount/a great deal
- Estimated percentage who think global warming will harm people in the US a moderate amount/a great deal
- Estimated percentage who think global warming will harm people in developing countries a moderate amount/a great deal
- Estimated percentage who think global warming will harm future generations a moderate amount/a great deal
- Estimated percentage who think global warming will start to harm people in the United States now/within 10 years
- Estimated percentage who think global warming will harm plants and animal species a moderate amount/a great deal
Support for Climate Action
- Estimated percentage who somewhat/strongly support setting strict limits on existing coal-fire power plants
- Estimated percentage who somewhat/strongly support regulating CO2 as a pollutant
- Estimated percentage who somewhat/strongly support requiring utilities to produce 20% electricity from renewable sources
- Estimated percentage who somewhat/strongly support funding research into renewable energy sources

Source: Yale Project on Climate Change Communication (Howe et al., 2015).

Finally, arguably the most critical element of public opinion for the prospects of climate action involves support for climate policy. If public opinion coalesces around support for climate action, elected officials are likely to pursue these policies or risk being voted out of office at the next election. Table 1 describes how each of these constructs are operationalized into variables for analysis.

4.2.2 Independent Variable

The independent variable is flood sensitivity. In this paper, flood sensitivity is operationalized and measured through the "Flood Sensitivity" index in the ND-GAIN Urban Adaptation Assessment (UAA) dataset, developed by the Notre Dame Global Adaptation Initiative (2018).

This index is created through calculating the average of each individual indicator's score for each given hazard. This is measured as the average of indicators of flood sensitivity in a city such as the percent of area that is impervious surface, the percent of population residing in mobile homes, the percent of population that is 65 years or older living along, the percent of population that is 5 years old or younger, the percent of households without access to a vehicle, the percent of buildings built before 1999, and the percent of population spending over 50 percent of income on rent. These social and physical vulnerabilities combine to capture flood sensitivity in a city.

4.2.3 Control Variables

A series of control variables are used to account for alternative explanations about factors that could affect public opinion about climate change harm in the US after exposure to floods.

First, flood experience could influence attitudes about climate change harm. In particular, recent experience of floods could increase the acknowledgement of climate change harm in affected communities (Deryugina, 2013; Druckman, 2015; Egan and Mullin, 2012; Joireman, Barnes Truelove and Duell, 2010; Konisky, Hughes and Kaylor, 2016; Zaval et al., 2014). Flood experience could lead to changes in attitudes about climate change harm as the amount of damage increases (Thistlethwaite et al., 2018). As a result, flood damage (logged) is included in the analysis, with data coming from the National Oceanic and Atmospheric Administration (NOAA), and reported in the UAA data (Notre Dame Global Adaptation Initiative, 2018).

Second, four indices reported in the UAA dataset related to flooding could also conceivably influence attitudes about climate change harm. These include flood exposure, flood adaptive ca-

Table 2: Indices and Indicators.

Index	**Indicators**
Flood Sensitivity	Percent of area that is impervious surface
	Percent of population residing in mobile homes
	Percent of population that is 65 years old or older living alone
	Percent of population that is 5 years old or younger
	Percent of households without access to a vehicle
	Percent of buildings built before 1999
	Percent of population spending over 50 percent of income on rent
Flood Exposure	Percent of cars in floodzone
	Percent of population in floodzone
	Percent of buildings in floodzone
Flood Adaptive Capacity	Number of acute care hospital beds available per 1000 residents
	Percent of population with health insurance
	Water quality
Flood Social Readiness	Civic Engagement
	General innovation capabilities
Flood Economic Readiness	City debt
	Readiness to accept adaptation investment
	Tax incentives for renewable energy

Source: Notre Dame Global Adaptation Initiative (2018).

pacity, flood social readiness, and flood economic readiness. These are produced through the same process as the index for flood sensitivity.[1] Further details about each index and the individual indicators used to produce the indices are presented in Table 1.

Third, previous research demonstrates that Republicans are more skeptical of climate change and less supportive of climate action (Elsasser and Dunlap, 2013; Jacques, Dunlap and Freeman, 2008; Krosnick, Holbrook and Visser, 2000; McCright and Dunlap, 2003, 2011; Oreskes and Conway, 2011). To account for partisanship as an alternative explanation, the proportion of votes for Donald Trump in the 2016 Presidential election in a city is included as a control variable. The variable is constructed by dividing the number of votes for Trump by the total population of the city in 2016 as estimated by the US Census Bureau (Daily Kos Staff, 2018; Notre Dame Global Adaptation Initiative, 2018).

Finally, standard demographic variables such as the total population (log), median income, and the percentage of the population with a 12th Grade education or below are also included to control for the possibility these factors shape public opinion about climate change. This data comes from the US Census Bureau and is reported in the UAA dataset (Notre Dame Global Adaptation Initiative, 2018).

Appendix A in the Supplementary Materials presents descriptive statistics for all variables. The table indicates the wide amount of variation in the dependent and independent variables of interest.

