



Restoring the Carbon Balance - Session 4: How Sustainable is Our Global Climate Ethos?

June 8th, 2017



Elisabeth Graffy
Professor
Arizona State University



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Security & Sustainability Forum



ARIZONA STATE UNIVERSITY



SECURITY & SUSTAINABILITY FORUM
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*Convening Global Experts to Guide Decision Making*₁

Restoring the Carbon Balance



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Fourth Webinar

How Sustainable is Our Global Climate Ethos

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Solar Water Heating - Is it for You – June 28th
Leadership in Community Resilience – July 13th

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Agenda



Introduction: Elisabeth Graffy

Presentations:

- Janos Pasztor, Carnegie Council
- Alice C. Hill, Hoover Institution
- Katharine Hayhoe, Texas Tech University

Panel Discussion

Audience Q&A: *Use the box in the go to Webinar window*

Panel Summary

(Please Take the Brief Exit Survey)

Moderator



Elisabeth Graffy is Professor of Practice in the School for the Future of Innovation in Society and in the Consortium for Science, Policy and Outcomes) at Arizona State University. She co-directs the Energy and Society program within ASU-LightWorks and co-leads the Environmental Humanities Initiative in the Global Institute of Sustainability (GIOS). She founded and directs the Spirituality and Sustainability Initiative and the Household Independent Power Project, and co founded the Center for Energy and Society



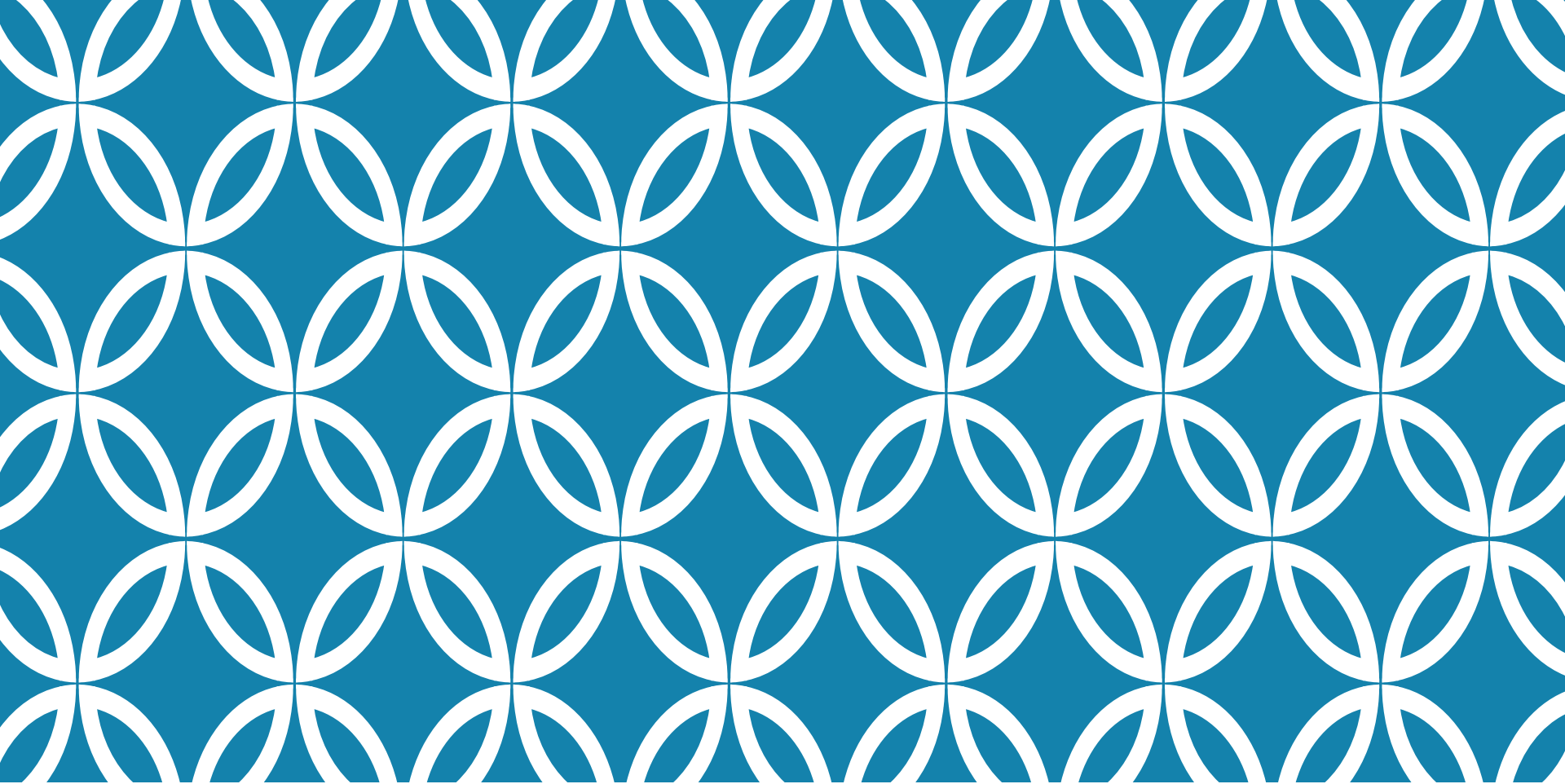
Janos Pasztor is Carnegie Council senior fellow and executive director of the Carnegie Climate Geoengineering Governance Initiative (C2G2). Before taking up his current assignment he was UN assistant secretary-general (SG) for climate change in New York under Secretary-General Ban Ki-moon.



Alice C. Hill is a Research Fellow at the Hoover Institution where her work focuses on building resilience to destabilizing catastrophic events, including the impacts of climate change. Prior to joining Hoover, she served as Special Assistant to the President and Senior Director for Resilience Policy for the National Security Council.




Katharine Hayhoe is a professor in the Department of Political Science and Director of the Climate Science Center at Texas Tech University, part of the Department of Interior's South-Central Climate Science Center and founder and CEO of ATMOS Research.



HOW SUSTAINABLE IS OUR GLOBAL CLIMATE ETHOS?

June 8, 2017

e·thos

/ˈēTHäs/ 

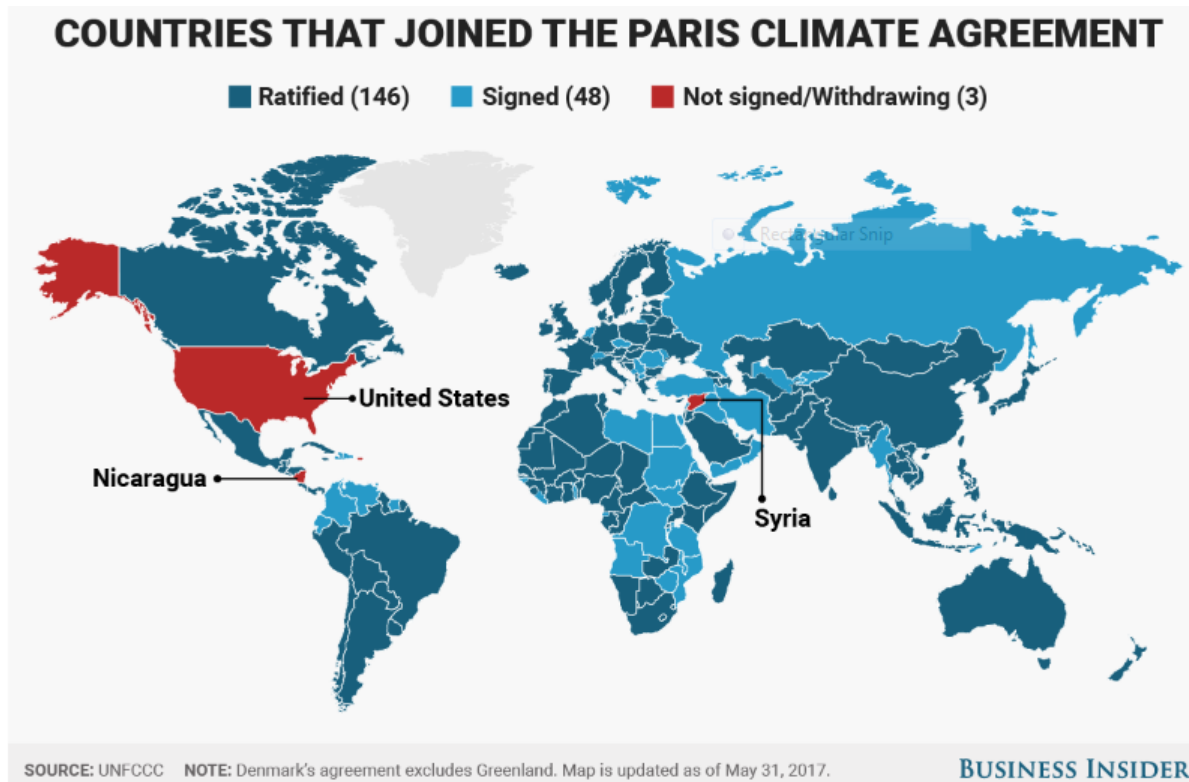
noun

the characteristic spirit of a culture, era, or community as manifested in its beliefs and aspirations.

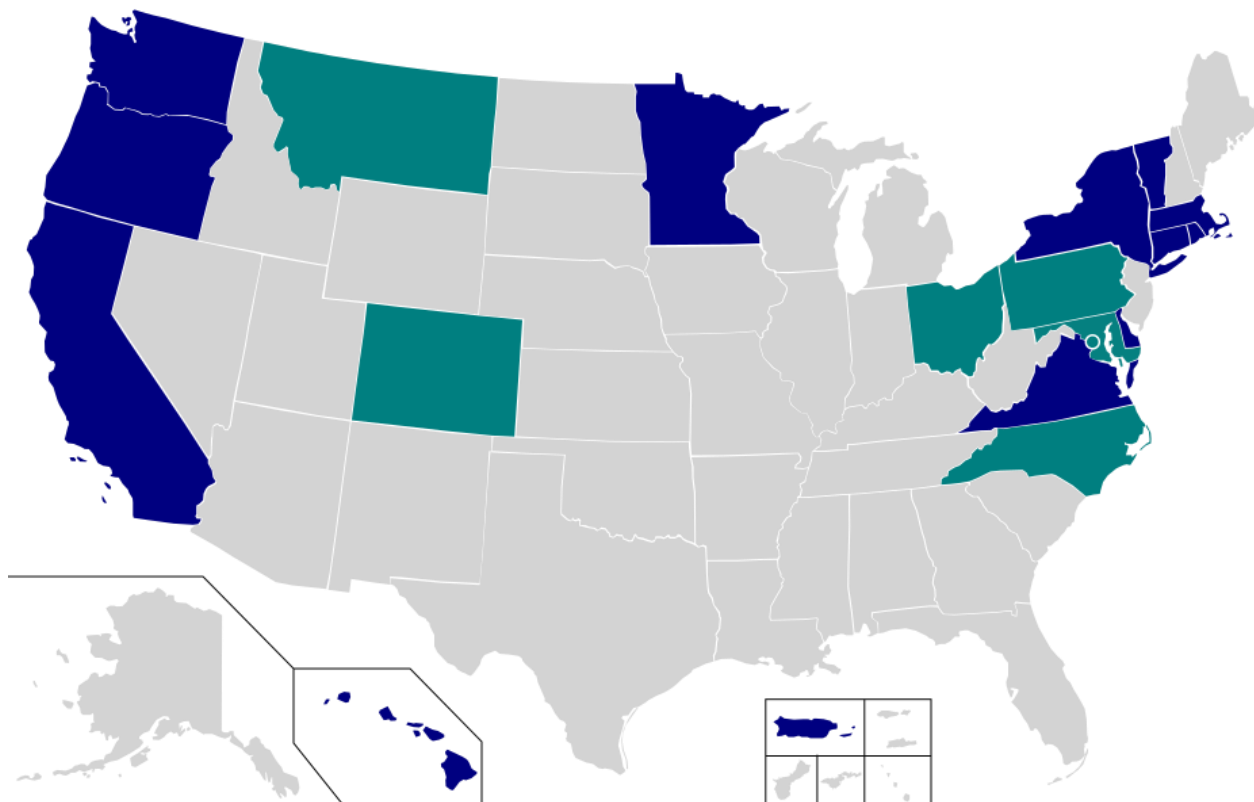
"a challenge to the ethos of the 1960s"

synonyms: spirit, character, atmosphere, climate, mood, feeling, tenor, essence; [More](#)

PARIS AGREEMENT SIGNATORIES



US CLIMATE ALLIANCE



CLIMATE MAYORS AND OTHERS “STILL IN”

C40 Cities Climate Leadership Group

C40 is a network of the world's megacities committed to addressing climate change.



