

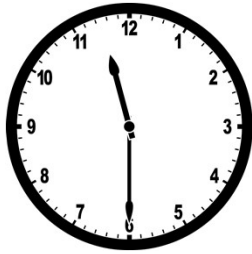
# Climate Change: What do we need to do?

Coty Keller  
Jones Beach Nature and Energy Center  
September 18, 2021

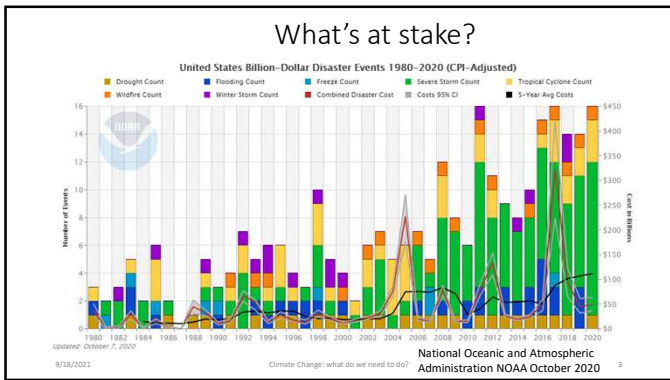
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## Agenda

- What's at stake?
- Causes
- What we need to do:
  - Federal level
  - State government
  - Local
  - In our own realms
- Q&A, Discussion



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## Climate Injustice

- Least responsible for the crisis are suffering the gravest consequences (poor, people of color and indigenous communities)
- Living in shadow of polluting industries
- Responses to climate change reproduce or exacerbate existing inequalities (climate gentrification)


Union of Concerned Scientists faith leader conference 2020.



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## Global warming - threat to national security

- Overseas threat multiplier
  - Scarcities increase resource competition
  - Aggravates poverty, environmental degradation, political instability, climate refugees
  - Enhances terrorist activity & other violence
- Sea level rise, killer heat threatens bases, training and equipment
- Internal stressors: climate refugees



National Security & Military Strategies, James Mattis, Union of Concerned Scientists – *Killer Heat*

Fleet Parking, Naval Station Norfolk (US Navy)

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## Without BOLD action

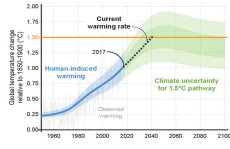
IPCC (2018) Severe Economic and Humanitarian Crises by 2030

Naturalist David Attenborough

- 2030 – Rainforest lost, arctic ice-free in summer, accelerating climate change
- 2040 – Frozen soils thaw, releasing methane, accelerating climate change
- 2050 - Oceans heat to the point of all coral reefs dying, fish populations crash
- 2080 - Durable food production crashes from soil degradation, pollinating insects disappear, weather becomes unpredictable
- 2100 – 4 degrees C warmer, large parts of earth uninhabitable, 6<sup>th</sup> massive extinction underway, millions homeless, Holocene Garden of Eden is lost.

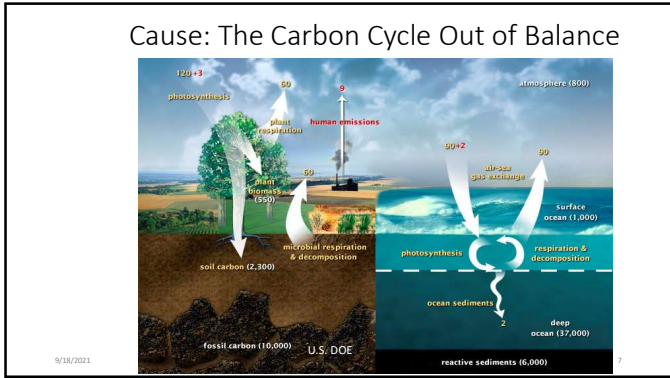
Documentary– *A Life on This Planet* 2020

FAQ1.2: How close are we to 1.5°C?  
Human-induced warming reached approximately 1°C above pre-industrial levels in 2017



IPCC Special Report on global warming of 1.5 degrees 2018

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### Cause: Food System, Farm Practices

- 20-30% of total emissions
- Fuels epidemics of diabetes and heart disease
- Exploits worker, worsens racial and income inequality
- Dominant farming methods despoil the landscape, pollute air and water and accelerate climate change

Photo credit: Union of Concerned Scientists

EPA and FAO data, Earthjustice estimate  
Union of Concerned Scientists

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### Self Interests = Barrier

- Vested interests -rather kill off life as we know it than leave profits in the ground (Naomi Klein, *This Changes Everything-Capitalism vs. The Climate*)
- Misunderstanding of Climate Change not an accident- disinformation programs
- Skeptics and deniers in important places, including our neighborhoods
- Buy policy-makers favor
- Big part of the problem - forces to be reckoned with

Bloomsbury Pres

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### What do we need to do?

