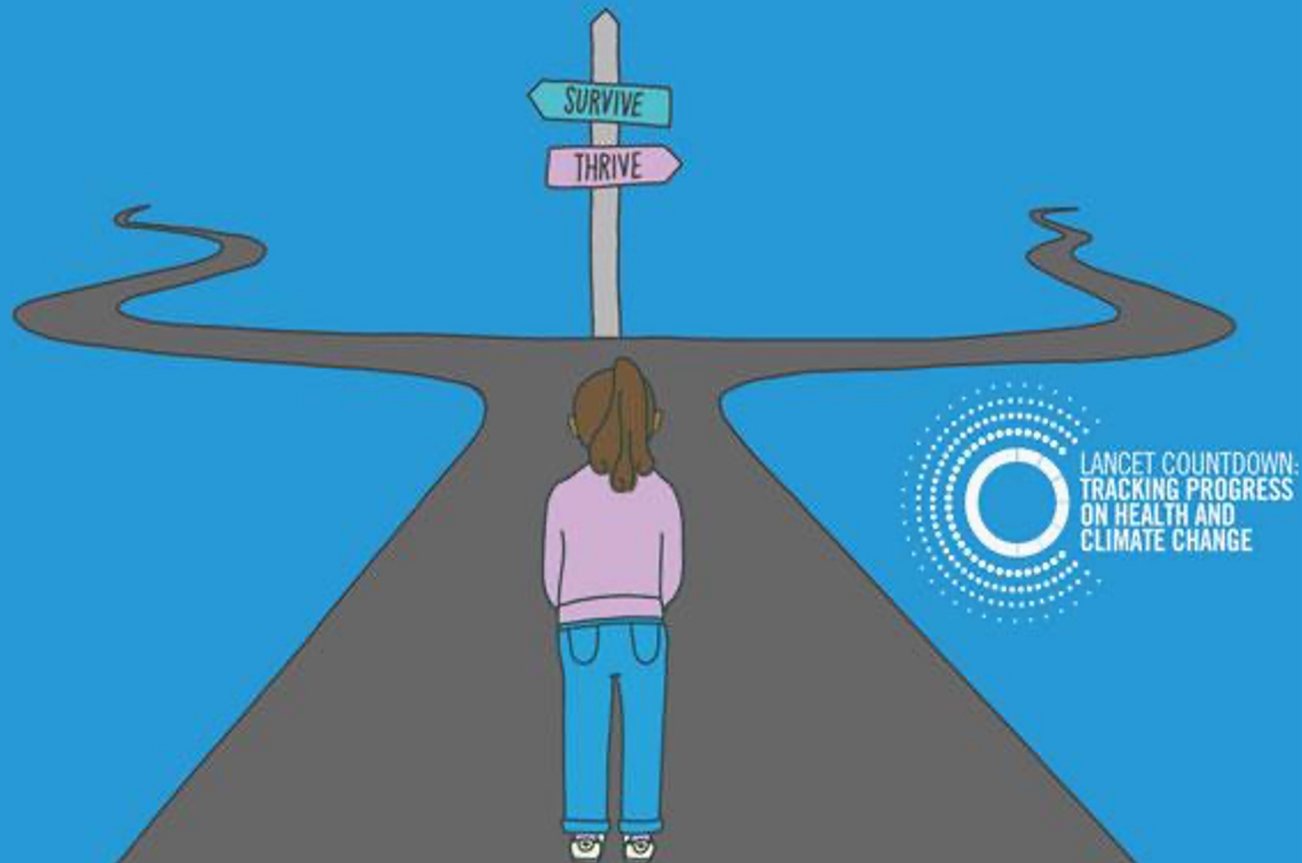


Health Equity & Disparities: Climate Change and Health

Dr. Michelle Montgomery, MA, MPP, PhD
(Haliwa Saponi/Eastern Band Cherokee)
Associate Professor and
Social and Historical Studies Division Chair
University of Washington

Paul Charlton, MD
ED Director, Gallup Indian Medical Center
IHS Chief Clinical Consultant for Emergency Medicine

Every child born today will be affected by climate change. How we respond will determine the world we live in tomorrow and will shape the health of children across the globe, at every stage of their lives.



“Greatest global health threat facing the world in the 21st century”