Climate Mayors [Follow](#)

U.S. #ClimateMayors working together to advance local climate action, national emission reduction policies,...

Jun 1 · 10 min read

274 US Climate Mayors commit to adopt, honor and uphold Paris Climate Agreement goals

STATEMENT FROM THE CLIMATE MAYORS IN RESPONSE TO PRESIDENT TRUMP'S WITHDRAWAL FROM THE PARIS CLIMATE AGREEMENT

Thursday, June 1st 2017

LEADERS IN THE US ECONOMY SAY “STILL IN” ON PARIS AGREEMENT

“We remain steadfastly committed to the sustainability, carbon and energy goals that we have set as a company and to the Paris Agreement's ultimate success. Our experience shows us that these investments and innovations are good for our planet, our company, our customers and the economy.” –

Brad Smith, President and Chief Legal Officer, Microsoft

“The coalition harnesses the power of scientific research and political and corporate leadership to make good on America's promise to the world. Collectively we have resolved to meet or exceed our Paris Agreement commitments.” – **Dorothy Leland, Chancellor, UC-Merced**

“Climate change is a fact of life that people in Los Angeles and cities around the world live with every day. It is a grave threat to our health, our environment, and our economy — an urgent challenge that requires unprecedented collaboration. The President may be pulling out of the Paris Climate Agreement, but L.A. will lead by committing to the goals of the accord — and working closely with over 200 other Climate Mayors as well as governors and CEOs across the U.S. to do the same.” – **Eric Garcetti, Mayor of Los Angeles, Los Angeles, California**



Janos Pasztor

CARNEGIE
COUNCIL *for Ethics in
International Affairs*

How Sustainable is Our Global Climate Ethos

Arizona State University

Security and Sustainability Forum

June 8, 2017

Alice Hill

Research Fellow at the Hoover Institution

Stanford University

ahill2@stanford.edu



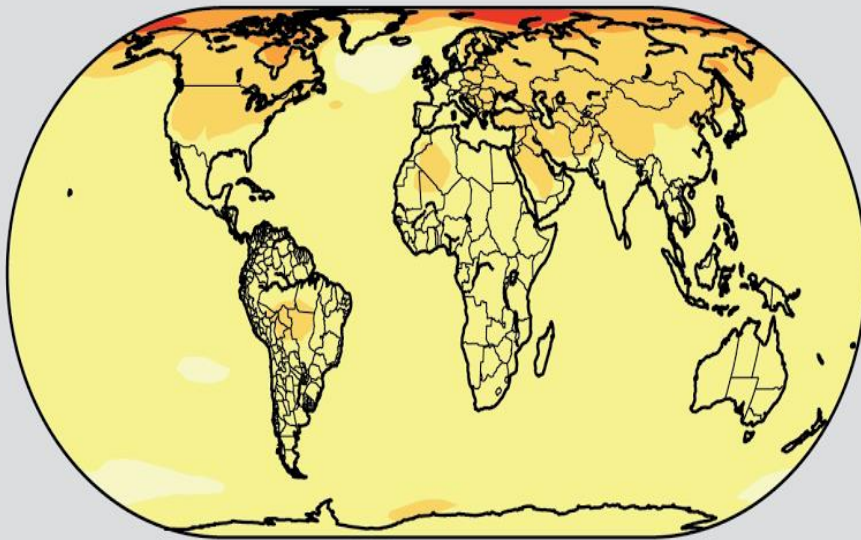
@Alice_C_Hill



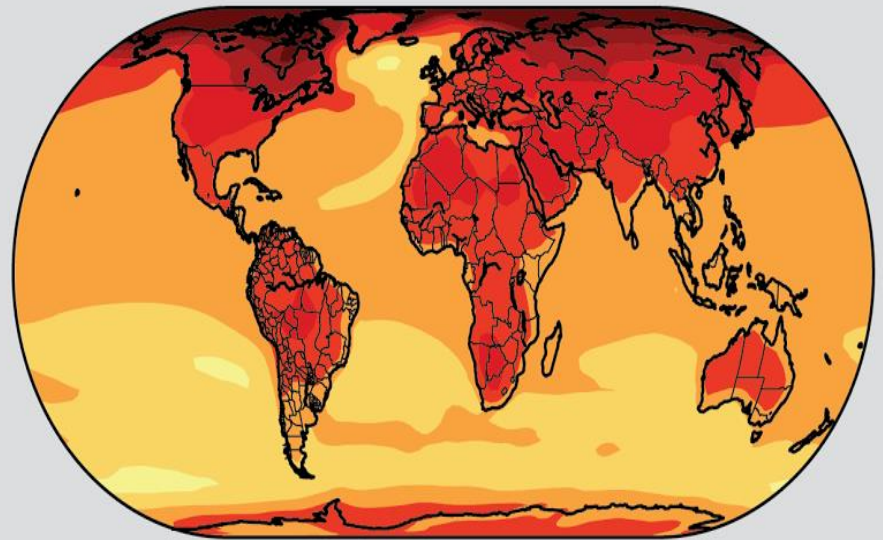


Projected Change in Average Annual Temperature

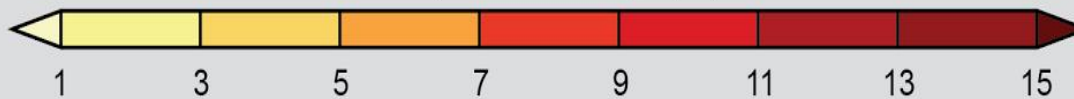
Rapid Emissions Reductions (RCP 2.6)



Continued Emissions Increases (RCP 8.5)



Temperature Change (°F)



THE WALL STREET JOURNAL.

WORLD NEWS

Last Year Was Warmest on Record, Climate Experts Say

Temperatures in 2016 set record for third year in a row, NASA and NOAA researchers find

SFGATE
Nearly 200,000 ordered evacuated as Oroville Dam danger spikes

The Washington Post

Energy and Environment

U.S. wildfires just set an amazing and troubling new record

FOX NEWS U.S.

U.S.

Large Regions of U.S. Damaged by Drought in 2016

Wildfires and damage to trees, crops and livestock the result of continued drought in parts of U.S.

By CAMERON MCWHIRTER and JIM CARLTON
Dec. 15, 2016 10:37 a.m. ET

USA TODAY

The big melt: Global sea ice at record low

CNN

Louisiana flood: Worst US disaster since Hurricane Sandy, Red Cross says

By Holly Yan and Rosa Flores, CNN
Updated 12:32 PM ET, Fri August 19, 2016

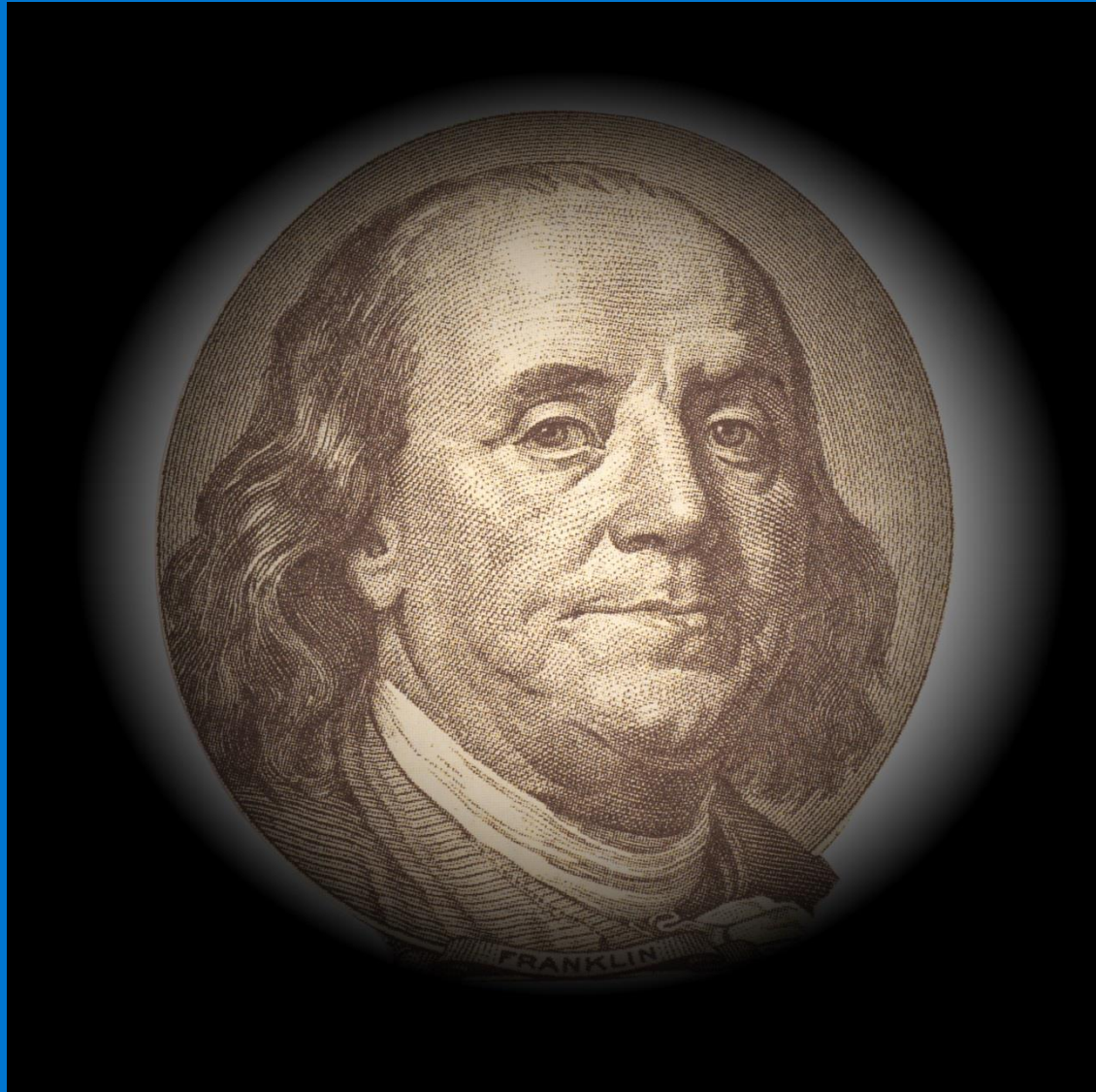


The Washington Post

Capital Weather Gang

West Virginia flood was 'one in a thousand year event,' Weather Service says; more heavy rain forecast

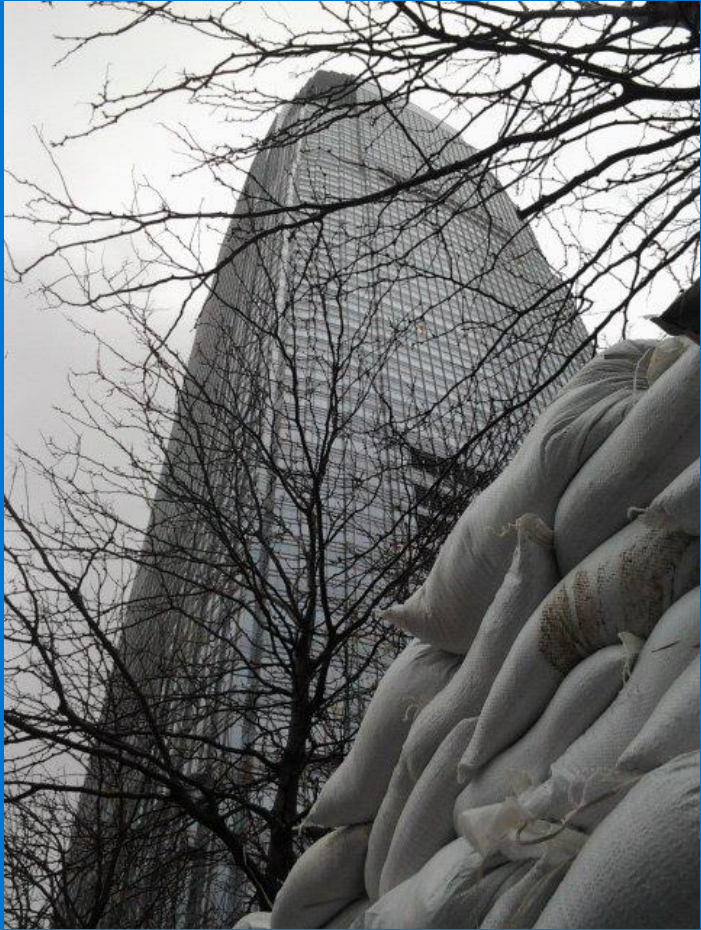
By failing to prepare, you are preparing to fail.
Benjamin Franklin





















Never doubt that a small group of thoughtful, committed citizens
can change the world; indeed, it's the only thing that ever has.

