

# Climate Change and Health – and your role in the solution

Homan Wai, MD, FACP

October 21, 2023



# Disclosures

- I am a founding member and a current steering committee member of Virginia Clinicians for Climate Action (VCCA), a network of clinician leaders advocating for climate change solutions that protect the health of our patients and communities.
- I serve as a chair of ACP Virginia Chapter's Climate and Health committee
- I have no financial disclosures

# Learning Objectives

By the end of this session, participants will...

1. Appreciate the connection between climate change and human health
2. Understand the role of healthcare in climate change
3. Understand the role of clinicians, including those in training, in advocating for climate policies to improve human health

# Outline

- Climate Change and Health in the News
- The Basics of Climate Change
- ACP's Position on Climate and Health
- The Role of Healthcare Providers – that means you!
- Resources



# Climate Change and Health in the News



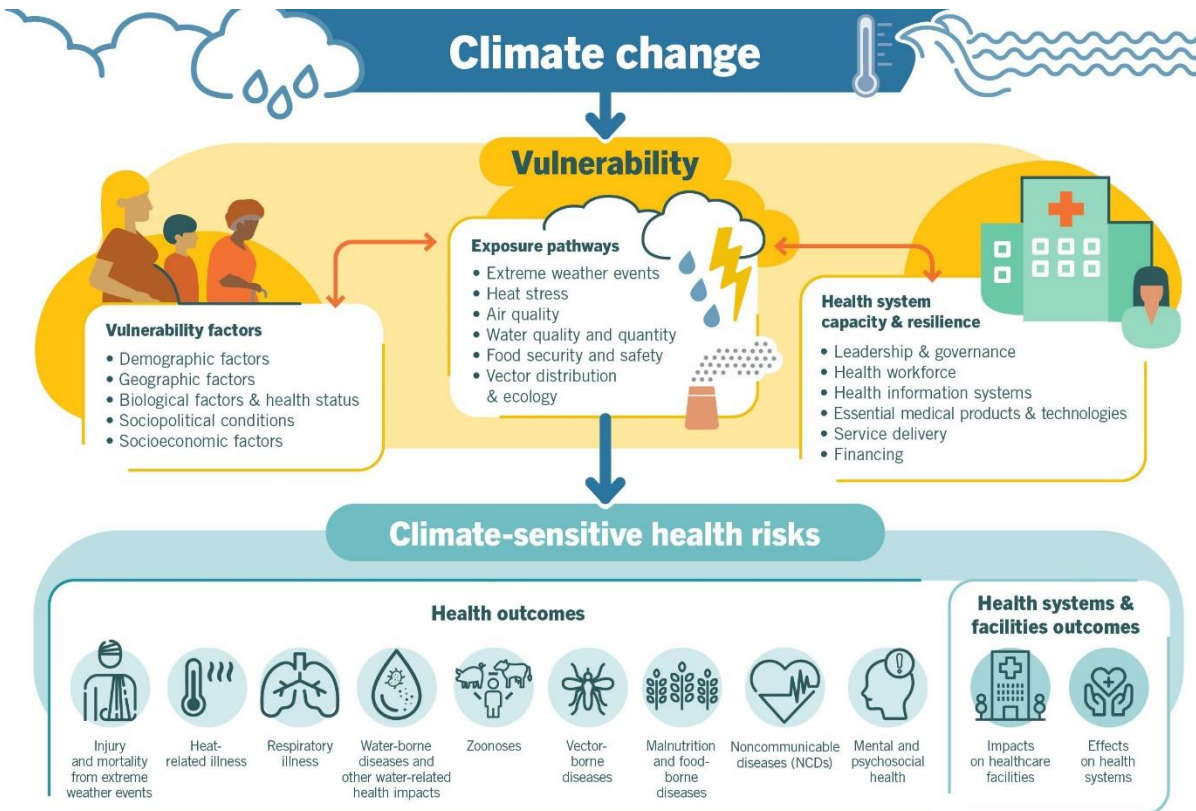
World Health Organization

## Climate change

12 October 2023

### Key facts

- Climate change is directly contributing to humanitarian emergencies from heatwaves, wildfires, floods, tropical storms and hurricanes and they are increasing in scale, frequency and intensity.
- Research shows that 3.6 billion people already live in areas highly susceptible to climate change. Between 2030 and 2050, climate change is expected to cause approximately 250 000 additional deaths per year, from undernutrition, malaria, diarrhoea and heat stress alone.
- The direct damage costs to health (excluding costs in health-determining sectors such as agriculture and water and sanitation) is estimated to be between US\$ 2–4 billion per year by 2030.
- Areas with weak health infrastructure – mostly in developing countries – will be the least able to cope without assistance to prepare and respond.
- Reducing emissions of greenhouse gases through better transport, food and energy use choices can result in very large gains for health, particularly through reduced air pollution.



# Climate Change and Health in the News



**Leaders spotlight the critical intersection between health and climate ahead of COP-28 first-ever Health Day**

18 September 2023 | Departmental news | New York, United States of America | Reading time: 2 min (670 words)

**Media Contacts**



# Climate Change and Health in the News

## Record shattering: Earth had its hottest July in 174 years

Global sea surface temperature hit record high for 4th-consecutive month

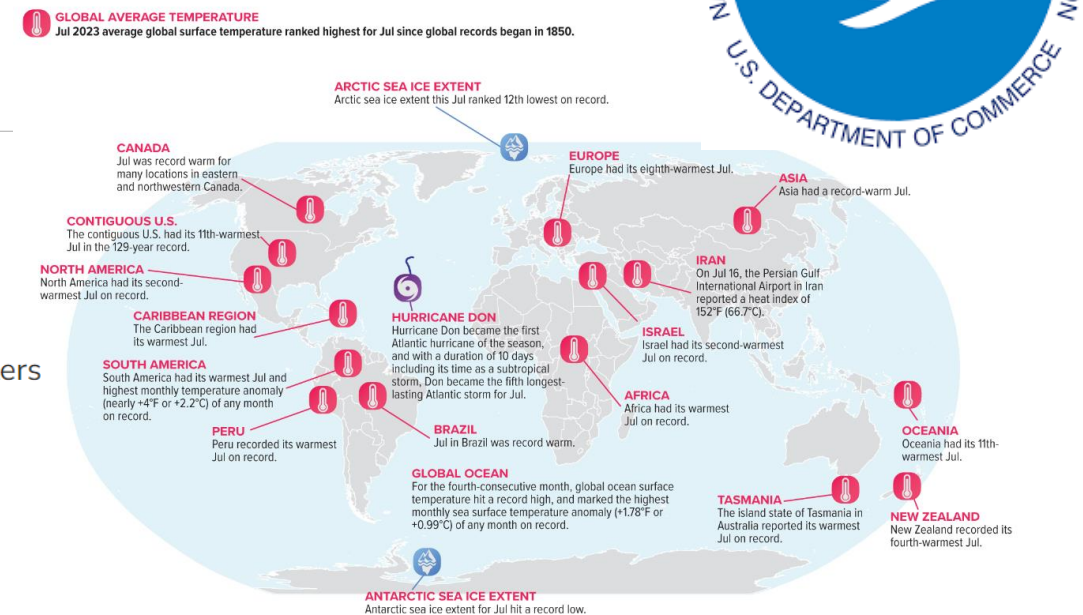
**Focus areas:** Climate, Satellites **Topics:** monthly climate report, climate data, climate change, heat, ocean heat

August 14, 2023

Earth just roasted under its hottest July on record, according to scientists from NOAA's National Centers for Environmental Information (NCEI).

For the fourth-consecutive month, the global ocean surface temperature also hit a record high.

### Selected Significant Climate Anomalies



Please note: Material provided in this map was compiled from NOAA's State of the Climate Reports. For more information please visit: <https://www.ncei.noaa.gov/access/monitoring/monthly-report/global/>

# Climate Change and Health in the News

CLIMATE CHANGE

## September Was the Most Anomalously Hot Month Ever

September shattered a record for the highest temperature anomaly of any month and could help push 2023 to be the first year to exceed 1.5 degrees Celsius above preindustrial temperatures

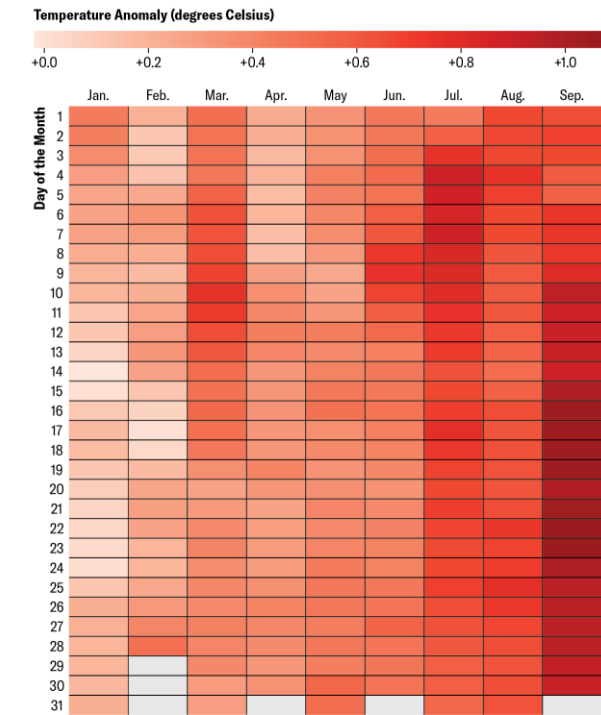
By Andrea Thompson on October 4, 2023

The milestone reached last month comes on the heels of July setting the record for the hottest month overall. (July is always the hottest month of the year globally because it occurs at the peak of the Northern ...

In a marker of just how much global temperatures have risen in recent decades, Hausfather observes, “this September will be hotter than most Julys before the last decade or two.”

### Daily Temperature Anomalies, 2023

Each cell in the grid below shows how much the temperature varied from average, a measure known as a temperature anomaly, on a day in 2023. The baseline period from which the anomaly is calculated was the average from 1991 to 2020. (That anomaly is on top of the approximately one degree Celsius, or 1.8 degrees Fahrenheit, of postindustrial warming that occurred prior to that period.)



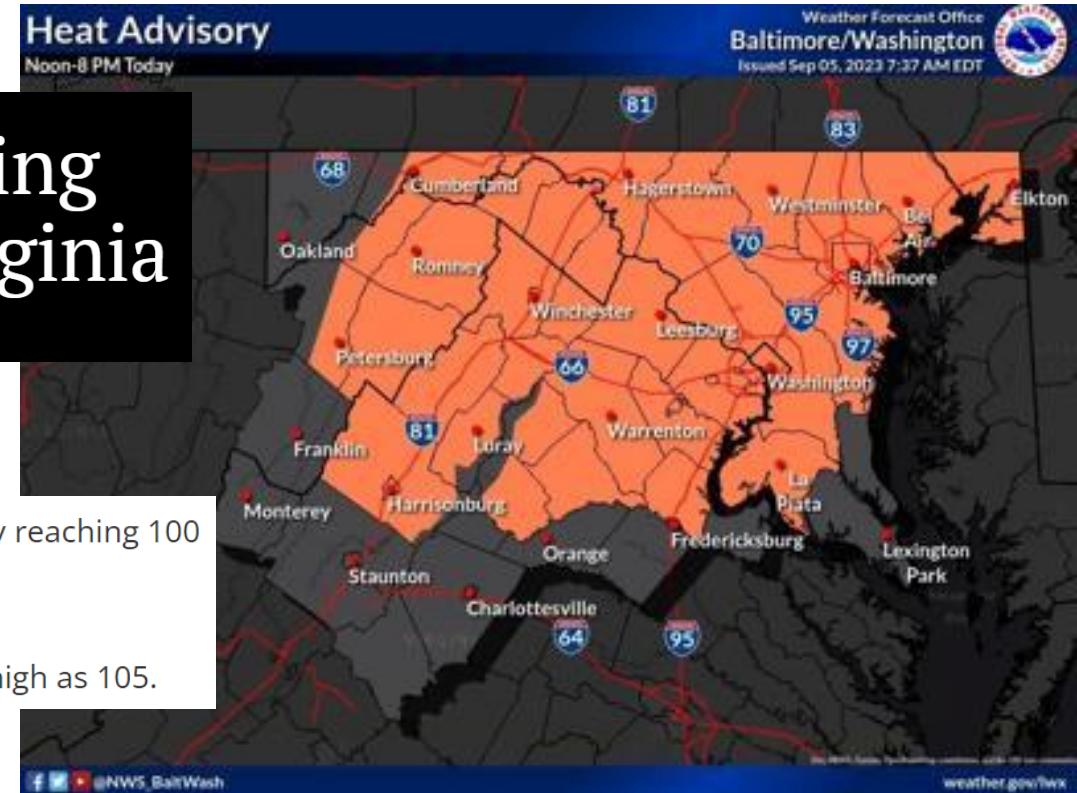
# Climate Change and Health in the News

## Heat advisory in effect; record-breaking temperatures possible for Northern Virginia

Sep 5, 2023 4

A heat advisory is in effect for Northern Virginia through 8 p.m., with temperatures potentially reaching 100 degrees and heat index values as high as 105.

Temperatures of 95 to 102 degrees are possible again Wednesday with heat index values as high as 105.



# Climate Change and Health in the News

## Wildfire Smoke Returns To VA: Here's When It Should Clear Out

Officials did not issue any smoke alerts across Virginia, but they reminded at-risk groups to avoid prolonged or heavy activity outdoors.



