

# Democratic Processes and Natural Disasters: How the United States is Representing Those Most Affected By and Most Concerned About Climate Change

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## Introduction

**Research Hypothesis:** In the United States, the incidents of the top most common climate-change effected natural disasters (severe storms, tornadoes, floods, and winter storms) have been increasing and the democracy process has been failing to address it. Earthquakes have been excluded as a natural disaster because they are not necessarily a natural disaster associated with human intervention in the climate (i.e. climate change), and wildfires have been excluded because they are often man-made.

## Methodology

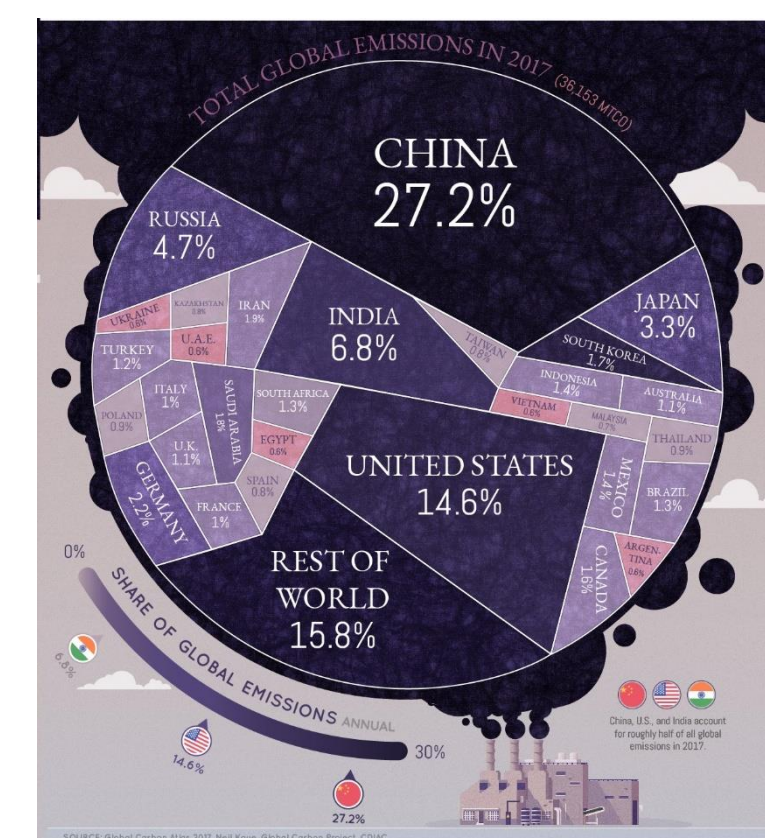
The data is looking at nation-wide incidents and severity (by damage) of natural disasters of a full year over two different time periods. The two years used are 2000 and 2019, which represent "normal" years spaced largely apart. There is also a presentation of storm types in 2019, showing what types of maps take precedence. To compare, there is a fourth map with 2020 data representing American state population's belief in climate change (by county). A fifth map shows which state's House representatives support the vote to remain in the Paris Agreement.

This study is interested in exploring if House Representatives accurately represent their constituency's concerns about climate change, and in states that are most impacted by natural disasters, if representatives are directly opposing the mitigation of climate change (proxied by the votes on the CANA act). This provides an interesting discussion of climate change and environmental justice, as well as of democracy and governance in the United States, determining whether the United States' government is truly representative of environmental concerns and are actively contributing to the lack of mitigation for increasing natural disasters.

## Discussion of Climate Change in the United States of America

### CLIMATE CHANGE AND THE PARIS AGREEMENT

Scientists say that we have mere years until the world is irreparably damaged due to climate change, where climate change can no longer be mitigated, making Earth unsuitable for human life. Natural disasters due to climate change in the United States have been increasing, with 10 times more billion-dollar natural disasters in 2019 than in 1988.\* Experts agree that the most impactful way to slow climate change is for swift, globally-sweeping action that holds all governments and peoples accountable.\* The Paris Agreement was an attempt at such action, which the United States signed under the Obama Administration in September 2016. The Paris Agreement, while having many clauses, is an international treaty where each country to ratify it has agreed to limit their emissions. Almost every country in the world, including the United States who produces almost 15% of the world's carbon emissions (as of 2017) signed it.\* However, not all American politicians see climate change as a problem or even acknowledge its existence.



