

Global Warming: Theory, Minnesota Impacts and Solutions

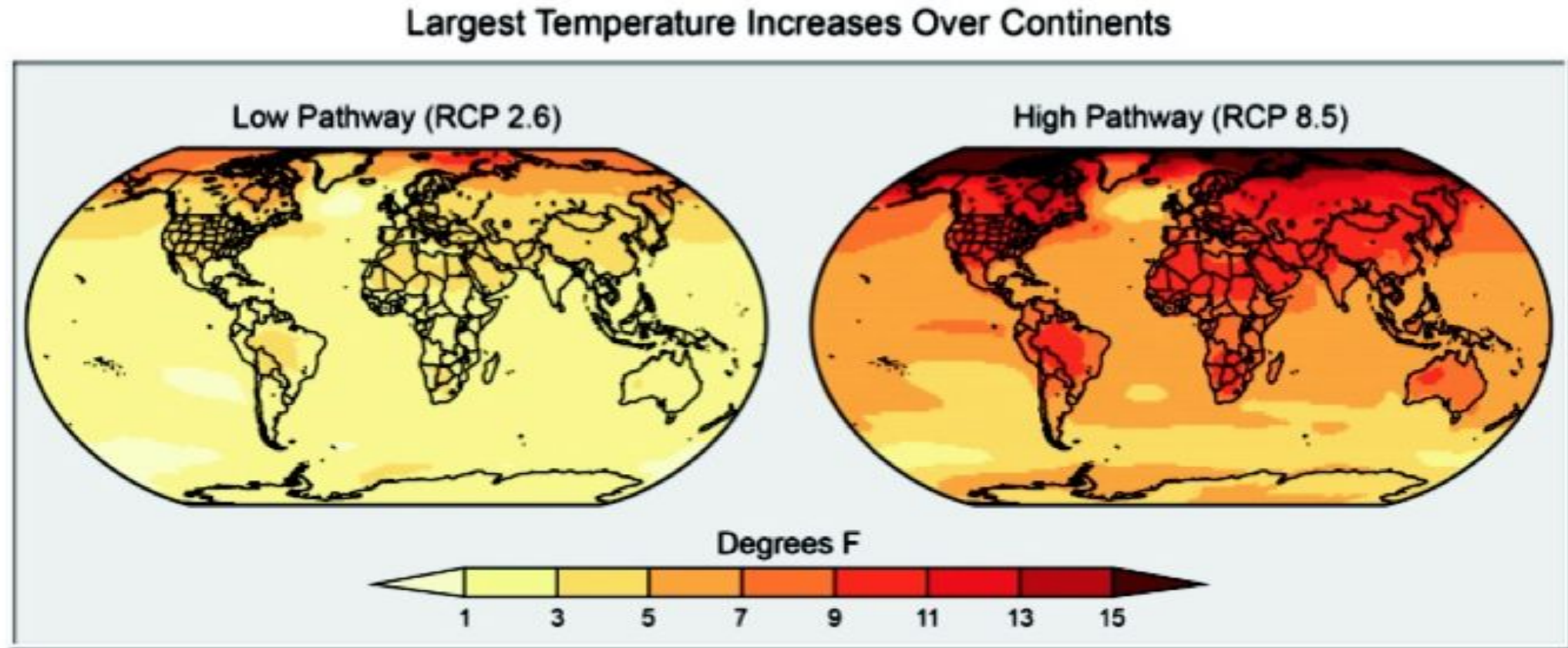
Burnhaven Library
April 9, 2019



Common Values



What will our legacy be?



My Story



Veda Kanitz

Our Agenda

Theory

1

Impacts

2

Solutions

3

Quick Poll

How familiar are you already with the facts and science of climate change?



1 ⇨ I haven't the faintest idea

2

3 ⇨ I'm well-versed in the basics

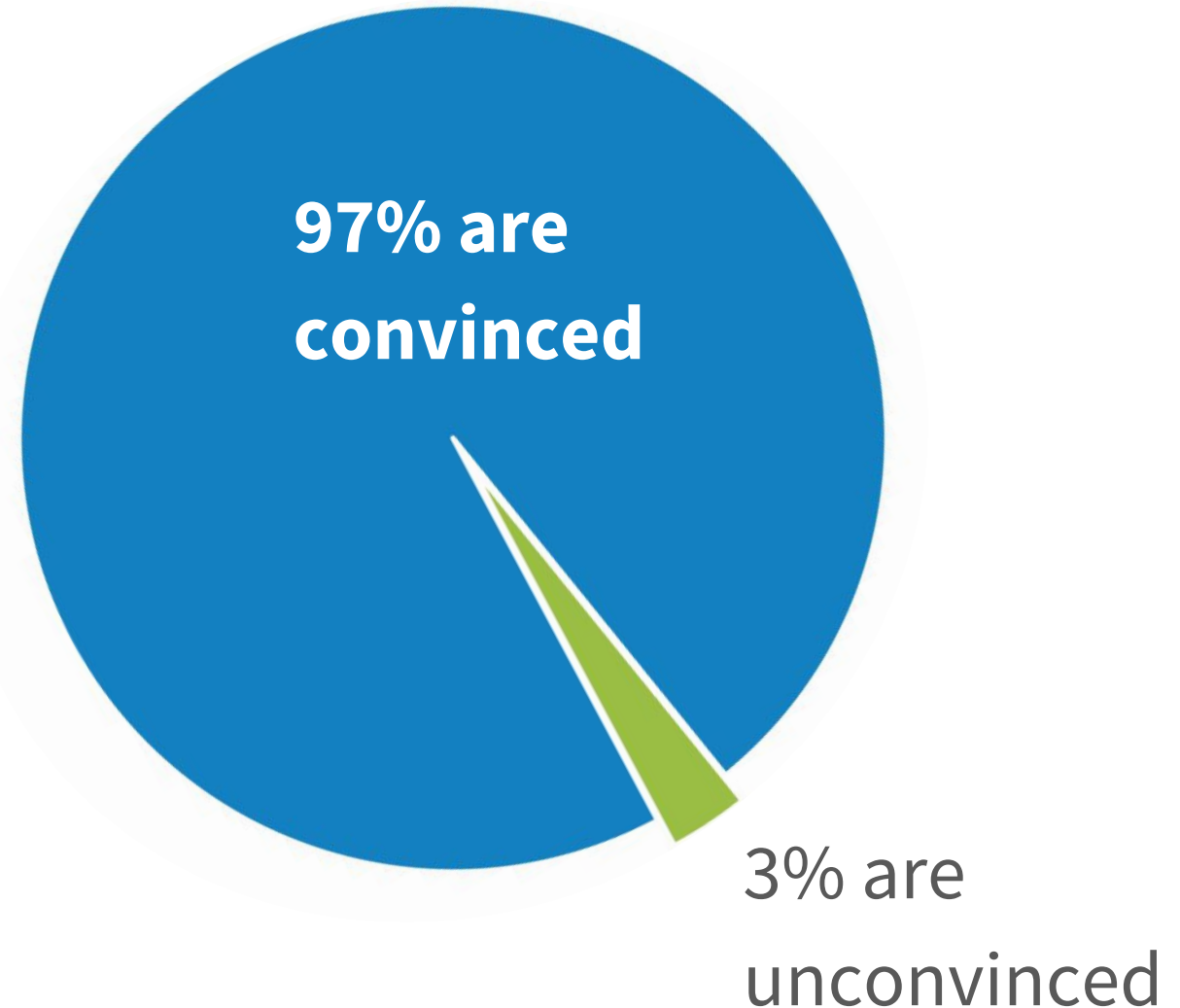
4

5 ⇨ I'm totally up on this stuff

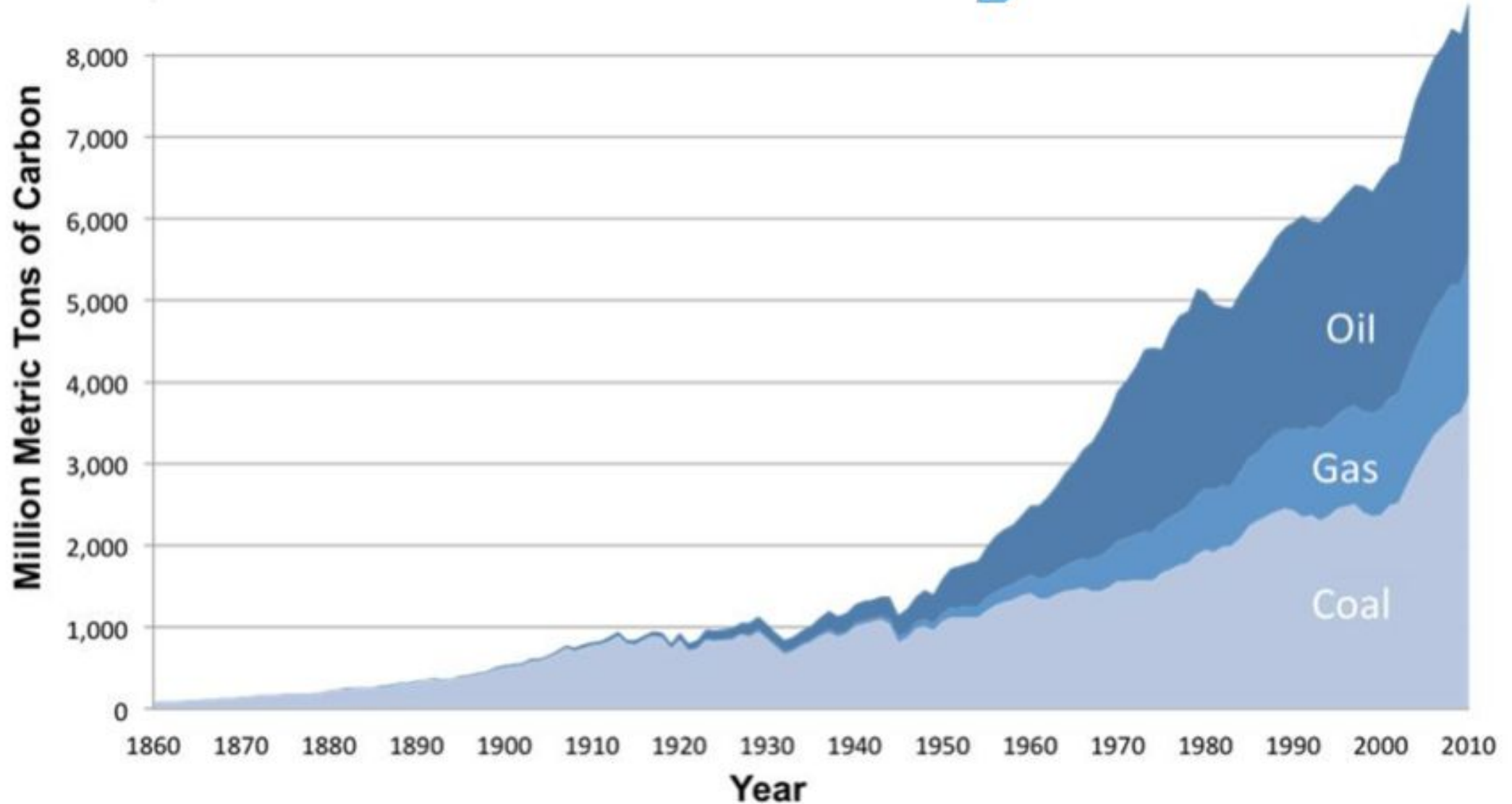
Scientific Consensus on Global Warming

97% of climate scientists agree:

- Global warming is real
- It's caused by increased greenhouse gases
- Human activity is causing almost all the increase.

