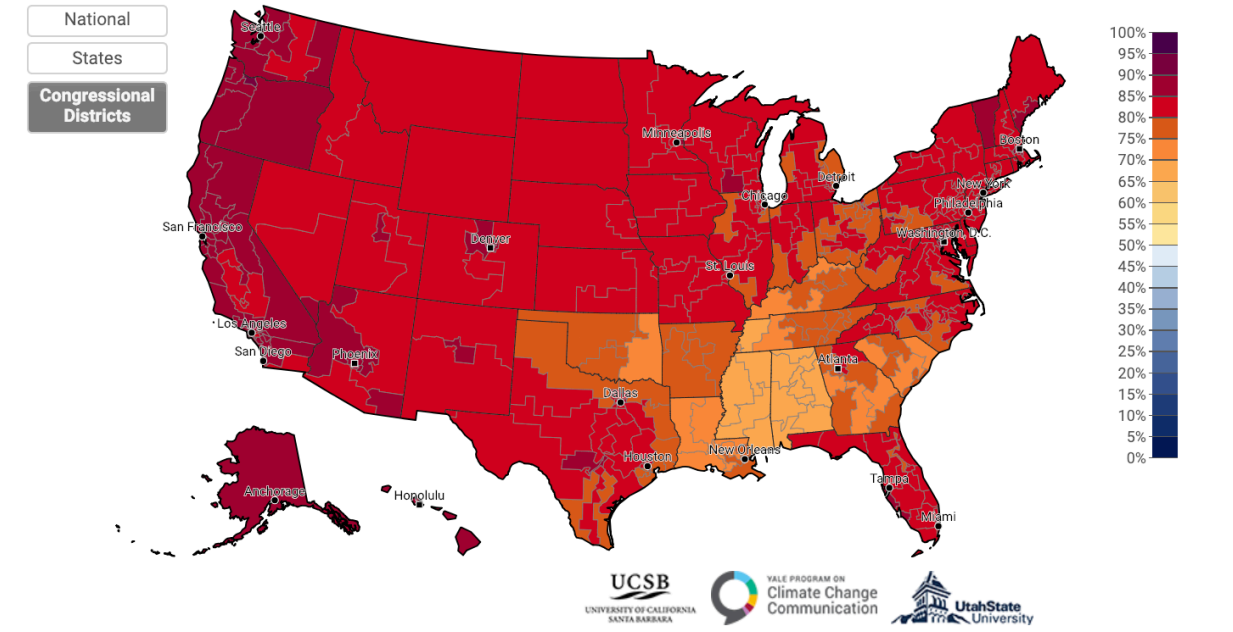
Factsheet – AAAS 2019

Political and Policy Feedbacks

Climate Change: Understanding Feedback from Nature, Culture and Society
Saturday, February 16, 2019; 3:30 PM - 5:00 PM; Marriott Wardman Park, Delaware Suite



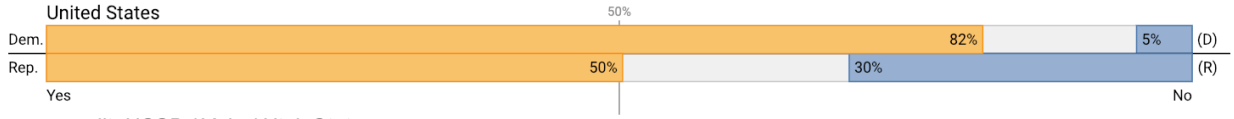


Image credit: UCSB / Yale / Utah State

Matto Mildenberger, University of California Santa Barbara explains how perceived experiences with climate change in the United States can be linked to political shifts in Congress, culture and society. He will demonstrate how partisan opinions about the prevalence and dangers of climate change in each of the 50 states and 435 congressional districts in the United States can change policymaking by Congress.

Announcing the 2018 Partisan Climate Opinion Maps

We are pleased to announce our new estimates of Democrats and Republicans who hold particular beliefs, attitudes, and policy preferences about global warming. These estimates cover both states and US congressional districts. The visualize the distribution of climate and energy beliefs among US Democrats and US Republicans.

This new data release will be made available shortly at:
http://climatecommunication.yale.edu/visualizations-data/

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About the Partisan Climate Opinion Maps

Even as US partisan polarization shapes climate and energy beliefs and attitudes, substantial heterogeneity in climate opinions still exists among both Republicans and Democrats. To date, our understanding of this partisan variability has been limited to analysis of national or less commonly, state-level opinion poll subsamples. The Partisan Climate Opinion Maps provide new data about how Republican and Democratic climate and energy opinions vary across all 50 states and all 435 congressional districts. They reveal new spatial patterns with policy-relevant implications for the trajectory of US climate change policy reforms. These maps have now been updated through to 2018, and give new information about the state of partisan climate and energy beliefs in the current political context.