Margaret Mead

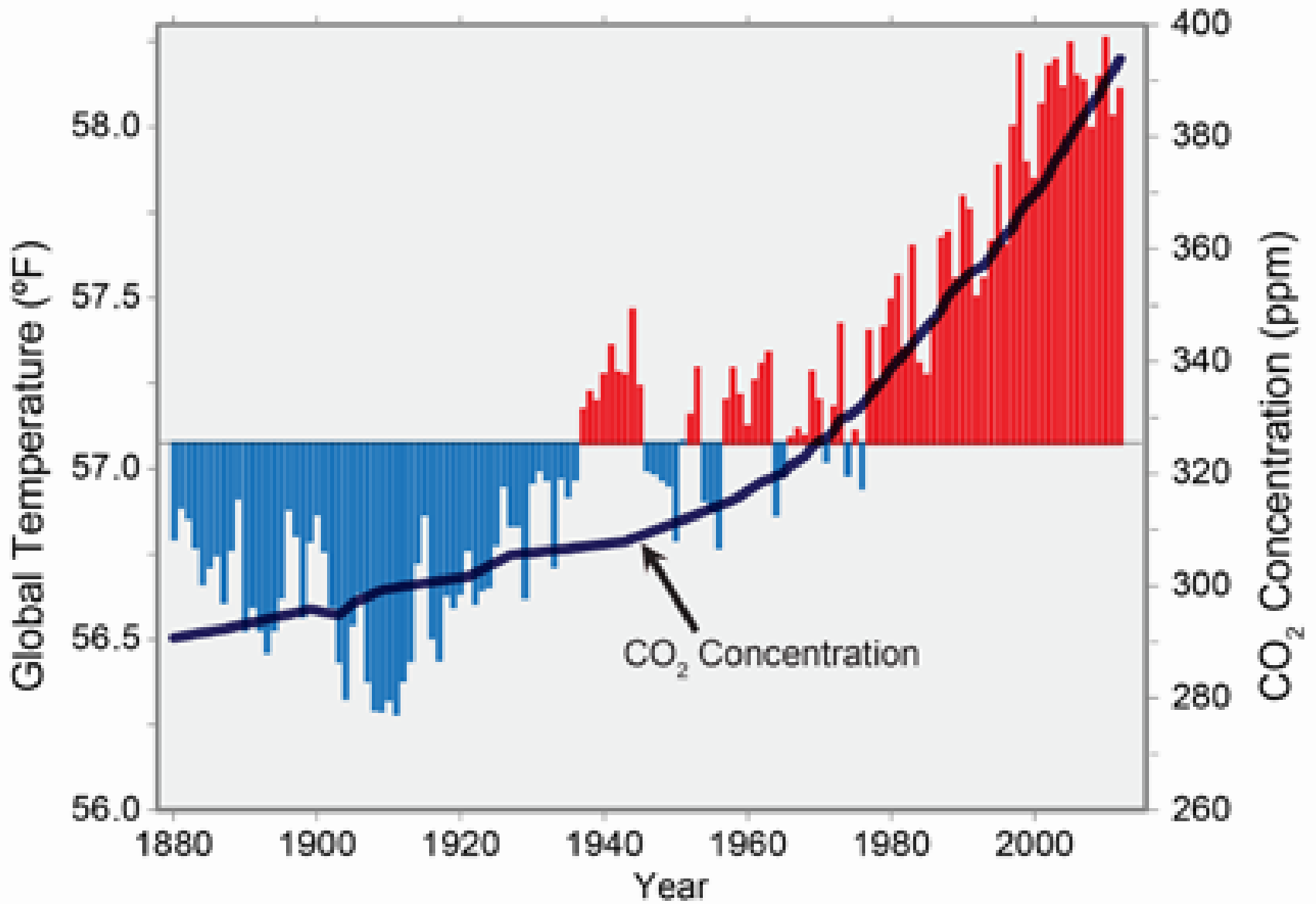


KATHARINE HAYHOE

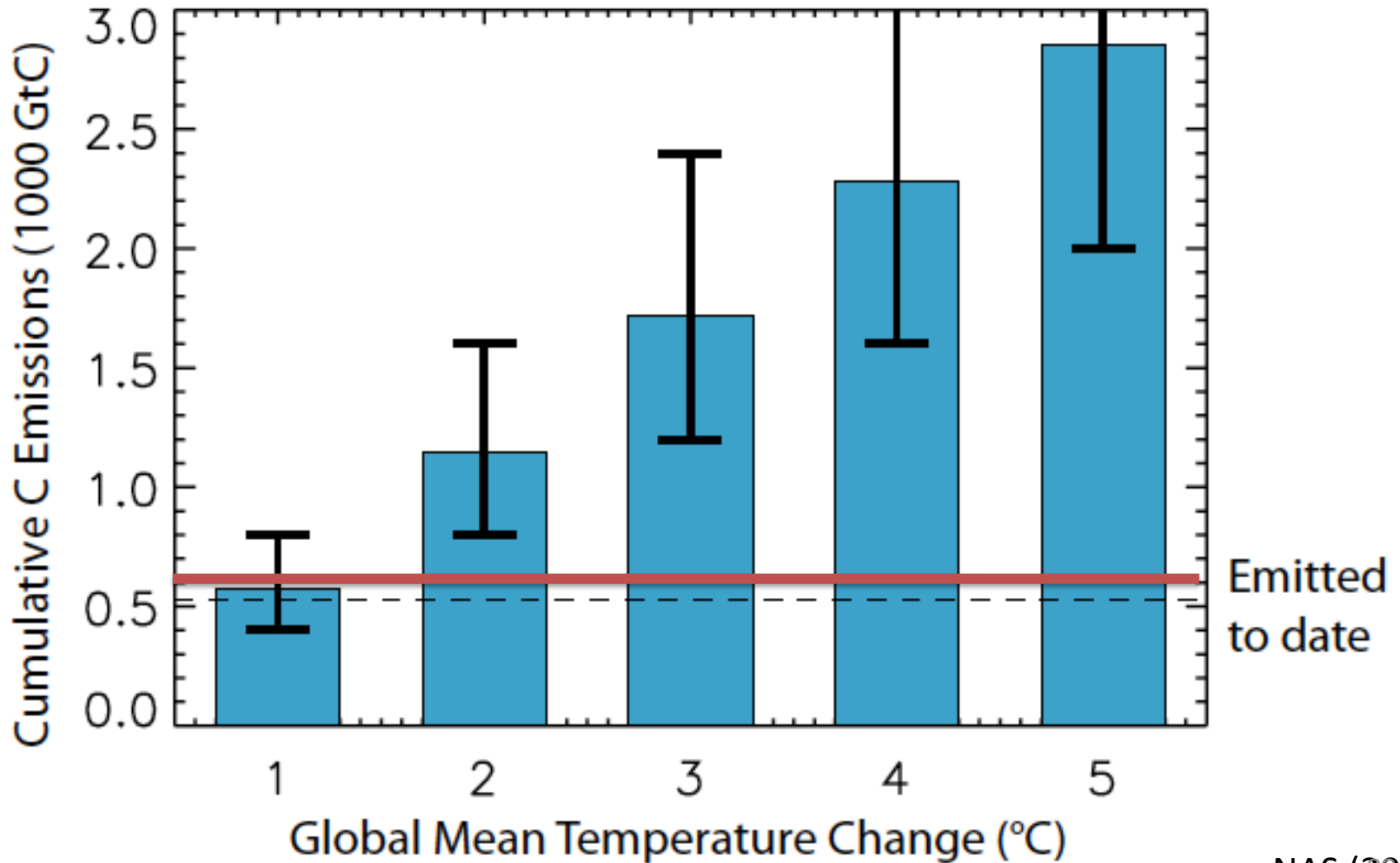
TEXAS TECH UNIVERSITY



TEXAS TECH
UNIVERSITY.