### THE TRUMP ADMINISTRATION AND CLIMATE CHANGE

When President Trump came into office in 2017, and throughout the following four years, many of the climate change protections set by previous-era presidents were dismantled, with the slashing of the budget for the Environmental Protection Agency, the promotion of the fossil fuel industry, and others.\* However, anti-climate change believers were not the only voices in 2017-2021 politics. Representatives like Alexandria Ocasio-Cortez and Ed Markey brought about a new wave of climate change activism with the proposal of the Green New Deal. The Green New Deal gathered huge swaths of support from the American people, especially among the younger generations.\* However, the Green New Deal was rejected for Congressional Approval in the House of Representatives, with 57 representatives voting against it, 43 abstaining, and zero voting in favor of it.\*

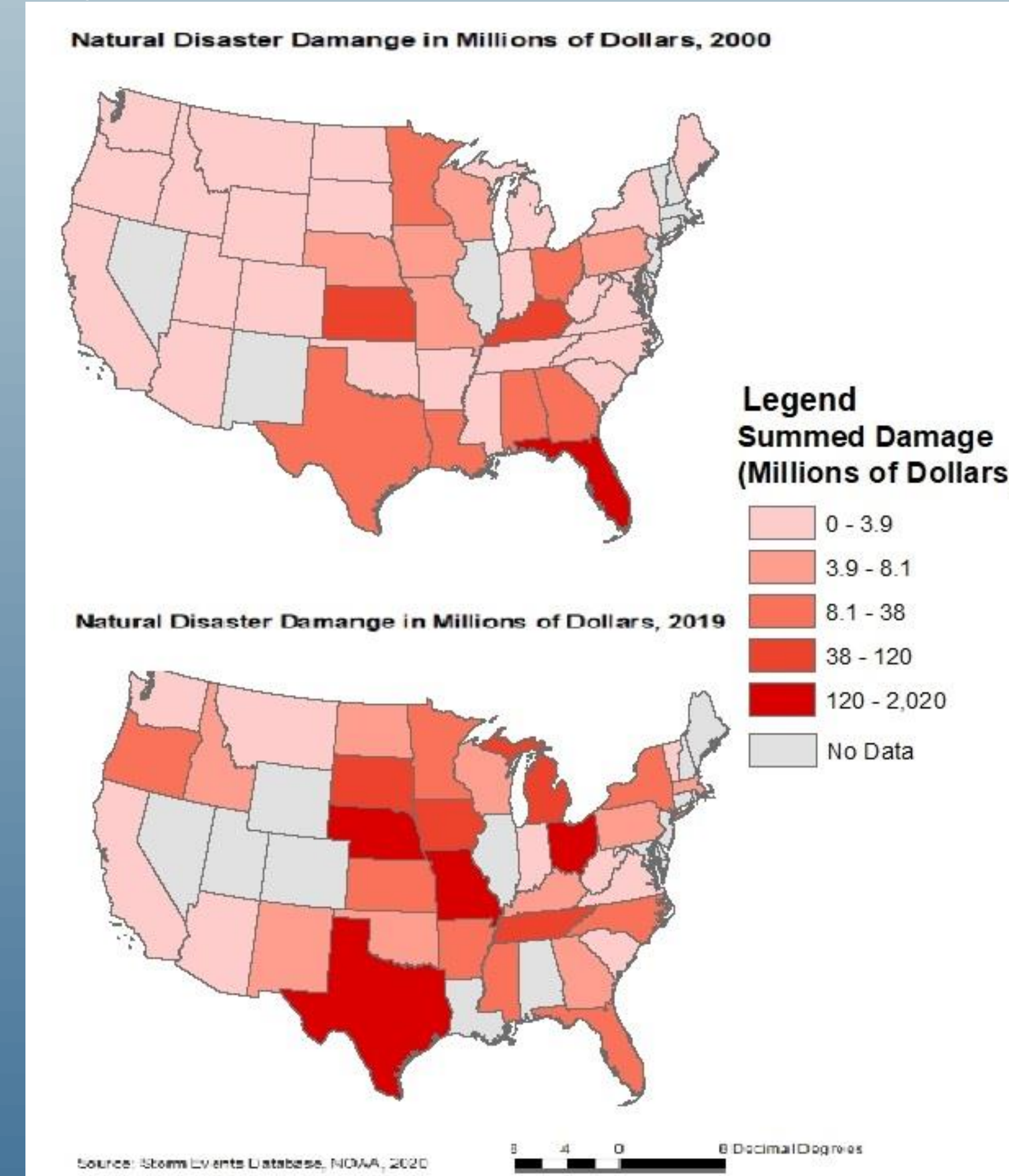
### CLIMATE ACTION NOW ACT (CANA)