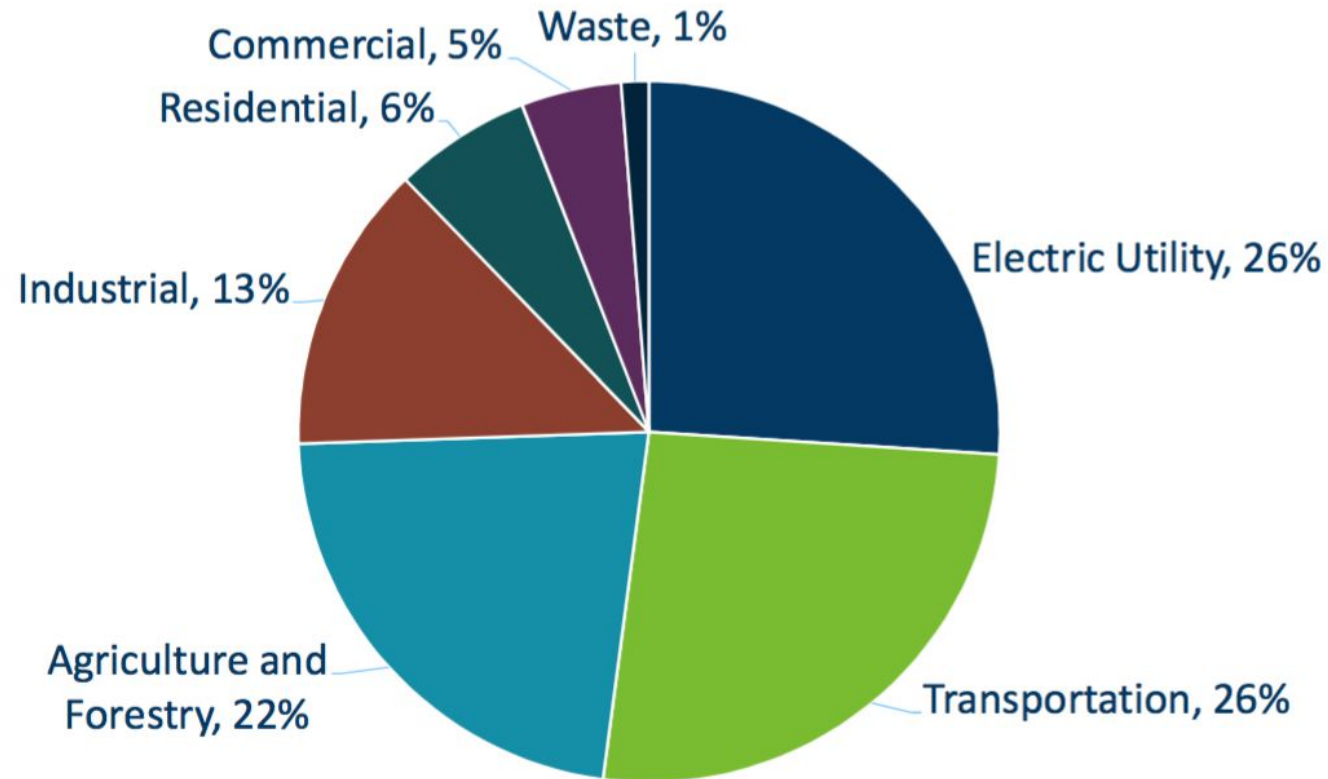


The Biggest Driver Is Fossil Fuels



Minnesota Emission Sources

Greenhouse gas emissions by sector, 2016



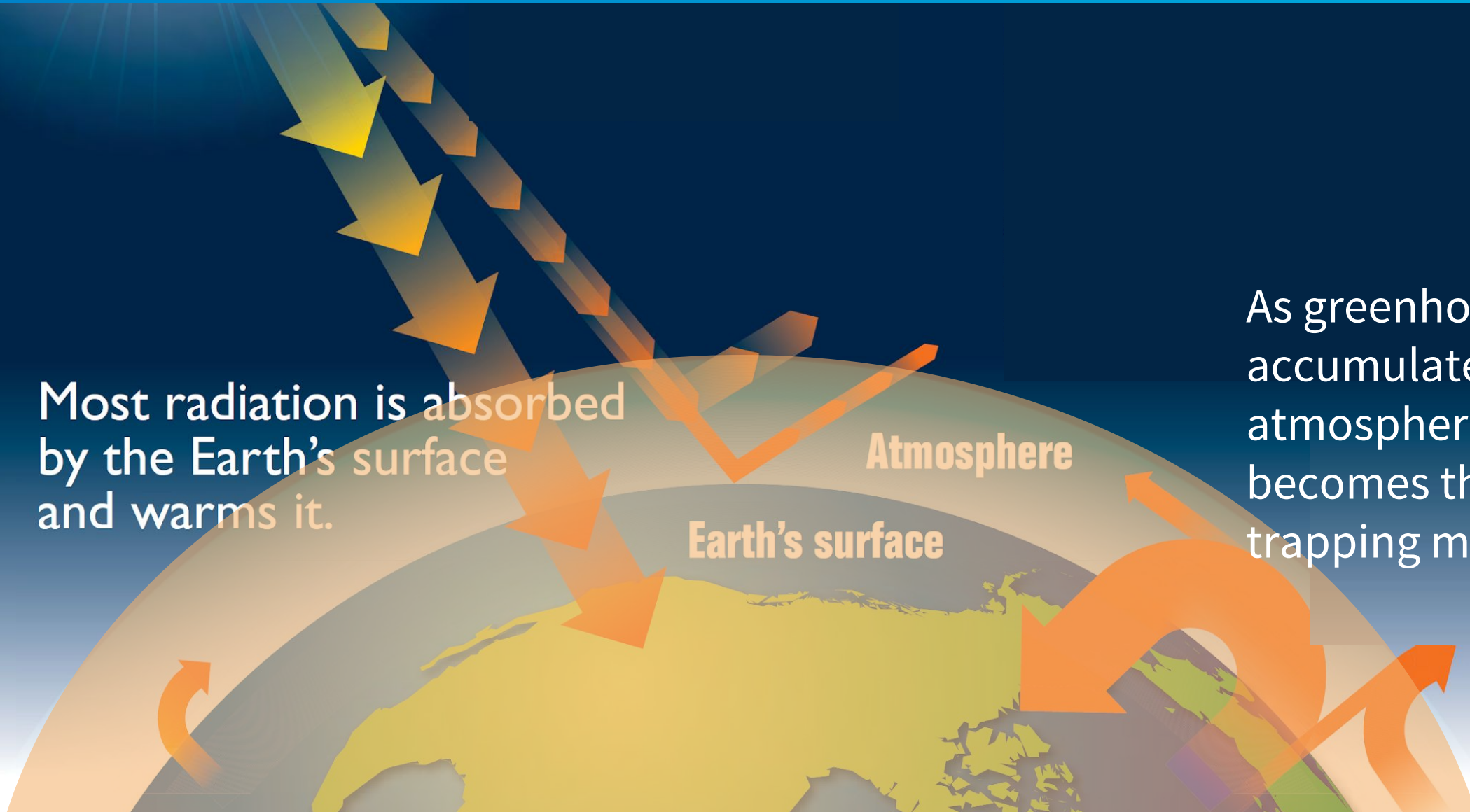
Greenhouse Gases Are Changing The Climate

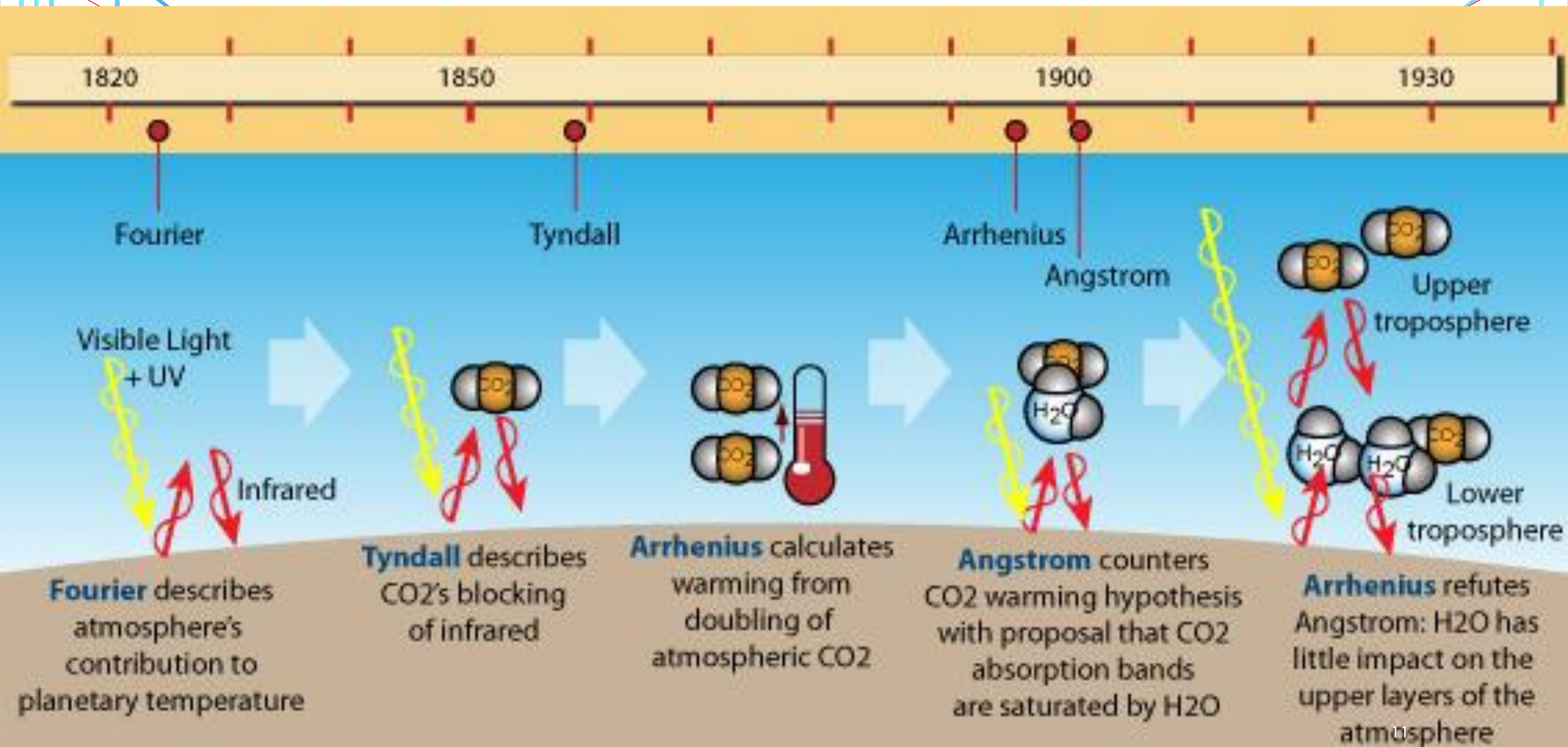
Most radiation is absorbed by the Earth's surface and warms it.

Atmosphere

Earth's surface

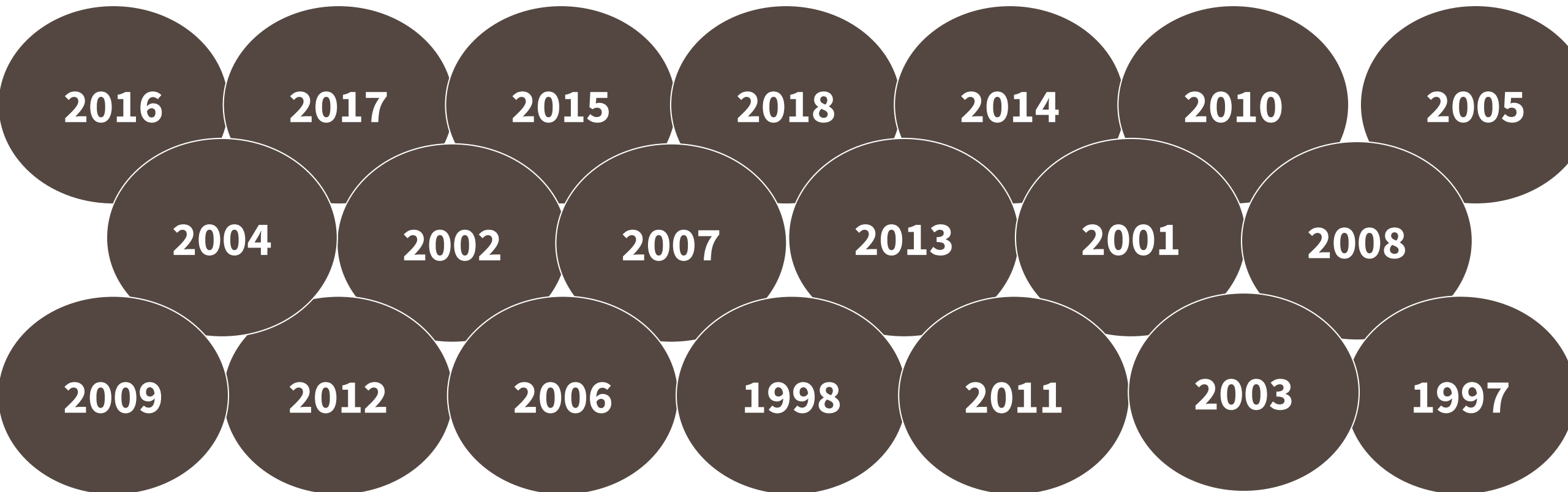
As greenhouse gases accumulate, our atmosphere blanket becomes thicker, trapping more heat.