- Lancet Countdown

Mainstream EM +

Watch

Home

Live

Reels

Shows

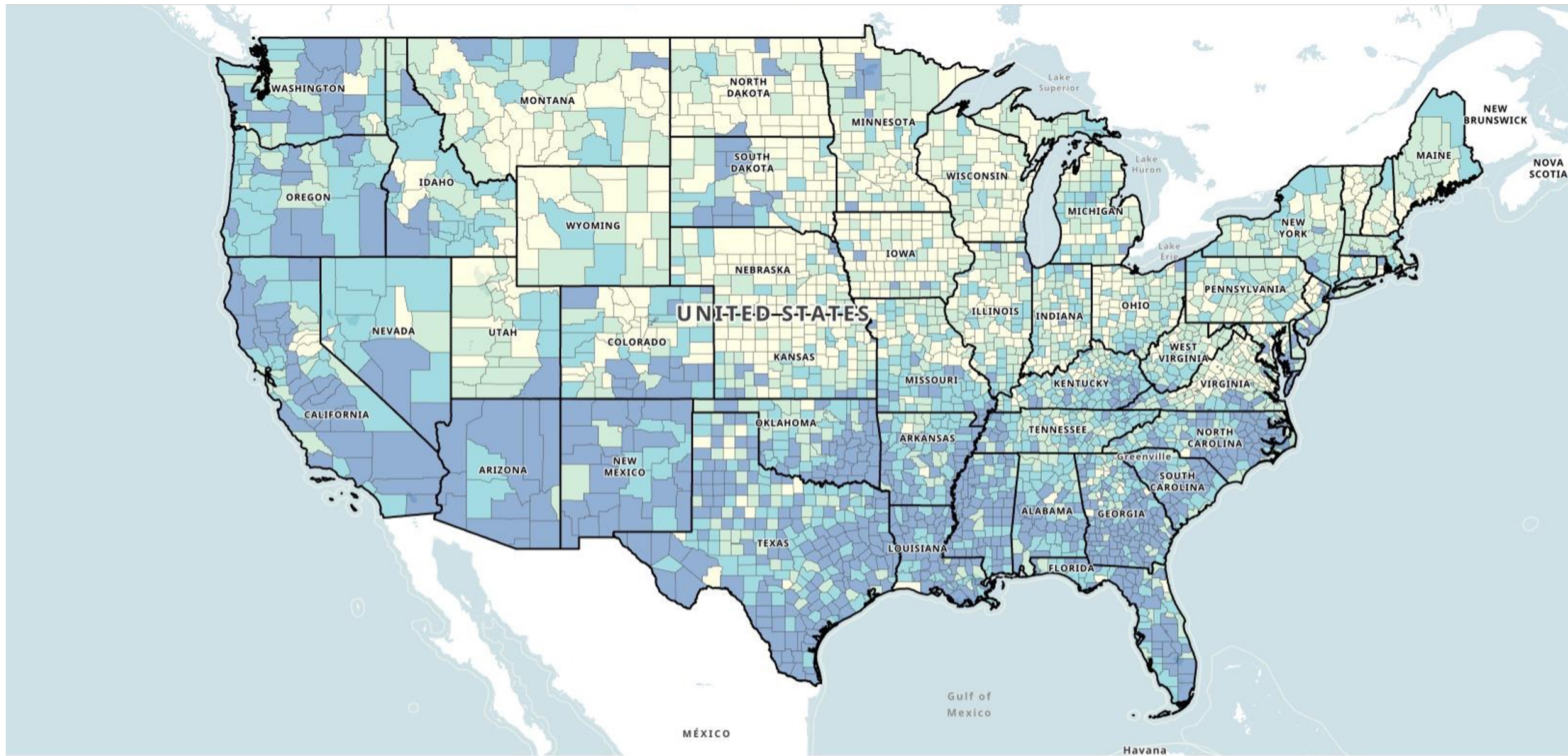
Explore



"Sheep Springs, NM" 🌊🤔

<https://www.facebook.com/teesto.az/videos/sheep-springs-nm/3301776903414763/>





<https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>

Level of Vulnerability

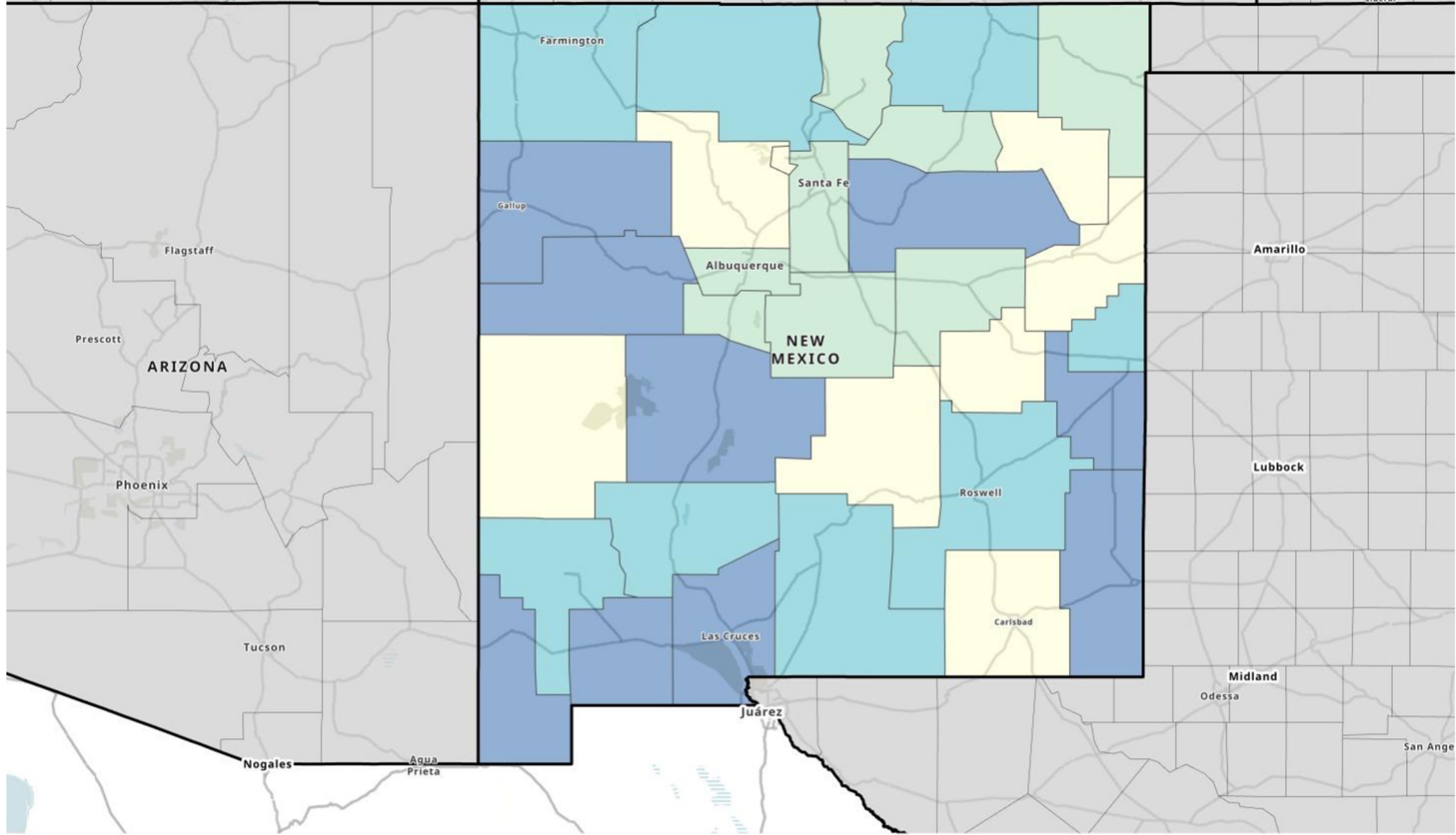
Low

Low-Medium

Medium-High

High

No Data



Level of Vulnerability





Census Tract 35031945300,
Mckinley County, New Mexico

2020 Statewide Overall SVI Score:

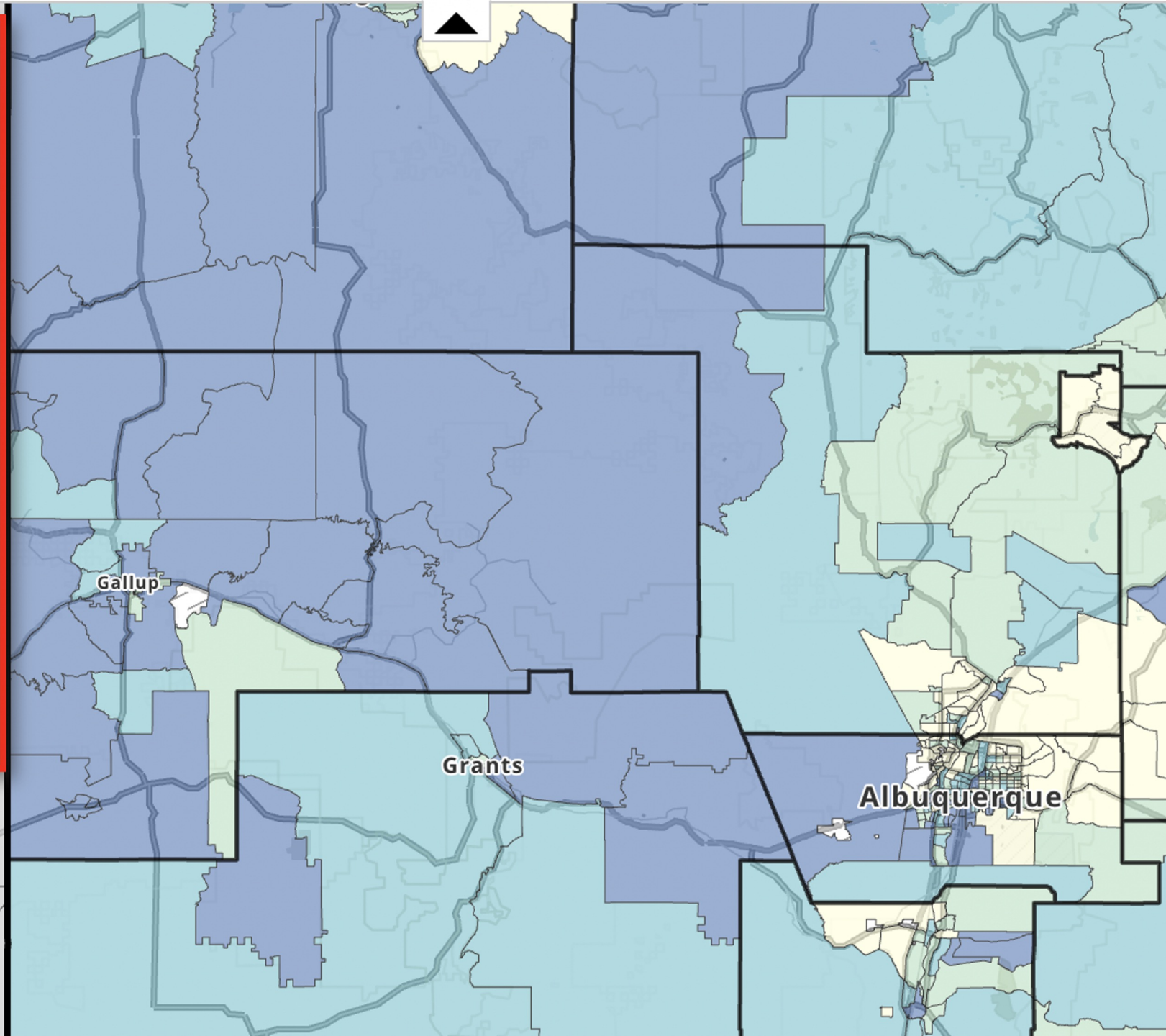
0.9883

Possible scores range from 0 (lowest vulnerability) to 1 (highest vulnerability).

A score of **0.9883** indicates a **high** level of vulnerability.

[View Prepared County Map](#)

[View in Table](#)



Extreme Weather Events

Severe Heat

Wildfires / Smoke

Mitigation

Resilience / Adaptation

- ED infrastructure resilience
- Climate resiliency plans

LAS CRUCES DAYS ABOVE 100°



**+15
DAYS**

Change in days above 100°F based on rate of change since 1970.
Source: RCC-ACIS.org

CLIMATE  CENTRAL

Excessive Body Heat
Hyperthermia of greater than 40.6 °C (105.1 °F) in combination with disorientation and a lack of sweating.



Dehydration, Humidity or Disruption of Enzymes regulating biochemical reactions



Seizure



Organ Failure, Unconsciousness or Death



Heat Wave and Blackout Would Send Half of Phoenix to E.R., Study Says

New research warns that nearly 800,000 residents would need emergency medical care for heat stroke and other illnesses in an extended power failure. Other cities are also at risk.

Headline: <https://www.nytimes.com/2023/05/23/climate/blackout-heat-wave-danger.html>

Research study: Stone et al. How Blackouts During Heat Waves Amplify Mortality and Morbidity Risk. Environmental Science and Technology. May 3, 2023.

<https://pubs.acs.org/doi/pdf/10.1021/acs.est.2c09588>

COMMUNITIES OF COLOR

Some communities of color living in risk-prone areas face cumulative exposure to multiple pollutants.

Adaptation plans that consider these communities and improve access to healthcare help address social inequities.



OLDER ADULTS

Older adults are vulnerable to extreme events that cause power outages or require evacuation.



Checking on elderly neighbors and proper emergency communication can save lives.

CHILDREN

Children have higher risk of heat stroke and illness than adults.



Adults can lessen risk by monitoring exertion and hydration.

LOW INCOME COMMUNITIES

Low income families are at risk of physical and mental illnesses during flooding and in crowded shelter conditions.



Comprehensive disaster management can improve resiliency for people with limited resources.