Less than a year after the signing of the Paris Agreement, President Trump announced his intentions to pull United States support, but due to Agreement details, the United States could not officially withdraw until November of 2020 at the earliest. The Climate Action Now Act, or CANA, proposed in April 2019 by the United States House of Representatives Democrat Party, was a legislation that would force the hand of the United States by preventing the government from using any federal money to withdraw from the deal, essentially requiring the United States to remain. Those who were in favor of the United States leaving the Paris Agreement argued that it is costly and restrictive to any action that the United States could have taken on its own, but these representatives were outvoted. The CANA vote passed the House of Representatives with a 231-190 vote and has been tabled in the Senate since May 7th, 2019.

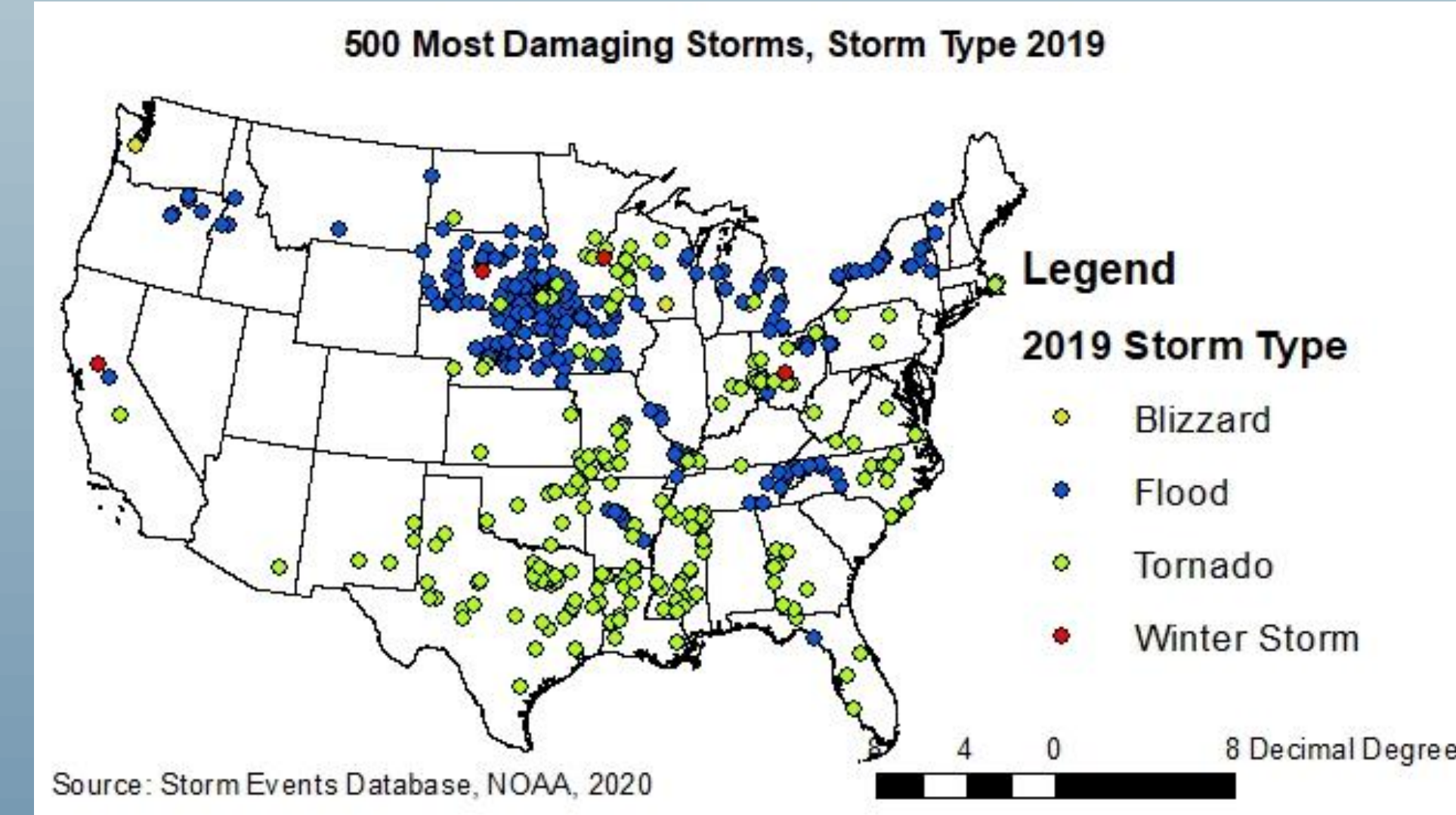
### PUBLIC OPINION ON CLIMATE CHANGE ACTION