Mark Hand, Patch Staff

Posted Wed, Aug 2, 2023 at 2:36 pm ET | Updated Wed, Aug 2, 2023 at 2:40 pm ET

Patch

UVA**Today**

UNIVERSITY NEWS

## Best Health Advice for Smoky Skies: Stay Inside and Wear a Mask When Outdoors

By Bryan McKenzie, bkm4s@virginia.edu • June 9, 2023





# Climate Change and Health in the News

## As climate change sparks wildfires, experts highlight the impacts of smoke in Virginia

VPM | By **Henry Brannan**

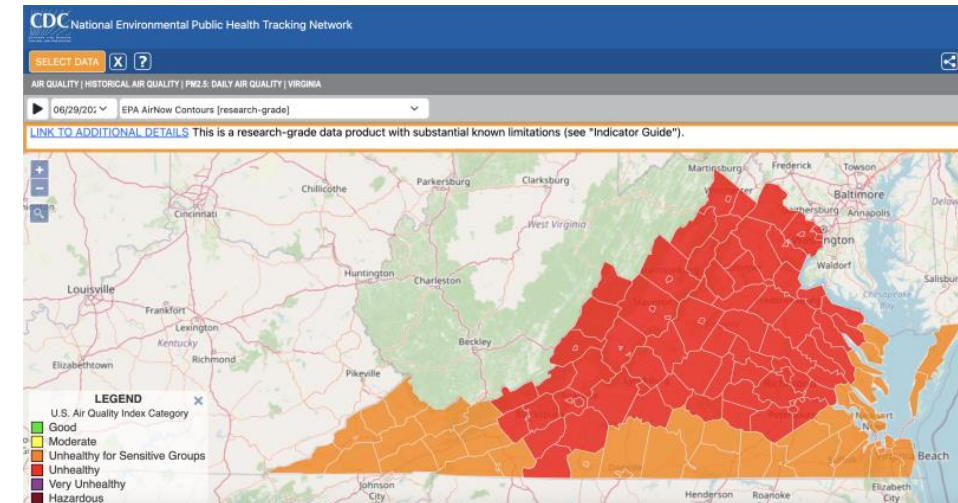
Published August 30, 2023 at 4:38 PM EDT

▶ LISTEN • 0:58

**Earlier this summer, wildfire smoke lowered air quality in the Eastern U.S. to its worst levels on record.**

While the smoke has mostly cleared in Virginia since July, scientists are sounding the alarm that — with climate change heating up the world and creating drier conditions — smoky summers will grow increasingly common.

“We all woke up and couldn’t see across the street,” said Lucas Henneman, a George Mason University professor. “And we’re thinking, ‘Well, something needs to be done about this.’”



# Climate Change and Health in the News

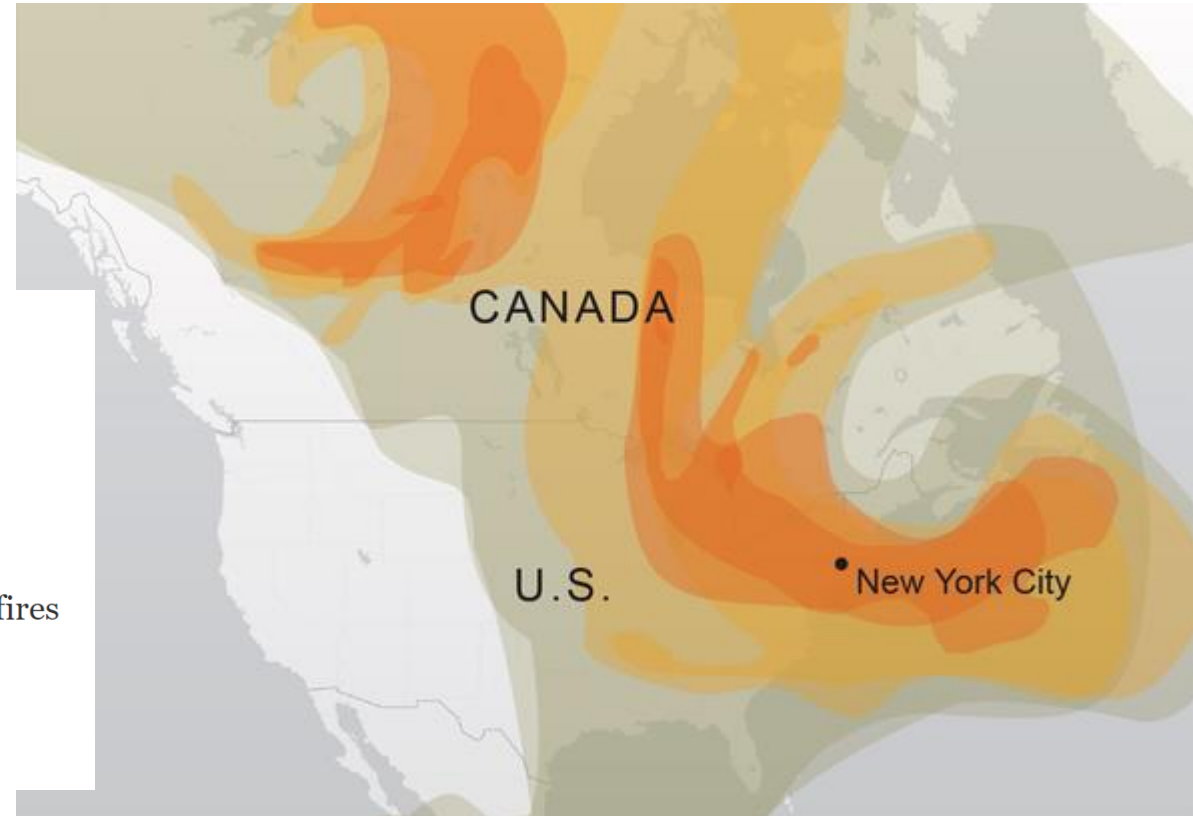
**SCIENTIFIC  
AMERICAN®**

NATURAL DISASTERS

## See How the Wildfire Smoke Spread Across the U.S.

Most of the eastern U.S. has been swathed in smoke billowing off more than 400 wildfires across Canada

By Meghan Bartels, Ripley Cleghorn on June 9, 2023





# Climate Change and Health in the News

## LOCAL NEWS

### Experts say Central Virginia is in for an early and severe allergy season

by: **Sierra Krug**  
Posted: Feb 24, 2023 / 08:00 AM EST  
Updated: Feb 23, 2023 / 07:33 PM EST



**NorthernVirginia**  
M A G A Z I N E



## NEWS

### Why it's a 'Miserable' Pollen Season in NoVA, and What to do About it

It's a rough pollen season, two NoVA doctors say, and it's not ending soon. They have tips on how to get through this season, as well as long-term suggestions.

By **Rick Massimo** | April 17, 2023

# Climate Change and Health in the News

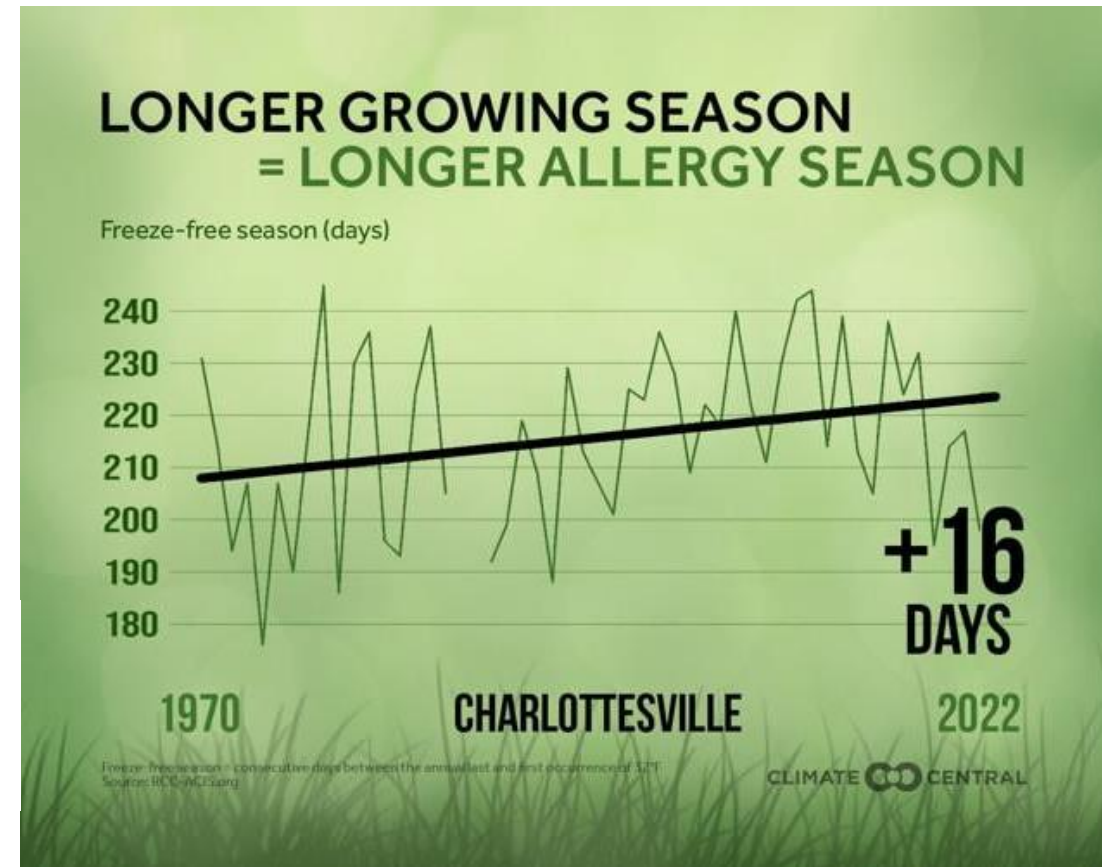
## Richmond Times-Dispatch

ALERT TOP STORY

### Warm winters, high pollen more common in Virginia's changing climate

Sean Sublette Mar 9, 2023 0

Despite the chill settling into Virginia this weekend and next week, the first two months of 2023 have been the warmest start to a year on record statewide. As a result, many trees are blooming, and pollen is jumping.

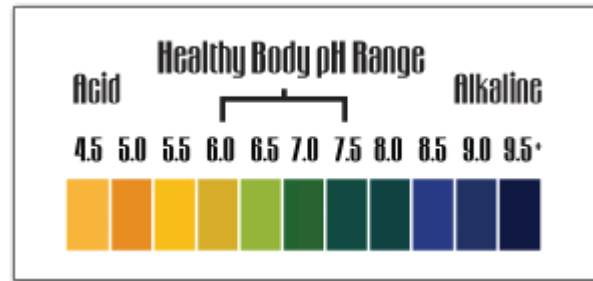




# The Basics of Climate Change



# The Basics of Climate Change



SODIUM (mmol/L)

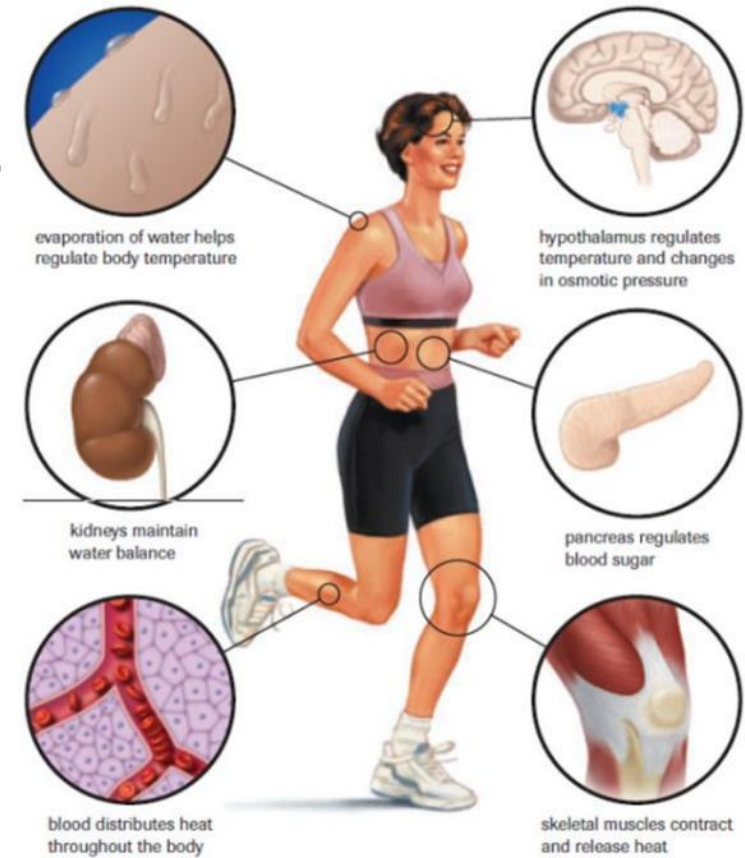


## Homeostasis

Body Temp.

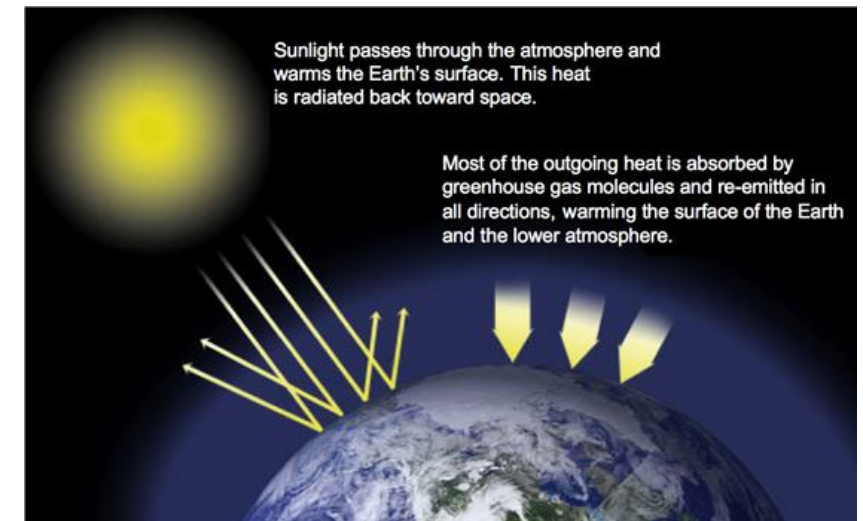
H<sub>2</sub>O

Blood Sugar



# The Basics of Climate Change

- Human activities generate greenhouse Gases (GHG) - carbon dioxide, methane, nitrous oxide, water vapor
- GHG in the atmosphere trap heat (we need just enough)
- Excessive GHG causes average temperature to rise (warming)
- Warming of the earth leads to a change in climate.