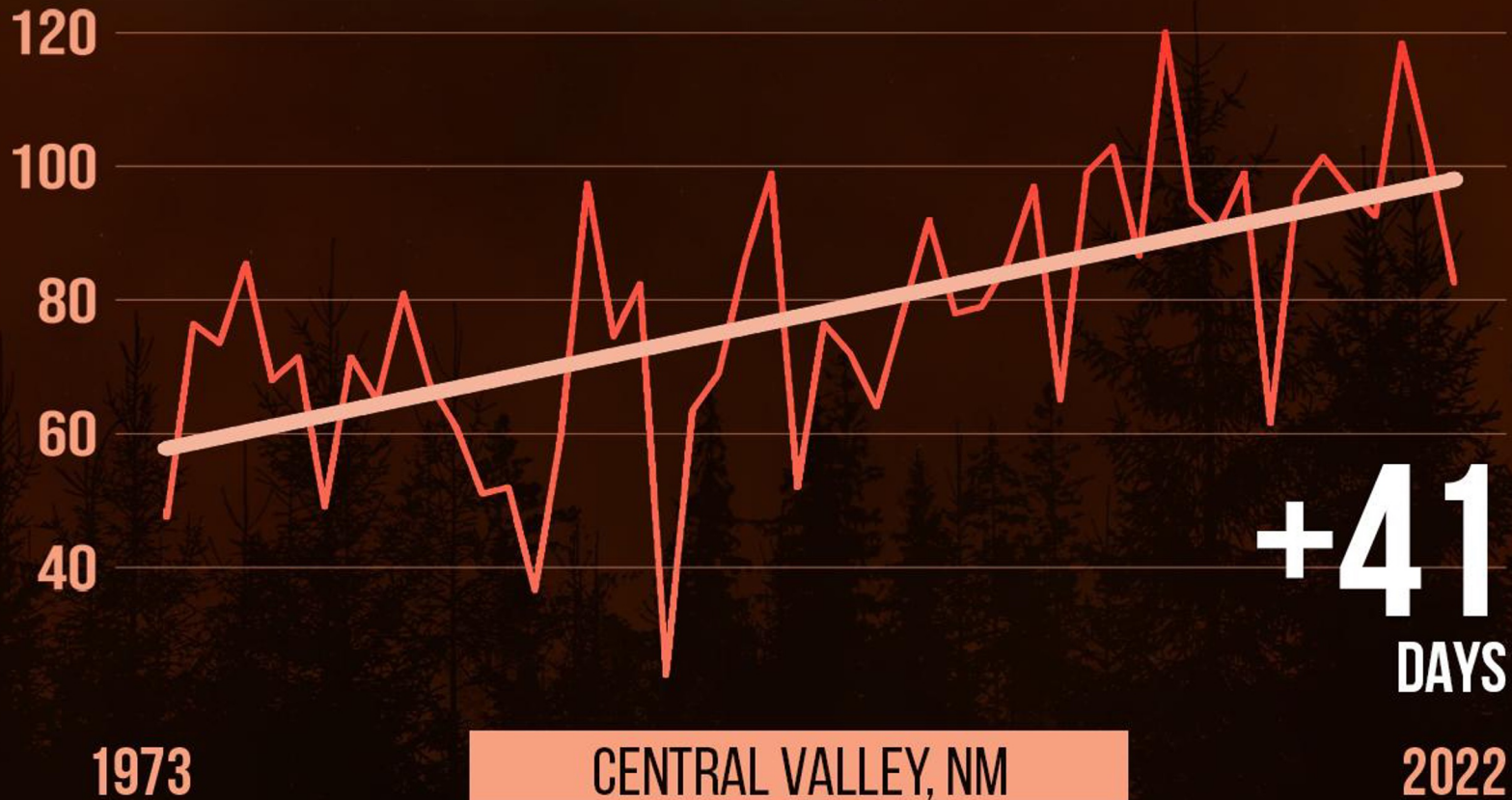




Photo: Jim Weber / Santa Fe New Mexican

FIRE WEATHER DAYS

Change in hot, dry, windy days

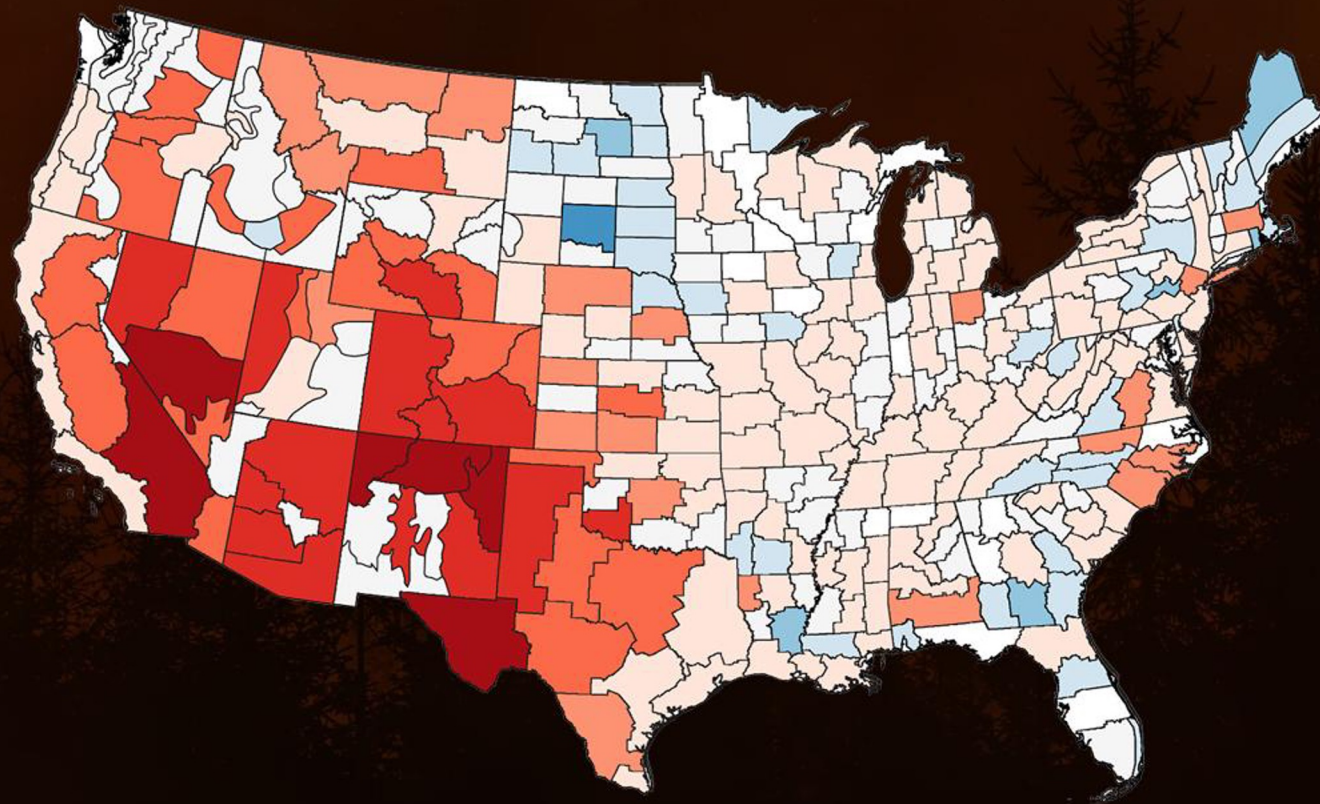


Annual days (1973-2022) at/above fire weather thresholds in at least two hourly observations per day. (2 stations in climate division)
Source: NOAA/NCEI Local Climatological Data (LCD)

CHANGE IN FIRE WEATHER DAYS

Change in annual hot, dry, windy days, 1973–2022

-56 -28 -14 -7 -1 1 7 14 28 56



Change in average annual days from 1973 to 2022 at/above fire weather thresholds in at least two hourly observations per day.