4.3 Methods

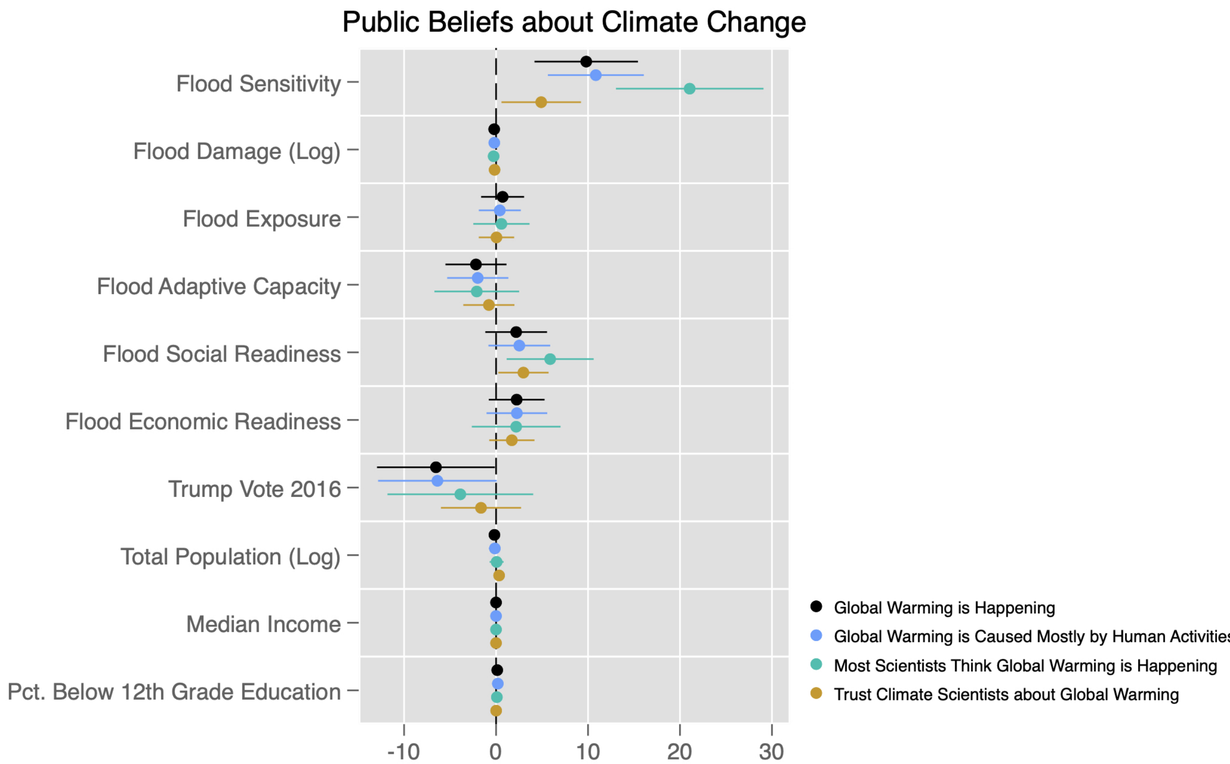
I use a series of simple OLS regressions with robust standard errors to assess the relationship between the independent variables and beliefs, risk perceptions, and support for climate action in the US. The unit of analysis is the city, and the model can be expressed as:

$$PublicOpinion_i = \beta_1 FloodSensitivity_i + u_i, \quad (1)$$

where $PublicOpinion_i$ refers to the percentage of adults sharing a given belief, risk perception, or support for climate action in a city $_i$.

[1] Food governance is not included in the analysis because the index includes public opinion about climate change.

Figure 1: Public Beliefs about Climate Change in the US.
Dependent Variables: Estimated Percentage of Public Belief in each Statement.



5 Results

The results broadly support the hypotheses presented in the paper. While controlling for alternative explanations, the analysis indicates that flood sensitivity is positively associated with beliefs about climate change, risk perceptions about the harm of climate change, and support for climate action to mitigate against climate change.[2]

5.1 Flood Sensitivity and Beliefs about Climate Change

Figure 1 presents the results of OLS regressions on beliefs about climate change in the US with all control variables included. Across all models, as flood sensitivity increases, the percentage of opinion indicating belief in climate change increases. There are several main implications of these results.

[2]Full results and additional robustness checks are presented in the Supplementary Materials.

First, the results indicate that flood sensitivity is positively associated with beliefs about climate change. Substantively, for every one unit increase in flood sensitivity, the number of people who believe global warming is happening increases by 9.806 percent, the number of people who believe global warming is caused mostly by human activities increases by 10.85 percent, the number of people who believe most scientists think global warming is happening increases by 21.056 percent, and the number of people who trust climate scientists about global warming increases by 4.913 percent. In sum, these results indicate we can reject the null hypothesis of flood sensitivity having no relationship with beliefs about climate change. Instead, as flood sensitivity increases, people increasingly believe climate change is happening and that there is scientific consensus about this fact.

Second, the results indicate that flood damage is negatively associated with beliefs about climate change harm. Although the magnitude of the effect are relatively small, it appears that direct flood experience may actually reduce beliefs about climate change.

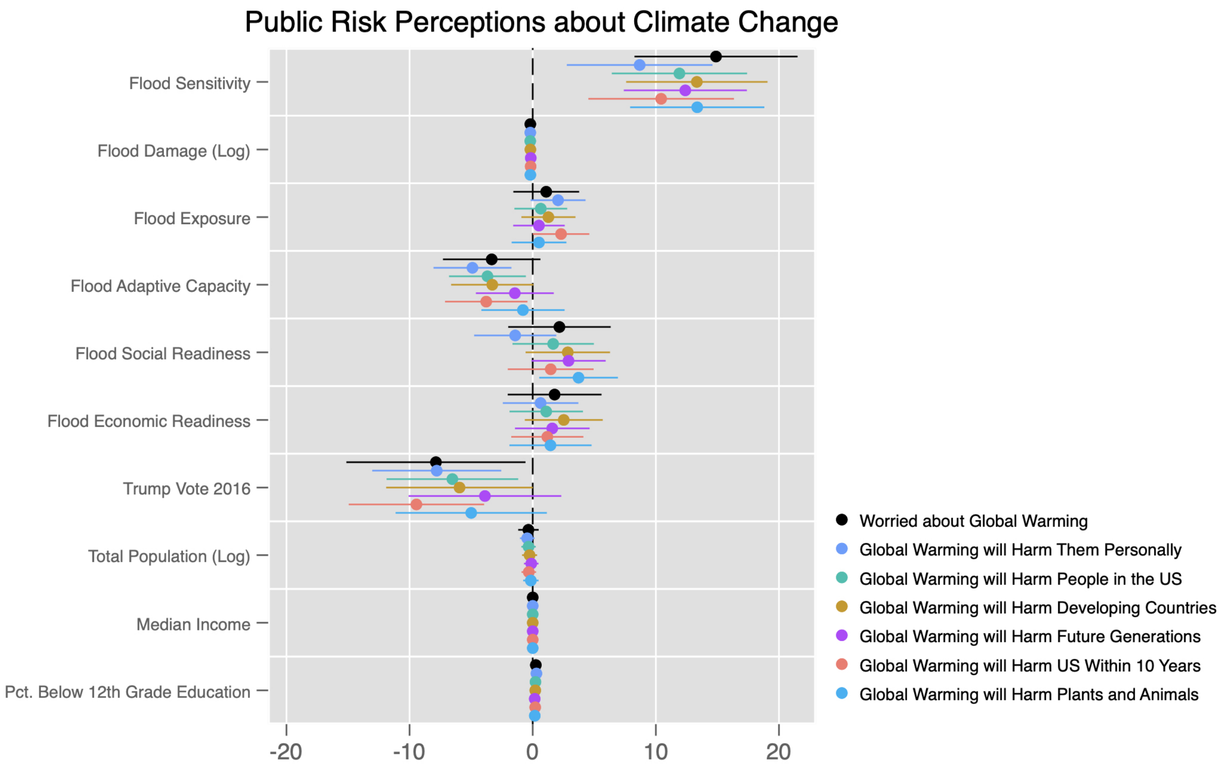
Third, as one might expect, the proportion of the city voting for Donald Trump in the 2016 Presidential election is negatively associated with beliefs about climate change, although the correlation is only statistically significant at $p>0.05$ for the belief that global warming is happening and $p>0.1$ for the belief that global warming is caused mostly by human activities. These results are broadly in line with what one might expect given widespread Republican skepticism of climate change, but they also suggest that the correlation between flood sensitivity and beliefs in climate change are not simply an artifact of partisan politics in urban areas.