# Summer 2021 – Used to be the Hottest on Record

**WeatherNation** LOCAL WEATHER WEATHER NEWS WEATHER

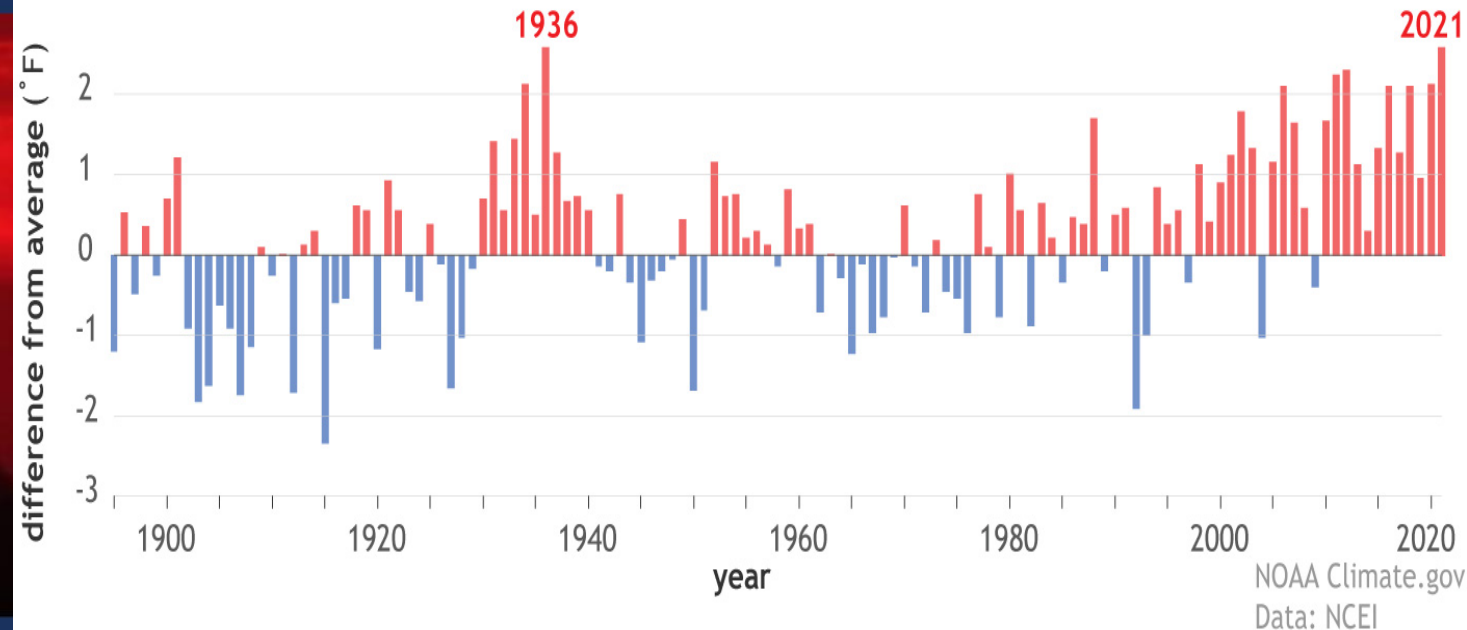
Search Weather News

## Summer 2021 Neck and Neck with Dust Bowl Summer for Hottest on Record



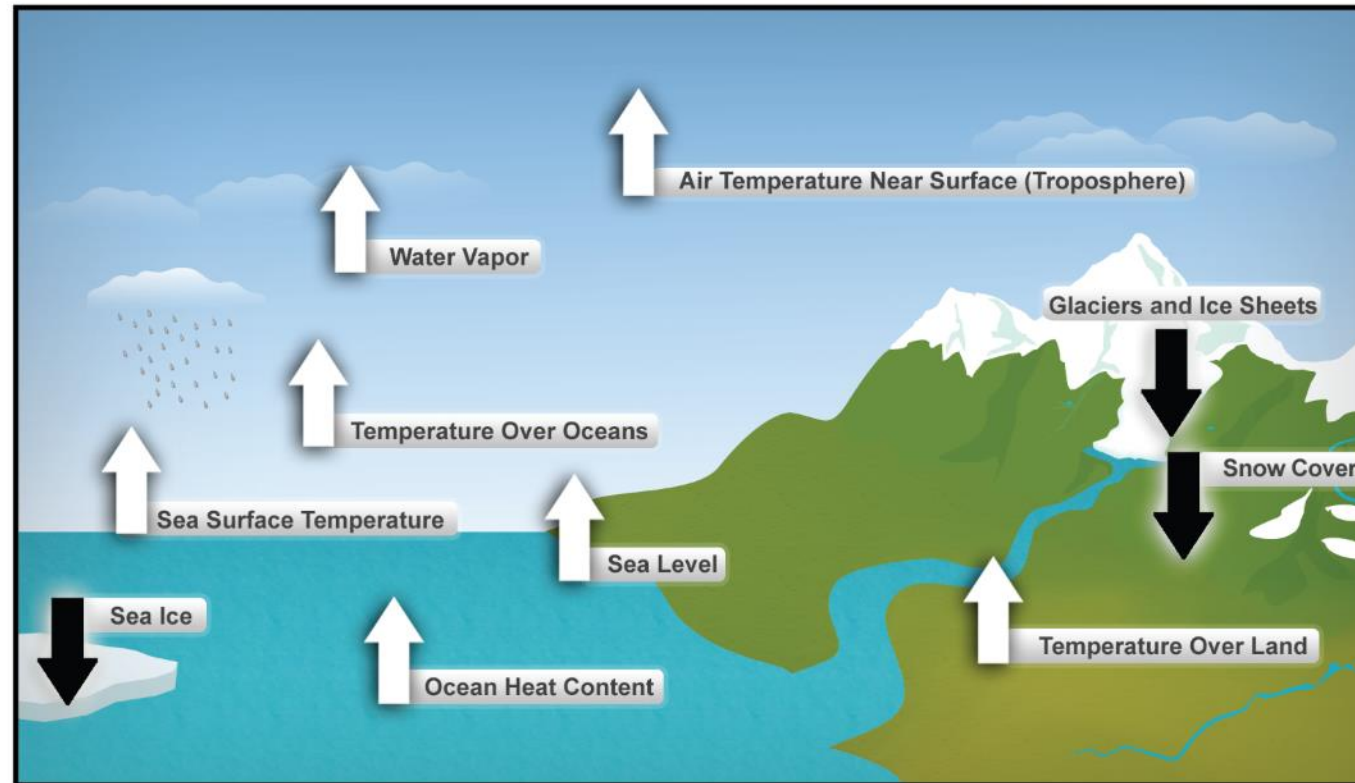
SUMMER  
15 SEP 2021, 1:30 AM

U.S. summer temperatures compared to the 20th-century average (1895-2021)



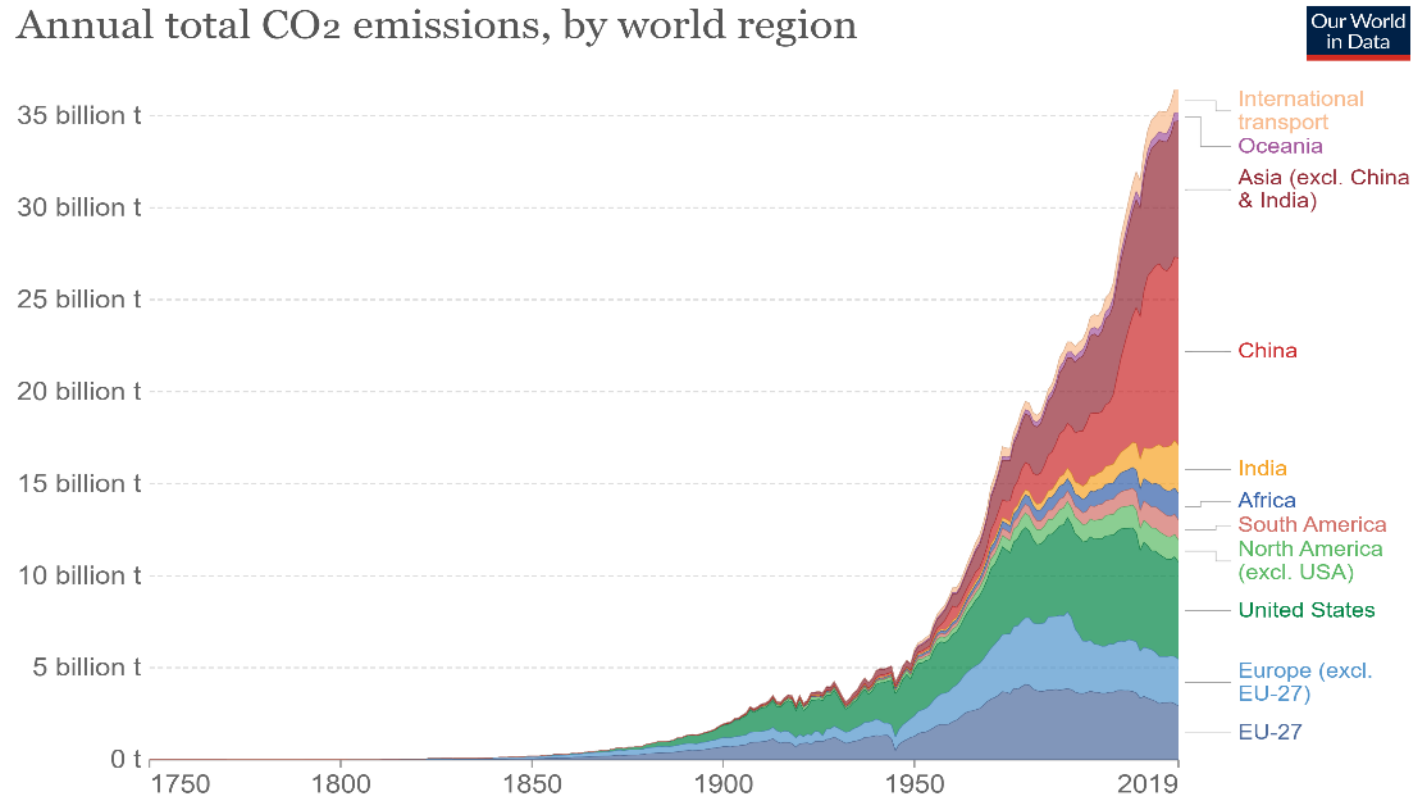
# NOAA: 10 Indicators of a Warming World

Ten Indicators of a Warming World



# CO2 Emission vs Global Temperature

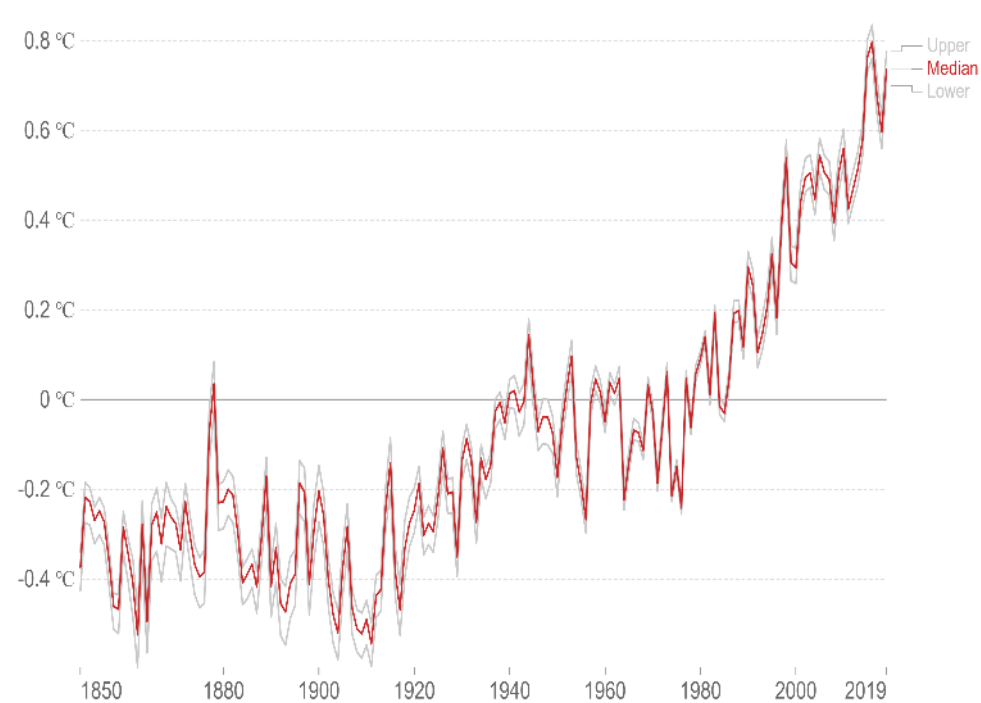
Annual total CO<sub>2</sub> emissions, by world region



Source: Global Carbon Project  
Note: This measures CO<sub>2</sub> emissions from fossil fuels and cement production only – land use change is not included. 'Statistical differences' (included in the GCP dataset) are not included here.