According to the Pew Research Center, almost 2/3 of the American public believe that the United States government is not doing enough to combat global climate change. But who are these people; and are they the ones being most effected by natural disasters?

Map 1 and 2



Map 3



feel that Congress should take direct action to combat climate change. Interestingly, no county in the United States has less than 35% or more than 78% of their population who believe Congress should be taking some direct action. The minimum threshold of 35% is over a third of the population, which speaks to the growing concern around this issue, as exemplified by the 2020 election polls, where more than 42% of voters said that climate action was their primary voting issue.\* The United States House of Representatives, however, do not seem to represent American citizens' concern with climate change, with the vast majority of states voting to leave the Paris Agreement, as measured by a sum of House voted for each state. Only a select few states voted to remain, with states like California, New Mexico, and New York voting almost unanimously to remain. A report about Americans who were polled about the United States leaving the Paris Agreement revealed that 60% of them oppose leaving the Paris Agreement and 64% disapprove of how the current administration has handled climate change.\*

### UNDERSTANDING THE RESEARCH QUESTION

The first part of the research question was whether natural disasters have been increasing (in damage) within the United States, which can be addressed by Maps 1, 2, and 3. The second half of the research question, which addressed governmental representation of those most concerned and impacted, can be addressed primarily with Map 5, when compared with Maps 1, 2, and 4.

## Results

### COMPARISON OF NATURAL DISASTERS:

The natural disasters chosen for this discussion were those that could be directly attributed to rising global temperatures due to climate change, and not directly manmade or seismic, therefore disasters such as earthquakes and wildfires have been excluded. When comparing the damage caused by natural disasters in 2000 versus 2019, the severity of natural disasters is clearly increasing. These two years were chosen specifically because they do not have any substantial storms and are spaced far enough apart that an increase is measurable. Map 1 and 2 show the 500 most damaging storms of each year. Map 3, the map of the 500 most damaging storms by storm type in 2019 is demonstrative of the types of storms causing the most damage. Interestingly, those causing the most intense damage are tornadoes and floods, which are both directly caused by an increase in global temperature.\* Climate change directly plays a role with these increasing disasters within the United States.

### GOVERNMENTAL REPRESENTATION

Those most concerned with Congressional action against climate change most often reside in the coasts, with states like California and New York having the highest percentage of their population who

## Conclusion and Policy Recommendations

The clear solution for alignment of American interests with government action is to have the United States rejoin the Paris Agreement, which President Trump officially pulled support for on November 4th, 2020.\* 68% Americans recognized that the current administration has not been representing their interests effectively, specifically regarding climate change action, and now, as of November 7th, 2020, have elected new representation who has promised to enact greater climate change mitigation plans, including rejoining the Paris Agreement.\* The 2020 American election cycle had climate change as one of the primary issues, with representatives such as Alexandria Ocasio-Cortez up for reelection, and where many candidates clearly laid out their policy plans (or lack thereof). A record number of climate change activists were elected, with President-elect Biden laying out a 17 trillion-dollar climate change intervention plan.\* Now would be the ideal time to push through a policy such as the Green New Deal, which has failed before under the Trump Administration. Americans are increasingly aware of climate change issues and how it affects them personally, and more Americans than ever are taking personal actions to combat global warming, with 60% having taken actionable steps to reduce their own carbon footprint, and 72% saying they are very motivated to do so.\* But Americans see beyond themselves and recognize that the biggest contributors to climate change are not individuals, but are systematic or corporate contributors. Americans need a strong science-informed action plan to combat climate change before it is too late.