#### Adapt

- Adaptation: the process of adjusting to actual or expected climate change
- We cannot focus exclusively on adaptation (or resiliency), The climate will continue changing and the long-term impact of global warming will be too severe to manage

Intergovernmental Panel on Climate Change.  
Jeffrey Ravens 2017 "To Curb Climate Change, Cities Need the Right Design" *Forbes*

#### Mitigate

- Mitigation: human intervention to reduce heat-trapping emissions or remove carbon already in the atmosphere
- Mitigation attacks the causes of global warming

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### What needs to happen and the means

- Plant lots of trees, stop deforestation
- Reduce Energy Consumption
- Electrify (almost) everything, generate power from **non-emitting power sources**
- Improve food system
- Finite earth economy
- Abolish corporate personhood

Project Drawdown, 2019 climate gap report, 4<sup>th</sup> National Climate Assessment, Union of Concerned Scientists, Solutions. This Spaceship Earth, Move to Amend, Bill Gates *How to Avoid a Climate Disaster*. Omega Institute, U of VT.

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### Non-emitting and sustainable energy sources

- Solar
- Wind
- Nuclear
- Small hydro
- Geothermal

Project Drawdown  
Union of Concerned Scientists  
Bill Gates *How to Avoid a Climate Disaster*

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### Who needs to do what specifically

**Government's Role**

- Federal
- State
- Local

**Government means**

- Carrot: Incentives
- Stick: Command and control, mandates, rules

Union of Concerned Scientist- *Cooler, Smarter, Bill Gates - How to Avoid a Climate Disaster*

**In our own realm**

- Individuals, families
- Businesses
- Houses of worship
- Farms


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### Federal Government

1. Global cooperation (Paris Agreement, COP 26)
2. National price on carbon (*Energy Innovation and Carbon Dividend Act*)
3. Transformative and sustainable Farm Bill
4. Abolish corporate personhood (*We the People Amendment*)

Union of Concerned Scientists – *Solutions; Cooler, Smarter. Move to Amend*



Citizens Climate Lobby 2018

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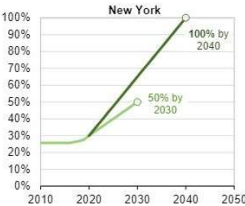
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### States regulate utilities

1. Low carbon electricity portfolio standard needed: 70-100% by 2030
2. Reduce electrical consumption
  - Audits, discounts on energy efficient equipment
  - Focus service over volume (new business model)
3. Favorable rules for distributed (roof top) solar

Union of Concerned Scientists- *Cooler, Smarter*

**Portfolio targets, based on % of retail electrical sales**



U.S. Energy Information Administration, based on states' renewable portfolio standards

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### Local Government (Front Lines)

- Zero Energy Building Codes
  - New construction & renovations/retrofit
  - Economics & social justice
- Transportation
  - Mixed housing, commercial and business planning
  - All electric public transit\*
  - EV charging availability\*
- Rules and tax incentives for native landscapes and reforestation
- Refrigerant disposal F gases (*Drawdown #1 Solution*)

\*All powered by non-emitting sources of electrical power

Union of Concerned Scientists- *Cooler, Smarter. Bill Gates How to Avoid a Climate Disaster. Habitat for Humanity.*

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Village of Freeport, NY

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### Can I (we) make a difference?