Average temperature anomaly, Global

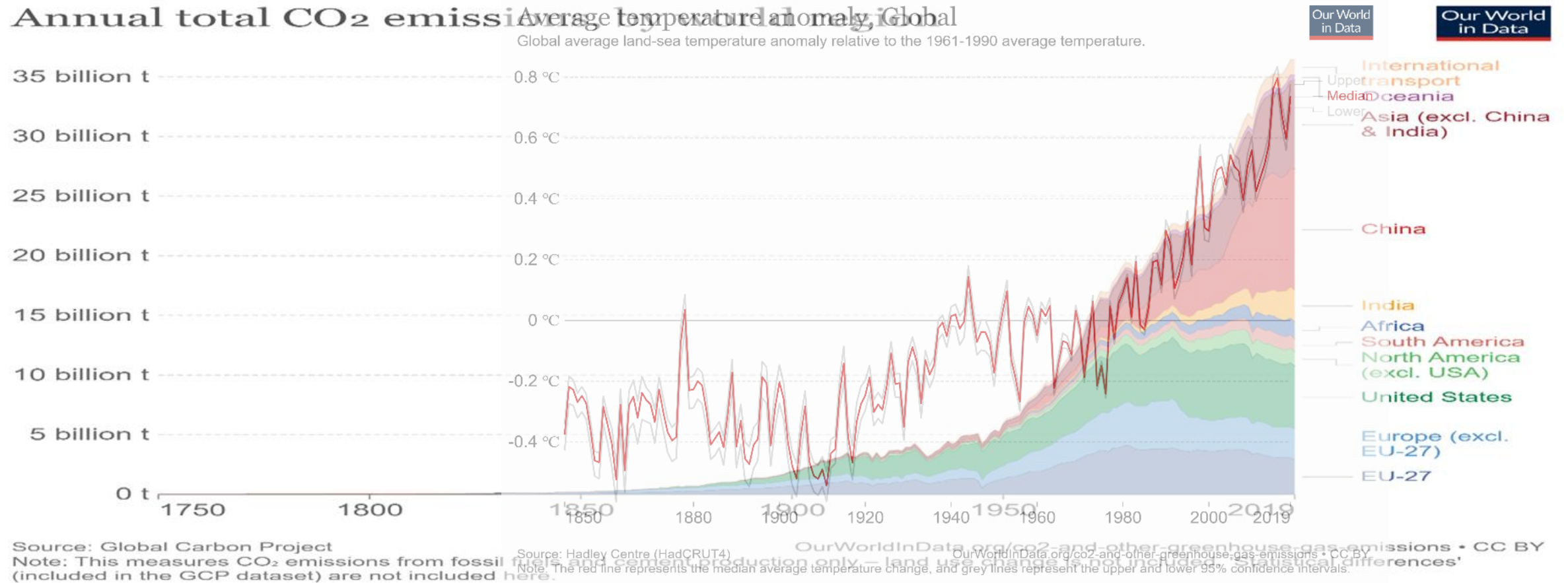
Global average land-sea temperature anomaly relative to the 1961-1990 average temperature.



Source: Hadley Centre (HadCRUT4)  
Note: The red line represents the median average temperature change, and grey lines represent the upper and lower 95% confidence intervals.



# CO2 Emission vs Global Temperature



# Intergovernmental Panel on Climate Change (IPCC)

## Assessment Report 6 (AR6) Part 1: 2021

- “It is **unequivocal** that **human influence** has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred.”
- “The scale of recent changes across the climate system as a whole and the present state of many aspects of the climate system are **unprecedented** over many centuries to many thousands of years.”
- “Many changes in the climate system become larger in direct relation to increasing global warming. They include increases in the frequency and intensity of **hot extremes**, **marine heatwaves**, and **heavy precipitation**, agricultural and ecological **droughts** in some regions, and proportion of intense tropical **cyclones**, as well as reductions in Arctic **sea ice**, **snow cover** and **permafrost**.”

# Lancet Countdown 2022 Global Report & US Brief



## KEY MESSAGE

**A persistent fossil fuel addiction is amplifying the health impacts of climate change, and compounding the concurrent energy, cost-of-living, food, and COVID-19 crises we face.**

Climate change is exacerbating food insecurity, health impacts from extreme heat, the risk of infectious disease outbreaks, and life-threatening extreme weather events.

The delay in the adoption of clean energies has left households dependent on dirty fuels, vulnerable to energy poverty, and exposed to dangerous levels of fuel-derived air pollution.

These impacts are compounding with today's multiple, concurrent crises.

## KEY MESSAGE

**Governments and companies continue to prioritise the fossil fuels above, and to the detriment, of peoples' health, jeopardising a liveable future.**

Governments continue to subsidise fossil fuels to a sum of hundreds of billions of dollars annually –for sums comparable to their total health budgets. Meanwhile, a profound lack of funding undermines a just transition towards affordable, healthy, zero-carbon energy.

Meanwhile, fossil fuel companies are pursuing plans which would lead to emissions vastly exceeding Paris Agreement goals – if fulfilled, their strategies could lock the world into a fatally warmer future.

## KEY MESSAGE

**The world faces a critical juncture. A health-centred, aligned response to the compounding crises can still deliver a future where people can not only survive, but thrive.**

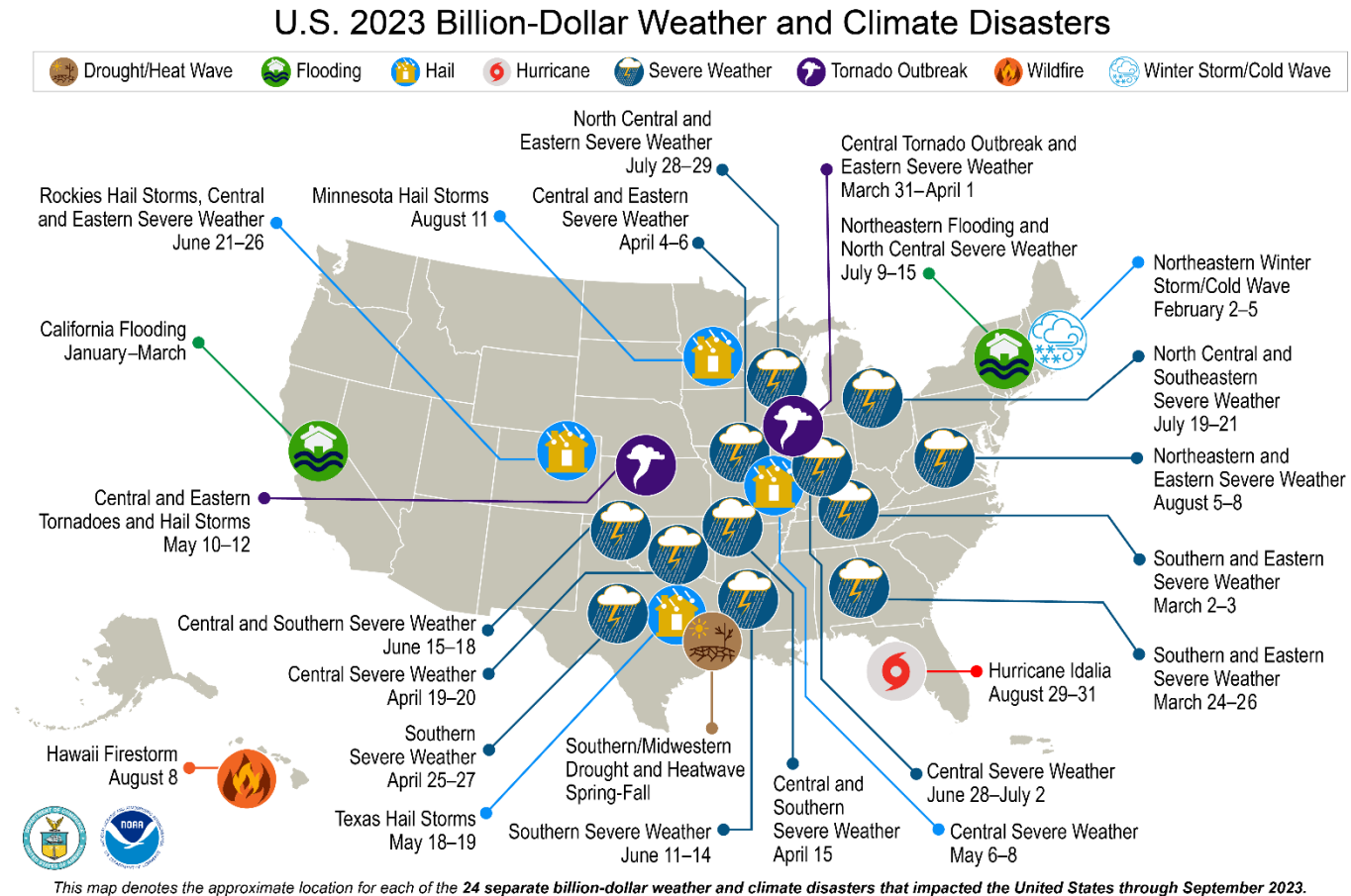
As countries device responses to the compounding crises, a renewed dependence on fossil fuels could lock-in a fatally warmer future.

However, in their response lies a new opportunity. Decision makers can today still deliver more resilient energy systems, saving at least 1.2 million lives from cleaner air, 11.5 million lives from healthier diets, reducing energy poverty, and delivering healthier, more liveable cities.

The just transition to a healthy future can no longer be delayed.

- The health of people around the world is at the mercy of a persistent fossil fuel addiction.
- While a renewed overreliance on fossil fuels could lock in a fatally warmer future with exacerbated health impacts, a health-centred, low-carbon response offers a renewed opportunity to deliver a future in which world populations can not only survive, but thrive.

# Economic Cost of Climate Change





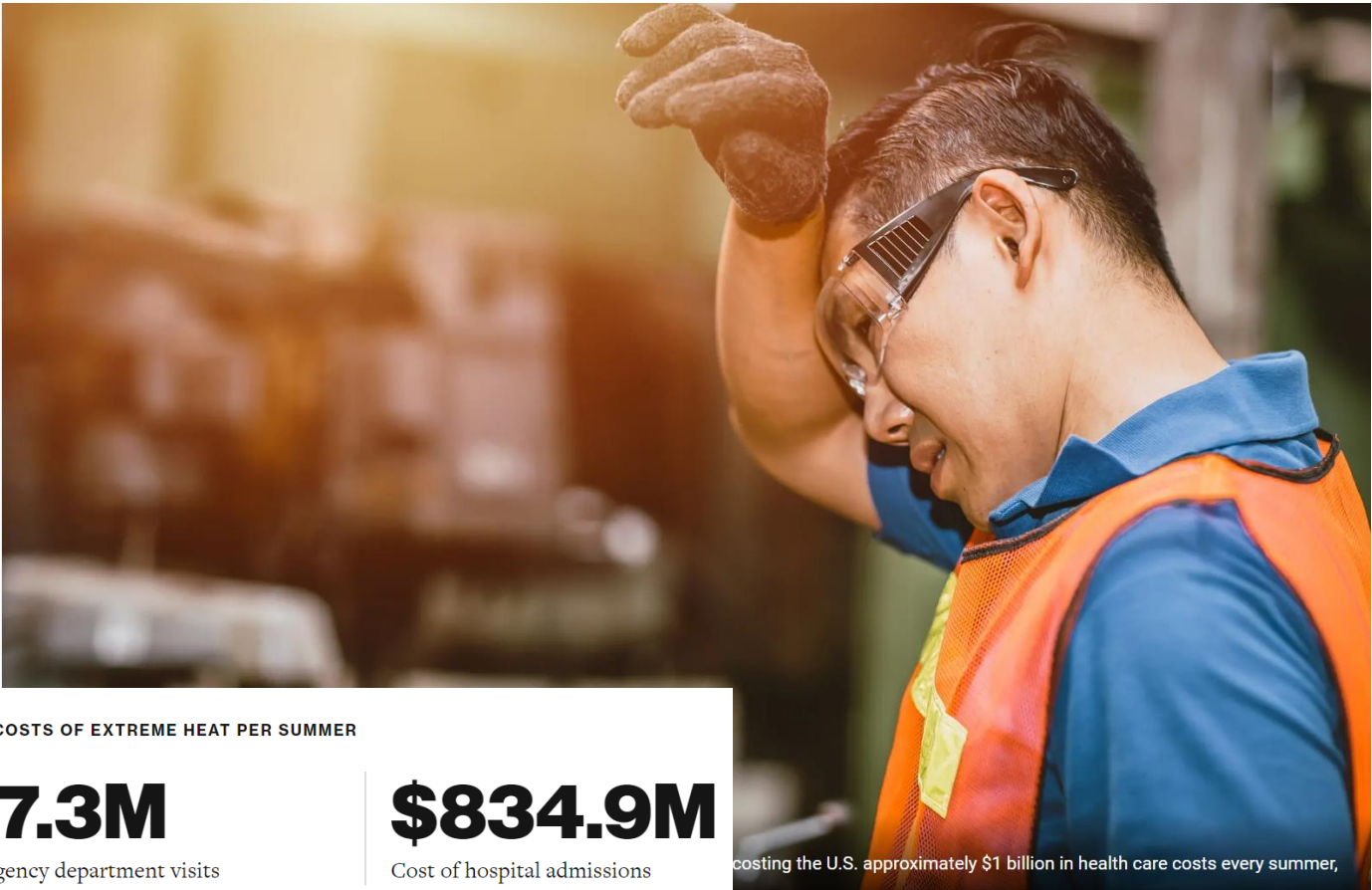
# Climate Change and Health in the News



JULY 17, 2023

## Interdisciplinary study from VCU reveals health care costs of extreme heat

Physicians, earth scientists, staff and students collaborated to better understand the health impact of extremely hot days in Virginia and across the nation – and they estimate a toll of \$1 billion per summer.