5.2 Flood Sensitivity and Risk Perceptions

Next, the relationship between flood sensitivity and risk perceptions about climate change is presented in Figure 2. Again, flood sensitivity is associated with increased perceptions of risks related to climate change.

Cities with greater flood sensitivity are much more likely to indicate worry about the harms of climate change. Substantively, in full models with all covariates included, a one unit increase in flood sensitivity is associated with a 14.886 percent increase in the number of people worried about global warming, a 8.686 percent increase in the number of people worried global warming will harm them personally, a 11.918 percent increase in the number of people worried that global

Figure 2: Public Risk Perceptions about Climate Change in the US.
Dependent Variables: Estimated Percentage of Public Perception of each Risk.



warming will harm people in the US, a 13.329 percent increase in the number of people worried that global warming will harm developing countries, a 12.395 percent increase in the number of people worried that global warming will harm future generations, a 10.433 percent increase in the number of people worried that global warming will harm the US now or within 10 years, and a 13.362 percent increase in the number of people worried that global warming will harm plants and animals.

There are several other notable results worth further discussion. First, flood damage was negatively associated with risk perception, indicating that previous experiences of floods may perversely reduce the likelihood of people worrying about the effects of climate change, despite exposure to hazards that are exacerbated by changes in climatic conditions.

Second, flood adaptive capacity is negatively associated with risk perception for many, if not all, risk perceptions. In many ways adaptive capacity captures a city's ability to cope with a disaster, where flood sensitivity measures the absence of this ability. As a result, it is perhaps unsurprising that people living in cities with greater numbers of hospital beds per capita, higher levels of health insurance coverage, and increased water quality are less concerned about the effects of climate change as they are less exposed to its effects.

Finally, the 2016 Trump vote is negatively associated with most risk perceptions, again suggesting that cities with larger numbers of Republican voters are less worried about the effects of climate change than other communities.

5.3 Flood Sensitivity and Support for Climate Action

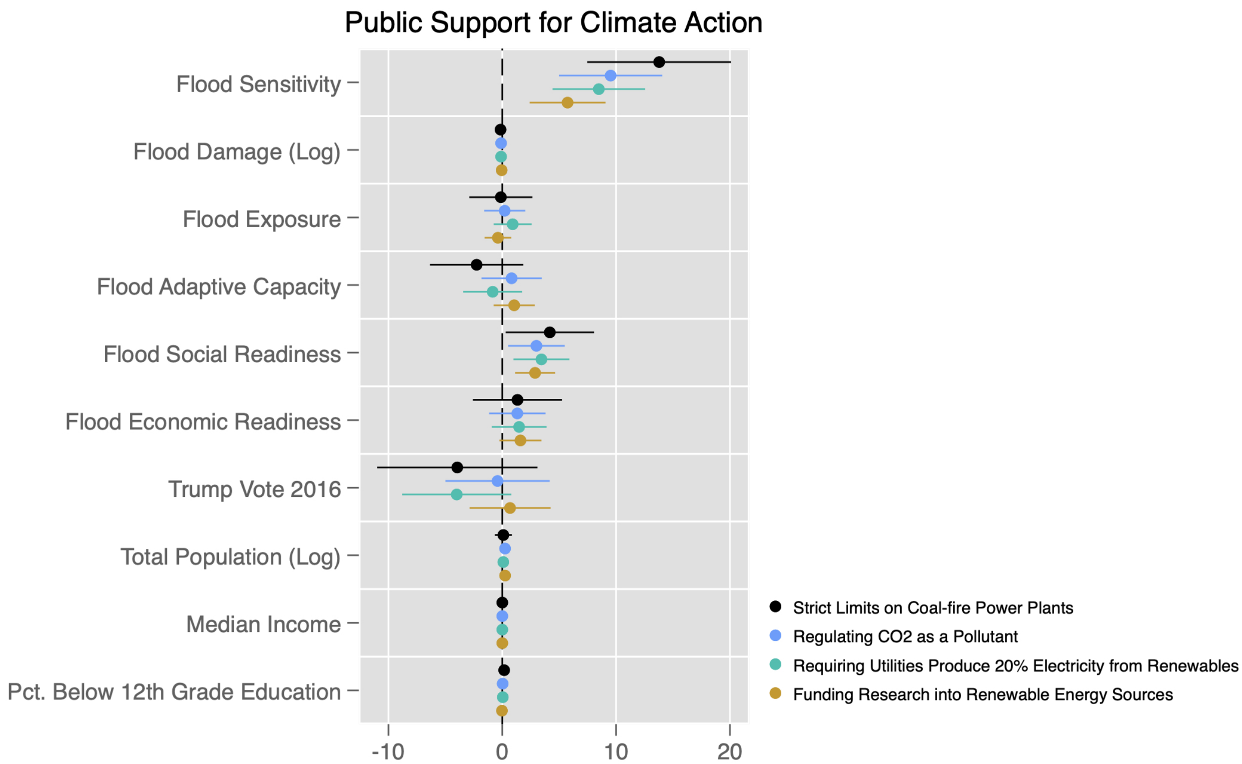
Finally, flood sensitivity is associated with increased support for climate action. Figure 3 presents the results of regressions on four climate policies.