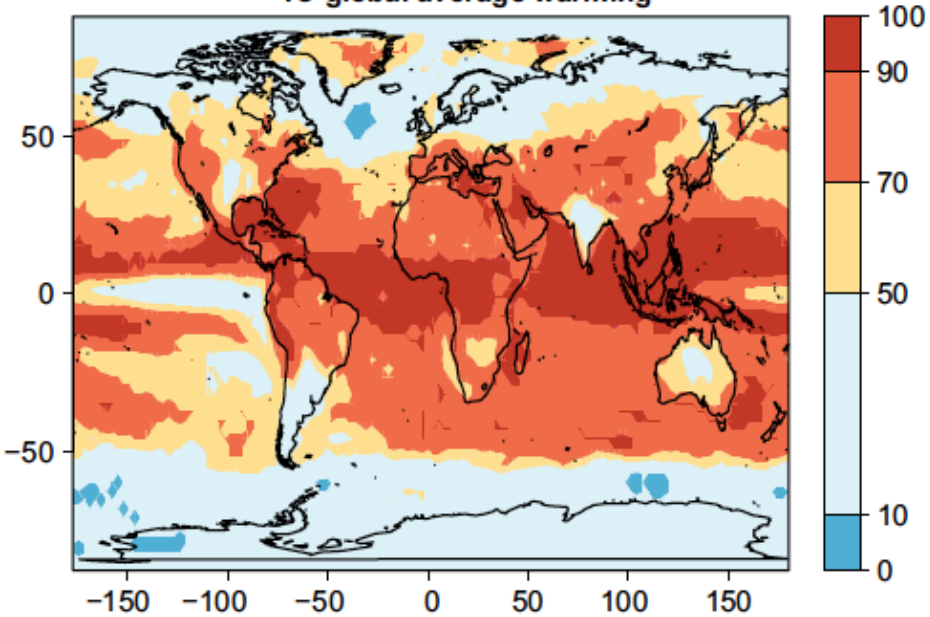


Cumulative Carbon Emissions and Global Temperature Targets



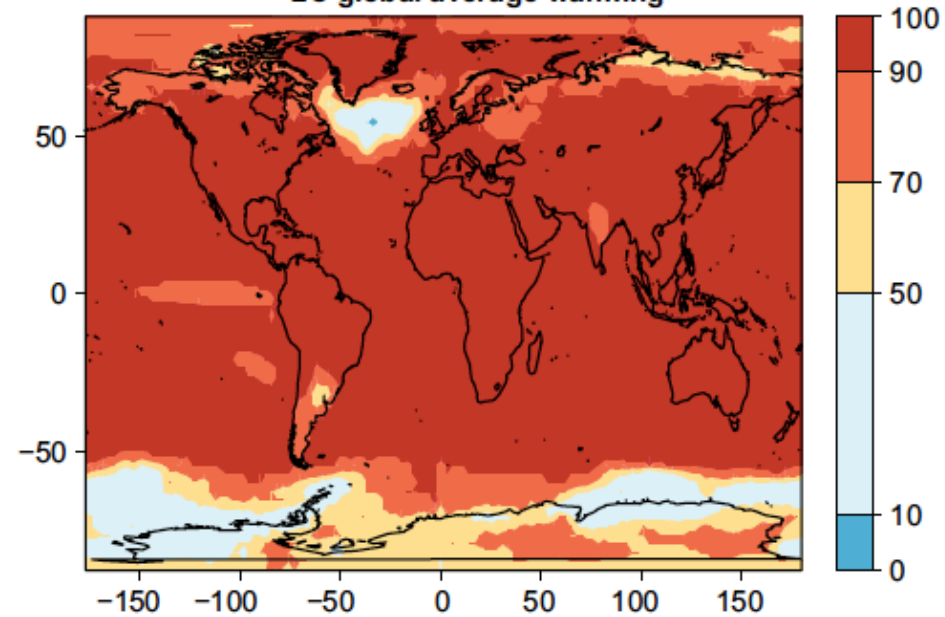
HOTTER SUMMERS

% summers warmer than current 95th percentile
1C global average warming



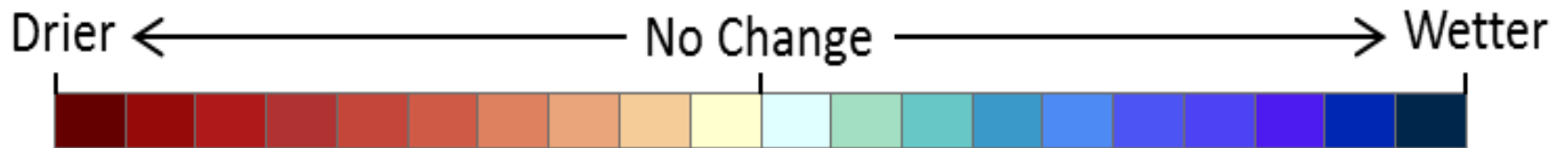
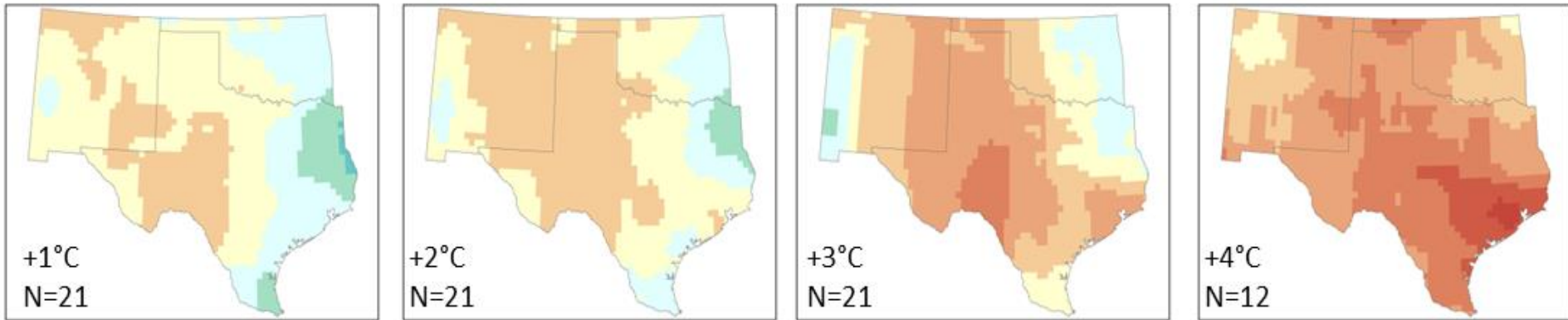
+1°C

% summers warmer than current 95th percentile
2C global average warming

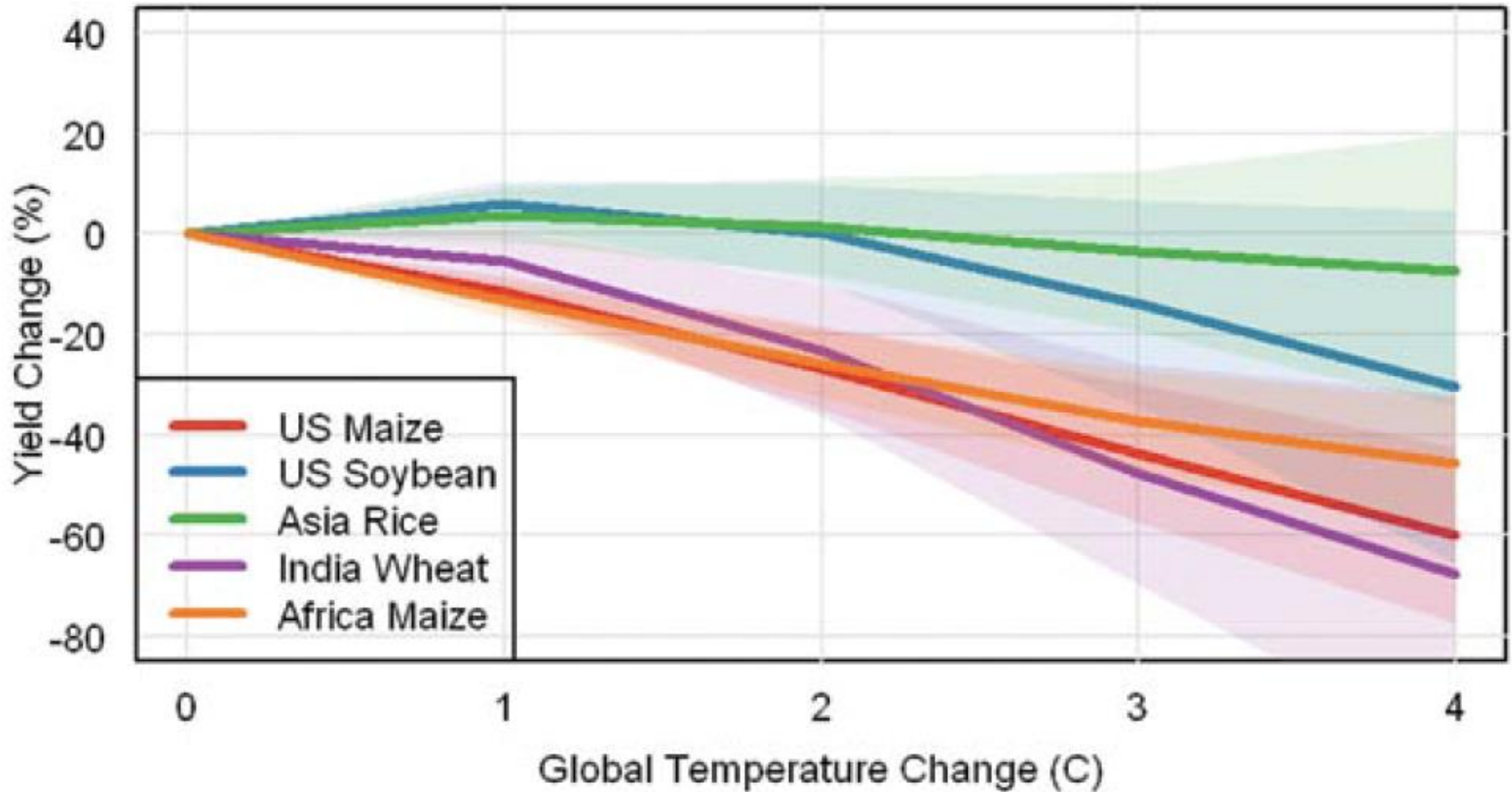


+2°C

DRIER SUMMMERS



DECLINING CROP YIELDS



We care about
a changing climate

**BECAUSE IT EXACERBATES
MANY OF THE RISKS WE
ALREADY FACE TODAY**

**THIS IS WHERE
SCIENCE STOPS.**

1992 United Nations Framework Convention on Climate Change

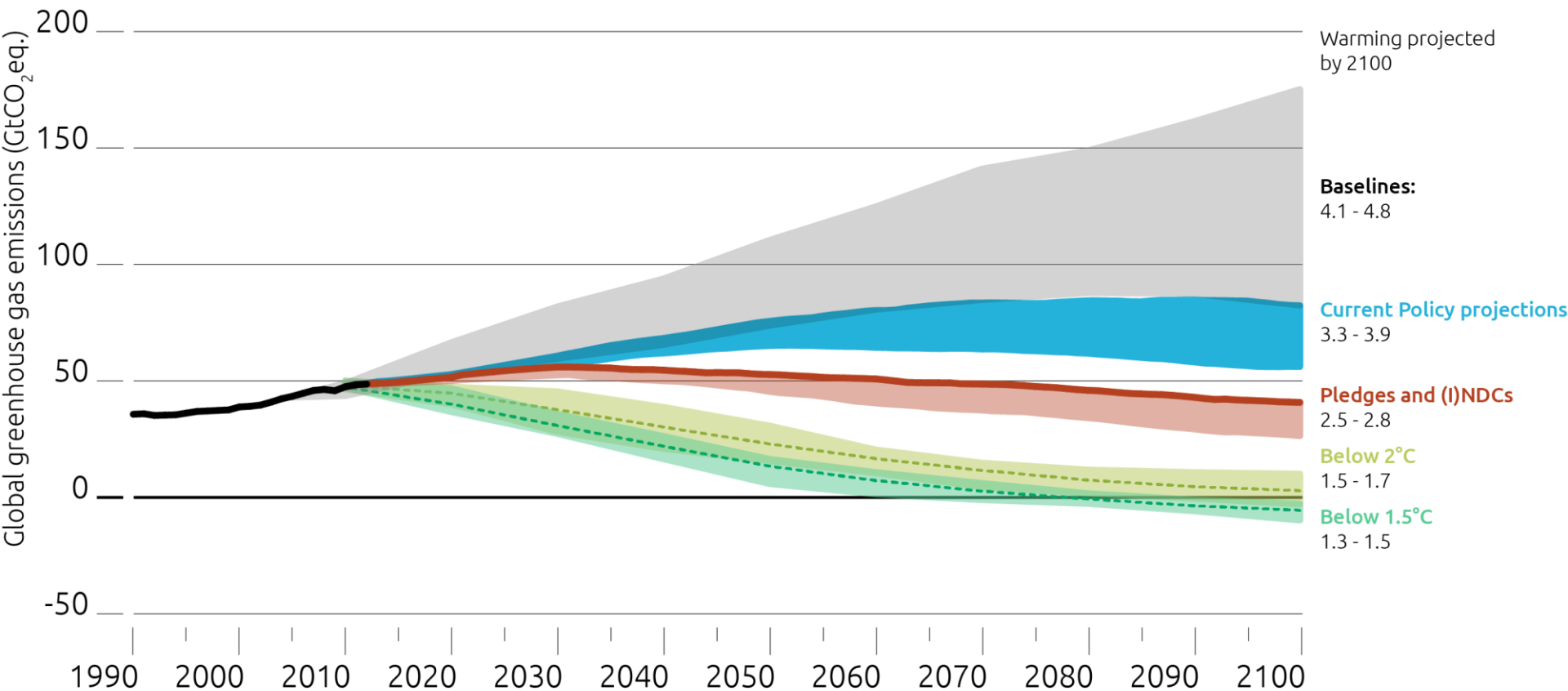
Achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent **dangerous anthropogenic interference with the climate system.**





23 YEARS LATER ...





Historical emissions, incl. LULUCF
 Current policy projections
 Reference*

Pledges and (I)NDCs
 2°C consistent median and range**
 1.5°C consistent median and range***

© www.climateactiontracker.org/
Climate Analytics/Ecofys/
NewClimate

* 5%-95% percentile of AR5 WGIII scenarios in concentration category 7, containing 64% of the baseline scenarios assessed by the IPCC

** Greater than 66% chance of staying within 2°C in 2100. Median and 10th to 90th percentile range. Pathway range excludes delayed action scenarios and any that deviate more than 5% from historic emissions in 2010.