THE NATIONWIDE COSTS OF EXTREME HEAT PER SUMMER

**\$1B**

Cost of heat event days

**\$177.3M**

Cost of emergency department visits

**\$834.9M**

Cost of hospital admissions

costing the U.S. approximately \$1 billion in health care costs every summer,



Virginia Chapter

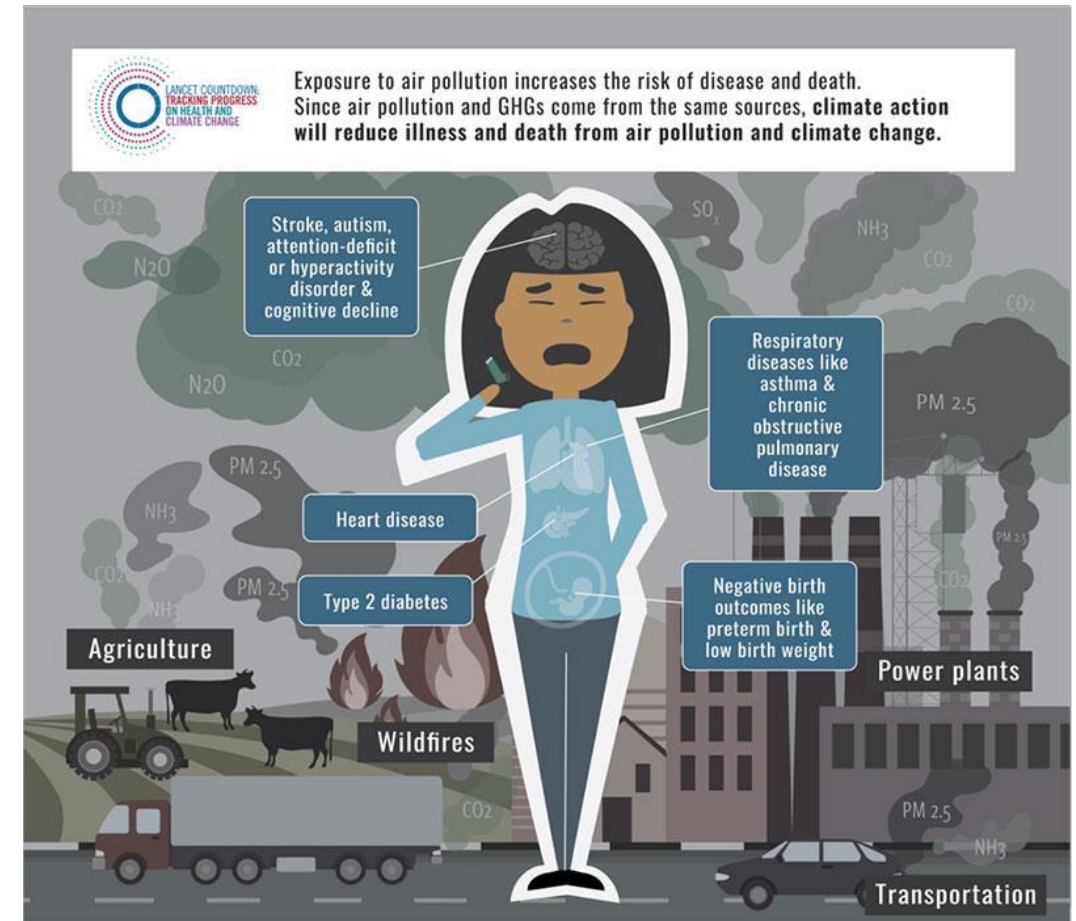
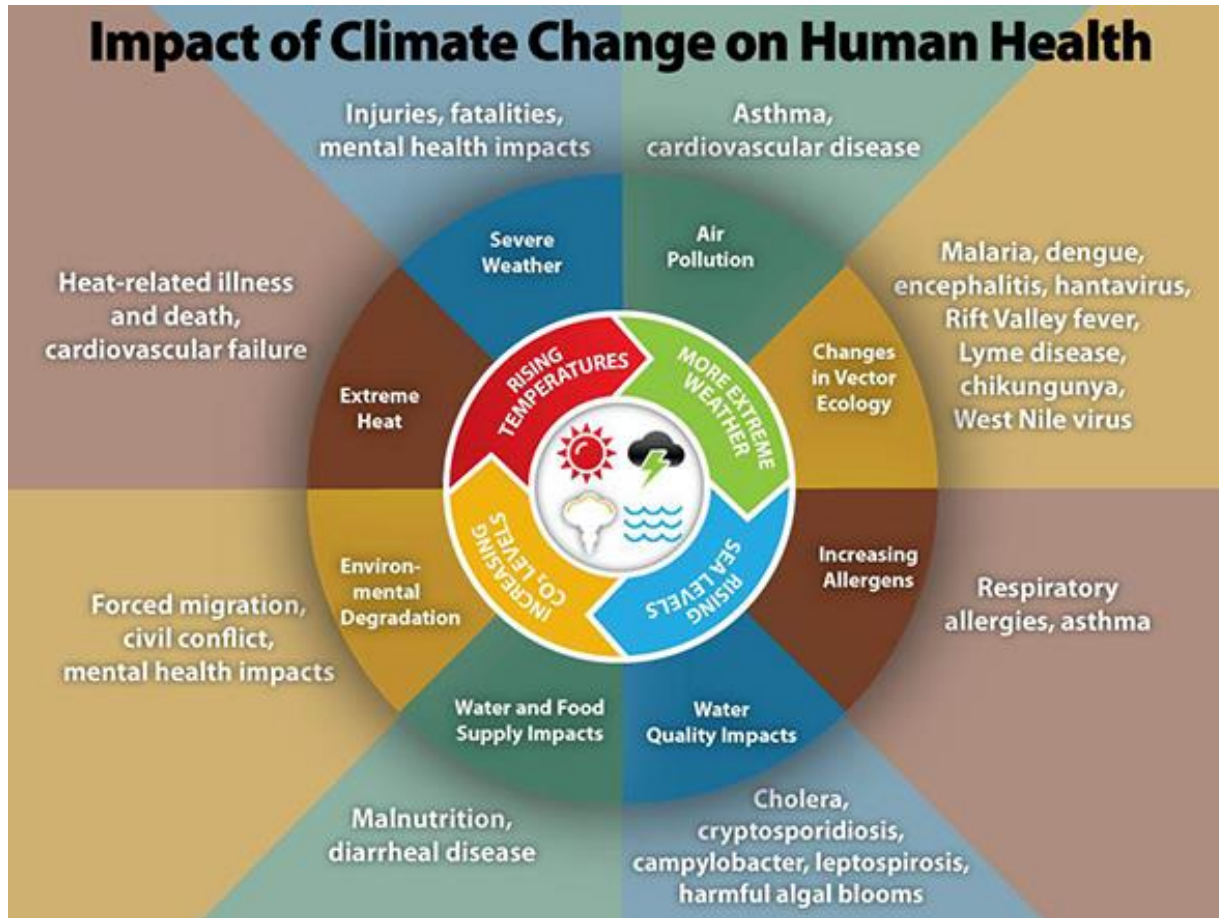
<https://news.vcu.edu/article/2023/07/interdisciplinary-study-from-vcu-reveals-health-care-costs-of-extreme-heat>

# Our role - Have you seen these patients?

- A woman in her 40s who stayed in the hospital for weeks due to her asthma exacerbated by poor air quality and extreme heat. She is worried about being able to maintain a sustainable income to pay her bills.
- A man in his 60s who worked in the park services was admitted for a femoral neck fracture after syncope. He had apparently experienced a heat stroke despite trying his best to hydrate. The heat index was close to 100 that day.

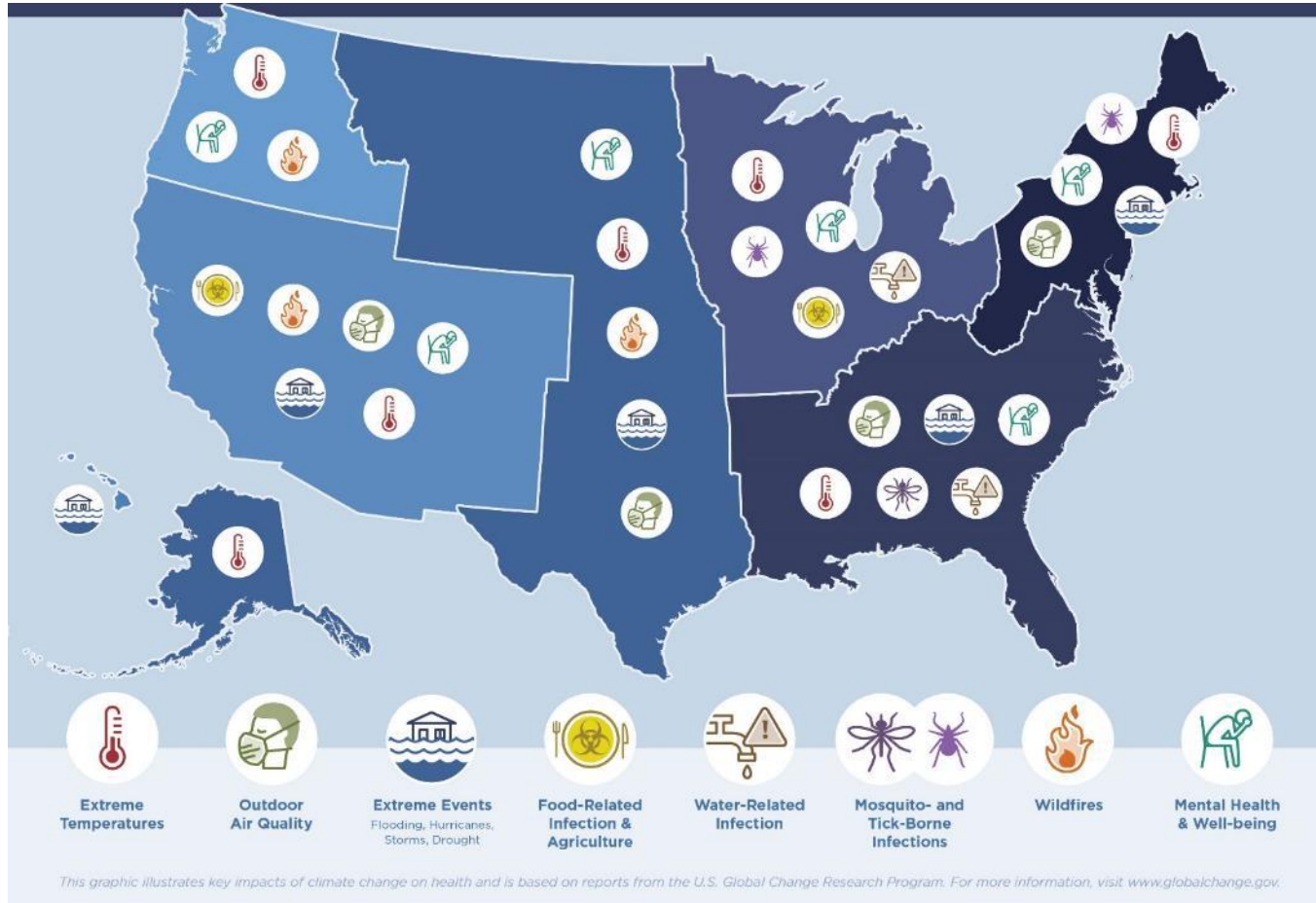


# Climate Change Impacts Human Health





# Climate Change Impacts Human Health





# Climate Change Impacts Human Health



# Climate Change Impacts Human Health

HEALTH NEWS

AUG. 28, 2023 / 3:00 AM

## Asthma-related ER visits rise in U.S. amid Canadian wildfire smoke

By Steven Reinberg, HealthDay News



Smoke from Canadian wildfires sent high numbers of people suffering from asthma attacks to America's emergency rooms this spring and summer, according to two new reports.

From April 30 to August 4, 2023, smoke from out-of-control wildfires in Canada increased emergency room visits for asthma by 17% over average, according to data from the U.S. Centers for Disease Control and Prevention.