In short, flood sensitivity is not just associated with greater belief in climate change and greater worry about its effects, but this vulnerability leads to increased support for policies that mitigate against climate change. A one unit increase in flood sensitivity is associated with a 13.783 percent increase in support for strict limits on coal-fire power plants, a 9.519 percent increase in support for regulating carbon dioxide as a pollutant, a 8.480 percent increase in support for requiring utilities to produce at least 20 percent of their electricity from renewable sources, and a 5.735 percent increase in support for funding research into renewable energy sources. In short, communities with large levels of flood sensitivity have increased support for climate action.

Flood social readiness is also positively associated with support for climate action. As social readiness measures civic engagement and innovation capacity, this suggests that cities in a good position to take action are more inclined to support climate action, which presents some reasons for optimism about the prospects of climate action in these communities.

In sum, flood sensitivity is positively associated with beliefs about climate change, worry about the harms of climate change, and support for climate action to mitigate against climate change. These results suggest that communities with greater numbers of people vulnerable to the effects of climate change are more aware of the effects of climate change, and more willing to pursue climate action.

Figure 3: Public Support for Climate Action in the U.S.
Dependent Variables: Estimated Percentage of Public Support for each Policy.



6 Discussion

Flood sensitivity appears to be an important factor in shaping people's beliefs, risk perceptions, and ultimately their support for climate action. This presents reasons for optimism about the prospects of climate action. While scholars and advocates of climate action cannot and should not directly manipulate flood sensitivity, making these risks salient in discussions of climate change could help people become more aware of the threat it presents to communities around the US.

Activists and lobby groups could garner increased support for climate action by highlighting communities' flood sensitivity in their messages, especially if they emphasize how the effects of climate change will disproportionately affect already-vulnerable groups in society. By making this salient, even some of the more traditionally resistant groups like Republican voters might be drawn to accept the reality of climate change, acknowledge the harms of climate change, and support climate action to reduce the costs of climate change.

If campaigns make flood sensitivity salient, it might be possible to further increase support for climate action and force politicians to comply with the policy preferences of their constituents and address climate change through legislation. As more people become exposed to the effects of climate change, these shifts in public opinion could be leveraged to influence public policy.

However, it is important to acknowledge some limitations of this study that future work should address. First, the paper provides a window into the dynamics of public opinion about climate change, but it does not test how this affects the likelihood of political action. Further research should study how public opinion about climate change translates into subsequent political action.

Second, while the UAA data helps to provide evidence in support of the hypotheses in this paper, causal inference is difficult given the observational nature of the data. Future research should use experiments to test the causal mechanisms leading from flood sensitivity to public opinion about climate change.

Third, it is worth considering the state of public knowledge about their own community. While some of the indicators in the data might be widely known by people living in each community, some are more likely to be unknown. Further work could examine public knowledge of community vulnerability, and then test how knowledge accuracy affects attitudes about climate change.

Finally, the data present a single snapshot in time where there is a single observation for every city. As more data is collected and published, longitudinal studies would further increase our understanding of public opinion about climate change, and the duration of effects of flood sensitivity over time.

Despite these limitations, this paper makes an important contribution by demonstrating the relationship between flood sensitivity and public opinion about climate change. It shows the communities that are most susceptible to the effects of climate change are most supportive of climate action. This suggests that vulnerable communities connect the dots between their flood sensitivity and the present and future threat of climate change. Further work should build on this research to understand how flood sensitivity affects public opinion, and ultimately examine how public opinion translates into political action to address climate change.

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A Appendix A. Descriptive Statistics

Table 3: Descriptive Statistics.

	Count	Mean	Std. Dev.	Min.	Max.
Beliefs about Climate Change					
Estimated percentage who think that global warming is happening	218	71.47381	4.385587	60.476	81.68
Estimated percentage who think that global warming is caused mostly by human activities	218	54.63254	4.584461	45	64.689
Estimated percentage who believe that most scientists think global warming is happening	218	50.99912	6.367387	38.843	66.52
Estimated percentage who somewhat or strongly trust climate scientists as a source of information about global warming	218	72.24718	3.067727	63.519	77.798
Risk Perceptions about Climate Change					
Estimated percentage who are somewhat/very worried about global warming	218	59.49885	5.694448	48.163	72.039
Estimated percentage who think global warming will harm them personally a moderate amount/a great deal	218	41.35174	5.100711	32.668	54.785
Estimated percentage who think global warming will harm people in the US a moderate amount/a great deal	218	59.17304	4.790825	50.274	70.013
Estimated percentage who think global warming will harm people in developing countries a moderate amount/a great deal	218	64.29268	4.839016	54.033	75.12
Estimated percentage who think global warming will harm future generations a moderate amount/a great deal	218	70.99783	4.21941	62.505	79.596
Estimated percentage who think global warming will start to harm people in the United States now/within 10 years	218	52.03257	4.737118	42.688	64.284
Estimated percentage who think global warming will harm plants and animal species a moderate amount/a great deal	218	70.44015	4.506658	60.776	79.148
Support for Climate Action					
Estimated percentage who somewhat/strongly support setting strict limits on existing coal-fire power plants	218	70.73089	5.035911	58.152	80.893
Estimated percentage who somewhat/strongly support regulating CO2 as a pollutant	218	75.12597	3.01523	65.565	80.191
Estimated percentage who somewhat/strongly support requiring utilities to produce 20% electricity from renewable sources	218	66.94727	3.097799	58.207	73.327
Estimated percentage who somewhat/strongly support funding research into renewable energy sources	218	82.44836	2.187237	76.803	87.365
Flood Sensitivity	218	.4815182	.1298465	.1841519	.778482
Flood Damage (Log)	158	12.98015	3.02747	4.043051	21.418
Flood Exposure	218	.3150496	.2279429	0	.9467379
Flood Adaptive Capacity	218	.581974	.1877756	.0767099	.9854249
Flood Social Readiness	218	.3830727	.2003148	.018305	.9490986
Flood Economic Readiness	218	.4714915	.1816562	.0153456	.9408811
Trump Vote 2016	218	.13201	.1277485	.0086272	.6581846
Total Population (Log)	218	15.68042	1.691636	11.0457	19.64042
Median Income	218	52626.52	15519.17	25764	114098
Pct. Below 12th Grade Education	218	14.41009	6.891168	2.4	45.2

B Appendix B. Full Results and Robustness Checks

B.1 Full Models with all Covariates

Table 4: OLS Regression: Public Beliefs about Climate Change.