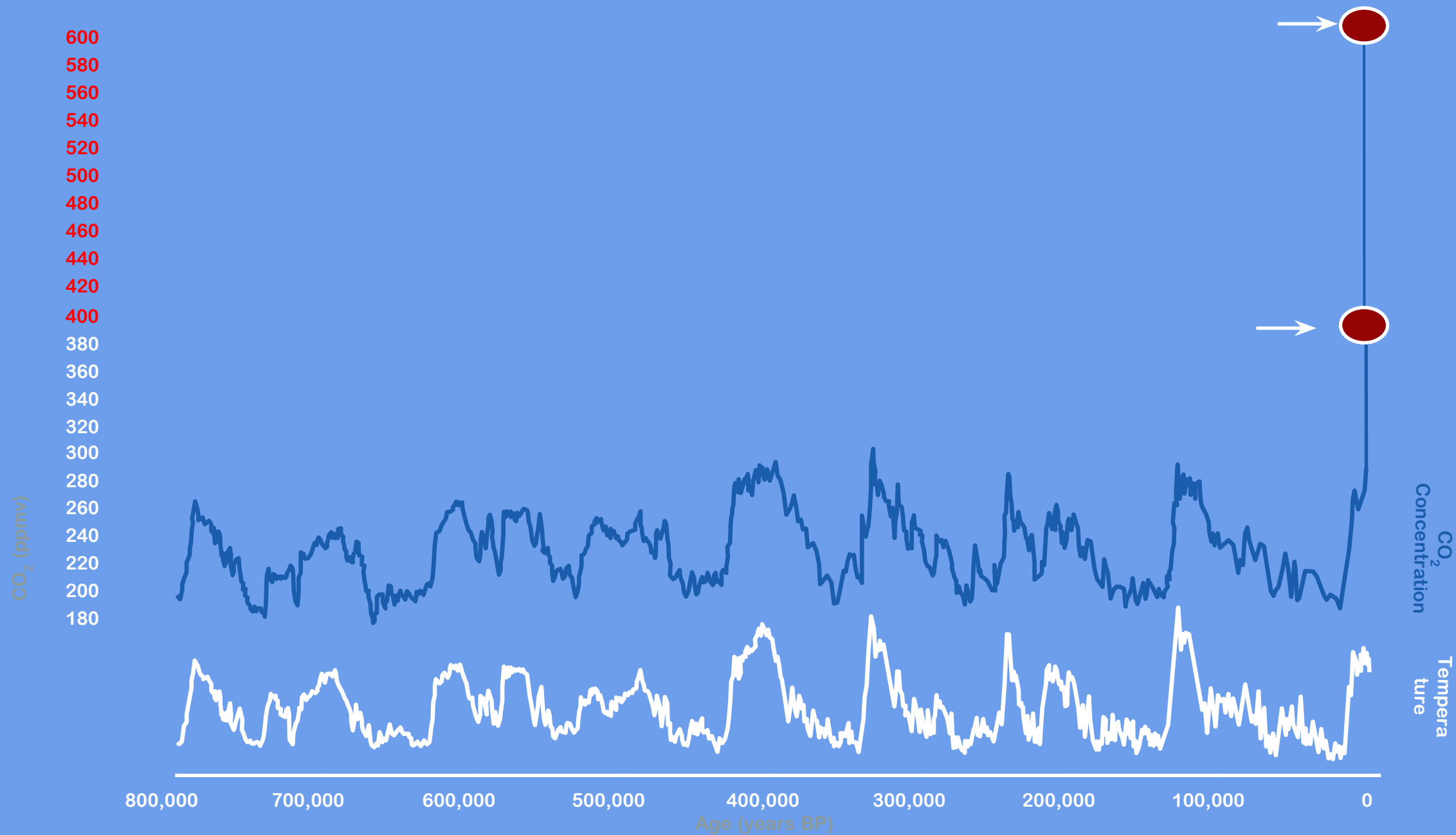




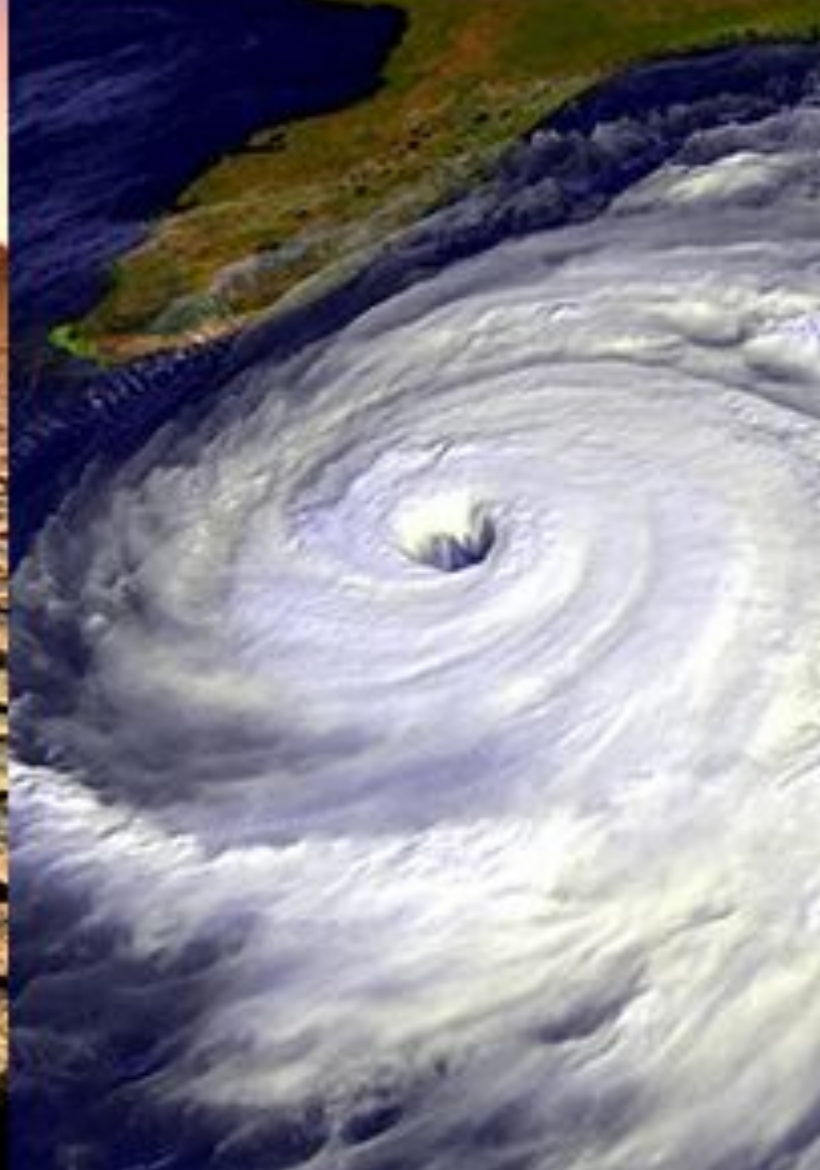
More Carbon Leads To A Warmer Planet

The 20 warmest years **ever** on record have occurred...
during the past 22 years



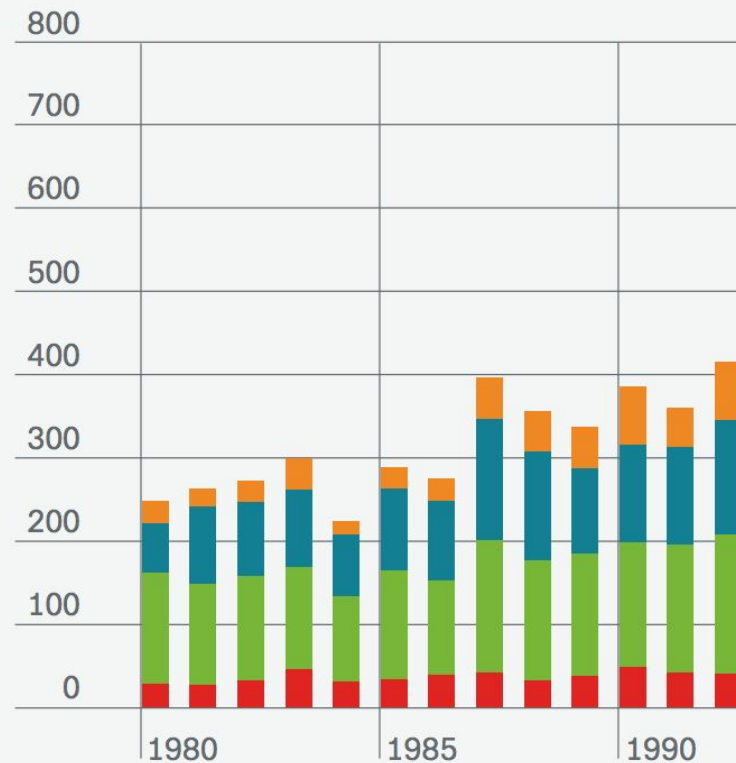


What We're Up Against



Increasing Extreme Weather Events

Number of Events 1980 - 2016



Climatological events

Extreme temperature, drought,
wildfire

Geophysical events

Earthquake, tsunami, volcanic activity

Hydrological events

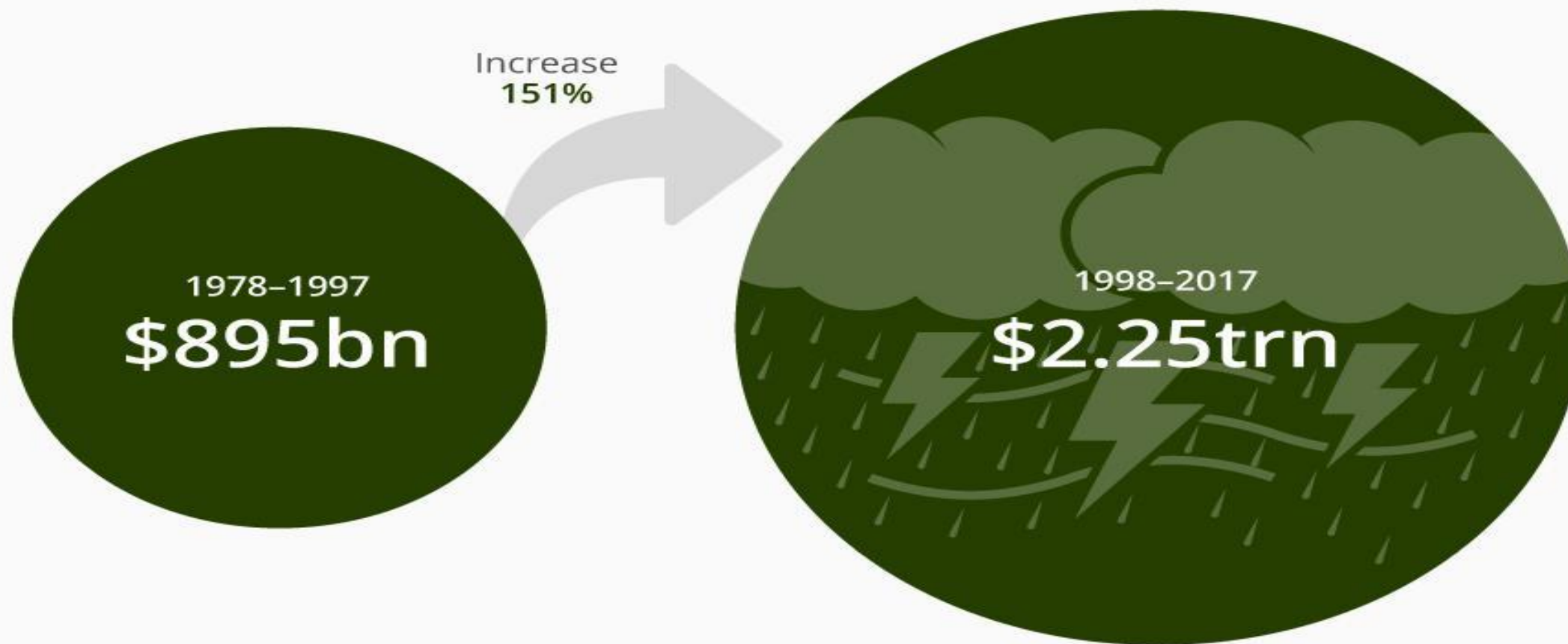
Flood, mass movement

Meteorological events

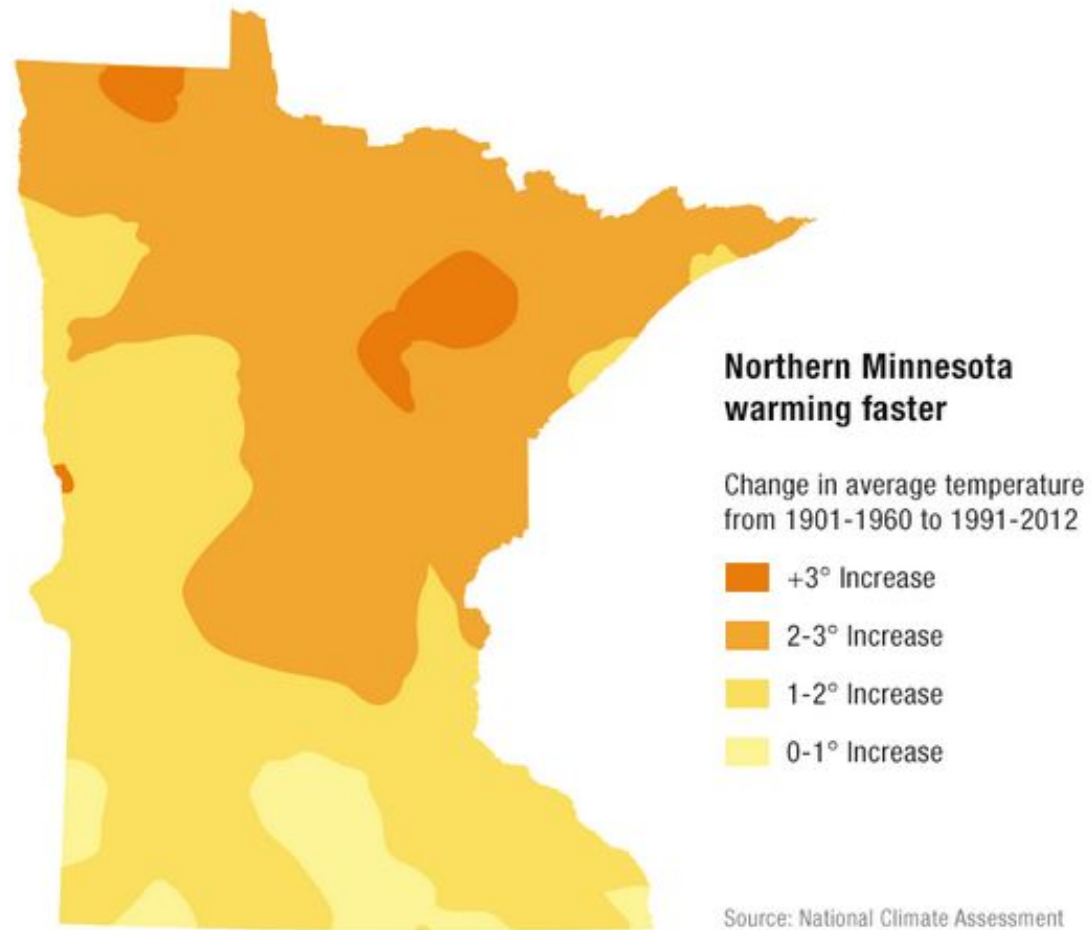
Tropical storm, extratropical
storm, convective storm,
local storm

Cost Of Climate-Related Disasters Soars 150%

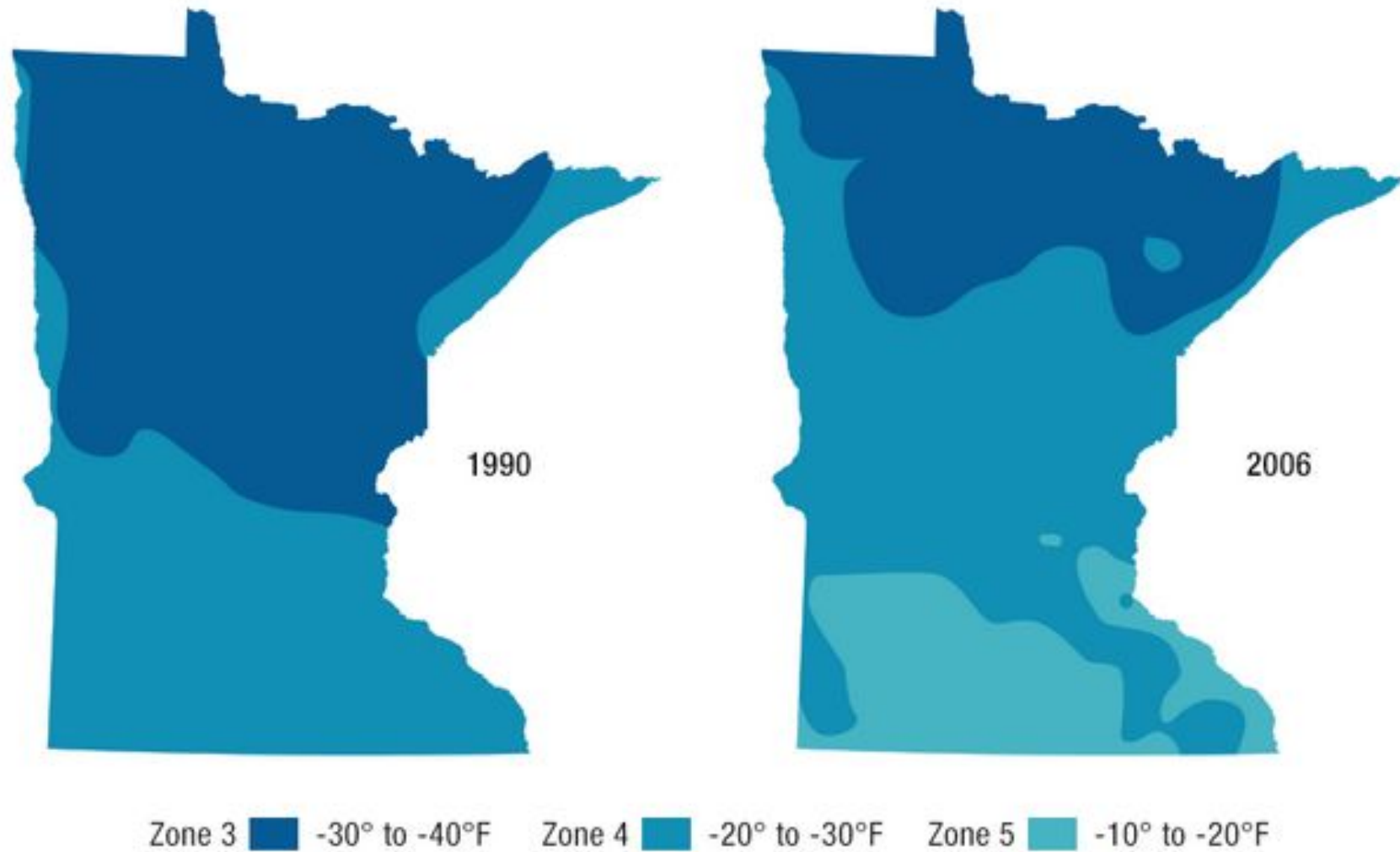
Total economic cost of global climate-related disasters over 20-year periods