Source: NOAA/NCEI Local Climatological Data (LCD)



AMTRAK
Las Vegas

Las Vegas, NM

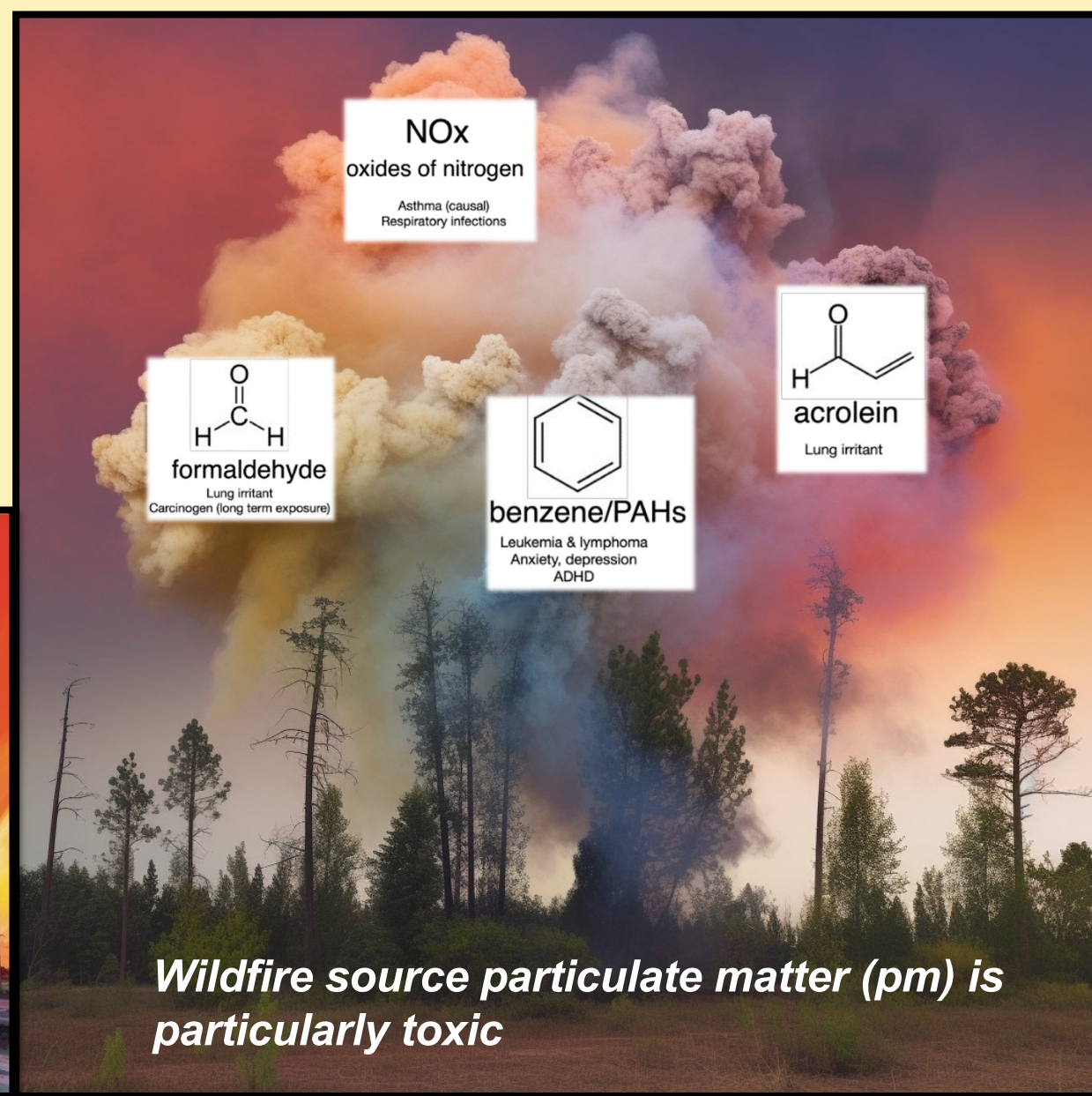
<https://www.npr.org/2022/05/08/1097455610/new-mexico-residents-brace-for-extreme-wildfire-conditions>

Smoke - chemical composition

Household chemicals



Industrial chemicals



Wildfire source particulate matter (pm) is particularly toxic



U.S. Department of Health and Human Services

Enhancing the health and well-being of all Americans

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About the Office of Climate Change and Health Equity (OCCHE)

Climate Change & Health Equity, and Environmental Justice at HHS +

About the Office of Environmental Justice (OEJ)



Protecting Vulnerable Patient Populations from Climate Hazards: A Referral Guide for Health Professionals

This resource is intended to inform education and referrals in clinical settings for patients who are vulnerable to climate change's health impacts, and can be used by health and human services providers to address climate-related threats to their clients' well-being.

This guide summarizes resources that can address patients' social determinants of health and mitigate health harms related to climate change. These resources include social services and assistance programs to which patients can be referred, as well as references for anticipatory guidance and counseling to help patients prepare for potential hazards.

Reciprocity of Eco-Mindfulness: What does justice demand?

LAND ACKNOWLEDGEMENT - I live and work on the land/sea of the Salish Coastal people and thank them for their past and present stewardship of the land.



Value-Based Concepts

- > Connection to Place**
- > Environmental Inequality/Inequity**
- > Climate Justice**
- > Eco-mindfulness**
- > Climate Resilience**
- > Curing vs. Healing**



OBJECTIVES

1. **Reciprocity + Gratitude + Intellectual Humility = Heart Work**
2. **Discuss key values and principles of justice with intellectual humility for responding to climate justice.**



Mind



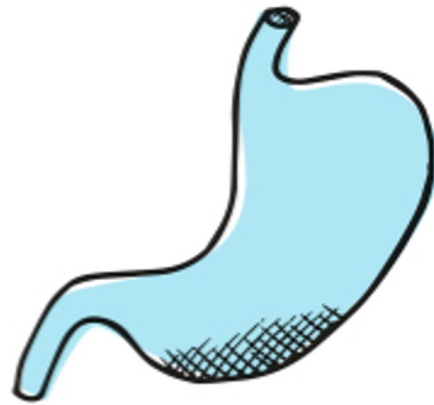
"I think things through to understand"