*** Greater than or equal to 50% chance of staying below 1.5°C in 2100. Median and 10th to 90th percentile range. Pathway range excludes delayed action scenarios and any that deviate more than 5% from historic emissions in 2010.

TARGETS FOR PARIS AGREEMENT



INDIA

Emission intensity of GDP **33-35%** below 2005 levels by 2030, Power capacity to be 40% non fossil fuel based

Source: uefcc.int



CHINA

Emission intensity of GDP **60-65%** below 2005 levels by 2030. Peak emissions around 2030. Non-fossil fuel to be 20% of primary energy consumption by 2030



USA

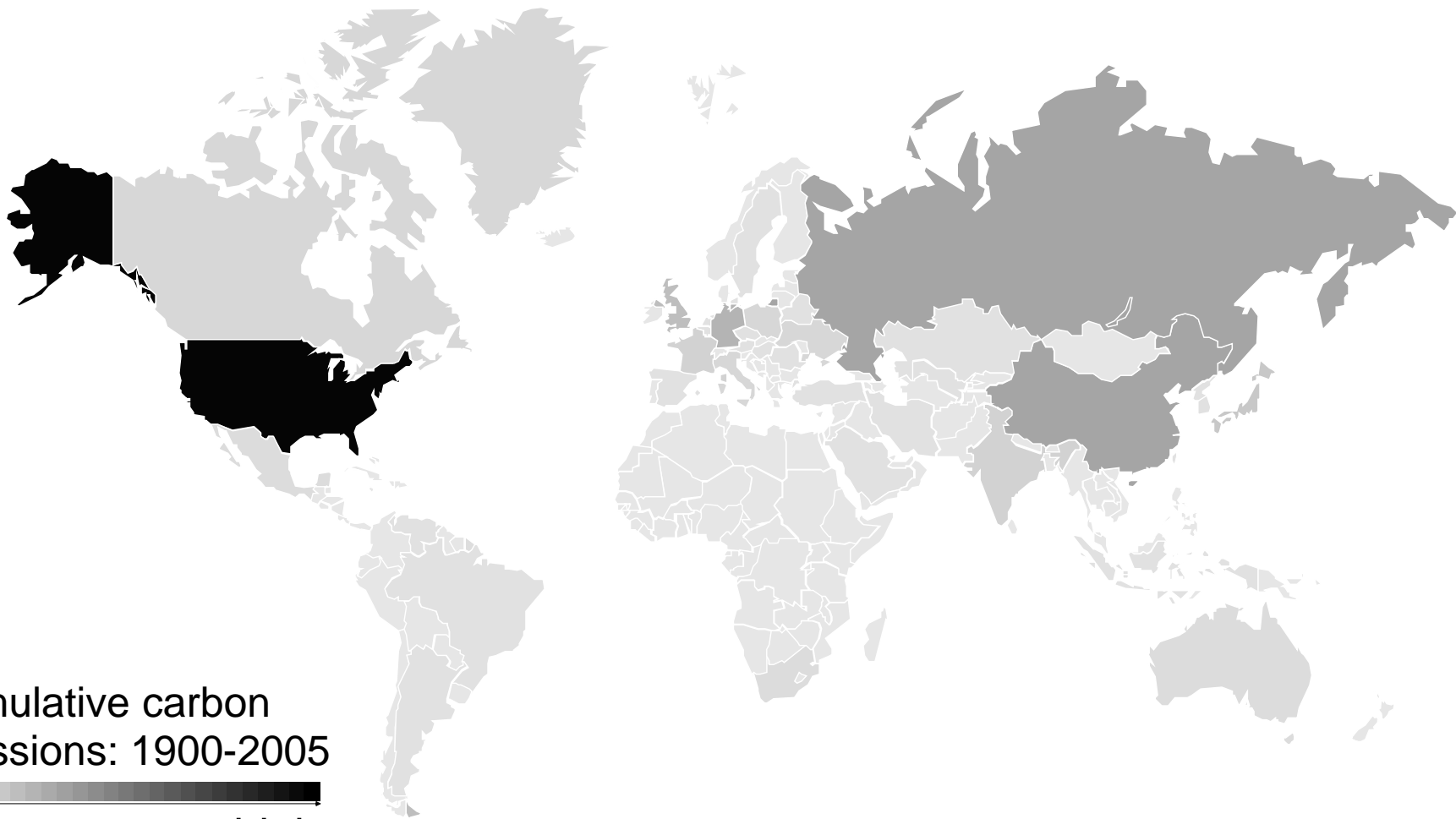
Absolute emissions **26-28%** below 2005 levels by 2025

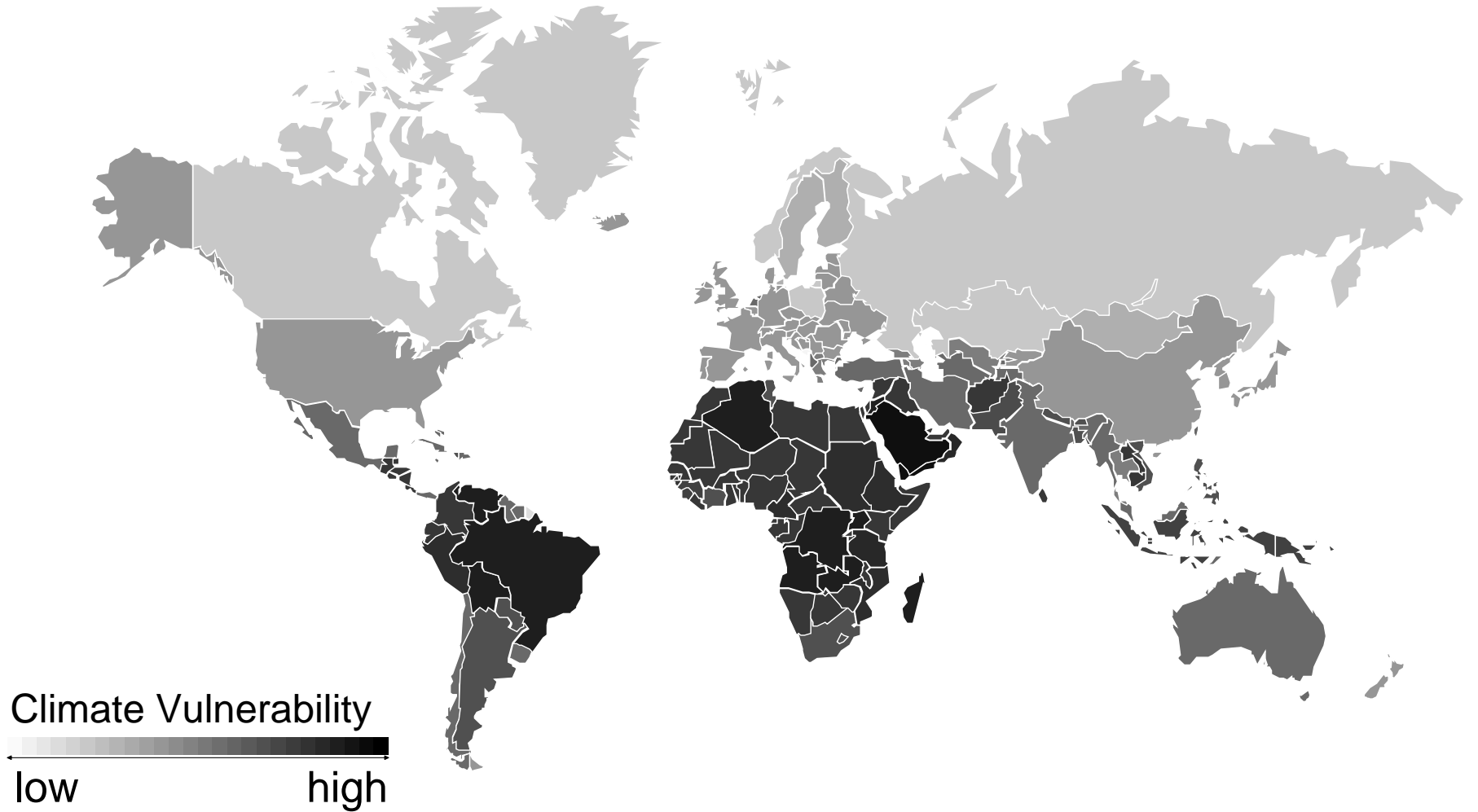


EU (28)

Absolute emissions **40%** below 1990 levels by 2030

Cumulative carbon
emissions: 1900-2005



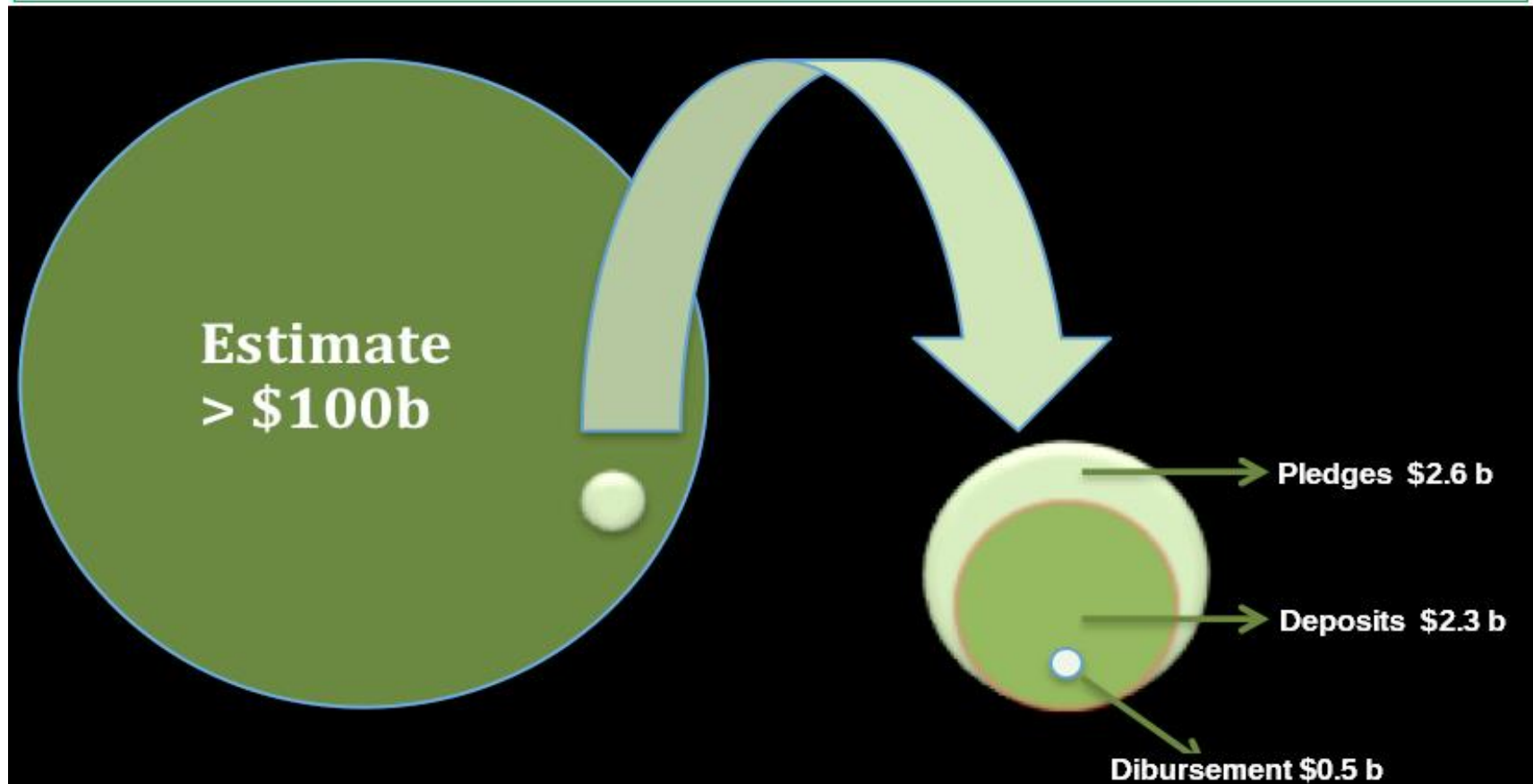


Based on Samson et al. (2012)