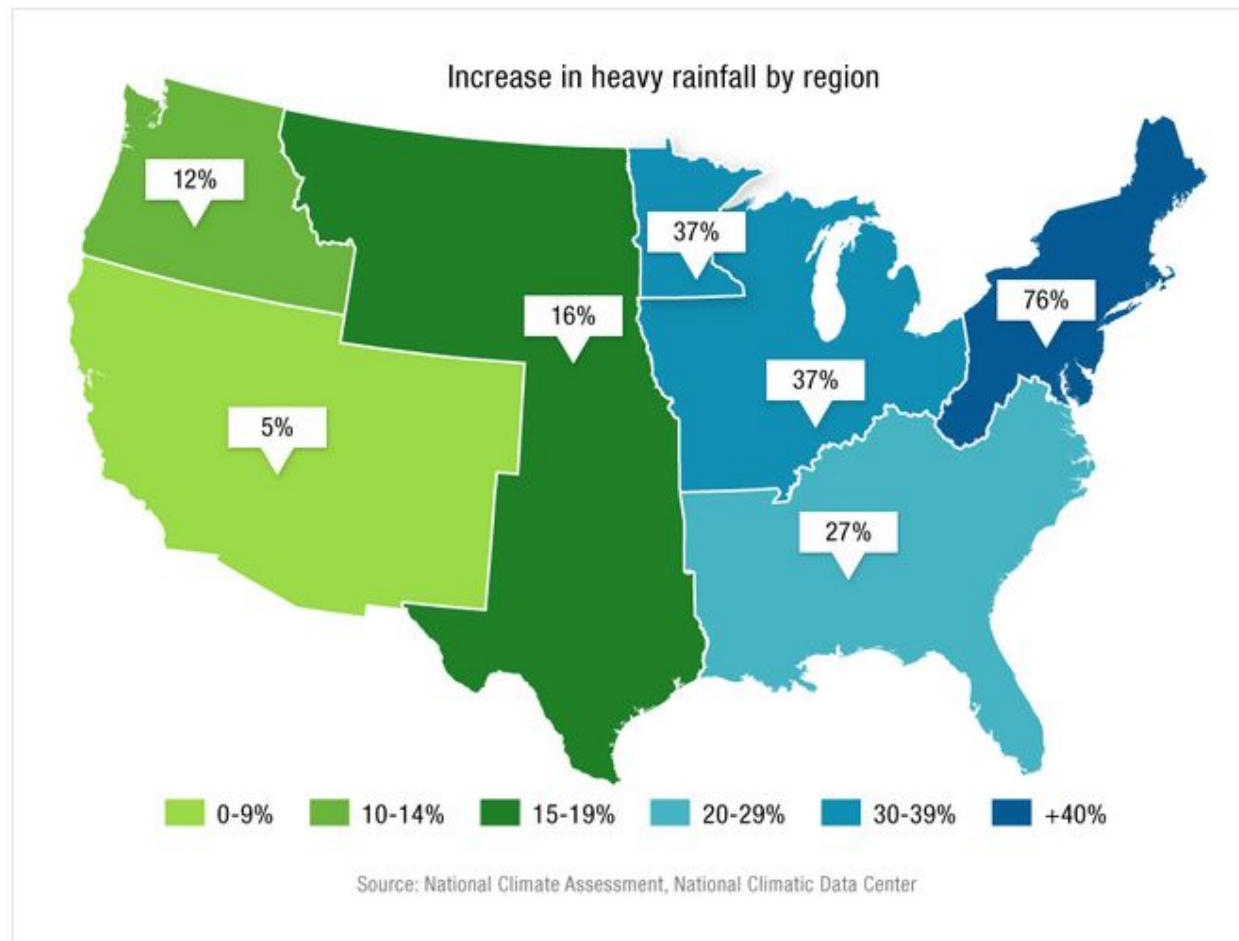
What Does That Mean Here?



Hardiness zone changes in Minnesota



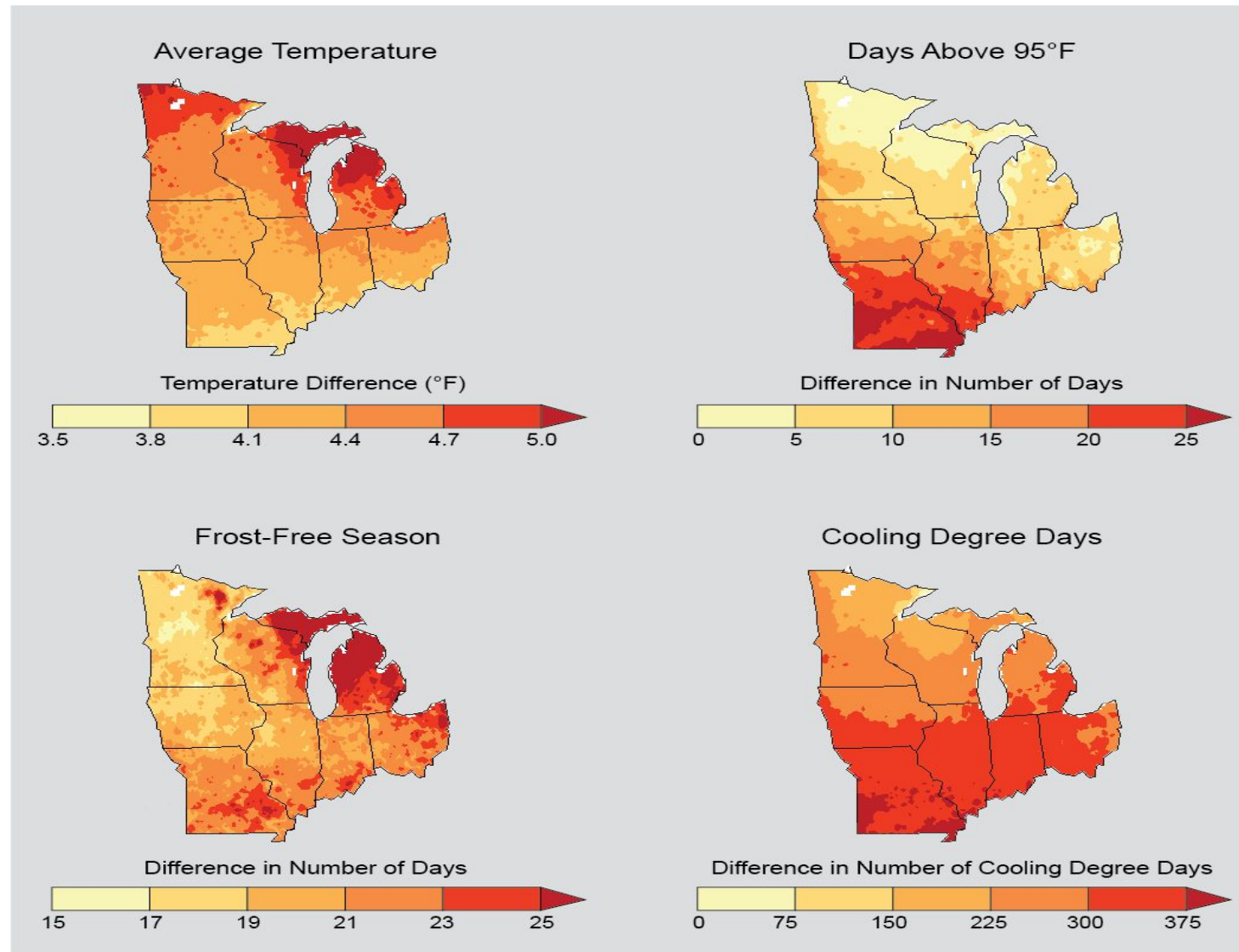
Source: U.S. Department of Agriculture



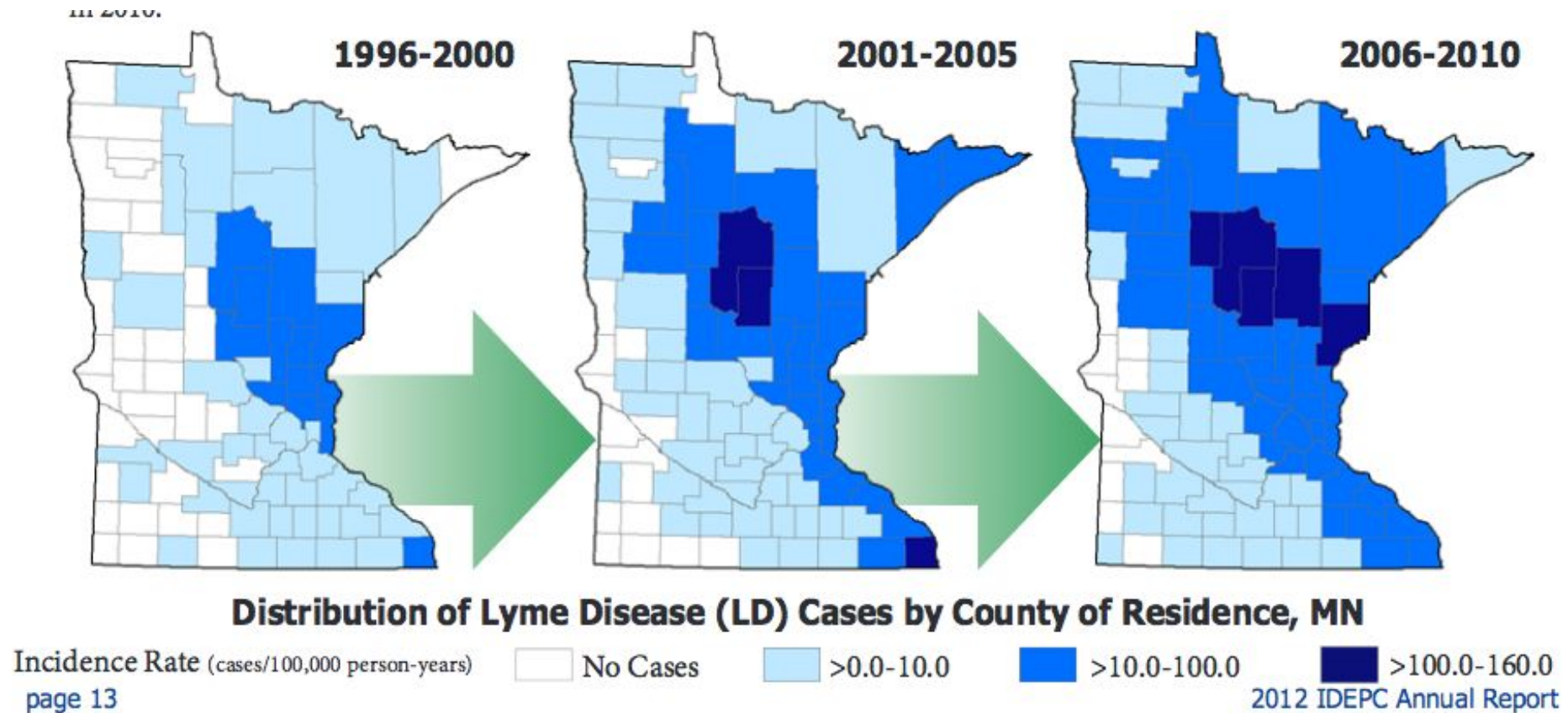
Regional heavy rainfall increases *Jaime Chismar for MPR News*