	Global Warming Happening	Caused by Human Activities	Scientific Consensus	Trust Climate Scientists
Flood Sensitivity	9.806***	10.850***	21.056***	4.913*
	(2.846)	(2.639)	(4.058)	(2.187)
Flood Damage (Log)	-0.199*	-0.188*	-0.261^{+}	-0.159*
	(0.091)	(0.095)	(0.140)	(0.066)
Flood Exposure	0.714	0.410	0.585	0.046
	(1.183)	(1.154)	(1.546)	(0.972)
Flood Adaptive Capacity	-2.180	-1.989	-2.098	-0.781
	(1.678)	(1.682)	(2.332)	(1.406)
Flood Social Readiness	2.190	2.532	5.884*	2.975*
	(1.698)	(1.698)	(2.392)	(1.383)
Flood Economic Readiness	2.244	2.265	2.187	1.719
	(1.533)	(1.670)	(2.441)	(1.246)
Trump Vote 2016	-6.532*	-6.375^{+}	-3.884	-1.636
	(3.244)	(3.263)	(4.009)	(2.206)
Total Population (Log)	-0.174	-0.128	0.061	0.333
	(0.307)	(0.319)	(0.387)	(0.220)
Median Income	0.000***	0.000***	0.000***	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)
Pct. Below 12th Grade Education	0.130*	0.196***	0.093	0.011
	(0.060)	(0.058)	(0.075)	(0.046)
Constant	61.935***	41.391***	28.413***	62.405***
	(5.552)	(5.640)	(7.389)	(4.139)
Observations	158	158	158	158
R^2	0.353	0.424	0.367	0.256

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5: OLS Regression: Public Risk Perceptions.

	Worried	Personal Harm	Harm US	Harm Developing Countries	Harm Future Generations	Harm US Within 10 Years	Harm Plants and Animals
Flood Sensitivity	14.886***	8.686**	11.918***	13.329***	12.395***	10.433***	13.362***
	(3.351)	(2.994)	(2.781)	(2.905)	(2.529)	(2.992)	(2.757)
Flood Damage (Log)	-0.190+	-0.195*	-0.199*	-0.187*	-0.156+	-0.170+	-0.187+
	(0.109)	(0.096)	(0.091)	(0.095)	(0.087)	(0.094)	(0.100)
Flood Exposure	1.099	2.061+	0.656	1.276	0.507	2.304*	0.512
	(1.351)	(1.128)	(1.085)	(1.112)	(1.059)	(1.161)	(1.125)
Flood Adaptive Capacity	-3.331+	-4.893**	-3.674*	-3.282+	-1.449	-3.775*	-0.791
	(2.003)	(1.601)	(1.579)	(1.693)	(1.602)	(1.694)	(1.711)
Flood Social Readiness	2.171	-1.422	1.663	2.849	2.913+	1.463	3.723*
	(2.105)	(1.687)	(1.673)	(1.735)	(1.526)	(1.763)	(1.617)
Flood Economic Readiness	1.779	0.639	1.099	2.524	1.590	1.186	1.445
	(1.927)	(1.554)	(1.509)	(1.602)	(1.534)	(1.482)	(1.688)
Trump Vote 2016	-7.860*	-7.794**	-6.524*	-5.943+	-3.879	-9.445***	-4.994
	(3.682)	(2.650)	(2.704)	(3.015)	(3.137)	(2.782)	(3.108)
Total Population (Log)	-0.347	-0.444	-0.338	-0.254	-0.117	-0.318	-0.149
	(0.422)	(0.300)	(0.297)	(0.308)	(0.297)	(0.298)	(0.316)
Median Income	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Pct. Below 12th Grade Education	0.253***	0.303***	0.226***	0.210***	0.164**	0.203**	0.168**
	(0.075)	(0.057)	(0.059)	(0.061)	(0.056)	(0.064)	(0.060)
Constant	44.898***	34.508***	48.998***	50.631***	56.844***	44.100***	55.789***
	(7.328)	(5.456)	(5.300)	(5.680)	(5.310)	(5.573)	(5.524)
Observations	158	158	158	158	158	158	158
R^2	0.427	0.531	0.470	0.449	0.394	0.423	0.394

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6: OLS Regression: Public Support for Climate Action.

	(1) CO2 Limits	(2) Regulate CO2	(3) 20% Electricity from Renewables	(4) Fund Renewables
Flood Sensitivity	13.783***	9.519***	8.480***	5.735***
	(3.196)	(2.290)	(2.060)	(1.685)
Flood Damage (Log)	-0.152	-0.105	-0.104	-0.054
	(0.106)	(0.069)	(0.067)	(0.054)
Flood Exposure	-0.127	0.215	0.911	-0.386
	(1.404)	(0.915)	(0.843)	(0.590)
Flood Adaptive Capacity	-2.252	0.820	-0.845	1.046
	(2.072)	(1.339)	(1.313)	(0.911)
Flood Social Readiness	4.176*	2.997*	3.439**	2.883**
	(1.962)	(1.260)	(1.244)	(0.889)
Flood Economic Readiness	1.337	1.322	1.479	1.595+
	(1.982)	(1.254)	(1.219)	(0.935)
Trump Vote 2016	-3.952	-0.416	-4.003	0.683
	(3.561)	(2.316)	(2.423)	(1.801)
Total Population (Log)	0.093	0.246	0.089	0.247
	(0.380)	(0.233)	(0.219)	(0.163)
Median Income	0.000***	0.000*	0.000***	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Pct. Below 12th Grade Education	0.166*	0.031	0.047	-0.029
	(0.067)	(0.045)	(0.041)	(0.033)
Constant	52.580***	62.110***	56.431***	72.747***
	(6.812)	(4.341)	(4.167)	(3.036)
Observations	158	158	158	158
R^2	0.356	0.260	0.336	0.281

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B.2 Public Beliefs about Climate Change

Table 7: OLS Regression: Estimated percentage who think that global warming is happening.