Heart

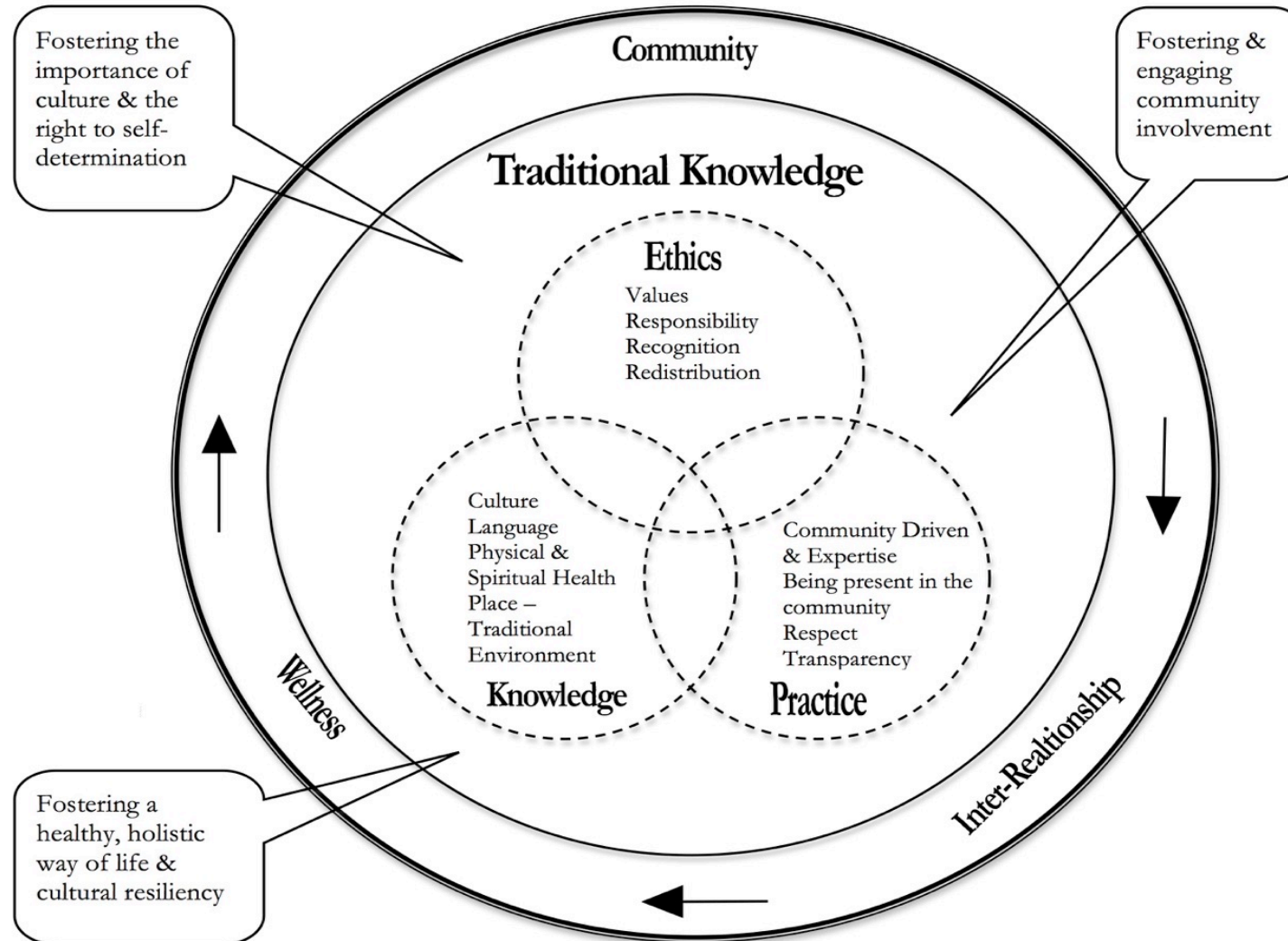


"I feel and sense whether something is right"

Gut



"I rely on gut instinct + personal experience"



Connection to Place

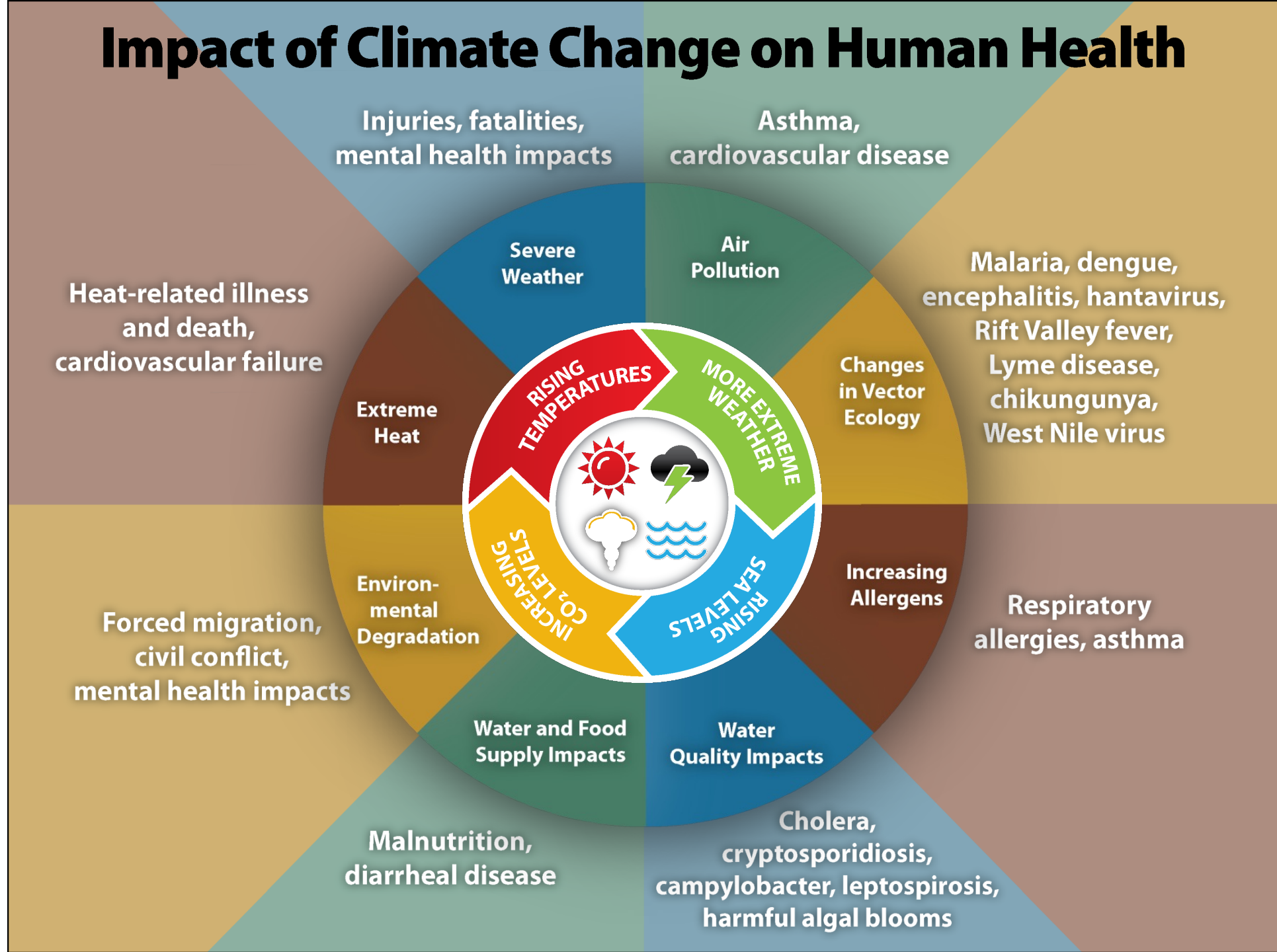
- **Place is multi-dimensional, cultural and relational. Place is also any environment, locality, or context with which all life interact.**
- **Place is a physical space that includes memories, spirituality and histories. The connection to place is deeply engrained in identity.**



Connection to Place – Clinical Implications

- **The Warren, North Carolina protests of 1982 are considered one of the earliest examples of the environmental justice movement. A manufacturer of electrical transformers dumped tons of cancer-causing PCB along 240 miles of North Carolina's highways.**