The public opinion estimates were generated using a statistical model that combines nationally representative survey data gathered by the Yale Program on Climate Change Communication and the George Mason Center for Climate Change Communication between 2008 and 2016 with voter registration, U.S. census, and geographic data. Party registration data is available for 32 states, and is imputed in the remaining states (i.e., in Alabama, Georgia, Illinois, Indiana, Michigan, Minnesota, Mississippi, Missouri, Montana, North Dakota, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington, and Wisconsin).

Details about the methods can be found here:
Mildenberger, M., Marlon, J.R., Howe, P.D., & Leiserowitz, A. (2017) "The spatial distribution of Republican and Democratic climate opinions at state and local scales," Climatic Change. https://doi.org/10.1007/s10584-017-2103-0.

Additional information can be found in Howe, P., Mildenberger, M., Marlon, J.R., and Leiserowitz, A., "Geographic variation in opinions on climate change at state and local scales in the USA," Nature Climate Change. DOI: 10.1038/nclimate2583.

Frequently Asked Questions

What do these maps depict?
The maps depict estimates of the percentage of registered Democrats and Republicans who hold particular beliefs, attitudes, and policy preferences about global warming. The estimates were generated from a statistical model that incorporates actual survey responses from a large dataset of >12,000 individuals since 2008. The actual survey responses were combined with party registration data, geographic data, and demographic data from the Census to estimate opinions based on information such as gender, race and ethnicity, and educational attainment; they also take into account changes in public opinion over time.

Where do the survey data underlying the estimates come from? The data underlying the maps come from a large national survey dataset (>15,000 respondents) collected between 2008 through 2018 as part of the Climate Change in the American Mind project led by the Yale Program on Climate Change Communication and the George Mason Center for Climate Change Communication. Reports from the individual surveys are available here: CCAM Reports.

How accurate are the estimates?
No model is perfect and there are uncertainties in the model estimates. To validate the original model, we conducted independent surveys in four states (CA, TX, OH, CO) and two metropolitan areas (Co-

lumbus, OH and San Francisco, CA) and compared the survey results to our model estimates. On average, the model estimates differed from the survey results by 2.9 percentage points among the four states and 3.6 percentage points among the two metropolitan areas, within the survey margins of error. A series of technical simulations estimate that the model has an average margin of error of ±7 percentage points at the state level, which includes the error inherent in the original national surveys themselves, which is typically ±3 percentage points. For this paper, we validated the model against the Cooperative Congressional Election Study data. The model estimates also tend to be conservative, so geographic areas with extremely high or low measures are not estimated as well as areas with values closer to the national average for each survey question.

What does the gray color mean on some of the bars beneath the maps?
The gray area reflects people who refused to answer the question or said "don't know". We do not provide specific values for the gray areas because we did not model this group specifically.

Do the maps account for differences in population density across the country?
No, the maps depict the estimated proportion of people within each geographic area who would answer each question as indicated. We have not adjusted the maps based on population density differences. It is important to keep in mind that some geographic areas may be large, but have few residents (e.g., Wyoming), while other geographic areas may be small, but have many residents (e.g., New Jersey). For reference, Wikipedia has a population density map here. The type of map used in this tool is called a choropleth map, which means the colors on the maps reflect the percentage of the population in a given geographic unit. These kinds of maps are used to represent everything from election results (e.g., the red state / blue state maps common during presidential elections) to census and economic data (e.g., per capita income or unemployment rates).

Can I use the data?
Yes. We encourage you to explore the maps and use the results in your own work. The data are available on our Data Download tab at the top of this page so that you can do your own analyses and create your own visualizations. If you publish an academic paper using these data please acknowledge the source by using the following citation:

Mildenberger, M., Marlon, J.R., Howe, P.D., & Leiserowitz, A. (2017) "The spatial distribution of Republican and Democratic climate opinions at state and local scales," Climatic Change. https://doi.org/10.1007/s10584-017-2103-0.

If you publish a news article, visualization or blog post using these data, please include a link back to the Partisan Climate Opinion Maps website.

More information

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Political and Policy Feedbacks in the Climate System
https://aaas.confex.com/aaas/2019/meetingapp.cgi/Paper/23746

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