By Mid-century



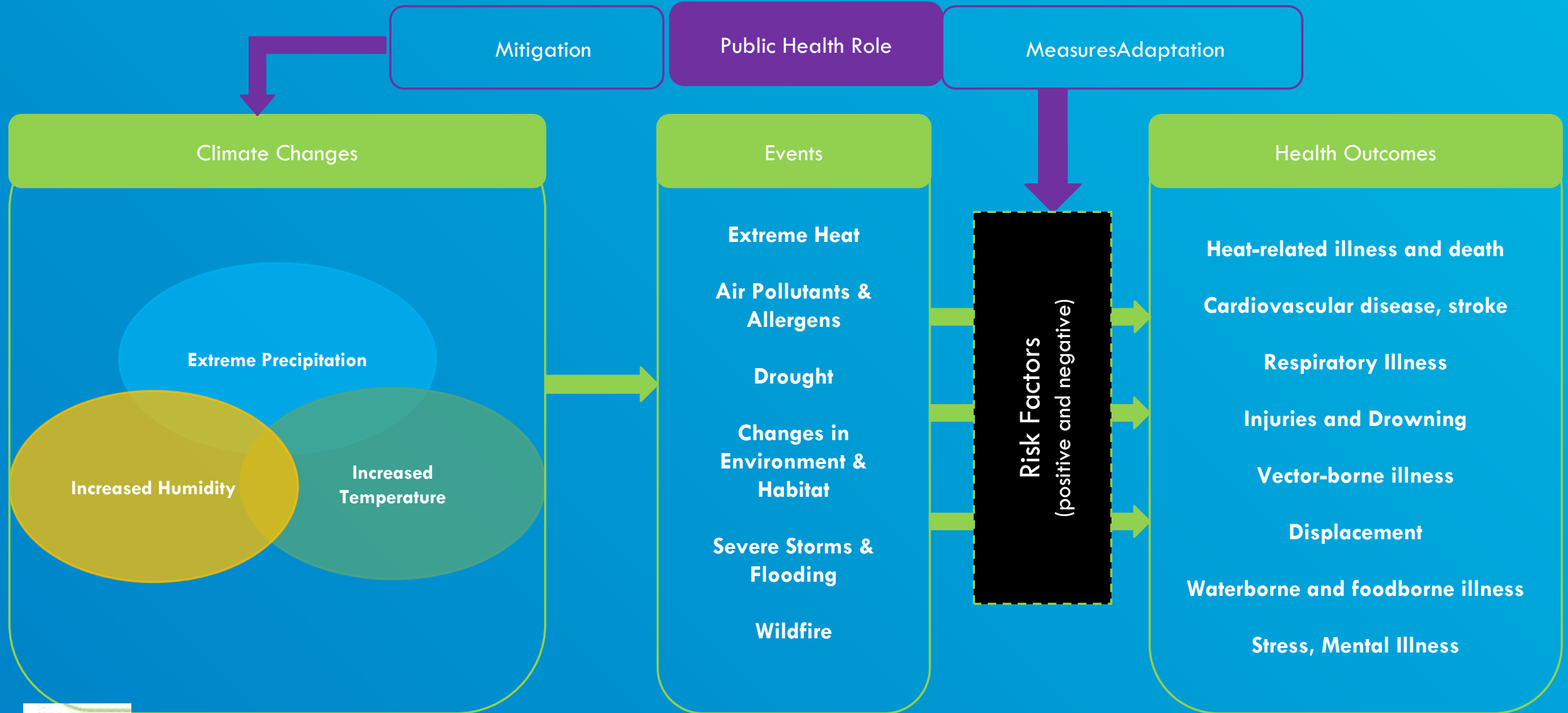
VECTOR BORNE DISEASES



THREATENED

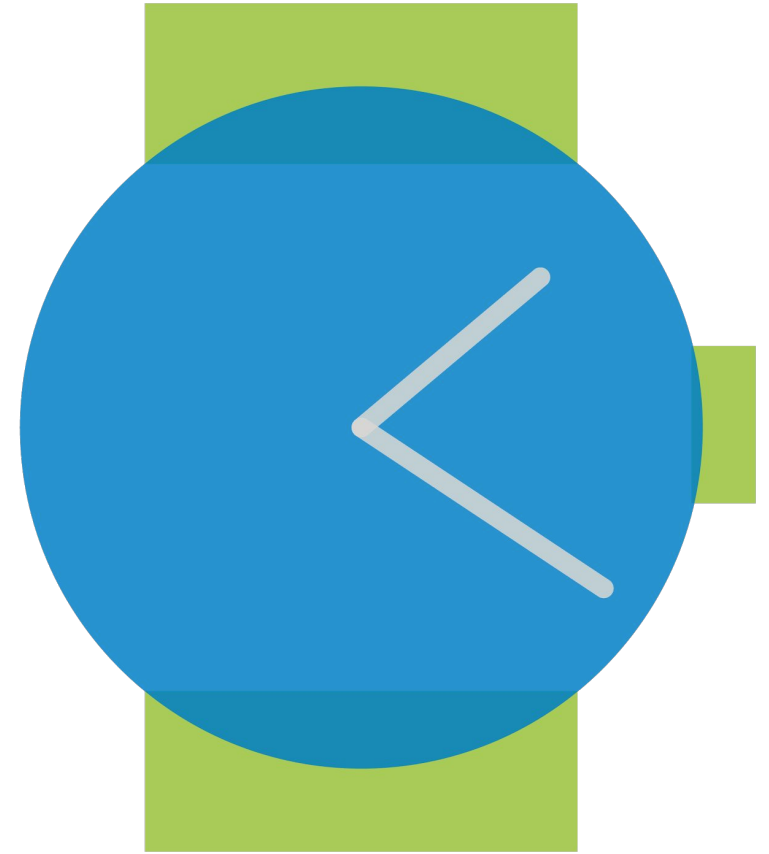


CLIMATE CHANGE AND PUBLIC HEALTH



How Long Do We Have?

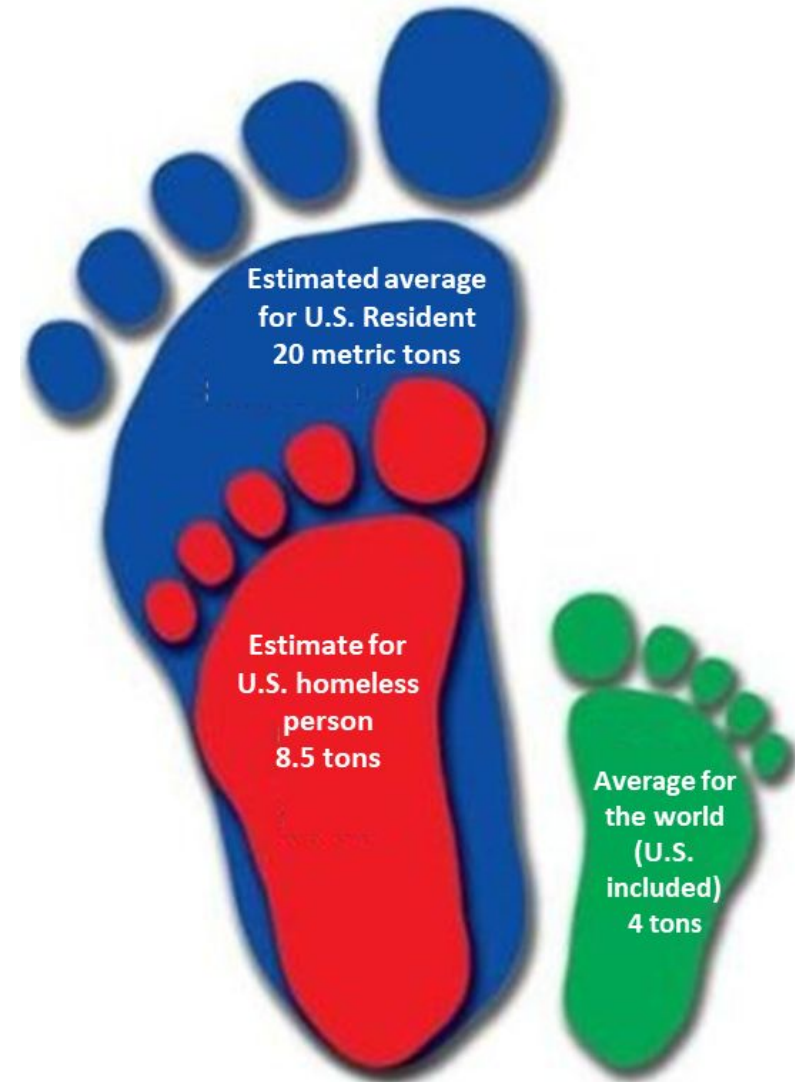
The IPCC reports we must cut emissions in half by 2030 and to near net zero by 2050.



How do we
achieve this?

Personal Actions to Preserve Healthy Climate

- Know your personal Carbon Footprint
- Use a Carbon Footprint calculator
<https://www.carbonfootprint.com/calculator.aspx>
- Set a personal reduction goal for yourself and your family





Regenerative*



CO_2

H_2O

No-Till

*In concert with other regenerative practices can help rebuild healthy soil.

KISS
the
GROUND

Degenerative*



CO_2

H_2O

Till

*In general this practice leads to degeneration of soil health.

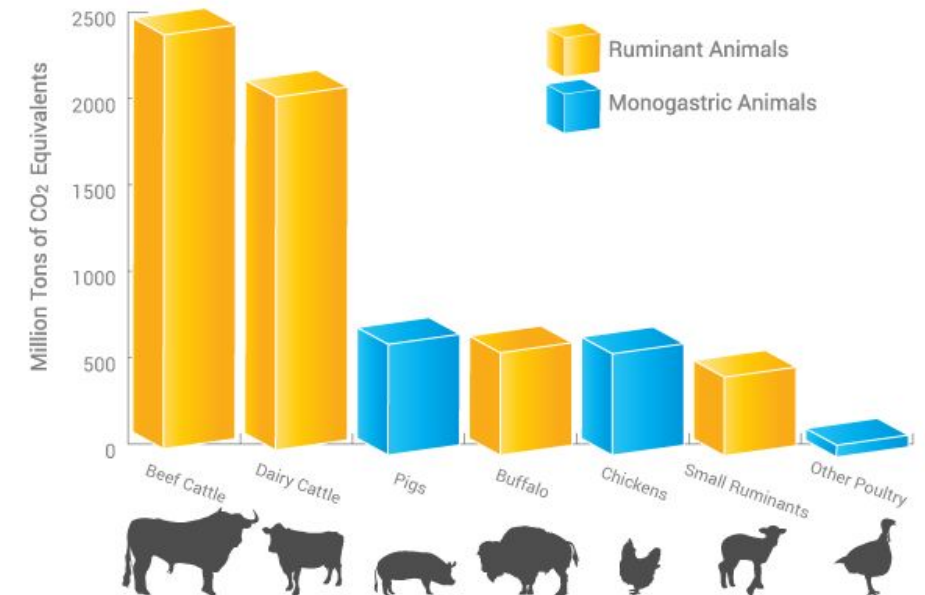
Meat and Dairy Animals

Image Source: Youtube



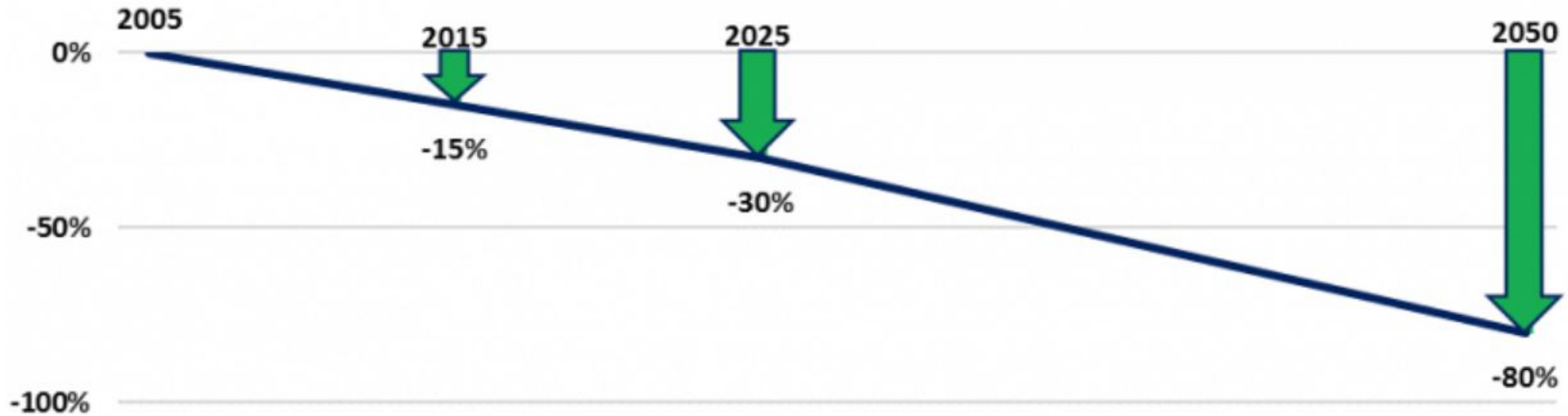
- Emit Methane gas
- Solid manure - CO_2 & Nitrous oxide
- Liquid manure - methane
- Can be used to help sequester carbon with controlled grazing

GREENHOUSE GAS EMISSIONS GLOBALLY BY LIVESTOCK SPECIES



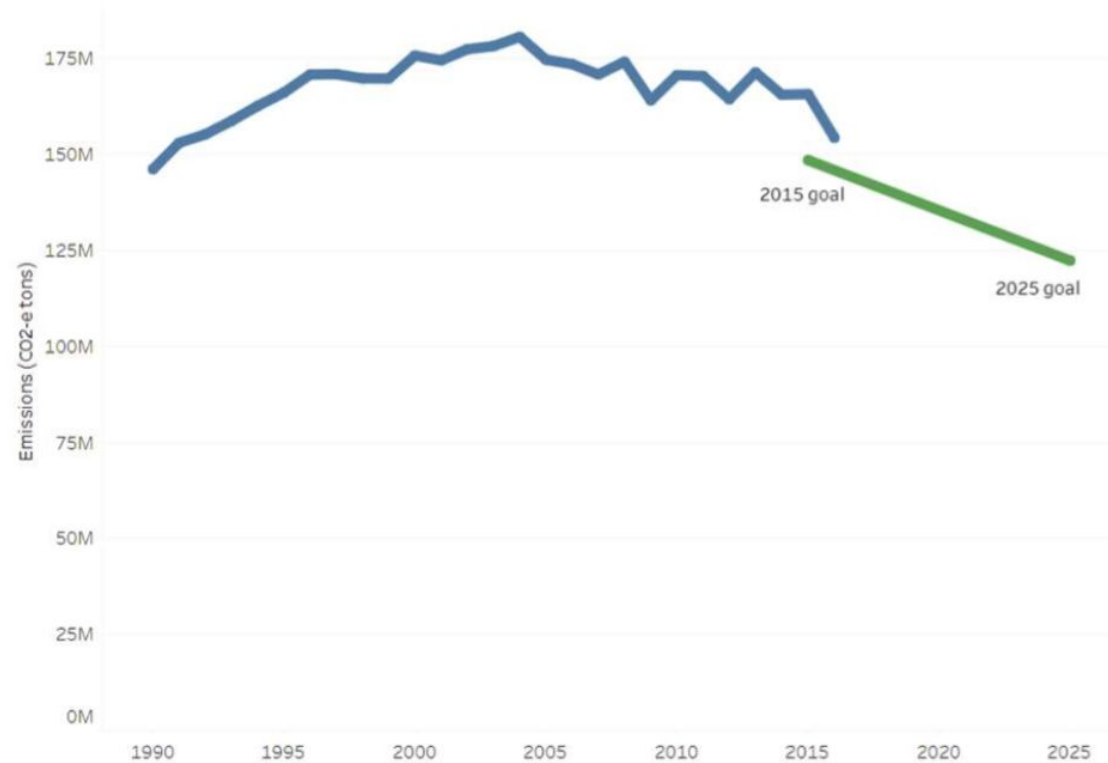
SOURCE: Gerber, P.J., Steinfeld, H., Henderson, B., Mottet, A., Opio, C., Dijkman, J., Faluccci, A. & Tempio, G. 2013. Tackling climate change through livestock – A global assessment of emissions and mitigation opportunities. Food and Agriculture Organization of the United Nations (FAO), Rome.

Next Generation Act



How are we doing?