Impact of Climate Change on Human Health



Actions

- **Decolonize the narrative – *who* defines for *whom* the meaning of knowledge and *climate justice*.**
- **Rules of engagement.**
- **Bi-directional safe space for clinicians and community partners to unlearn and re-learn how to refill your heart cup.**

Climate and Health



Environmental Inequality and Justice

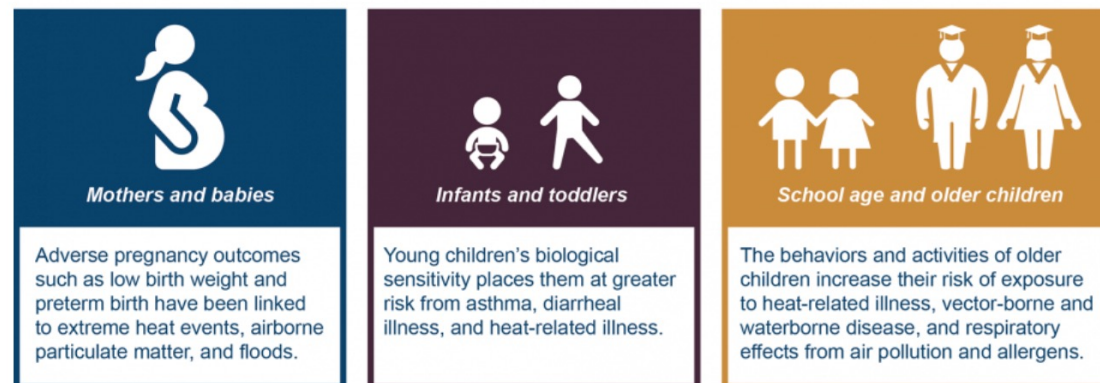
Intersection of Social Determinants of Health and Vulnerability in the face of Climate Change

How are populations variably affected?

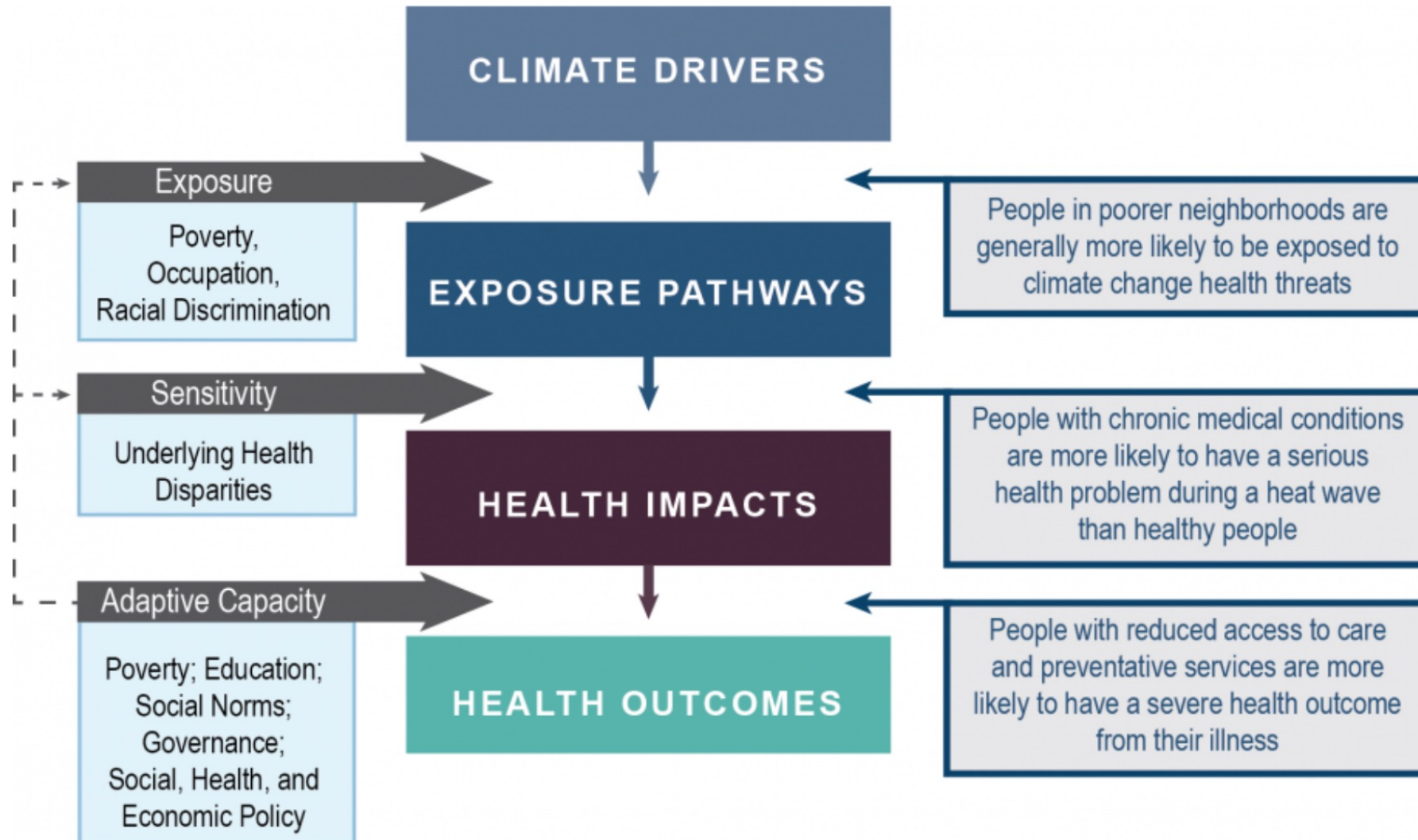
Examples:

- > Unique vulnerabilities along the lifespan
- > Unique vulnerabilities dependent on geographic location, health insurance status, access to resources, etc.