# Climate Change Impacts Human Health

## As climate change leads to more and wetter storms, cholera cases are on the rise

Health Aug 1, 2023 12:59 PM EDT

SN StarNews  
ONLINE

LOCAL

### A warming ocean is helping a flesh-eating bacteria creep north. What it means for the NC coast.

*According to the CDC, Vibrio vulnificus is expanding its range north at nearly 30 miles a year. So far three NC residents have died from Vibrio infections this year, and eight since 2019*

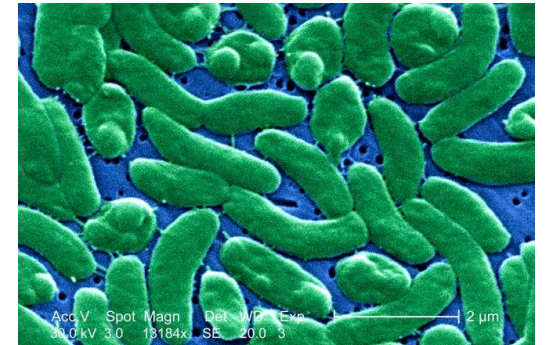


**Gareth McGrath**

USA TODAY NETWORK

Published 5:06 a.m. ET Sept. 21, 2023 | Updated 5:07 a.m. ET Sept. 21, 2023

PBS  
NEWS  
HOUR





# Climate Change Impacts Human Health



# Climate Change Impacts Human Health

**CDC** Centers for Disease Control and Prevention  
CDC 24/7: Saving Lives. Protecting People™

## Morbidity and Mortality Weekly Report (MMWR)

### *Notes from the Field: Locally Acquired Mosquito-Transmitted (Autochthonous) Plasmodium falciparum Malaria — National Capital Region, Maryland, August 2023*

Weekly / October 13, 2023 / 72(41);1123–1125

### The mosquito era: As the world warms, these insects are thriving – and bringing disease



By Laura Paddison, CNN

© 6 minute read · Updated 12:37 PM EDT, Thu June 29, 2023

Se **NATION**

West Nile Virus

Add Topic +

### Mosquito populations surge in parts of California after tropical storms and triple-digit heat

**Tom Kisken and Vanessa Arredondo** USA TODAY NETWORK

Published 8:55 p.m. ET Sept. 24, 2023 | Updated 8:56 p.m. ET Sept. 24, 2023



LOCAL NEWS

### 2023 West Nile season ending with 3 deaths, 92 cases

by **Eric Mayer**

Posted: Oct 20, 2023 / 02:55 PM CDT

Updated: Oct 20, 2023 / 09:15 PM CDT



## Virginia Chapter

<https://www.cdc.gov/mmwr/volumes/72/wr/mm7241a3.htm>

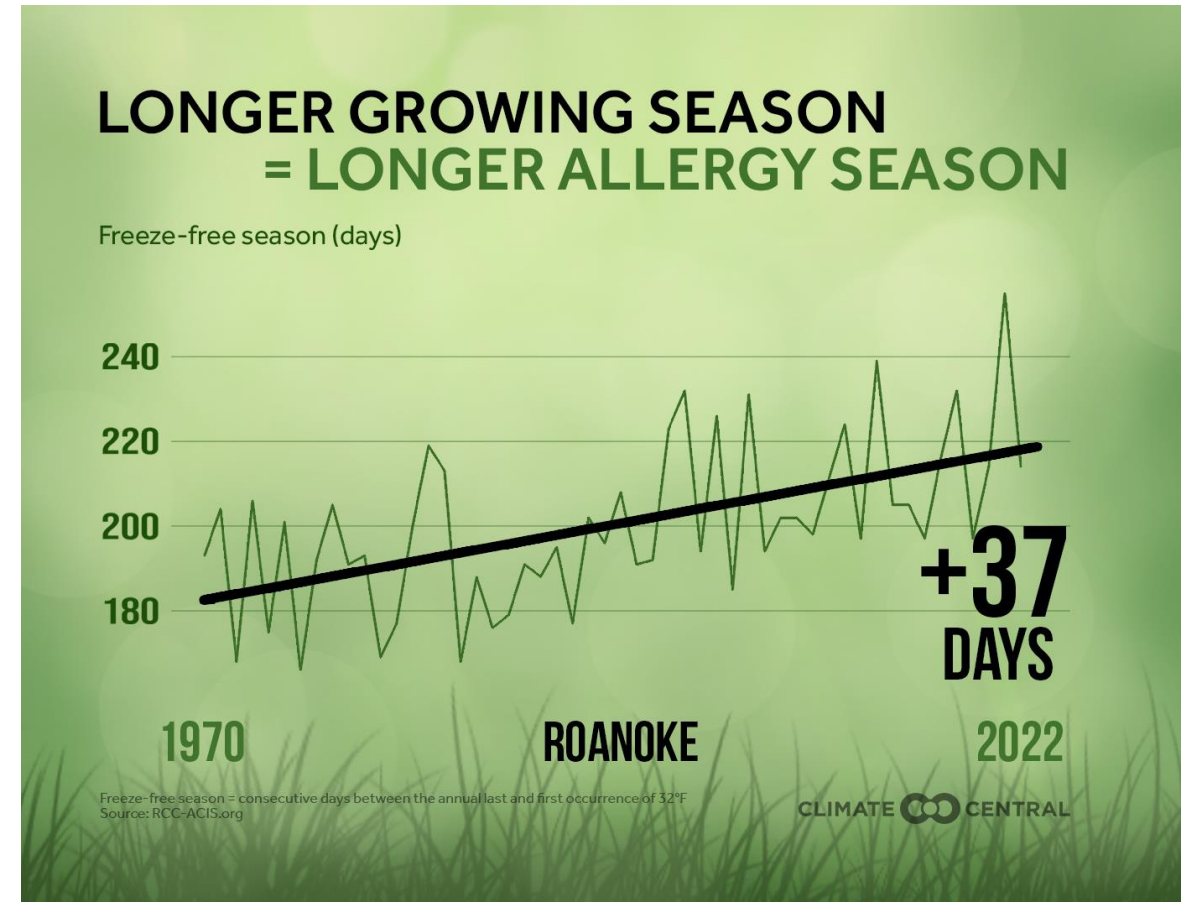
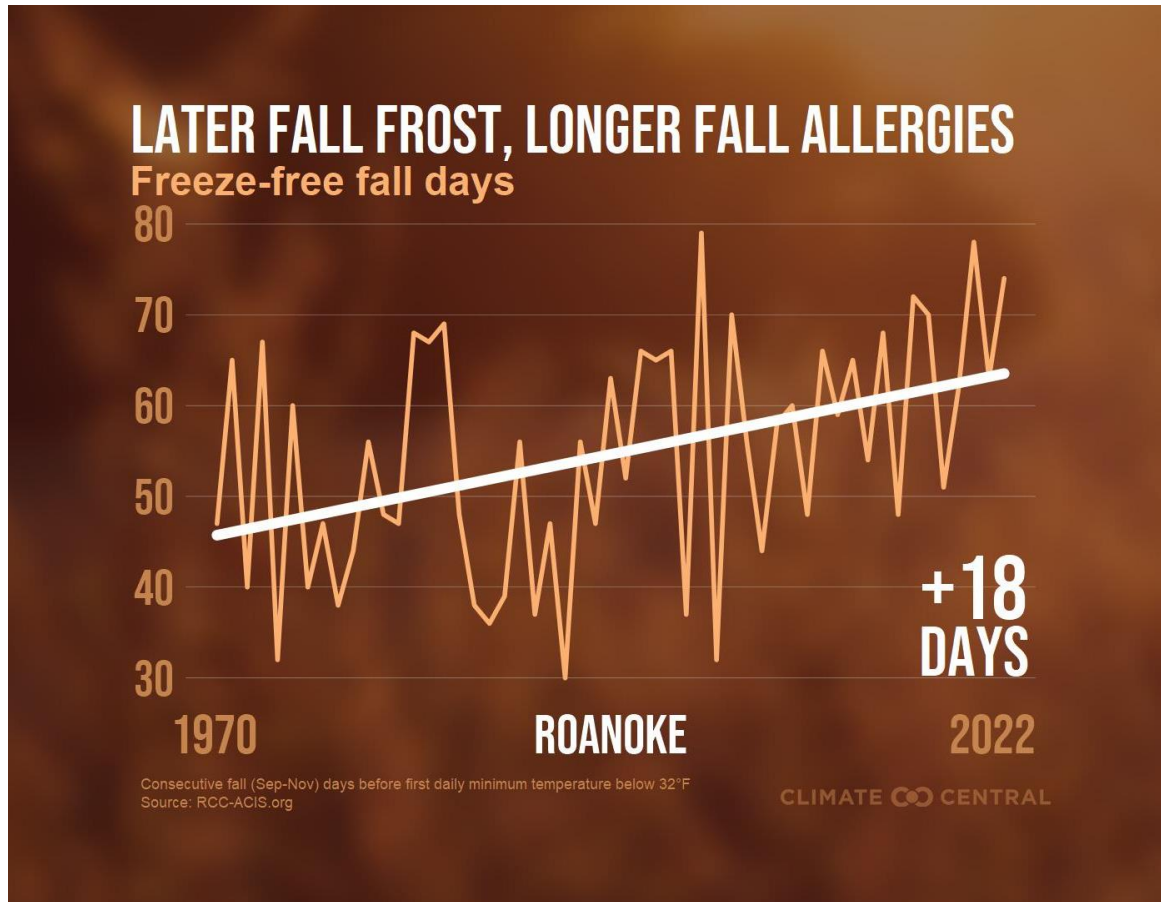
<https://www.cnn.com/2023/06/29/world/mosquitoes-spread-climate-dengue-malaria-scn/index.html>

<https://www.usatoday.com/story/news/nation/2023/09/24/mosquitoes-west-nile-virus-california-populations/70956111007/>

<https://www.keloland.com/news/local-news/2023-west-nile-season-ending-with-3-deaths-92-cases/>

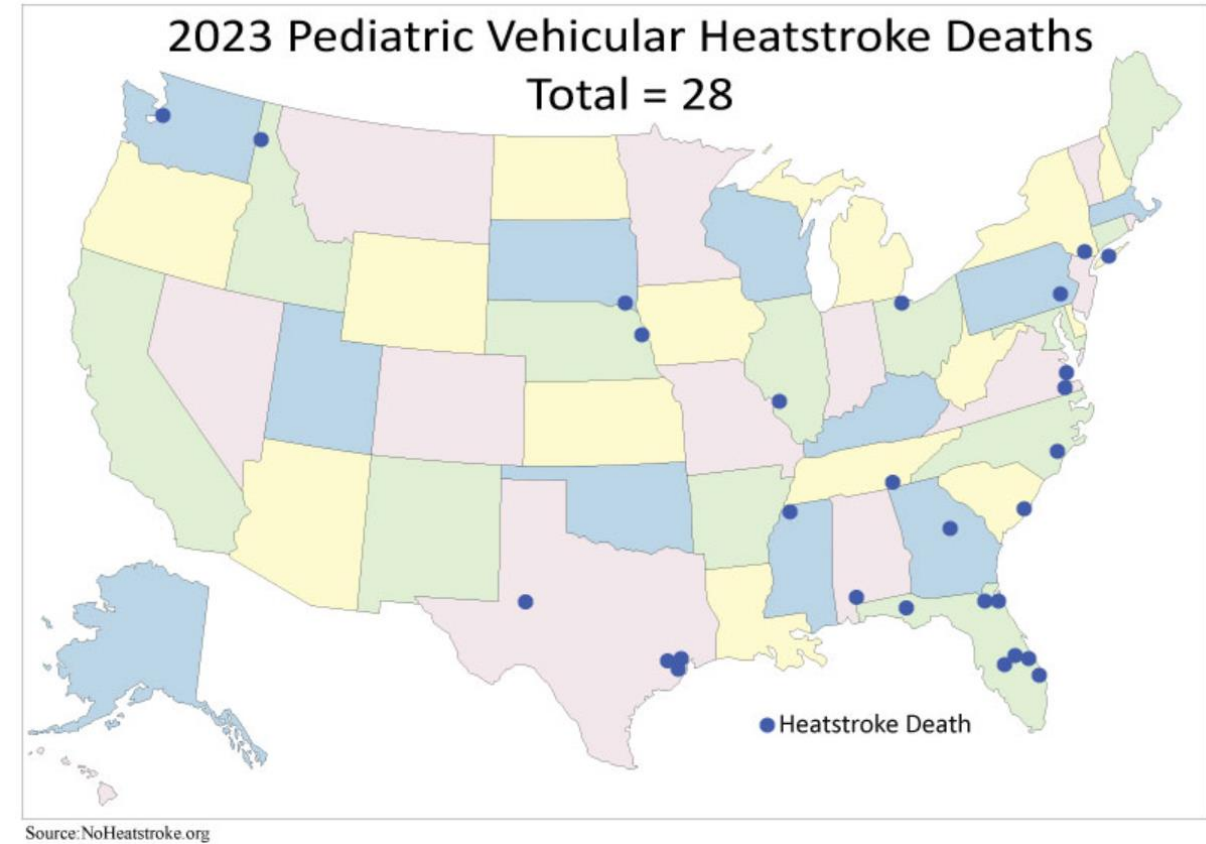


# Climate Change Impacts Human Health



# Climate Change Impacts Human Health

#	Date	City	Temperature	Gender	Age
<u>28</u>	10/10/2023	Newton County, GA	83	Girl	14 mo
<u>27</u>	10/4/2023	West Hempfield Township, PA	83	Girl	3 mo
<u>26</u>	9/12/2023	York County, VA	88	Girl	11 mo
<u>25</u>	9/5/2023	Jacksonville Beach, FL	73	Girl	2 yr
<u>24</u>	8/29/2023	Jacksonville, NC	91	Boy	14 mo
<u>23</u>	8/25/2023	Daniel island, SC	92	Girl	16 mo
<u>22</u>	8/23/2023	Yankton, SD	100	Girl	1 yr
<u>21</u>	8/21/2023	Omaha, NE	97	Girl	1 yr
<u>20</u>	8/16/2023	Williston, OH	80	Girl	4 mo
<u>19</u>	8/8/2023	Houston, TX	102	Boy	2 mo
<u>18</u>	8/3/2023	Collinsville, IL	84	Boy	3 yr



# The Role of Healthcare Providers

## How health care providers can be part of the solution to climate change

October 13, 2023

Shreya Doshi, MBBS

Rana F. Hamdy, MD, MPH, MSCE

Conference | [IDWeek](#)

News Article



*At IDWeek 2023, a presentation on the emotional and financial cost of climate change, and what clinicians can do right now to help.*

In her session, "Climate change is a pandemic: decreasing emissions is the vaccine we need to be part of the solution. Healthcare workers: Being part of the solution at the local level," Preeti Jaggi, MD, professor of pediatrics at Emory University of School of Medicine and antimicrobial stewardship program director, spoke at IDWeek about how health care workers can be a very real part of the solution for climate change.