Progress toward Next Generation Act GHG reduction goals



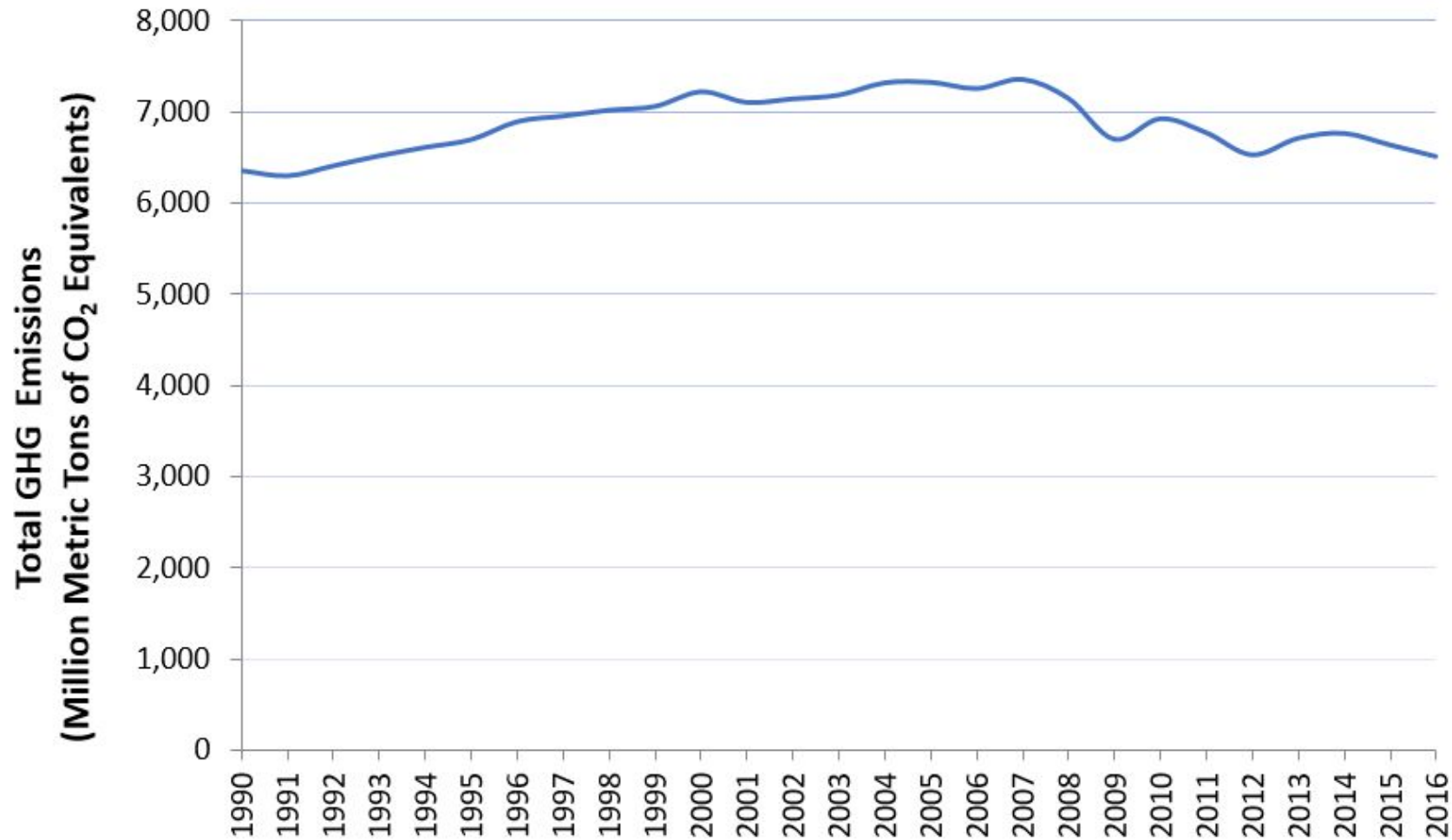
1/22/2019

100% Carbon Free Electricity 2050



US Total Emissions

Total U.S. Greenhouse Gas Emissions, 1990-2016

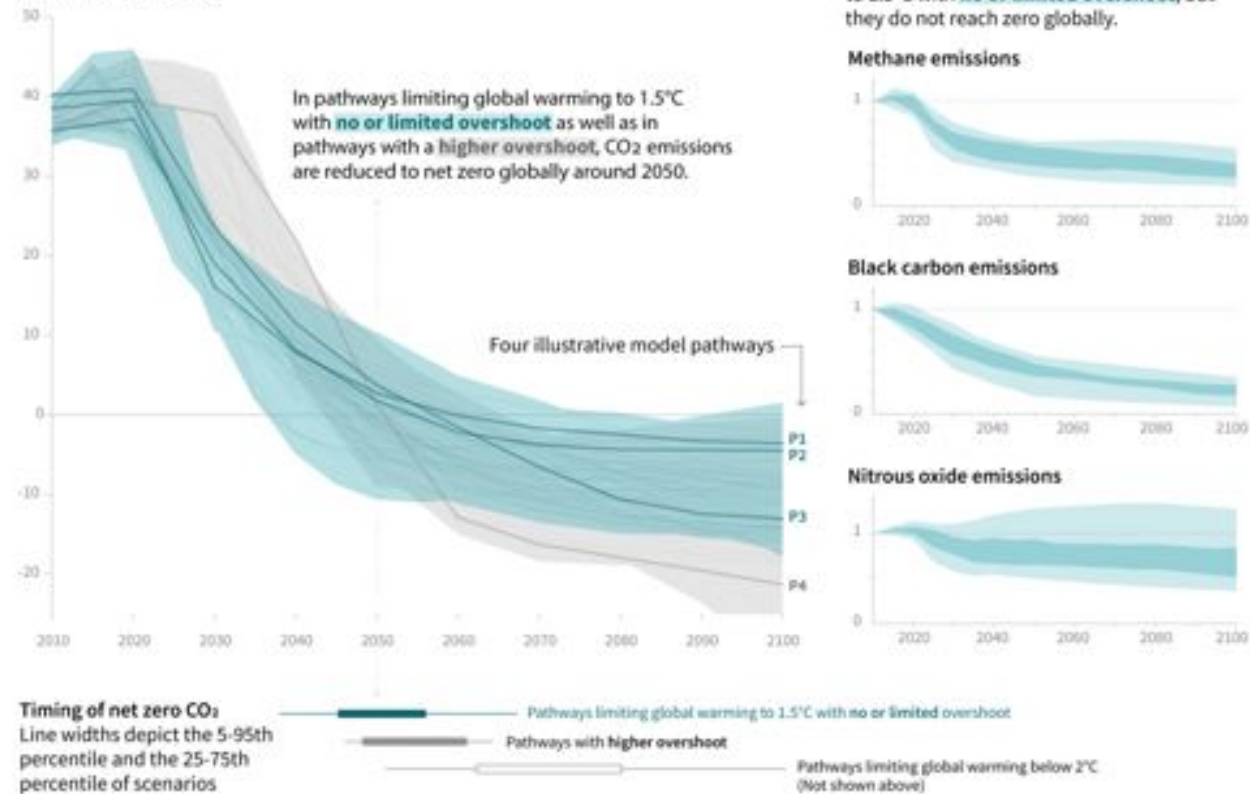


Global emissions pathway characteristics

General characteristics of the evolution of anthropogenic net emissions of CO₂, and total emissions of methane, black carbon, and nitrous oxide in model pathways that limit global warming to 1.5°C with no or limited overshoot. Net emissions are defined as anthropogenic emissions reduced by anthropogenic removals. Reductions in net emissions can be achieved through different portfolios of mitigation measures illustrated in Figure SPM.3b.

Global total net CO₂ emissions

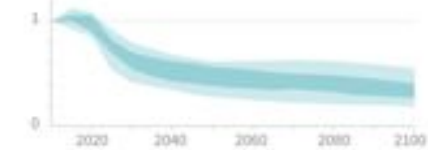
Billion tonnes of CO₂/yr



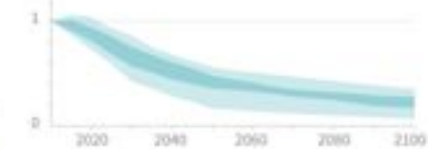
Non-CO₂ emissions relative to 2010

Emissions of non-CO₂ forcers are also reduced or limited in pathways limiting global warming to 1.5°C with no or limited overshoot, but they do not reach zero globally.

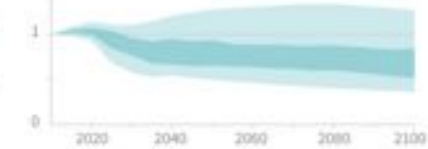
Methane emissions



Black carbon emissions



Nitrous oxide emissions



Which Describes You Best?

1 I think climate change is real and important, but I'm not yet doing much about it.

2 I've taken some steps to reduce my personal choices, but not much more.

3 I actively address climate change through my personal choices and by working for a national policy that lowers greenhouse gases.

Question for Reflection

→ What's keeping me from fully engaging around climate change?

Citizens' Climate Lobby

- **Personal Conviction** - Education and training from one of the largest grassroots climate organizations in USA
- **Path to Success** - Roadmap to effective national climate policy
- **Action Opportunities** - Specific next steps to make a difference today
- **Support** - Chapters organize respectful, non-partisan collaboration



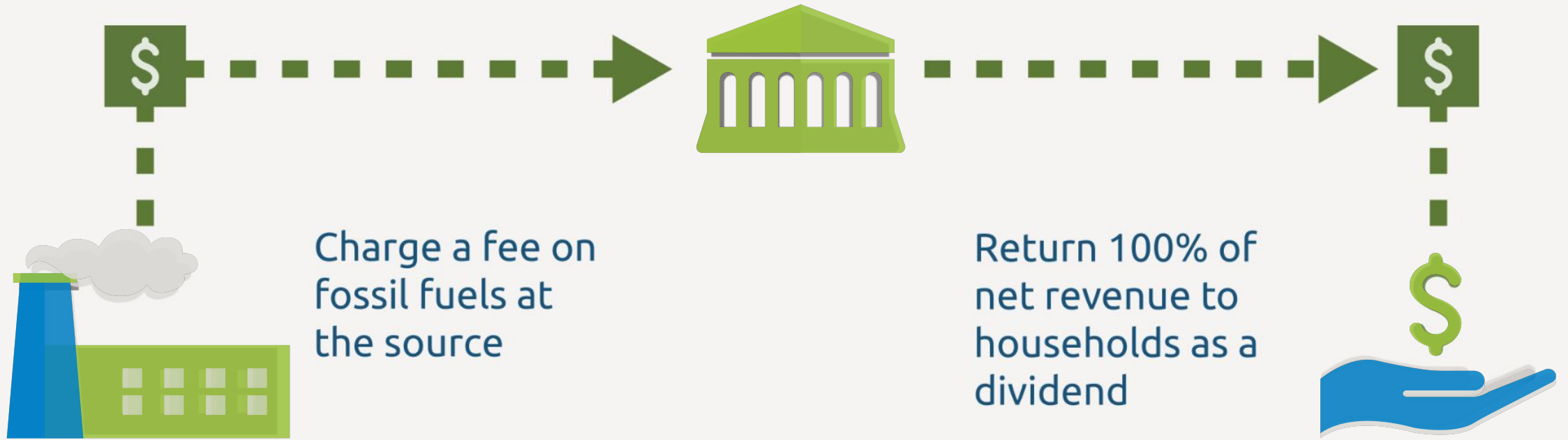
What Makes A Good Climate Solution?

- Drives large scale change quickly
- Uses incentives that support choice
- Fair and “sticky”
- Healthy for the planet and the economy



What Meets These Criteria?

A carbon fee & dividend policy



Energy Innovation AND Carbon Dividend Act

THE BIPARTISAN CLIMATE SOLUTION

H.R. 763



Ted Deutch
(D-FL-22)
Original sponsor



Judy Chu
(D-CA-27)
Original cosponsor



Charlie Crist
(D-FL-13)
Original cosponsor



Anna Eshoo
(D-CA-18)
Original cosponsor



Chellie Pingree
(D-ME-01)
Cosponsor



Mark DeSaulnier
(D-CA-11)
Cosponsor



Adam Schiff
(D-CA-28)
Cosponsor



Angie Craig
(D-MN-02)
Cosponsor



Dan Lipinski
(D-IL-03)
Original cosponsor



Francis Rooney
(R-FL-19)
Original cosponsor



Scott Peters
(D-CA-52)
Original cosponsor



Dean Phillips
(D-MN-01)
Cosponsor



Tom Malinowski
(D-NJ-07)
Cosponsor



Albio Sires
(D-NJ-08)
Cosponsor



Harley Rouda
(D-CA-48)
Cosponsor



Jim McGovern
(D-MA-02)
Cosponsor



Hank Johnson
(D-GA-04)
Cosponsor



Salud Carbajal
(D-CA-24)
Cosponsor



Alcee Hastings
(D-FL-20)
Cosponsor



Susan Wild
(D-PA-07)
Cosponsor



Yvette Clarke
(D-NY-09)
Cosponsor



Jackie Speier
(D-CA-14)
Cosponsor



Jan Schakowsky
(D-IL-09)
Cosponsor



Gerald Connolly
(D-VA-11)
Cosponsor



Yvette Clarke
(D-NY-09)



Jackie Speier
(D-CA-14)



Jan Schakowsky
(D-IL-09)



Gerald Connolly
(D-VA-11)



Barbara Lee
(D-CA-13)



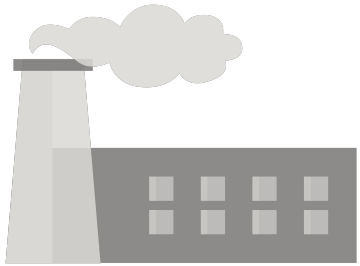
Gil Cisneros
(D-CA-39)



Gil Cisneros
(D-CA-39)

Energy Innovation AND Carbon Dividend Act

How It Works



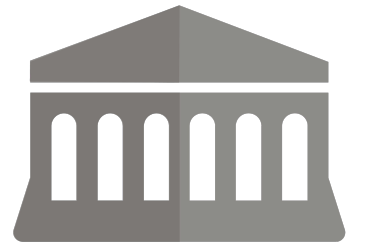
Carbon
Fee



Carbon
Dividend



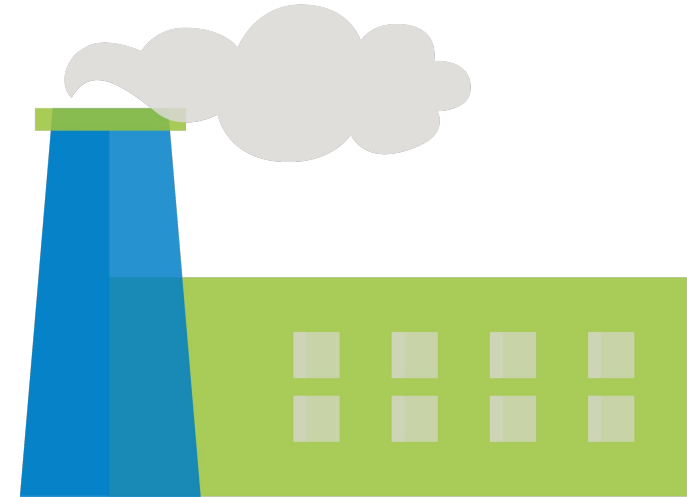
Border
Carbon
Adjustment



Limited
Regulatory
Adjustment

1. Carbon fee

Places a fee on coal, oil, and gas. It starts low, and grows over time.



2. Carbon dividend

The net revenue collected from the carbon fee is allocated in equal shares every month to the American people.



3. Border adjustment

Imported goods will pay a border carbon adjustment, and goods exported from the United States will receive a refund.