	(1)	(2)	(3)	(4)
Flood Sensitivity	2.232	2.515	4.763*	9.806***
	(1.870)	(2.003)	(2.116)	(2.846)
Flood Damage (Log)		-0.343**	-0.285**	-0.199*
		(0.106)	(0.104)	(0.091)
Flood Exposure			-0.117	0.714
			(1.377)	(1.183)
Flood Adaptive Capacity			-4.646**	-2.180
			(1.620)	(1.678)
Flood Social Readiness			3.711*	2.190
			(1.694)	(1.698)
Flood Economic Readiness			2.405	2.244
			(1.692)	(1.533)
Trump Vote 2016				-6.532*
				(3.244)
Total Population (Log)				-0.174
				(0.307)
Median Income				0.000***
				(0.000)
Pct. Below 12th Grade Education				0.130*
				(0.060)
Constant	70.399***	73.986***	72.309***	61.935***
	(0.916)	(1.679)	(2.107)	(5.552)
Observations	218	158	158	158
R^2	0.004	0.074	0.137	0.353

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 8: OLS Regression: Estimated percentage who think that global warming is caused mostly by human activities.

	(1)	(2)	(3)	(4)
Flood Sensitivity	3.453^{+}	3.461^{+}	5.950**	10.850***
	(1.916)	(2.052)	(2.149)	(2.639)
Flood Damage (Log)		-0.352**	-0.288*	-0.188*
		(0.109)	(0.112)	(0.095)
Flood Exposure			-0.556	0.410
			(1.399)	(1.154)
Flood Adaptive Capacity			-5.321**	-1.989
			(1.711)	(1.682)
Flood Social Readiness			3.908*	2.532
			(1.778)	(1.698)
Flood Economic Readiness			2.249	2.265
			(1.965)	(1.670)
Trump Vote 2016				-6.375^{+}
				(3.263)
Total Population (Log)				-0.128
				(0.319)
Median Income				0.000***
				(0.000)
Pct. Below 12th Grade Education				0.196***
				(0.058)
Constant	52.970***	56.713***	55.397***	41.391***
	(0.942)	(1.687)	(2.284)	(5.640)
Observations	218	158	158	158
R^2	0.010	0.078	0.147	0.424

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 9: OLS Regression: Estimated percentage who believe that most scientists think global warming is happening.

	(1)	(2)	(3)	(4)
Flood Sensitivity	6.660*	7.971*	11.091***	21.056***
	(2.886)	(3.115)	(3.279)	(4.058)
Flood Damage (Log)		-0.496**	-0.401*	-0.261^{+}
		(0.152)	(0.154)	(0.140)
Flood Exposure			-0.444	0.585
			(1.800)	(1.546)
Flood Adaptive Capacity			-4.322*	-2.098
			(2.169)	(2.332)
Flood Social Readiness			8.914***	5.884*
			(2.387)	(2.392)
Flood Economic Readiness			2.505	2.187
			(2.666)	(2.441)
Trump Vote 2016				-3.884
				(4.009)
Total Population (Log)				0.061
				(0.387)
Median Income				0.000***
				(0.000)
Pct. Below 12th Grade Education				0.093
				(0.075)
Constant	47.792***	52.492***	47.798***	28.413***
	(1.430)	(2.506)	(3.135)	(7.389)
Observations	218	158	158	158
R^2	0.018	0.100	0.186	0.367

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 10: OLS Regression: Estimated percentage who somewhat or strongly trust climate scientists as a source of information about global warming.

	(1)	(2)	(3)	(4)
Flood Sensitivity	1.040	0.919	2.337	4.913*
	(1.284)	(1.548)	(1.618)	(2.187)
Flood Damage (Log)		-0.243***	-0.205**	-0.159*
		(0.072)	(0.068)	(0.066)
Flood Exposure			-0.198	0.046
			(1.028)	(0.972)
Flood Adaptive Capacity			-1.946	-0.781
			(1.218)	(1.406)
Flood Social Readiness			4.128**	2.975*
			(1.323)	(1.383)
Flood Economic Readiness			1.922	1.719
			(1.289)	(1.246)
Trump Vote 2016				-1.636
				(2.206)
Total Population (Log)				0.333
				(0.220)
Median Income				0.000*
				(0.000)
Pct. Below 12th Grade Education				0.011
				(0.046)
Constant	71.747***	74.694***	72.186***	62.405***
	(0.655)	(1.201)	(1.584)	(4.139)
Observations	218	158	158	158
R^2	0.002	0.060	0.137	0.256

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B.3 Public Risk Perceptions about Climate Change

Table 11: OLS Regression: Estimated percentage who are somewhat/very worried about global warming.

	(1)	(2)	(3)	(4)
Flood Sensitivity	5.509*	4.917+	8.073**	14.886***
	(2.596)	(2.680)	(2.855)	(3.351)
Flood Damage (Log)		-0.405**	-0.318*	-0.190+
		(0.128)	(0.132)	(0.109)
Flood Exposure			-0.182	1.099
			(1.675)	(1.351)
Flood Adaptive Capacity			-7.222**	-3.331+
			(2.179)	(2.003)
Flood Social Readiness			3.890+	2.171
			(2.310)	(2.105)
Flood Economic Readiness			1.723	1.779
			(2.324)	(1.927)
Trump Vote 2016				-7.860*
				(3.682)
Total Population (Log)				-0.347
				(0.422)
Median Income				0.000***
				(0.000)
Pct. Below 12th Grade Education				0.253***
				(0.075)
Constant	56.846***	61.275***	60.591***	44.898***
	(1.226)	(2.066)	(2.859)	(7.328)
Observations	218	158	158	158
R^2	0.016	0.076	0.142	0.427

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 12: OLS Regression: Estimated percentage who think global warming will harm them personally a moderate amount/a great deal.