We care about
a changing climate

**BECAUSE IT
DISPROPORTIONATELY AFFECTS
THE POOR AND VULNERABLE –
AND THAT'S NOT FAIR**

Green Climate Fund



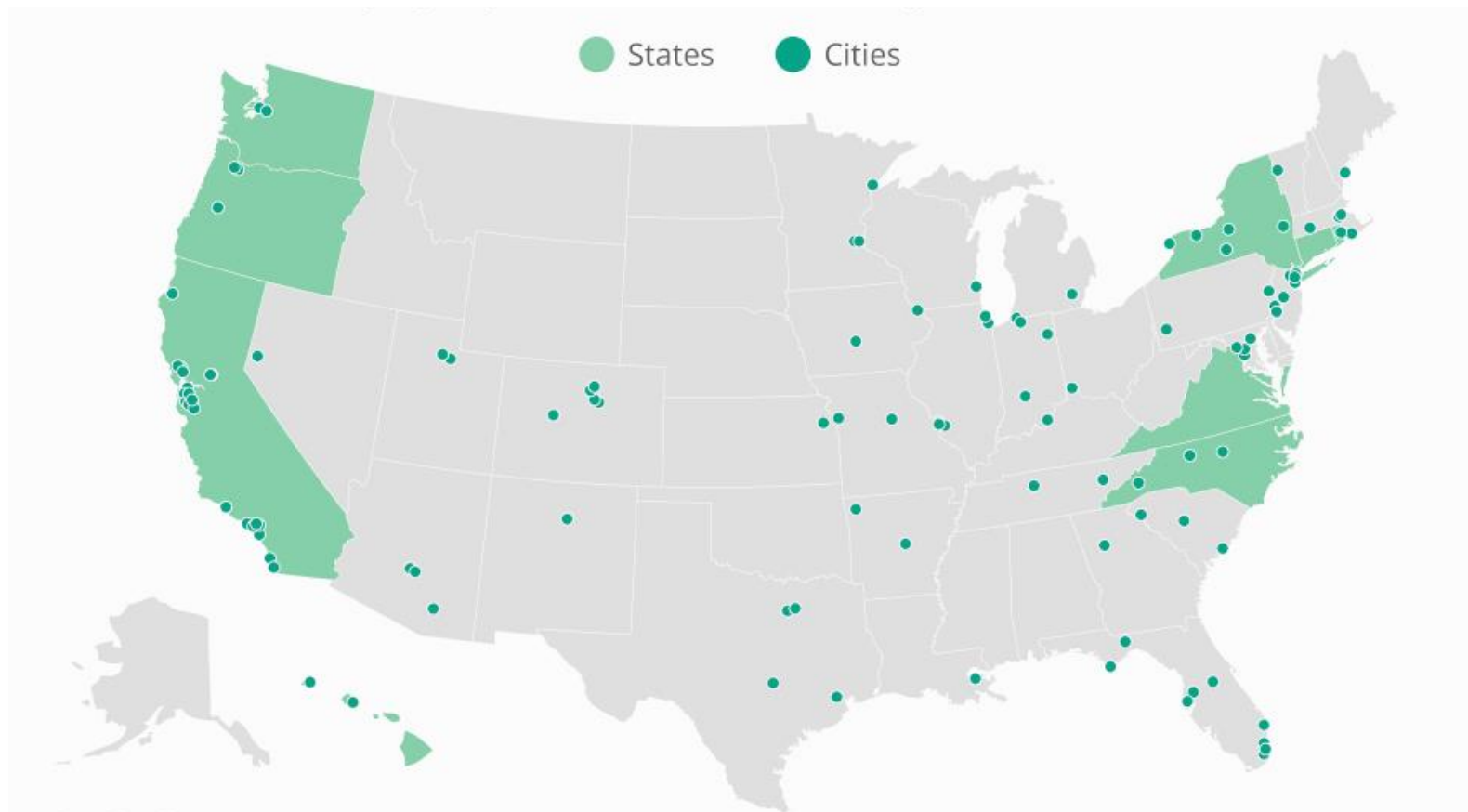
Obama admin injects another \$500M into global climate fund



Trump dismays, angers allies by abandoning global climate pact



Over 1,400 U.S. Cities, States and Businesses Vow to Meet Paris Climate Commitments



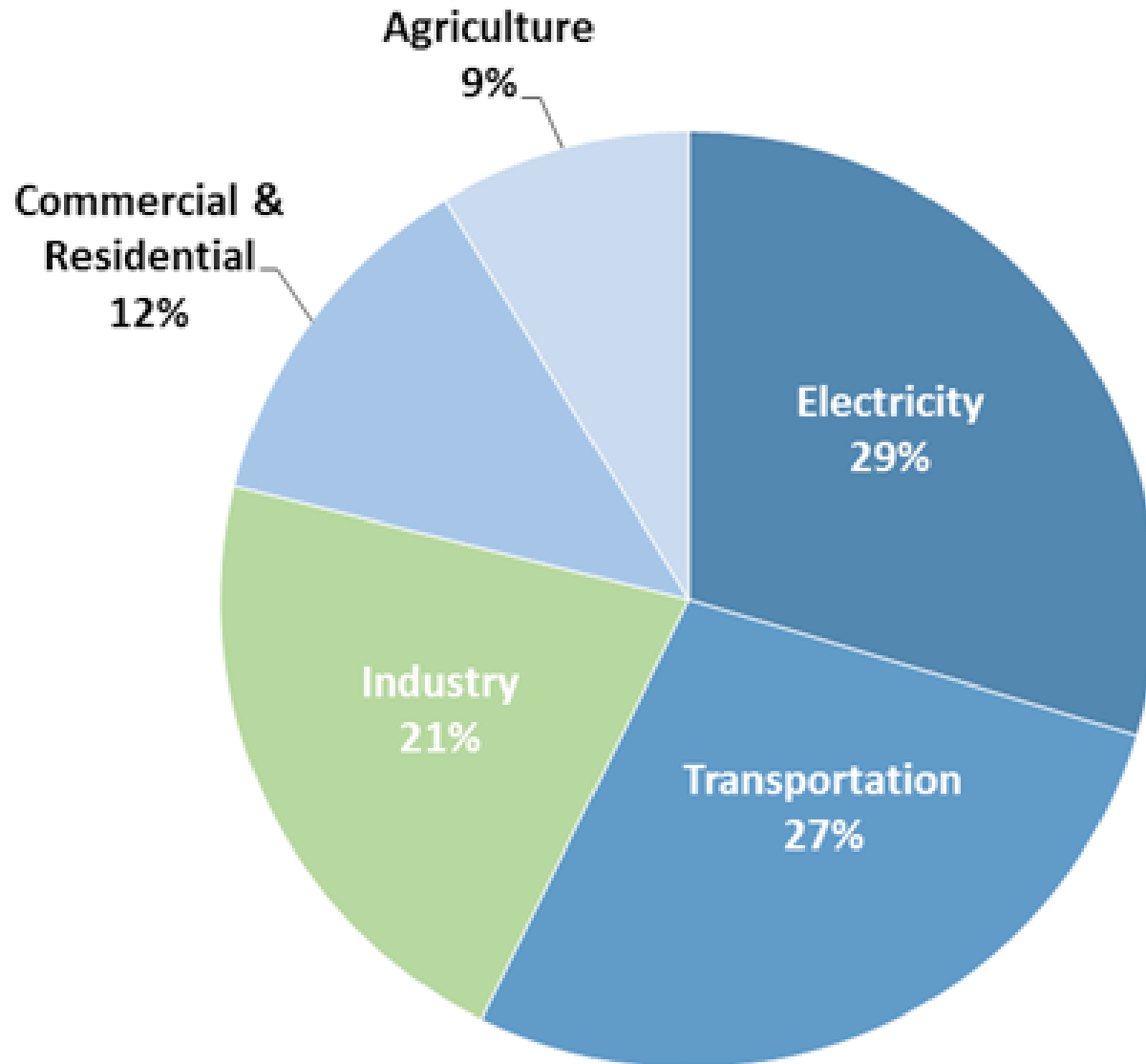
If U.S. states that support the
PARIS AGREEMENT
were a country, they would be the world's