4. Limited regulatory adjustment

Prevents additional regulations on CO₂ emissions as long as emission targets are being met.

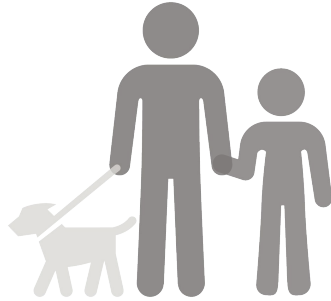
Regulations based on other pollutants, auto mileage standards, water quality, and more won't be affected.



Energy Innovation AND Carbon Dividend Act



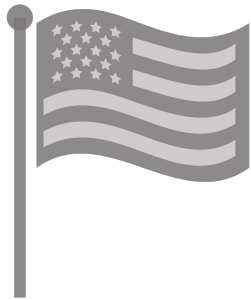
Effective



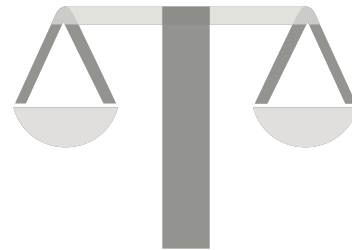
Good for
people



Good for the
economy



Bipartisan



Revenue Neutral

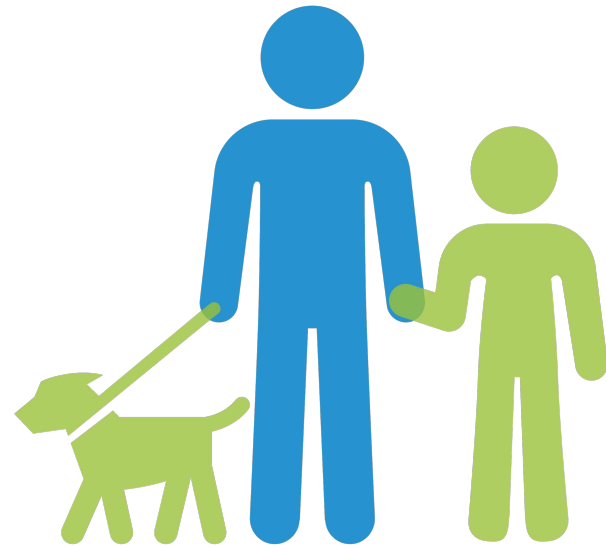
Effective

- This policy will reduce America's emissions by at least 40% by 2030 and 90% by 2050
- It's supported by economists and scientists as simple, comprehensive, and effective.



Good for people

- This policy will improve health and save lives by reducing pollution that Americans breathe.
- The carbon dividend puts money into people's pockets every month to spend as they see fit, helping low and middle income Americans.



This benefits people, the economy, and the environment

FAMILIES GET PAID

TODAY

\$0

paid to households
in carbon dividends



THE FUTURE

\$3,456

annual dividend for a family of 4



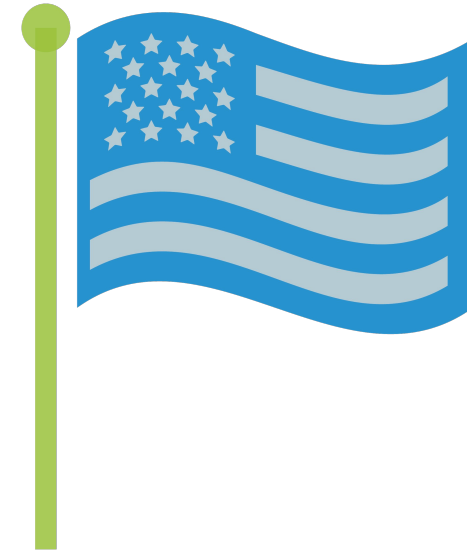
Creates jobs

This policy will create 2.1 million additional jobs over the next 10 years as the dividend helps families across America thereby stimulating the economy.



Bipartisan support

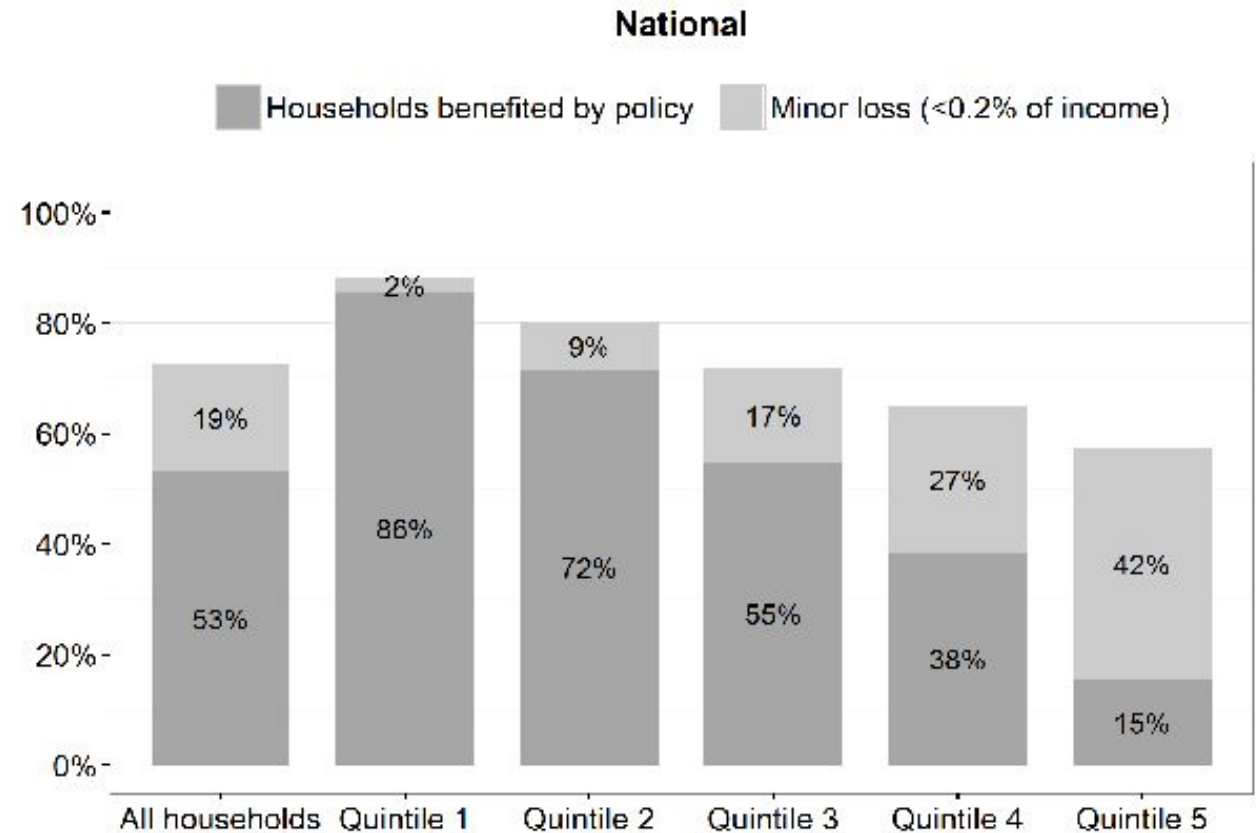
- Republicans and Democrats are both on board, cosponsoring together.
- The majority of Americans support Congress taking action on climate change.
- Solving climate change is too urgent to get caught up in partisan politics.



Revenue neutral



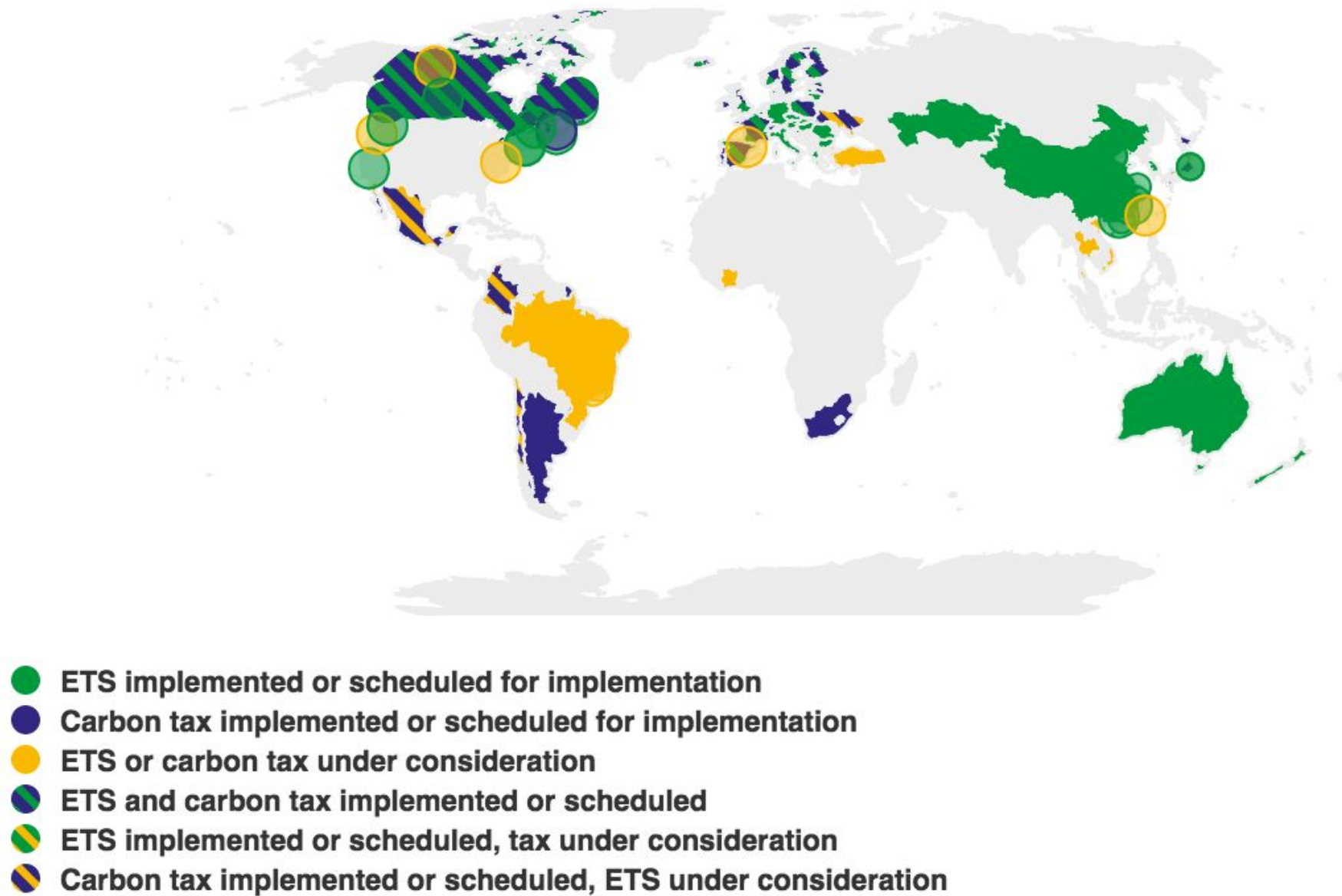
- The fees collected on carbon emissions will be allocated to all Americans to spend how they choose.
- The government will not keep any of the fees collected, so the size of the government will not grow.



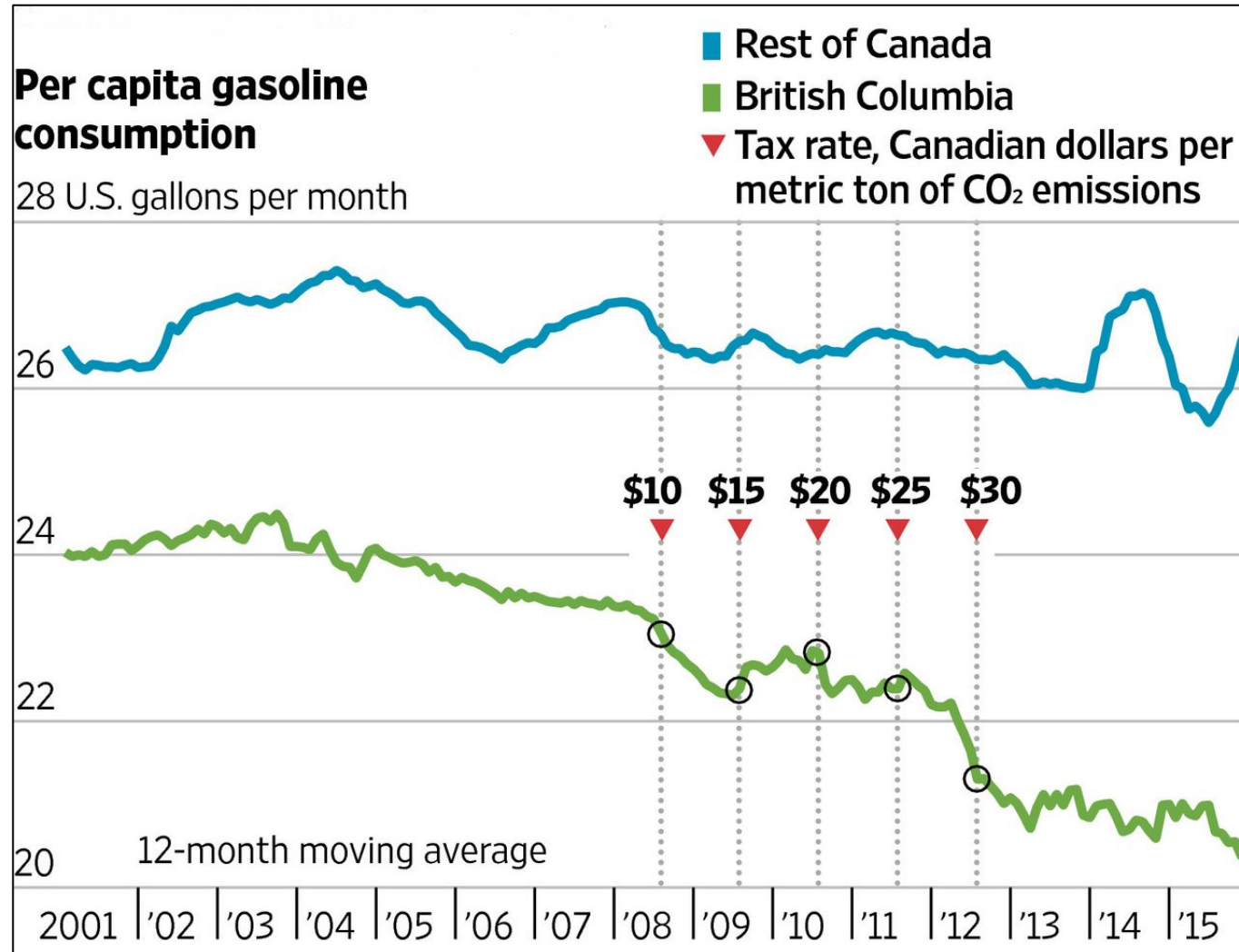
Why Not Regulations?