## Limitations

Some limitations in this data are: the project does not expand the search beyond two time frames and therefore cannot show true trends in increased natural disasters, there is not data on what specific types of disasters happened in 2000, and CANA votes are used as a proxy for action for climate change, which may or may not be accurate, as House representatives may have taken other action. However, the Paris Agreement is considered the most progressive action of today and can be interpreted as an accurate proxy.

## Sources

Bethune, Sophie. "Majority of US Adults Believe Climate Change Is Most Important Issue Today." American Psychological Association. American Psychological Association, 2020. <https://www.apa.org/news/press/releases/2020/02/climate-change>.

Castor, Kathy. "Actions - H.R.9 - 116th Congress (2019-2020): Climate Action Now Act." Congress.gov, May 7, 2019. <https://www.congress.gov/bills/116th-congress/house-bill/9/all-actions?q=%7B%22search%22%3A%5B%22S-4692%22%5D%7D>.

Disaster Declarations for States and Counties. FEMA, 2020. <https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties>.

Friedman, Lisa. "U.S. Quits Paris Climate Agreement: Questions and Answers." The New York Times. The New York Times, November 4, 2020. <https://www.nytimes.com/2020/11/04/climate/paris-climate-agreement-trump.html>.

Funk, Cary, and Meg Hefferon. "U.S. Public Views on Climate and Energy." Pew Research Center Science & Society. Pew Research Center, October 2, 2020. <https://www.pewresearch.org/science/2019/11/25/u-s-public-views-on-climate-and-energy/>.

Ghosh, Iman. "All the World's Carbon Emissions in One Chart." Visual Capitalist, November 22, 2019. <https://www.visualcapitalist.com/all-the-worlds-carbon-emissions-in-one-chart/>.

GovTrack. "H.R. 9: Climate Action Now Act." GovTrack.us, May 14, 2019. <https://www.govtrack.us/congress/bills/116/hr9/summary>.

Marlon, Jennifer, Peter Howe, Matto Mildenberger, Anthony Leiserowitz, and Xinran Wang. "Yale Climate Opinion Maps 2020." Yale Program on Climate Change Communication, September 2, 2020. <https://climatecommunication.yale.edu/visualizations-data/ycom-us/>.

National Geographic Society. "Natural Disasters and Climate Change." National Geographic Society, July 8, 2020. <https://www.nationalgeographic.org/activity/natural-disasters-and-climate-change/>.

NOAA. "Storm Events Database." National Centers for Environmental Information. Accessed November 19, 2020. <https://www.ncdc.noaa.gov/stormevents/ftp.jsp>.

Regan, Helen, Ivana Kottsová, and Drew Kann. "The US Election is a Vote on Climate Change for the Whole World." CNN. Cable News Network, November 2, 2020. <https://www.cnn.com/2020/11/01/world/us-election-climate-crisis-intl-dst-hnk/index.html>.

ShareAction. "Point of No Returns (Part III) - Climate Change." ShareAction, August 7, 2020. <https://shareaction.org/research-resources/point-of-no-returns/point-of-no-returns-part-iii-climate-change/?id=10973168769>.