	(1)	(2)	(3)	(4)
Flood Sensitivity	2.988	1.571	4.562^{+}	8.686^{**}
	(2.342)	(2.357)	(2.391)	(2.994)
Flood Damage (Log)		-0.383^{**}	-0.300^{*}	-0.195^{*}
		(0.116)	(0.115)	(0.096)
Flood Exposure			0.859	2.061^{+}
			(1.431)	(1.128)
Flood Adaptive Capacity			-9.094^{***}	-4.893^{**}
			(1.975)	(1.601)
Flood Social Readiness			-0.674	-1.422
			(2.032)	(1.687)
Flood Economic Readiness			0.343	0.639
			(2.040)	(1.554)
Trump Vote 2016				-7.794^{**}
				(2.650)
Total Population (Log)				-0.444
				(0.300)
Median Income				0.000^{***}
				(0.000)
Pct. Below 12th Grade Education				0.303^{***}
				(0.057)
Constant	39.913^{***}	44.501^{***}	47.126^{***}	34.508^{***}
	(1.096)	(1.803)	(2.563)	(5.456)
Observations	218	158	158	158
R^2	0.006	0.071	0.212	0.531

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 13: OLS Regression: Estimated percentage who think global warming will harm people in the US a moderate amount/a great deal.

	(1)	(2)	(3)	(4)
Flood Sensitivity	4.111^{+}	3.532	6.426^{**}	11.918^{***}
	(2.144)	(2.139)	(2.276)	(2.781)
Flood Damage (Log)		-0.385^{***}	-0.305^{**}	-0.199^{*}
		(0.107)	(0.108)	(0.091)
Flood Exposure			-0.433	0.656
			(1.356)	(1.085)
Flood Adaptive Capacity			-6.994^{***}	-3.674^{*}
			(1.758)	(1.579)
Flood Social Readiness			2.963	1.663
			(1.881)	(1.673)
Flood Economic Readiness			0.997	1.099
			(1.876)	(1.509)
Trump Vote 2016				-6.524^{*}
				(2.704)
Total Population (Log)				-0.338
				(0.297)
Median Income				0.000^{***}
				(0.000)
Pct. Below 12th Grade Education				0.226^{***}
				(0.059)
Constant	57.194^{***}	61.498^{***}	61.701^{***}	48.998^{***}
	(1.031)	(1.702)	(2.280)	(5.300)
Observations	218	158	158	158
R^2	0.012	0.091	0.175	0.470

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 14: OLS Regression: Estimated percentage who think global warming will harm people in developing countries a moderate amount/a great deal.

	(1)	(2)	(3)	(4)
Flood Sensitivity	4.477*	4.546*	7.552**	13.329***
	(2.120)	(2.172)	(2.269)	(2.905)
Flood Damage (Log)		-0.378***	-0.296**	-0.187*
		(0.109)	(0.111)	(0.095)
Flood Exposure			0.220	1.276
			(1.375)	(1.112)
Flood Adaptive Capacity			-6.494***	-3.282^{+}
			(1.747)	(1.693)
Flood Social Readiness			4.298*	2.849
			(1.859)	(1.735)
Flood Economic Readiness			2.455	2.524
			(1.921)	(1.602)
Trump Vote 2016				-5.943^{+}
				(3.015)
Total Population (Log)				-0.254
				(0.308)
Median Income				0.000***
				(0.000)
Pct. Below 12th Grade Education				0.210***
				(0.061)
Constant	62.137***	66.025***	64.391***	50.631***
	(1.021)	(1.702)	(2.339)	(5.680)
Observations	218	158	158	158
R^2	0.014	0.091	0.178	0.449

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 15: OLS Regression: Estimated percentage who think global warming will harm future generations a moderate amount/a great deal.

	(1)	(2)	(3)	(4)
Flood Sensitivity	4.394*	4.822**	6.974***	12.395***
	(1.795)	(1.837)	(2.024)	(2.529)
Flood Damage (Log)		-0.314**	-0.253*	-0.156^{+}
		(0.094)	(0.100)	(0.087)
Flood Exposure			-0.362	0.507
			(1.257)	(1.059)
Flood Adaptive Capacity			-4.024*	-1.449
			(1.593)	(1.602)
Flood Social Readiness			4.324**	2.913^{+}
			(1.624)	(1.526)
Flood Economic Readiness			1.539	1.590
			(1.739)	(1.534)
Trump Vote 2016				-3.879
				(3.137)
Total Population (Log)				-0.117
				(0.297)
Median Income				0.000***
				(0.000)
Pct. Below 12th Grade Education				0.164**
				(0.056)
Constant	68.882***	71.939***	70.185***	56.844***
	(0.889)	(1.529)	(2.116)	(5.310)
Observations	218	158	158	158
R^2	0.018	0.089	0.151	0.394

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 16: OLS Regression: Estimated percentage who think global warming will start to harm people in the United States now/within 10 years.

	(1)	(2)	(3)	(4)
Flood Sensitivity	3.902^{+}	3.894^{+}	6.895**	10.433***
	(2.060)	(2.184)	(2.294)	(2.992)
Flood Damage (Log)		-0.343**	-0.252*	-0.170^{+}
		(0.118)	(0.114)	(0.094)
Flood Exposure			1.337	2.304*
			(1.398)	(1.161)
Flood Adaptive Capacity			-7.261***	-3.775*
			(1.788)	(1.694)
Flood Social Readiness			2.489	1.463
			(1.936)	(1.763)
Flood Economic Readiness			1.242	1.186
			(1.766)	(1.482)
Trump Vote 2016				-9.445***
				(2.782)
Total Population (Log)				-0.318
				(0.298)
Median Income				0.000***
				(0.000)
Pct. Below 12th Grade Education				0.203**
				(0.064)
Constant	50.154***	53.802***	53.431***	44.100***
	(1.000)	(1.852)	(2.403)	(5.573)
Observations	218	158	158	158
R^2	0.011	0.075	0.166	0.423

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 17: OLS Regression: Estimated percentage who think global warming will harm plants and animal species a moderate amount/a great deal.