Vulnerability to the Health Impacts of Climate Change at Different Life Stages



Intersection of Social Determinants of Health and Vulnerability



➔ Elements of Vulnerability

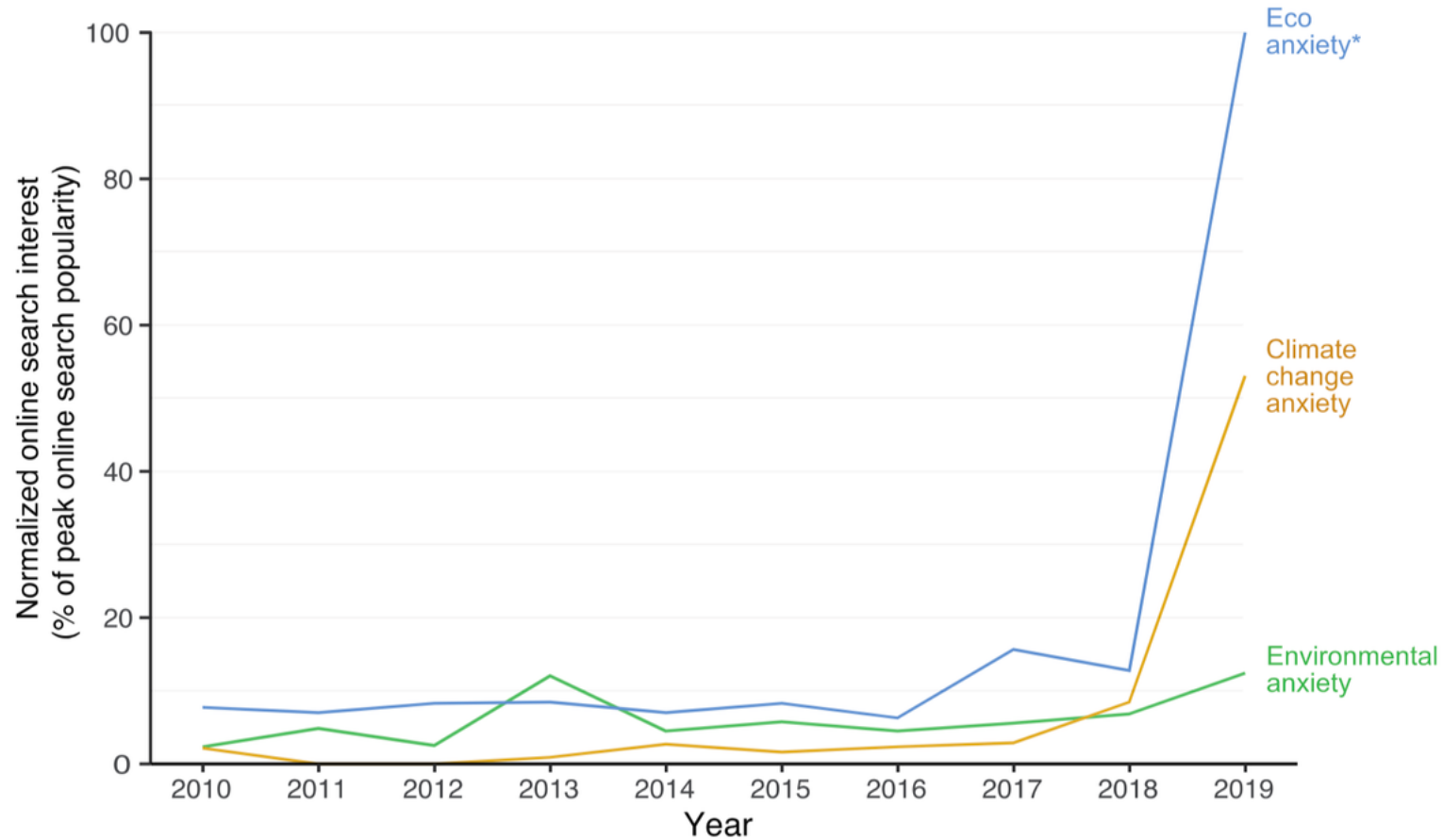
□ Social Determinants of Health

← □ Examples



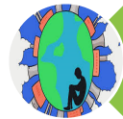
Mental Health & Climate Change

B Global online search queries for the term “eco anxiety” from 2010–2019



Mental health and climate change, reactions to a changing world

Navigating the New Terminology



- Ecoanxiety,⁷



- Ecogrief,⁸



- Ecoparalysis,⁷



- Ecoguilt,⁷



- Solastalgia,⁷



Mental Health & Climate Change: Ecogrief

- 1. Acute or past physical ecological loss – disappearance, degradation or extinction of species, landscapes and ecosystems.**
- 2. Loss of environmental knowledge – disruption of personal and cultural identities created in relation to the physical environment.**
- 3. Anticipated future loss - species, landscapes, ecosystems, ways of life or livelihoods.**



Mental Health & Climate Change: Solastalgia

Definition:

A feeling of homesickness without ever leaving home

'Solastalgia': Arctic inhabitants overwhelmed by new form of climate grief



📌 Solastalgia: 'I am homesick for my home even though I am still here' Illustration: Roy Boney/The Guardian

Ecological grief and anxiety: the start of a healthy response to climate change?

Ashlee Cunsolo, Sherilee L Harper, Kelton Minor, Katie Hayes, Kimberly G Williams, Courtney Howard

Lancet Planetary Health, 2020

Ecological grief and anxiety are *reasonable and functional* responses to climate-related losses

Population-level emotional distress, anxiety, and grief are *increasing*

Urgent responses are needed from clinicians, public health practitioners, families, researchers, educators, and policy-makers

Following a health equity approach to resources and responses to build resilient mental health systems

Increasing training for mental health professionals on climate change and health

Focusing on families

Enhancing clinical assessments and support

Increasing social prescribing of activities that enhance environmental, physical, and mental health

Harnessing already-proven individual and group therapy strategies

What is needed to *strengthen and support responses?*

Accessible, safe spaces for exploring emotional reactions

Political will to ensure funding for strategies and supports

Ongoing research to promote healing and resilience

Responses that *reduce emotional suffering* associated with climate change can include...



Heart Work = Hope to Address Health and the Climate Crisis

Hope:

- > Hopeful people feel better than hopeless people
- > Hope leads to action
- > Hope is empirically justified

How can this be done?

- > Tell the truth
- > Acknowledge grief
- > Envision success
- > Identify pathway to success
- > Empower people to act
- > Cultivate solidarity
- > Make room for joy



Applying “Heart Work” to climate change interventions

What can “we” do as a collective group?

- > Individual level interventions
- > Community level interventions
- > Policy level interventions



Intellectual Humility & Heart Work - Group Discussions:

Group Discussion:

- > What does it mean to practice intellectual humility in connection to place?**
- > How do you understand the difference between performative and invested intentions?**
- > What are the actions of Heart Work in an intellectual humility context?**
 - Environmental Inequality**
 - Climate Justice**
 - Eco-mindfulness**



What do health professionals have to offer?

- 1. We are on the frontlines, and we have stories to tell.**
- 2. We are a trusted sources of information for our patients and communities**
- 3. Climate impacts on health will continue to involve health professionals**
- 4. Leveraging our expertise and experience to ensure that climate policies are meaningful, equitable, and rooted in protecting our communities.**



IHS Sustainability Committee



[Administration](#) [Priorities](#) [The Record](#)

DECEMBER 08, 2021

Executive Order on Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability



▶ BRIEFING ROOM

▶ PRESIDENTIAL ACTIONS



NEW MEXICO
**HEALTH
PROFESSIONALS**
FOR CLIMATE ACTION

NM Health Professionals for Climate Action

A new climate and health movement in New Mexico

OUR MISSION

**To mobilize New Mexico healthcare and public health professionals
to advocate for healthy and equitable climate solutions**

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