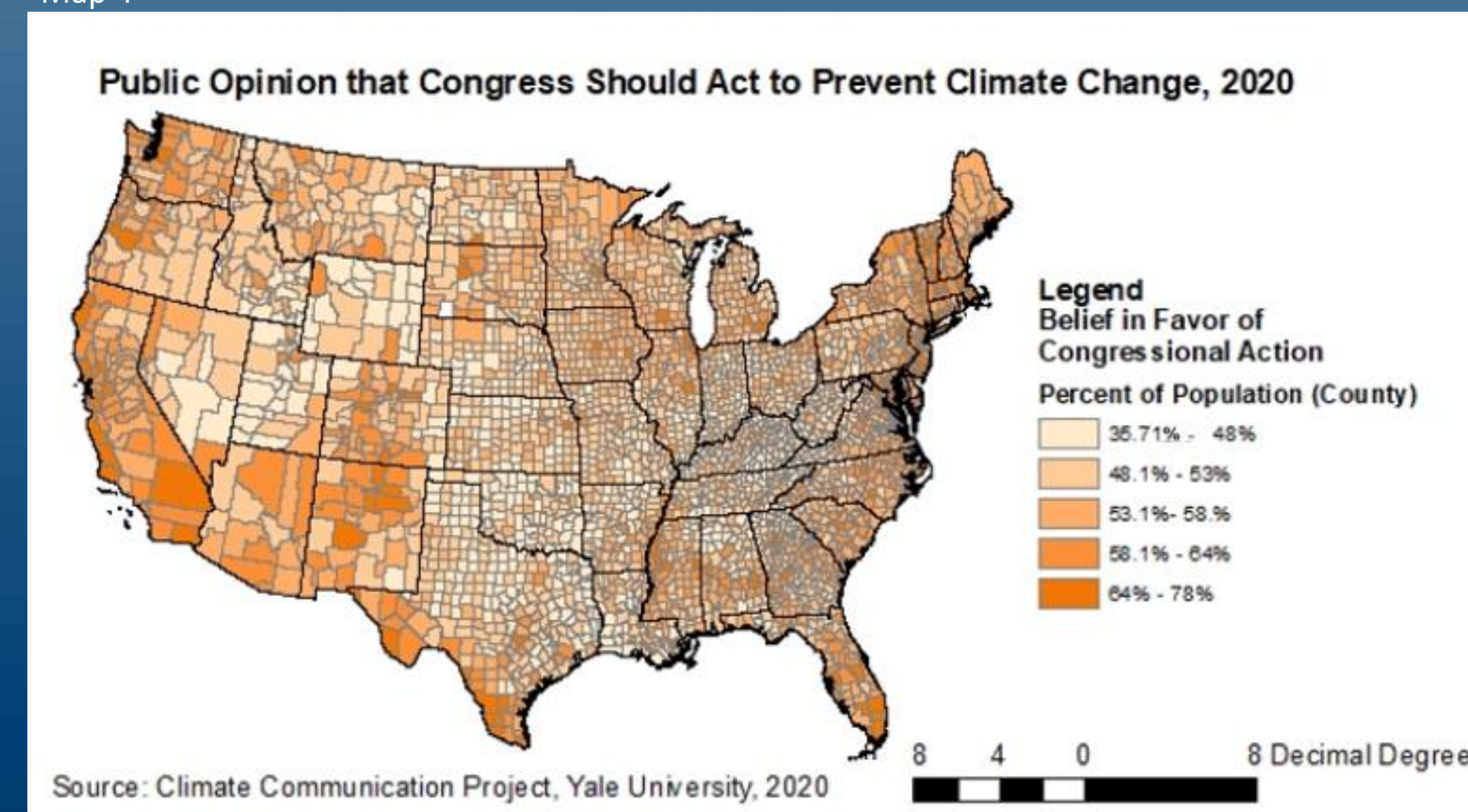
Tyson, Alec. "How Important Is Climate Change to Voters in the 2020 Election?" Pew Research Center. Pew Research Center, October 21, 2020. <https://www.pewresearch.org/fact-tank/2020/10/06/how-important-is-climate-change-to-voters-in-the-2020-election/>.

United States of America Government Open Data Source. Data.gov, September 14, 2020. <http://www.data.gov/>.

United States of America House of Representatives. "Americans to Trump: Pulling Out of Paris Agreement is Bad for Business." The Office of Majority Leader Steny Hoyer, June 20, 2017. <https://www.majorityleader.gov/content/americans-trump-pulling-out-paris-agreement-bad-business>.

United States of America Senate. "Roll Call Votes 116th Congress - 1st Session (2019)." U.S. Senate: Roll Call Votes 116th Congress - 1st Session (2019), December 19, 2019. [https://www.senate.gov/legislative/LIS/roll\\_call\\_lists/vote\\_menu\\_116\\_1.htm](https://www.senate.gov/legislative/LIS/roll_call_lists/vote_menu_116_1.htm).

Map 4



Map 5