- Worked well for some pollutants
 - leaded gas, acid rain
- GHGs difficult - so many sources
- Clean Power Plan - hung up in courts
- Economic loss
- Partisan issue

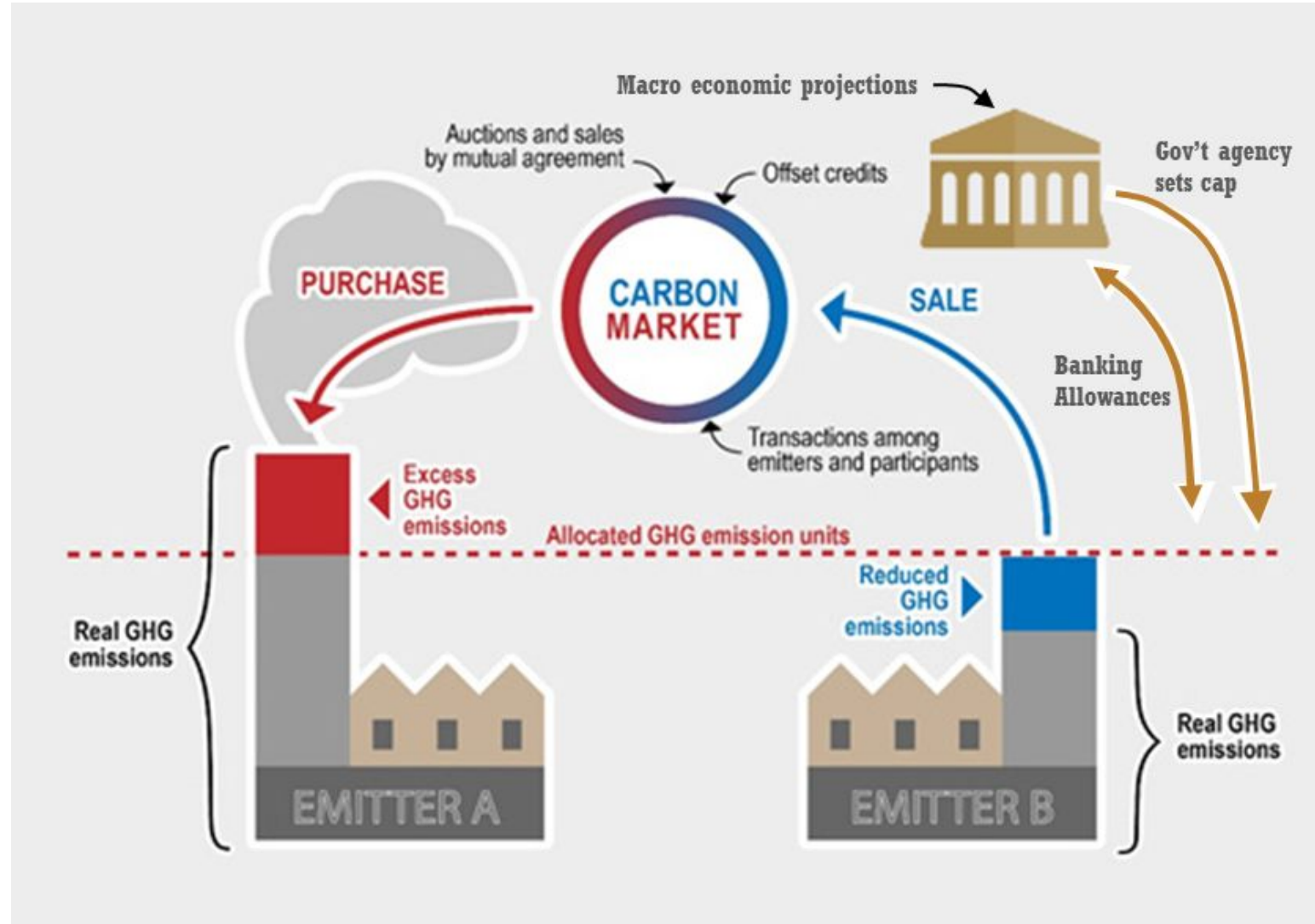
Summary map of regional, national and subnational carbon pricing initiatives



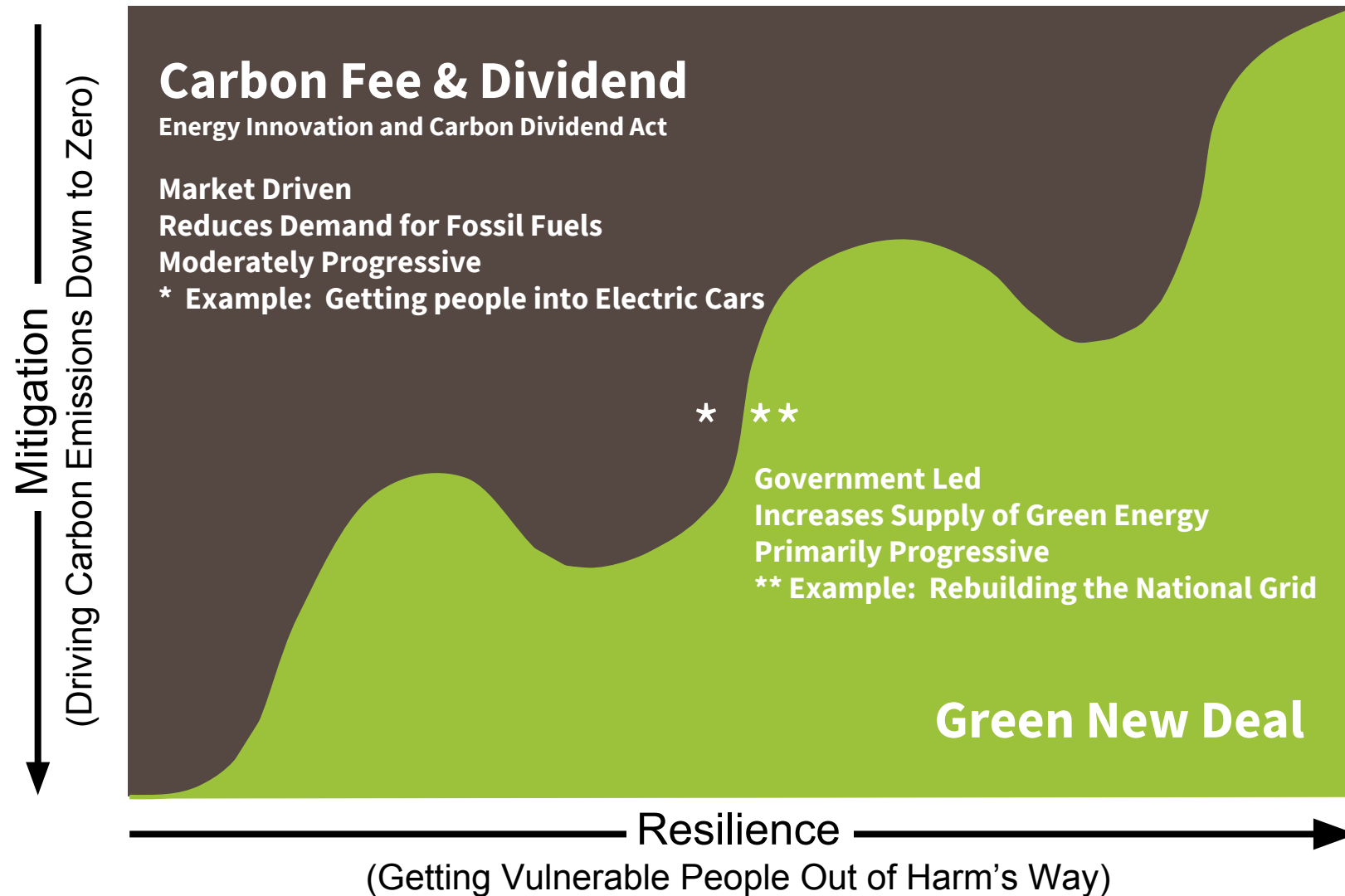
Proven Success in Canada



Cap and Trade Approach

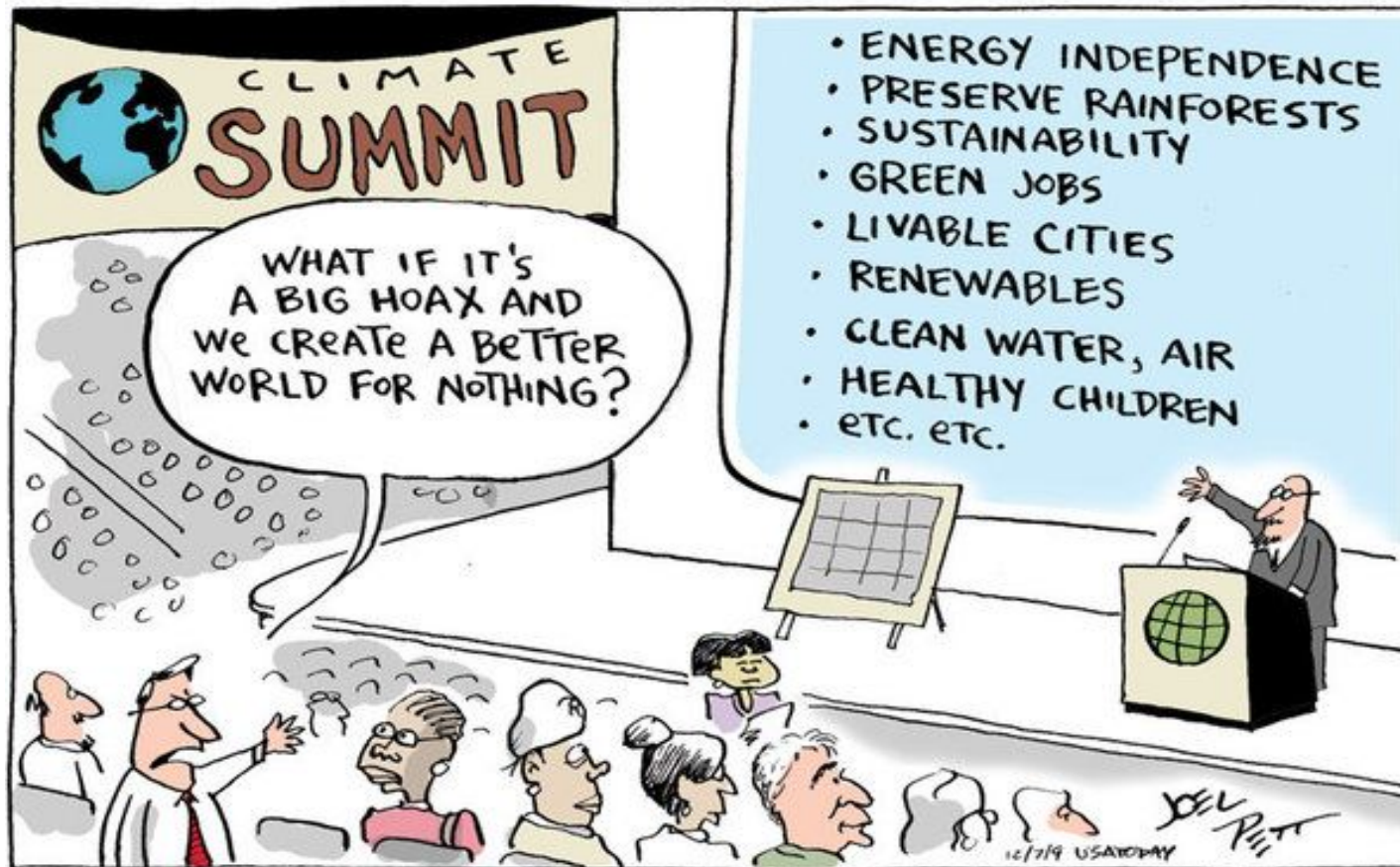


Compatible with the Green New Deal



Good for the Economy

And Climate!



Build Political Will to Act on Climate



What's Your Action Plan?

- Continue to act locally
 - Share what you know about climate change
- Advocate for an effective national policy



Get More Information

- **CCL Info Session**
Hosted live weekly on
Wednesdays at 8 pm ET:
cclusa.org/intro
- More about the
Energy Innovation Act:
energyinnovationact.org



Tap the Power of CCL Chapters

Local chapters - 2nd Saturday

- Prior Lake, Shakopee, Savage
- Northfield
- Lakeville, Burnsville, Eagan, Rosemount



Chapters: Grassroots Outreach

CCL volunteers engaged in **3,072** outreach events in their community in 2018.

- Farmers markets
- Film Screenings
- CCL Climate Meet-ups



Chapters: Engage Local Leaders

CCL volunteers tallied **3,675** endorsements for climate action and carbon fee and dividend policies through 2018.



Chapters: Use the Media

CCL volunteers wrote
4,173 letters to the editor
and newspaper op-eds in
2018

- Join our letter writing parties
- Follow us online:
[Facebook](#), [Twitter](#)

The other day I was running errands around town, enjoying the smooth quiet ride of my electric car. I heard on the radio that President Donald Trump created a working group tasked with refuting the scientific and economic facts about climate change. As I plugged my car into the free charging station at the Lakeville HyVee store, I puzzled over how they would accomplish this and, more importantly, why. To most Americans it's now clear that climate change causes escalating human misery and economic hardship. The cost of continuing to use fossil fuels far outweighs the benefits, especially when there are cheaper, cleaner alternatives that will boost the economy. Why work toward a dark and troubled future when a much brighter one is within reach? During lunch at the Market Grill, I read about a climate change bill recently introduced in the U.S. House (House Rule 763). It would charge fossil fuel production companies a carbon fee, and return the proceeds entirely and equally to U.S. citizens; a market-based solution that would grow the economy, but not the government. The bill is sponsored by 14 Democrats but only one Republican. I was puzzled why more conservatives don't support a solution that fits their small-government, free-market ideology.

Join Our Next Visit To Congress!

CCL volunteers held **1,398** meetings with members of Congress and staff in 2018.

- Join in-district visits with your Members of Congress
- Come to our annual Conference & Lobby Day, June 9 - 11th, 2019 in Washington, DC:

cclusa.org/conference



Let's Discuss!

- What did you learn (or re-learn) today that is important or energizing?
- What actions will you take?
 - Local action
 - CCL / national policy action
- What questions do you have?

Common Values



Thank You!

Veda Kanitz

E-mail: vmkanitz@gmail.com

Phone: 952 237 3751

Chapter: Dakota County Chapter



Citizens' Climate Lobby

www.citizensclimatelobby.org