5th
LARGEST
ECONOMY

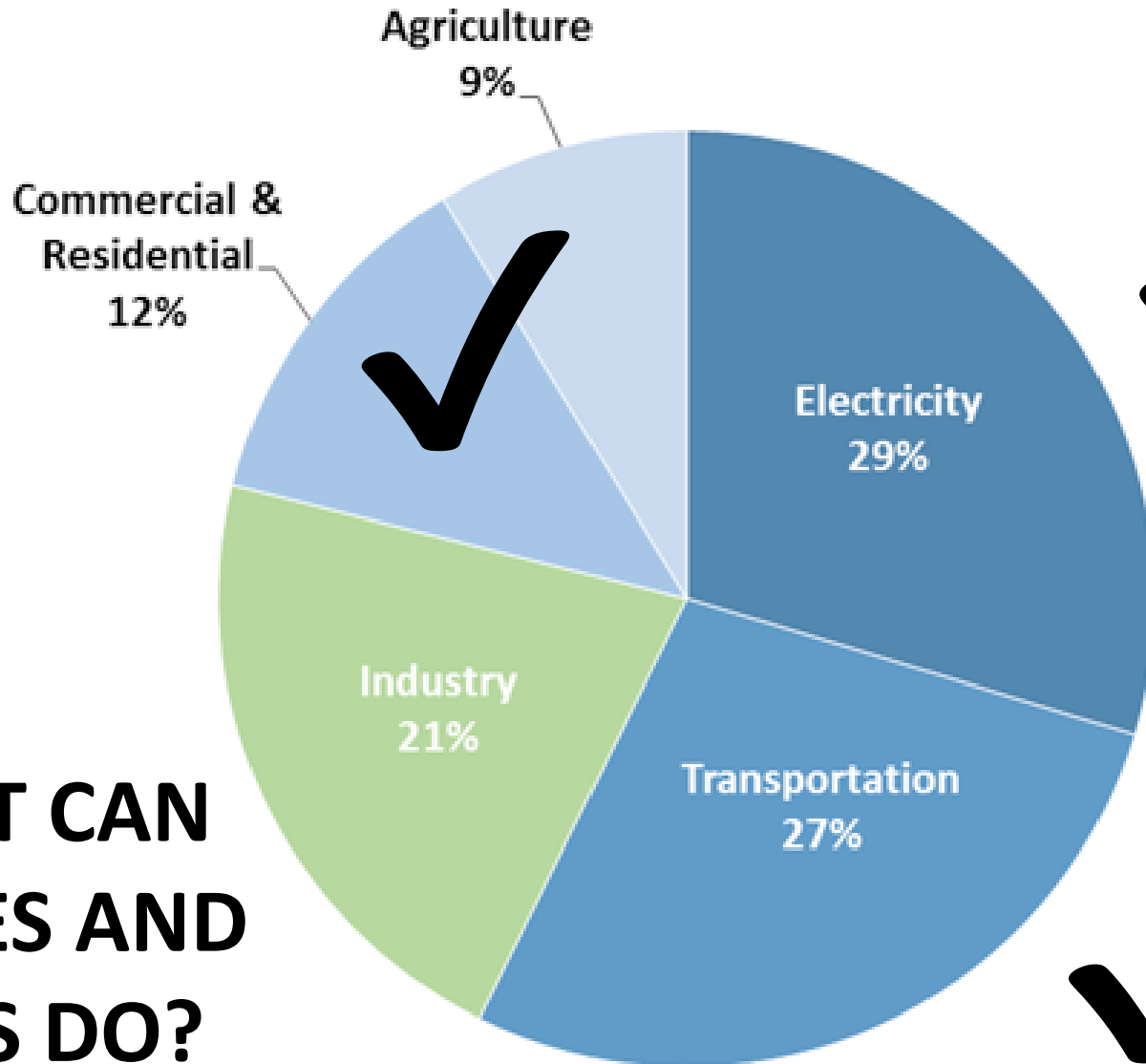
12th
MOST
POPULOUS
COUNTRY

6th
LARGEST
EMITTER

Total U.S. Greenhouse Gas Emissions by Economic Sector in 2015

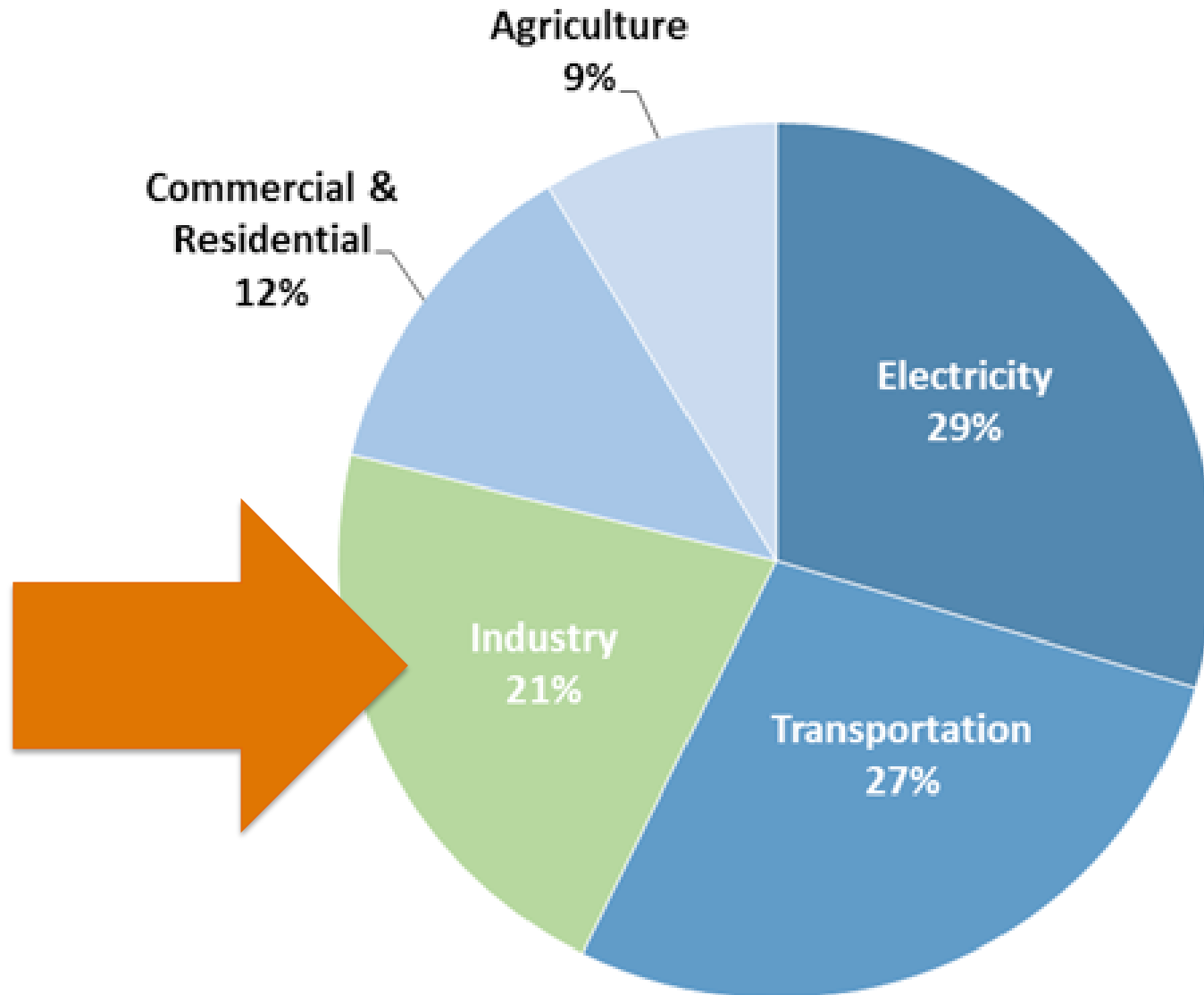


Total U.S. Greenhouse Gas Emissions by Economic Sector in 2015



**WHAT CAN
STATES AND
CITIES DO?**

Total U.S. Greenhouse Gas Emissions by Economic Sector in 2015



- 2015** Investors Urge Exxon to Take Moral Responsibility for Global Warming
- 2016** Exxon Stiff-Arms a Request to Take Moral Responsibility for Climate Change

- 2015 Investors Urge Exxon to Take Moral Responsibility for Global Warming
- 2016 Exxon Stiff-Arms a Request to Take Moral Responsibility for Climate Change

Energy and Environment

- 2017 **Financial firms lead shareholder rebellion against ExxonMobil climate change policies**
- Exxon shareholders approve measure on climate-change report



“President Trump should not turn his back on more than a 1,000 major companies and investors and 70 percent of Americans who want the U.S. to stay in the **Paris Agreement.**”

- Andrew Steer
WRI President and CEO

Exxon urges Trump to keep US in Paris climate accord

Letter comes as White House seeks to unravel Obama greenhouse commitments

U.S. evangelical green groups pan Trump's climate accord exit

Acts of Faith

Vatican leaders dismayed by reports that United States will leave Paris climate accord

Episcopal Church Presiding Bishop and Primate Michael B. Curry has issued the following statement on President Donald Trump's action and the Paris Climate Accord.

The United States has been a global leader in caring for God's creation through efforts over the years on climate change. President Trump's announcement changes the U.S.'s leadership role in the international sphere. Despite this announcement, many U.S. businesses, states, cities, regions, nongovernmental organizations and faith bodies like the Episcopal Church can continue to take bold action to address the climate crisis. The phrase, "We're still in," became a statement of commitment for many of us who regardless of this decision by our President are still committed to the principles of the Paris Agreement.



FP

ONE OF THE MOST DANGEROUS
MYTHS WE'VE BOUGHT INTO IS ...



*First, It Came for the
Polar Bears*

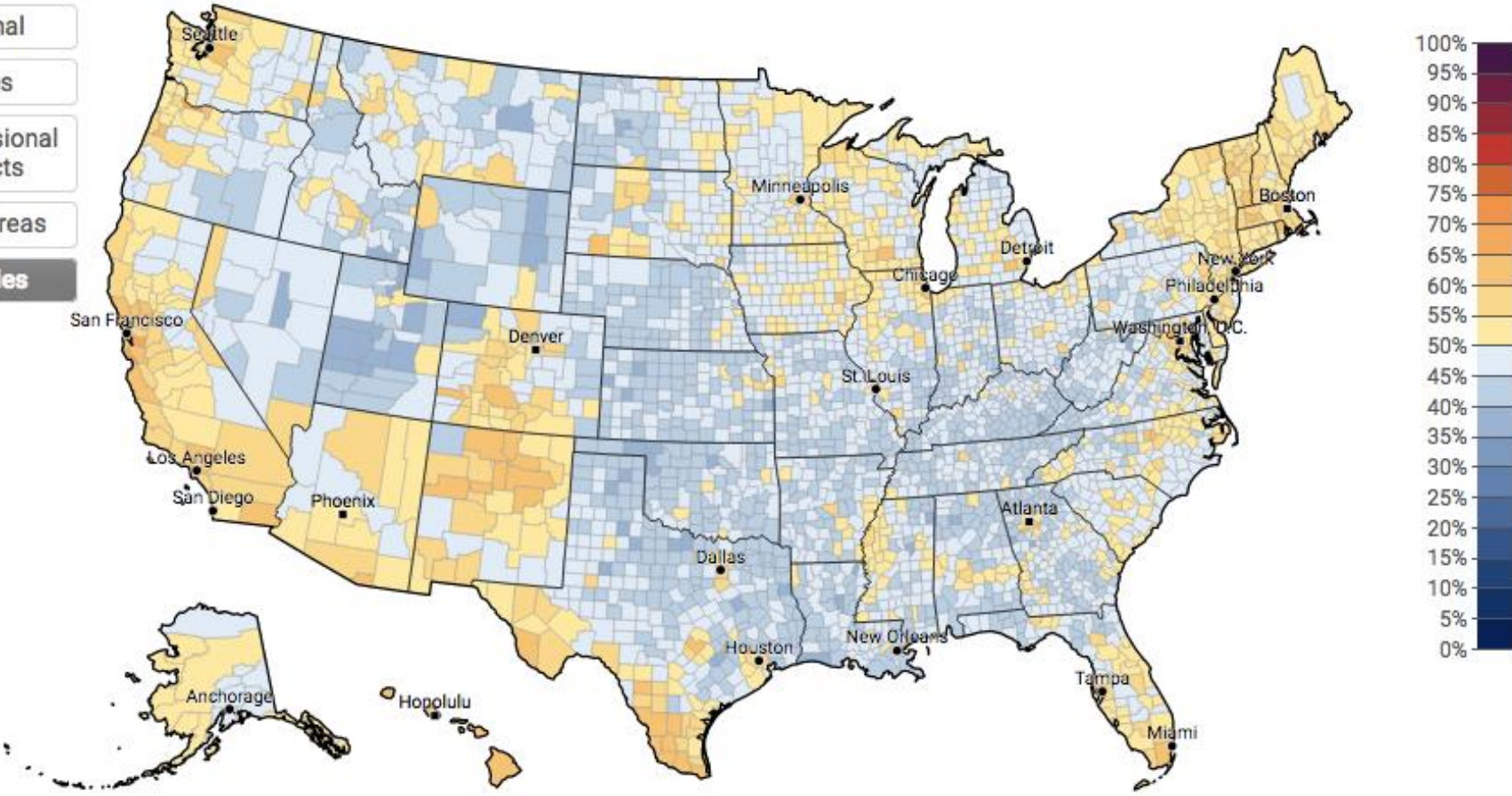
THE CLIMATE CHANGE ISSUE

Estimated % of adults who think global warming is mostly caused by human activities, 2016

Display model output:

Click on map to select geography, or:

- National
- States
- Congressional Districts
- Metro Areas
- Counties**

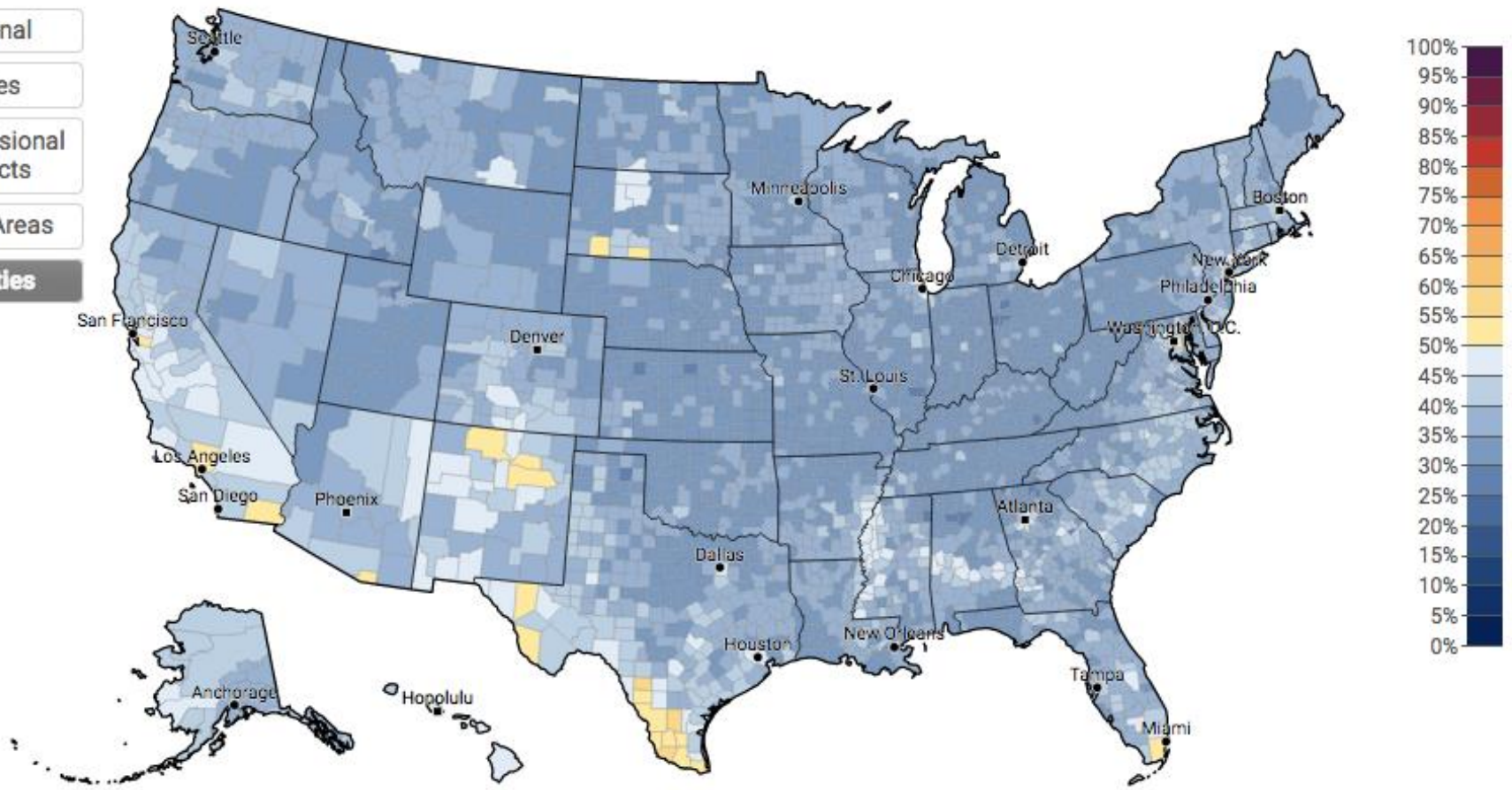


Estimated % of adults who think global warming will harm them personally, 2016

Display model output:

Click on map to select geography, or:

- National
- States
- Congressional Districts
- Metro Areas
- Counties**



How Can We Make People Care About Climate Change?

ASIA

23 MAY 2016

What will it take for people to care about climate change?

A record-breaking heat wave in Rajasthan reveals how badly we lack the necessary infrastructure to cope with the human suffering climate change is already causing.

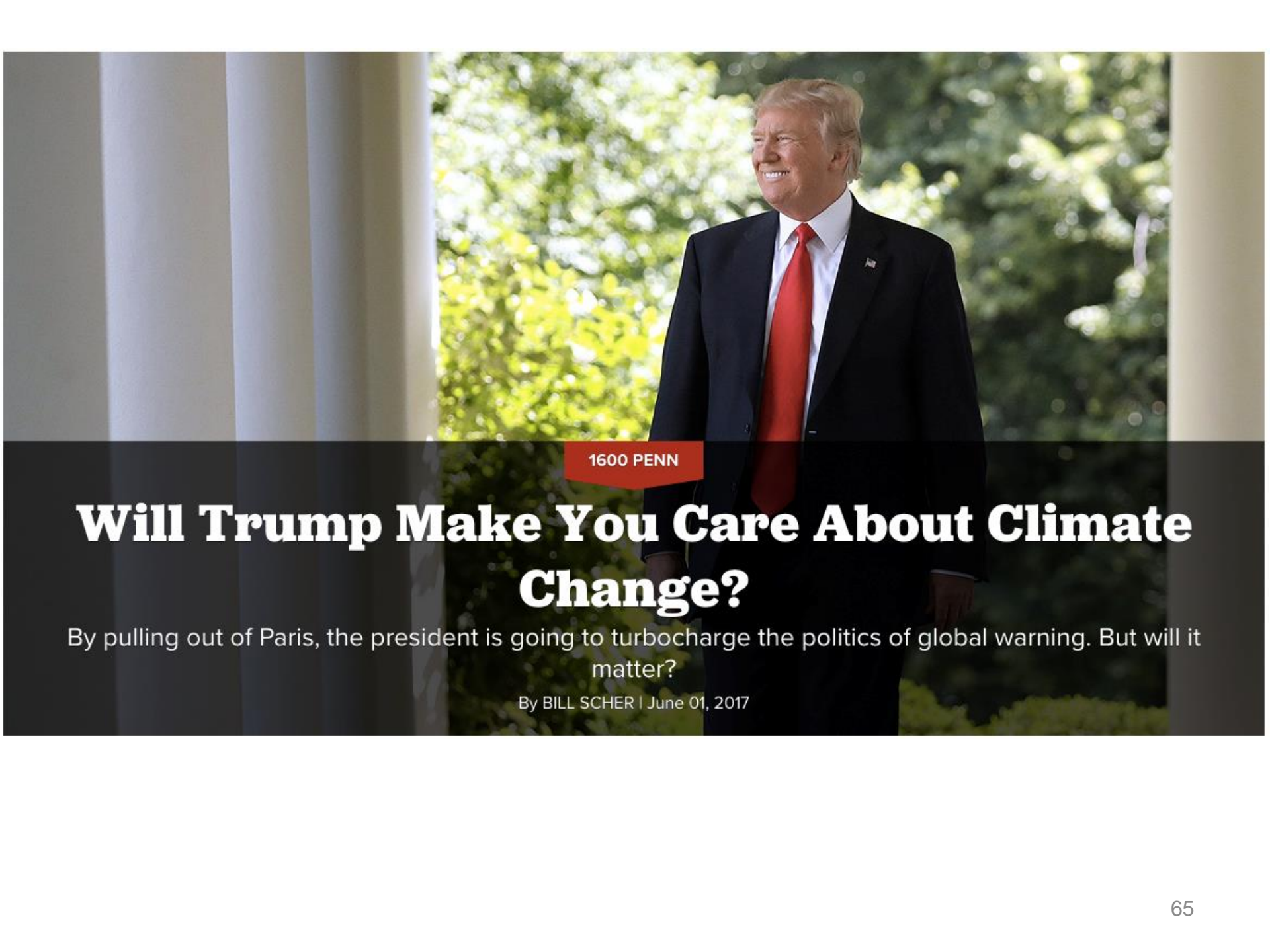
Why you need to care about climate change – now

The facts link global warming to increasingly destructive and deadly weather

ONE OF THE MOST DANGEROUS MYTHS
WE'VE BOUGHT INTO IS ...

CLIMATE CHANGE IS A DISTANT ISSUE,
ONLY AFFECTING FUTURE GENERATIONS
AND PLACES THAT ARE FAR AWAY.

... and if it ever gets really bad,
someone else will fix it for us.

A photograph of Donald Trump, the 45th President of the United States, standing outdoors. He is wearing a dark suit, a white shirt, and a bright red tie. He is smiling and looking towards the right. The background shows a blurred green landscape and a building with white columns. A dark grey banner is overlaid at the bottom of the image, containing text.

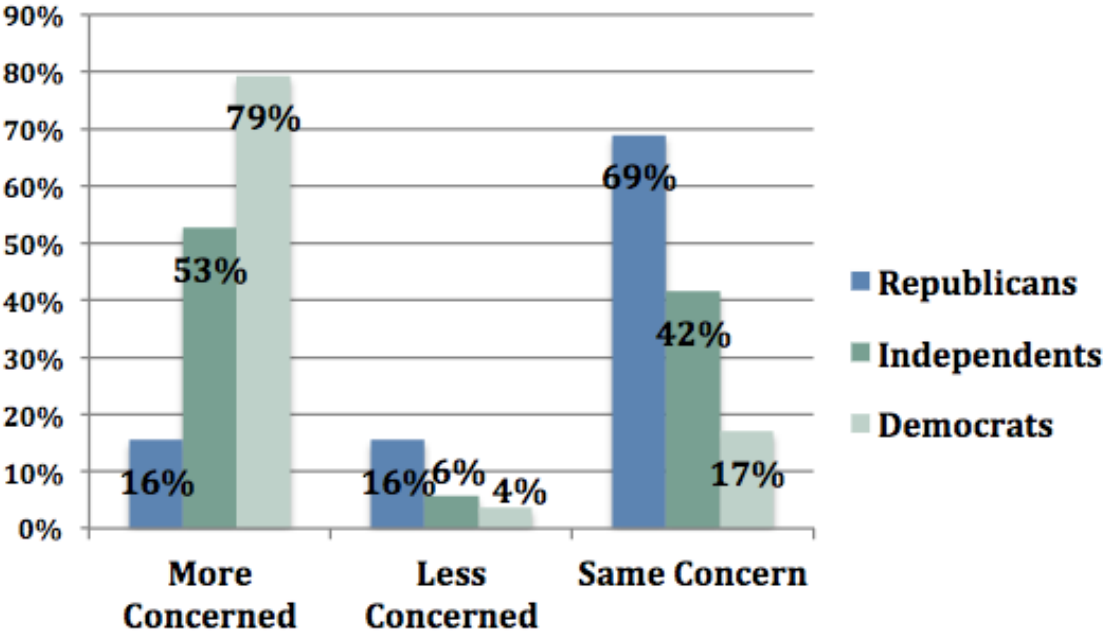
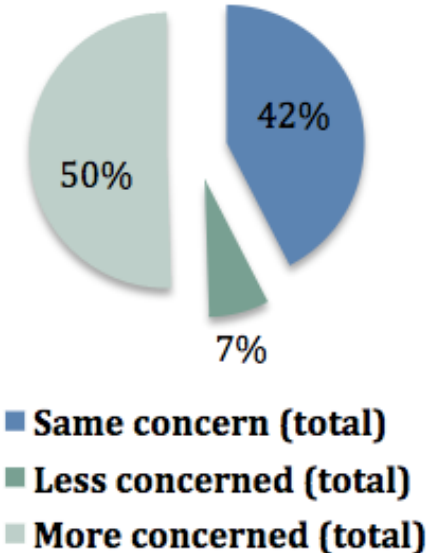
1600 PENN

Will Trump Make You Care About Climate Change?

By pulling out of Paris, the president is going to turbocharge the politics of global warning. But will it matter?

By BILL SCHER | June 01, 2017

Since Trump has been elected, are you more, less, or the same concerned about climate change and the environment? 801 respondent(s), select one, % Same Concern vs. More vs. Less



Global Warming Concern at Three-Decade High in US



All polls conducted in March

IS THERE A WAY
FORWARD?

YES

Discussion



Janos Pasztor
jpasztor@c2g2.net



Alice C. Hill
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Katharine Hayhoe
www.katharinehayhoe.com



Elisabeth Graffy
egraffy@asu.edu

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Thank you for attending! A recording of this webinar and the slide presentation will be available soon in the SSF Archives at www.ssfonline.org.
(and please take the brief exit survey)