	(1)	(2)	(3)	(4)
Flood Sensitivity	5.146**	5.571**	7.732***	13.362***
	(1.963)	(2.054)	(2.267)	(2.757)
Flood Damage (Log)		-0.352**	-0.288*	-0.187+
		(0.106)	(0.112)	(0.100)
Flood Exposure			-0.410	0.512
			(1.352)	(1.125)
Flood Adaptive Capacity			-3.536*	-0.791
			(1.712)	(1.711)
Flood Social Readiness			5.242**	3.723*
			(1.679)	(1.617)
Flood Economic Readiness			1.448	1.445
			(1.897)	(1.688)
Trump Vote 2016				-4.994
				(3.108)
Total Population (Log)				-0.149
				(0.316)
Median Income				0.000***
				(0.000)
Pct. Below 12th Grade Education				0.168**
				(0.060)
Constant	67.962***	71.474***	69.097***	55.789***
	(0.975)	(1.749)	(2.280)	(5.524)
Observations	218	158	158	158
R^2	0.022	0.097	0.160	0.394

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B.4 Public Support for Climate Action

Table 18: OLS Regression: Estimated percentage who somewhat/strongly support setting strict limits on existing coal-fire power plants.

	(1)	(2)	(3)	(4)
Flood Sensitivity	5.889**	5.210*	8.053**	13.783***
	(2.225)	(2.477)	(2.559)	(3.196)
Flood Damage (Log)		-0.343**	-0.261*	-0.152
		(0.117)	(0.121)	(0.106)
Flood Exposure			-1.019	-0.127
			(1.607)	(1.404)
Flood Adaptive Capacity			-5.303**	-2.252
			(1.948)	(2.072)
Flood Social Readiness			5.873**	4.176*
			(1.947)	(1.962)
Flood Economic Readiness			1.330	1.337
			(2.187)	(1.982)
Trump Vote 2016				-3.952
				(3.561)
Total Population (Log)				0.093
				(0.380)
Median Income				0.000***
				(0.000)
Pct. Below 12th Grade Education				0.166*
				(0.067)
Constant	67.895***	71.869***	69.999***	52.580***
	(1.105)	(2.034)	(2.621)	(6.812)
Observations	218	158	158	158
R^2	0.023	0.071	0.144	0.356

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 19: OLS Regression: Estimated percentage who somewhat/strongly support regulating CO2 as a pollutant.

	(1)	(2)	(3)	(4)
Flood Sensitivity	5.616***	6.041***	6.859***	9.519***
	(1.307)	(1.590)	(1.699)	(2.290)
Flood Damage (Log)		-0.178*	-0.153*	-0.105
		(0.074)	(0.072)	(0.069)
Flood Exposure			-0.053	0.215
			(0.964)	(0.915)
Flood Adaptive Capacity			-0.221	0.820
			(1.172)	(1.339)
Flood Social Readiness			3.958**	2.997*
			(1.207)	(1.260)
Flood Economic Readiness			1.394	1.322
			(1.256)	(1.254)
Trump Vote 2016				-0.416
				(2.316)
Total Population (Log)				0.246
				(0.233)
Median Income				0.000*
				(0.000)
Pct. Below 12th Grade Education				0.031
				(0.045)
Constant	72.422***	74.233***	71.446***	62.110***
	(0.666)	(1.261)	(1.554)	(4.341)
Observations	218	158	158	158
R^2	0.058	0.102	0.171	0.260

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 20: OLS Regression: Estimated percentage who somewhat/strongly support requiring utilities to produce 20% electricity from renewable sources.

	(1)	(2)	(3)	(4)
Flood Sensitivity	2.961*	3.651*	5.349***	8.480***
	(1.209)	(1.407)	(1.451)	(2.060)
Flood Damage (Log)		-0.210**	-0.157*	-0.104
		(0.076)	(0.072)	(0.067)
Flood Exposure			0.480	0.911
			(0.949)	(0.843)
Flood Adaptive Capacity			-2.357*	-0.845
			(1.149)	(1.313)
Flood Social Readiness			4.632***	3.439**
			(1.229)	(1.244)
Flood Economic Readiness			1.696	1.479
			(1.284)	(1.219)
Trump Vote 2016				-4.003
				(2.423)
Total Population (Log)				0.089
				(0.219)
Median Income				0.000***
				(0.000)
Pct. Below 12th Grade Education				0.047
				(0.041)
Constant	65.522***	67.529***	64.628***	56.431***
	(0.623)	(1.182)	(1.524)	(4.167)
Observations	218	158	158	158
R^2	0.015	0.073	0.168	0.336

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 21: OLS Regression: Estimated percentage who somewhat/strongly support funding research into renewable energy sources.

	(1)	(2)	(3)	(4)
Flood Sensitivity	2.147*	2.699*	3.086**	5.735***
	(0.913)	(1.109)	(1.160)	(1.685)
Flood Damage (Log)		-0.095	-0.086	-0.054
		(0.060)	(0.055)	(0.054)
Flood Exposure			-0.488	-0.386
			(0.629)	(0.590)
Flood Adaptive Capacity			0.915	1.046
			(0.792)	(0.911)
Flood Social Readiness			3.882***	2.883**
			(0.829)	(0.889)
Flood Economic Readiness			1.763+	1.595+
			(0.907)	(0.935)
Trump Vote 2016				0.683
				(1.801)
Total Population (Log)				0.247
				(0.163)
Median Income				0.000
				(0.000)
Pct. Below 12th Grade Education				-0.029
				(0.033)
Constant	81.414***	82.294***	79.257***	72.747***
	(0.472)	(0.947)	(0.987)	(3.036)
Observations	218	158	158	158
R^2	0.016	0.045	0.209	0.281

Standard errors in parentheses

$^{+}$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$