Sixty percent of young people report feeling worried about climate change causing them anger and distress, noted Jaggi. Rapidly warming climate is the greatest threat to global public health right now, and diseases display

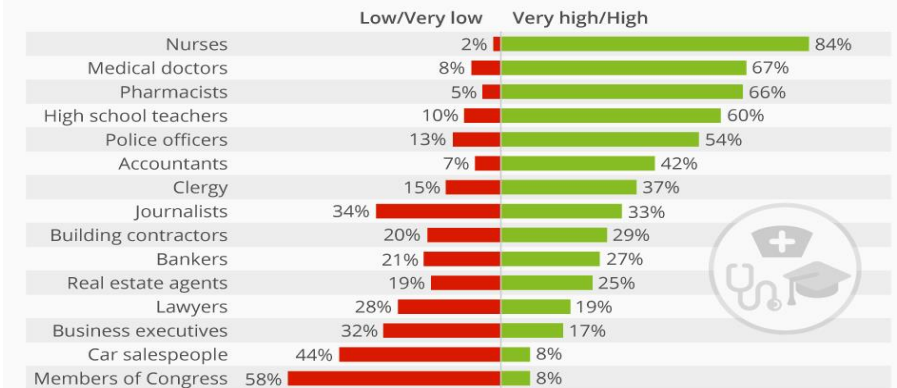


*Diverse people with varying occupations: © Rawpixel.com-stock.adobe.com*

## Contemporary PEDIATRICS®

### America's Most & Least Trusted Professions

Rating of selected U.S. professions in terms of honesty and ethical standards in 2018



© StatistaCharts n=1,025 U.S. adults  
Source: Gallup

statista



# Physician/Public Health Organizations on Climate Change

“The changing climate is causing physical, chemical, and ecological changes that are fundamentally altering the planet. These changes pose significant threats to human health, with children representing a uniquely vulnerable group.” ([American Academy of Pediatrics](#))

“Our AMA supports the findings of the Intergovernmental Panel on Climate Change’s fourth assessment report and concurs with the scientific consensus that the Earth is undergoing adverse global climate change and that anthropogenic contributions are significant. These climate changes will create conditions that affect public health, with disproportionate impacts on vulnerable populations, including children, the elderly, and the poor.” ([American Medical Association](#))

“Climate change can harm the water supply, increase vector-borne disease and increase extreme weather events. Vulnerable populations such as communities of color, the elderly, young children, the poor and those with chronic illnesses bear the greatest burden of injury, disease and death related to climate change. As an APHA priority, we believe in the need for strong climate change strategies and interventions that protect people's health. The public health community plays a critical role.” ([American Public Health Association](#))

# Climate Change and Health: A Position Paper of the American College of Physicians - 2016

POSITION PAPER

Annals of Internal Medicine

## Climate Change and Health: A Position Paper of the American College of Physicians

**Ryan A. Crowley, BSJ, for the Health and Public Policy Committee of the American College of Physicians\***

Climate change could have a devastating effect on human and environmental health. Potential effects of climate change on human health include higher rates of respiratory and heat-related illness, increased prevalence of vector-borne and waterborne diseases, food and water insecurity, and malnutrition. Persons who are elderly, sick, or poor are especially vulnerable to these potential consequences. Addressing climate change could have substantial benefits to human health. In this position paper, the American College of Physicians (ACP) recommends that physicians and the broader health care community throughout the world engage in environmentally sustainable practices that reduce carbon emissions; support efforts to mitigate and adapt to

the effects of climate change; and educate the public, their colleagues, their community, and lawmakers about the health risks posed by climate change. Tackling climate change is an opportunity to dramatically improve human health and avert dire environmental outcomes, and ACP believes that physicians can play a role in achieving this goal.

*Ann Intern Med.* 2016;164:608-610. doi:10.7326/M15-2766 [www.annals.org](http://www.annals.org)

For author affiliation, see end of text.

This article was published at [www.annals.org](http://www.annals.org) on 19 April 2016.

# Climate Change and Health: A Position Paper update of the American College of Physicians - 2022

Annals of Internal Medicine

POSITION PAPER

## Environmental Health: A Position Paper From the American College of Physicians

**Ryan Crowley, BSJ; Suja Mathew, MD; and David Hilden, MD, MPH; for the Health and Public Policy Committee of the American College of Physicians\***

Environmental health refers to the health effects associated with environmental factors, such as air pollution, water contamination, and climate change. Environmental hazards are associated with poor outcomes in common diseases, including diabetes and heart disease. In this position paper, the American College of Physicians (ACP) seeks to inform physicians about environmental health and offers policymakers recommendations to reduce the adverse health consequences of climate change, improve air and water quality, reduce

exposure to toxic substances, and address environmental injustice. ACP affirms that all communities, including people of color, people with low income, and marginalized populations, deserve to live in a healthy environment.

*Ann Intern Med.* 2022;175:1591-1593. doi:10.7326/M22-1864 **Annals.org**

For author, article, and disclosure information, see end of text.

This article was published at Annals.org on 25 October 2022.

# The Healthcare Sector and Climate





# Healthcare Industry is One of the Largest Consumers of Energy

- “If the health sector were a country, it would be the fifth-largest emitter on the planet.”
- U.S. health sector spends over \$9 billion annually on energy costs
- Power plant emissions are connected to premature deaths, chronic bronchitis, asthma attacks, emergency room visits and more.
- “30% cut in healthcare electricity’s carbon pollution by 2030 would reduce greenhouse gas emissions, preventing an estimated 4,130 premature deaths, 85,000 asthma attacks, 4 million respiratory symptom events and 3,750 hospital visit incidents and save about \$1.2 billion in medical costs.” – Health Care Climate Council

# What Can I Do? – Learn About It!

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everyone, every day



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HOME > ADVOCACY > ADVOCACY IN ACTION > CLIMATE CHANGE TOOLKIT

## Climate Change Toolkit

Resources to help reduce energy use and greenhouse gas emissions in your practice.

Physicians can play a substantial role in addressing climate change by advocating for climate change adaptation and mitigation policies and educating themselves about climate change and how it affects public and individual health, and the potential health threats it may pose to their community.

To learn more about how climate change affects health, see [Climate Change and Health: A Position Paper of the American College of Physicians](#). The paper lays out the evidence of how our changing planet has impacted, is impacting and will continue to impact human health.

ACP has developed a Climate Change and Health Action Plan to help our members take initiative. The Action Plan includes:



Virginia Chapter

<https://www.acponline.org/advocacy/advocacy-in-action/climate-change-toolkit>  
image source: <https://climateforhealth.org/ambassadors-training/>

# What can I do? – Counsel Patients



# What can I do? - Advocacy

- VCCA Advocacy Day at the General Assembly
  - Jan/Feb each year
  - <https://www.virginiaclinicians.org/advocacy>
  - Collaborate on bill introduction, co-advocacy for/against bills
- MS2CH (Consortium) Advocacy Day on Capital Hill
  - Feb/Mar each year
  - <https://medsocietiesforclimatehealth.org/annual-meeting/2024-annual-meeting/>
- ACP Leadership Day with Medical Society of Virginia (MSV)



# The Clean Air Act, enacted 1970, is working!

## Air Quality Trends Show Clean Air Progress

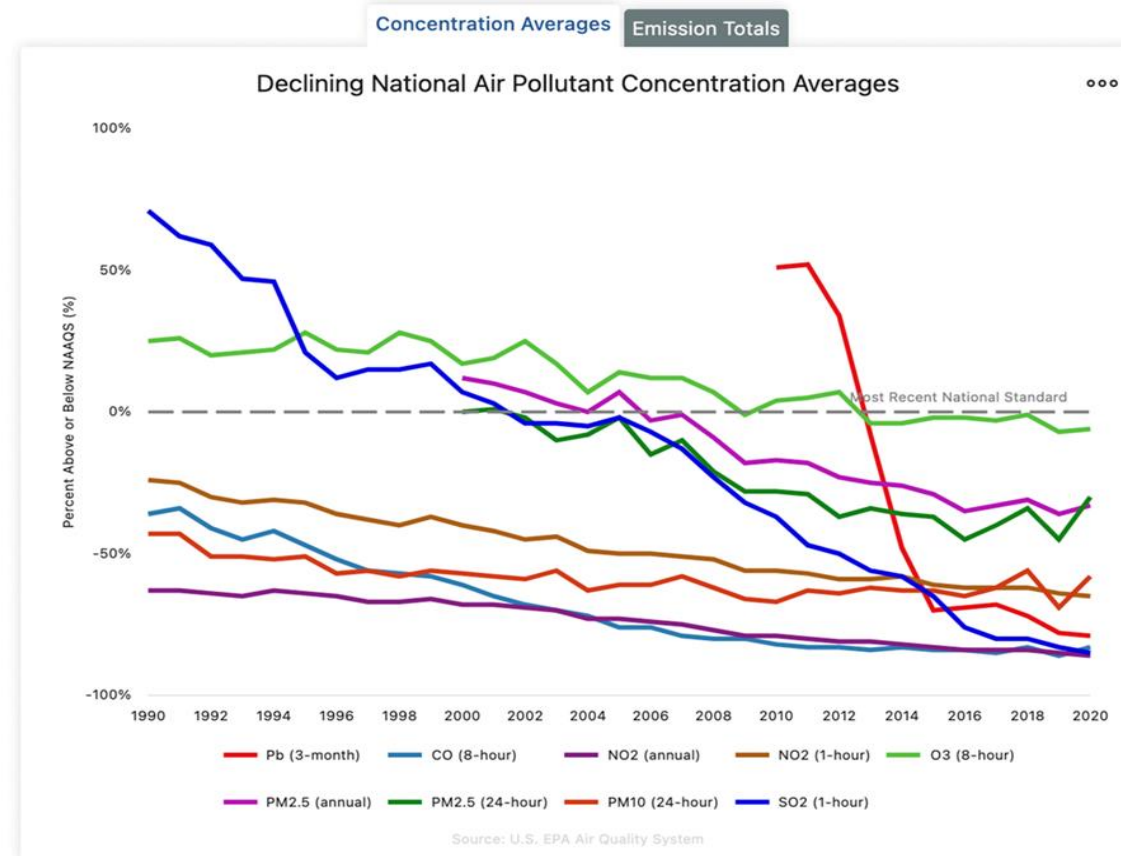
Nationally, concentrations of air pollutants have dropped significantly since 1990:

- Carbon Monoxide (CO) 8-Hour, ↓ 73%
- Lead (Pb) 3-Month Average, ↓ 86% (from 2010)
- Nitrogen Dioxide (NO<sub>2</sub>) Annual, ↓ 61%
- Nitrogen Dioxide (NO<sub>2</sub>) 1-Hour, ↓ 54%
- Ozone (O<sub>3</sub>) 8-Hour, ↓ 25%
- Particulate Matter 10 microns (PM<sub>10</sub>) 24-Hour, ↓ 26%
- Particulate Matter 2.5 microns (PM<sub>2.5</sub>) Annual, ↓ 41% (from 2000)
- Particulate Matter 2.5 microns (PM<sub>2.5</sub>) 24-Hour, ↓ 30% (from 2000)
- Sulfur Dioxide (SO<sub>2</sub>) 1-Hour, ↓ 91%
- Numerous air toxics have declined with percentages varying by pollutant

Despite increases in air concentrations of pollutants associated with fires, carbon monoxide and particle pollution, national average air quality concentrations remain below the current, national standards.

*Air quality concentrations can vary year to year, influenced not only by pollution emissions but also by natural events, such as dust storms and wildfires, and variations in weather.*

**Tip** Click pollutant names in the chart legend to hide or include trend lines, and hover over any line to display percentages above or below the most recent standard. Click the Emission Totals tab to view emission trends.



# Inflation Reduction Act of 2022



## MAKING AMERICA GREENER

The US Senate has passed the Inflation Reduction Act of 2022 — a pared-down version of US President Joe Biden's Build Back Better Act — which includes the largest climate spending package in US history

NEWS 18  
creative

## FINANCIAL BREAKDOWN OF THE CLIMATE BILL

\$75 BILLION

INVESTING IN DECARBONIZING ALL SECTORS OF THE ECONOMY

\$64.5 BILLION

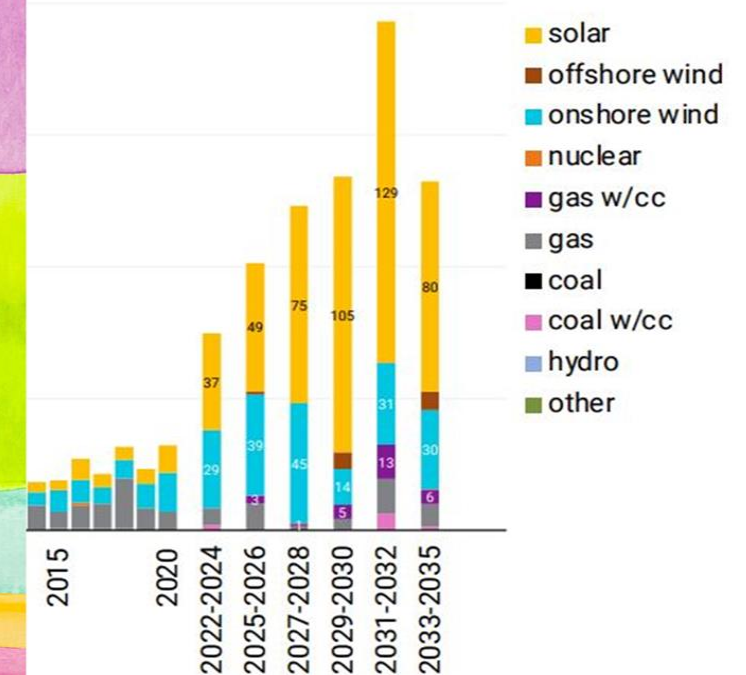
INCREASING AMERICAN ENERGY SECURITY

\$27.6 BILLION

SUPPORTING RESILIENT RURAL COMMUNITIES

\$10 BILLION LOWERING ENERGY COSTS FOR AMERICANS NICOLE KELNER

\$10 BILLION FOCUSING INVESTMENTS INTO DISADVANTAGED COMMUNITIES

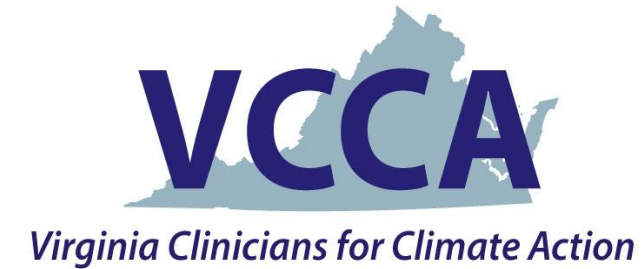




# What can I do? - Advocacy


## Virginia Climate and Health Policies supported by VCCA

- Regional Greenhouse Gas Initiative - PASSED!
- Virginia Clean Economy Act - PASSED!
- Solar Freedom- PASSED!
- Clean Cars - PASSED!