1. Every little bit helps
2. Save money
3. Improve health
4. Set example
5. It's the right thing to do (moral duty to restore creation, prevent injustice)

Union of Concerned Scientists – *Cooler, Smarter. GreenFaith*

**"We are not powerless. Send a signal to the market" (Bill Gates- 2021 *How to Avoid a Climate Disaster*)**

**"Nobody made a greater mistake than he who did nothing because he could only do a little"**

Edmund Burke, Irish philosopher

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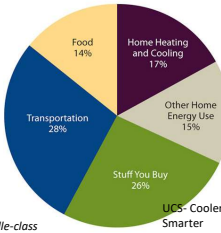
### Action in Our Own Realm -Eliminate Emissions

Direct emissions – Determine how much energy is being consumed and estimate the resulting emissions. Evaluate alternatives. (Carbon counter tools available).

- Buildings – Reduce consumption, transition to non-emitting energy sources. (New Building: DOE Zero Energy Homes standard)
- Transportation – Conserve (avoid driving, reduce/eliminate long distance travel, chose best means) and shift (bikes, EVs charged from Sun)

40,000 Pound carbon diet: how a middle-class family cut emissions 75% and saved money doing it. UCS, *Cooler, Smarter*

**Where the Average American's Carbon Emissions Come From**



UCS, *Cooler, Smarter*

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### What we eat and waste

- Red meat and cheese have most impact on emissions
- Plant-Rich Diet
  - Climate benefits - #4 of 100 Drawdown
    - -70% Vegan
    - -63% Vegetarian
  - Health and financial benefits
- Support Community Sponsored Agriculture (CSA)
- Reduce food waste: buy less, compost, food recovery programs

Union of Concerned Scientists – *Cooler, Smarter*. Project Drawdown

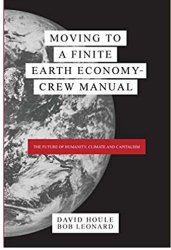


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### Stuff we buy – towards a finite earth economy

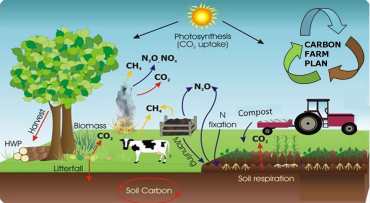
- Growth economy is not serving us well- opt out of GDP worship
- Individual strategies
  - Buy less stuff
  - Purchase recycled or reclaimed (used)
  - Repair/refurbish things instead of discarding and buying new
  - Pay attention to how goods are manufactured
    - Concrete and steel = greater emissions than sustainably grown wood (certified as sustainably grown -FSC -Forest Stewardship Council)



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### Action in our own realm - Taking carbon from Atmosphere



- Hero Farmers: Silvopasture (#9), Regenerative Agriculture (#11), Composting (#60) and Fertilizer-nutrient management (#65)
- Native landscapes for residence, business, condo associations, HOAs
- Reforestation/Afforestation (#15) projects

Project Drawdown, Union of Concerned Scientists – *Cooler, Smarter*

[Photo credit: Marin Carbon Project]

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### You Influencing Government

Calling  
Writing  
Emailing  
Support/join non-partisan groups:

- Citizens Climate Lobby
- Move to Amend
- Scrutiny/hold accountable
- Voting



Union of Concerned Scientists – *Cooler, Smarter*

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### Summary - what we need to do is mitigate, bold action

Restore the natural carbon cycle – must get atmospheric carbon from over 400 PPM to under 350 ppm before 2030

1. Stop human caused emission within the decade
  - Reduce Energy Consumption
  - Electrify (almost) everything, generate power from **non-emitting power sources**  
**Solar Wind Nuclear Small hydro Geothermal**
2. Take lots of carbon from the atmosphere
  1. Reforestation
  2. Soil management

Full court press – everyone doing their part


1. Federal, State, Local levels
2. Individuals at home, businesses, houses of worship, farms. Influencing governments. Climate Voters

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### Resources

- 6-part series – *This Fragile Earth, our Island Home* (Interfaith Association of Greater Long Beach)
  - <https://tinyurl.com/withGreta>
  - Session 4- Action in own realm
  - Session 5 – Government action
- *Drawdown: the most comprehensive plan ever proposed to reverse global warming.* Paul Hawken, ed.
- *How to Prepare for Climate Change: a practical guide for surviving the chaos.* David Pogue
- **40,000 Pound Carbon Diet** (Current Events)
- *Urgency & Action: drawdown to reverse global warming* (FLVCS)



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