# What can I do? – Write about it

## Wai: Climate change is making us sicker

Dr. Homan Wai Wai is an Internal Medicine physician at Inova Fairfax Hospital and serves on the Steering Committee of Virginia Clinicians for Climate Action. Aug 9, 2019  0

Chances are you've noticed that it's been very hot outside lately. More than 1,000 Virginians had to seek emergency medical care for heat related illness in July alone. This is almost double the amount from the same period in 2018.

But extreme heat is not just a problem here in Virginia. Wildfires recently burned from Siberia to Greenland to Alaska at an unprecedented magnitude. Even the Arctic is literally on fire.

The environmental impact of human activities in the 21st century is not as visible as the black smoke gushing from chimneys and industrial factories during the last century. But make no mistake-air pollution remains a clear and present danger to our health.

The health community in Virginia and beyond is speaking out on the urgent need to address the greatest threat to human health that we have ever faced. However, our state and federal policymakers must join with us to find policy solutions that can provide the cure to the climate crisis.

The time to act is now to protect the health of Virginians. Virginia's General Assembly election is coming up this November. Ask your candidates what they plan to do to protect your family from climate change. The health of you and your family depends on it.



# What can I do? – Write about it

Letters | 1 October 2019

## ***Vibrio vulnificus* Infections From a Previously Nonendemic Area**

Madeline King, PharmD\*, Lucia Rose, PharmD\*, Henry Fraimow, MD, Maria Nagori, MD, ... [View all authors +](#)

[Author, Article and Disclosure Information](#)

<https://doi.org/10.7326/L19-0133>

☰ Sections

PDF Tools Share

*Background:* *Vibrio vulnificus* is a gram-negative pathogen that lives in brackish, high-salinity waters with surface temperatures above 13 °C. *V. vulnificus* wound infections occur through breaks in the skin, and intestinal infections occur after consumption of seafood. Either route can lead to bloodstream infections (1). Mortality from wound and bloodstream

Letters | 3 March 2020

## ***Vibrio vulnificus* Infections From a Previously Nonendemic Area**

Homan Wai, MD, Samantha Ahdoot, MD

[Author, Article and Disclosure Information](#)

<https://doi.org/10.7326/L19-0756>

☰ Sections

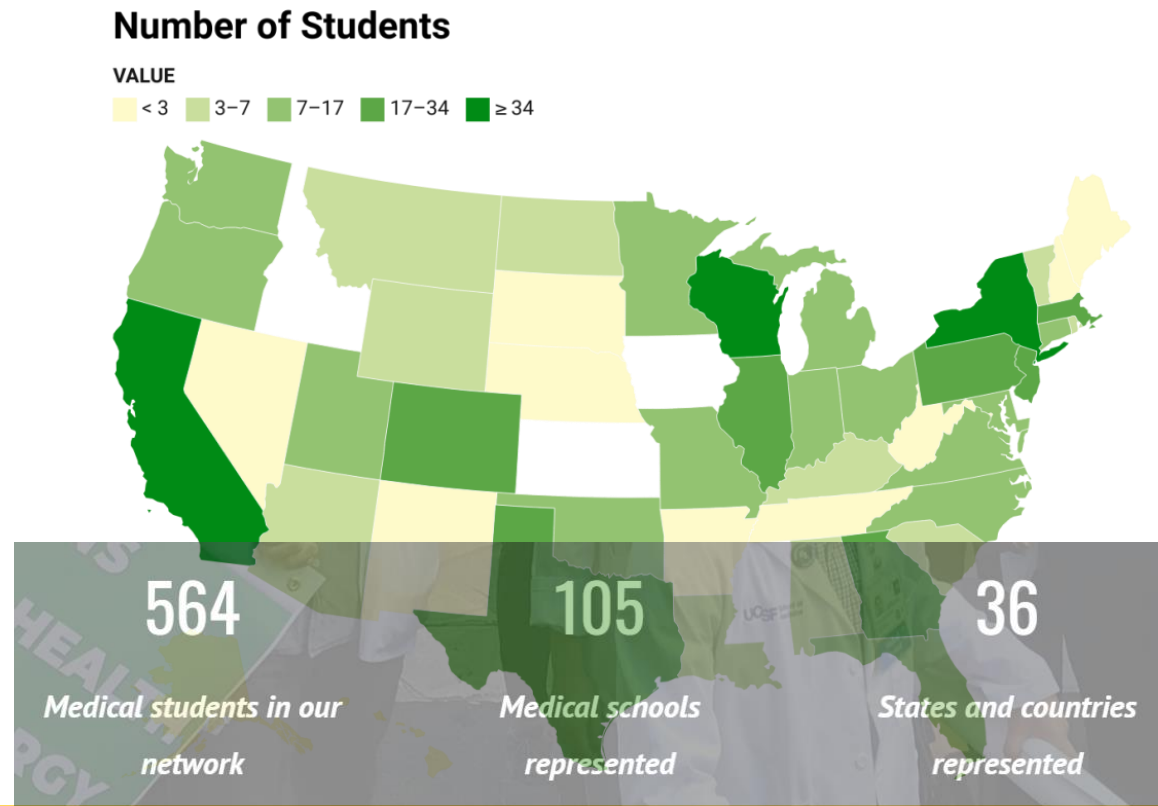
PDF Tools Share

TO THE EDITOR:

King and colleagues (1) describe 5 patients affected by *Vibrio vulnificus* infection leading to substantial morbidity and mortality. This series is notable in that the exposures occurred within the Delaware Bay region,

# Trainee Engagement

- Medical Students for a Sustainable Future (MS4SF)



# Trainee Engagement

- Planetary Health Report Card (PHRC)



## University of Virginia School of Medicine

2023 REPORT CARD

2022 REPORT CARD

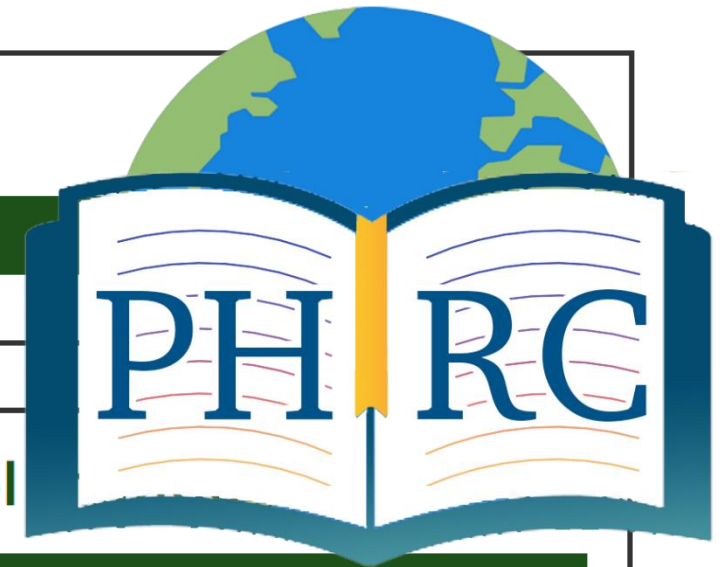


## Virginia Commonwealth University School

2023 REPORT CARD

2022 REPORT CARD

2021 REPORT CARD



# Rationale for an ACP Climate and Health Committee

- “Between 2030 and 2050, climate change is expected to cause approximately 250 000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress.” (WHO 2020)
- “Climate change is the greatest global health threat facing the world in the 21st century, but it is also the greatest opportunity to redefine the social and environmental determinants of health.” (Lancet 2022)
- “ACP strongly supports aggressive action to mitigate and adapt to climate change, strengthen policies to regulate air pollution, ensure that everyone has access to clean water, and limit exposures to toxins.” (ACP Position Paper 2022, update from original Position Paper 2016)
- “...climate change [is] an urgent threat to health and social justice. Motivated to protect our future patients and the communities we love, we catalyze action to prevent and address the health harms of climate change. (Medical Students for a Sustainable Future)



# ACP Virginia Climate and Health Committee

- The ACP VA Climate and Health committee is currently recruiting members at all stages of training, including faculty, fellows, residents, and students. We will plan to hold quarterly meetings with opportunities to join in with other initiatives with partner organizations and ACP committees.
- ACP VA signed the Health and Human Services (HHS) Health Care Sector Climate Pledge (American Hospital Association, the Catholic Health Association, and Children's Hospital Association) in September 2023
- Journal club (March 2023)
- Sustainability engagement with healthcare sectors (Sustainability Committee, VCCA)
- Virginia Climate and Health Education Collaborative (VCHEC by VCCA)
- Advocacy Opportunities (MSV, VCCA, M2SCH)

# Synergy with other domains

- Advocacy
- DEI
- High Value Care/Resource Utilization
- Simplifying Practice/Decreasing Paperwork

# What Can I Do? – Post It!

 **The Medical Society Consortium on...** · 8h ...

As a health professional, how can you respond to the harms of fossil fuel pollution and deliver climate-informed specialty care? Join this @NEJM webinar on November 16 for answers to these questions and more.


Register here: [events.nejm.org/events/625](https://events.nejm.org/events/625)



NEJM and 7 others


6 10 512

**Posts** Replies Media Likes

 **Virginia Clinicians for Climate Action** · 4d

This evening at 8 PM, the LEAGUE OF WOMEN VOTERS OF THE FAIRFAX AREA EDUCATION FUND INC will host a forum for candidates running for the Clerk of the Circuit Court position.

You can watch the event on @FPAtvradio or streaming it online at:

 **Inside Scoop TV Show**  
youtube.com

26

**Posts** Replies Media Likes


 **Virginia Clinicians for Climate Action reposted**  
**Homan Wai, MD** @homatropine · 9/30/23 ...

I'm grateful to be a part of the Climate Action Conference hosted by Fairfax County Supervisor James Walkinshaw. We educated our community about the adverse health effects caused by climate change. The engagement from the community was enthusiastic!




Supervisor James Walkinshaw and 8 others

3 6 181

 **Virginia Clinicians for Climat...** · 10/12/23 ...

Learn about the impactful efforts of Theo Lim, PhD to empower students in Roanoke to engage in discussions and enhance their understanding of climate change.



heatmap.news  
**How Much Can Heat Vary Within a City?**  
These Kids Strapped on Sensors to Find

1 2 325

# What Can I Do as a Trainee?

- Resource utilization stewardship
  - Daily labwork
  - Imaging
    - Pretest probability
    - Duplicated studies from neighboring hospitals
  - Telemetry and other monitoring
  - Medications same bioavailability
    - Fluroquinolones, metronidazole, ondansetron
- Make your voice heard
  - Join our ACP VA Climate and Health committee!
  - Join Virginia Clinicians for Climate Action
  - Join Medical society consortium for Climate and Health





# What Can I Do as a Trainee?

**Peter Trinh, M.D, M.B.A.**, an internal medicine and primary care resident at Brigham & Women's Hospital, was selected for his commitment to building a culture of cost-effective, patient-centered, climate-smart health care by reducing low value, wasteful clinical practices.

For his project, he will use a team-based approach to reduce low-value, unnecessary lab tests on two general internal medicine teaching units and perform an analysis of the cost and carbon footprint of inpatient lab tests.



“This is an incredible honor. I truly believe that sustainable change in health care must address team behaviors and organizational culture, and I'm excited to engage in this hard work with the support of the Health Care Without Harm Physician Network. I am very much looking forward to CleanMed 2022 and learning vital lessons from this community that I can share and apply at my institution.”



— Peter Trinh, M.D, M.B.A.

# Vote for Climate!



# Resources

- ACP Advocacy Toolkit - <https://www.acponline.org/advocacy/advocacy-in-action/climate-change-toolkit>
- CDC Climate and Health Program - <https://www.cdc.gov/climateandhealth/default.htm>
- ecoAmerica Climate for Health - <https://ecoamerica.org/health/>
- EPA Envirofacts - <https://enviro.epa.gov/>
- EPA – Greenhouse Gas Emissions - <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>
- GlobalChange.gov - Fourth National Climate Assessment (NCA4) - <https://nca2018.globalchange.gov/>
- Healthcare Without Harm - <https://noharm.org/>
- IPCC Reports, including AR6 and Special Reports - <https://www.ipcc.ch/reports/>
- Lancet Count Down Full Report & US Brief - <https://www.lancetcountdown.org/2022-report/> | <https://www.lancetcountdownus.org/2022-lancet-countdown-u-s-brief/>



# Resources

- 🔗 Medical Society Consortium for Climate and Health - <https://medsocietiesforclimatehealth.org/>
- 🔗 Medical Students for a Sustainable Future - <https://ms4sf.org/>
- 🔗 My Green Doctor - <https://mygreendoctor.org/>
- 🔗 National Center for Environmental Information State of the Climate (under NOAA – National Oceanic and Atmospheric Administration) - <https://www.ncdc.noaa.gov/sotc/>
- 🔗 Our World In Data – CO2 and Greenhouse Gas Emissions - <https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions> ; <https://ourworldindata.org/co2-emissions>
- 🔗 Planetary Health Report Card - <https://phreportcard.org/>
- 🔗 Virginia Clinicians for Climate Action - <https://www.virginiaclinicians.org/>
- 🔗 World Health Organization (WHO) COP27 Special Report on Climate Change and Health - <https://www.un.org/en/climatechange/cop27>

# Please touch base with ideas/engagement

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- [hwai@viriniaclinicians.org](mailto:hwai@viriniaclinicians.org)

