

Climate change and mental health

Susan Clayton

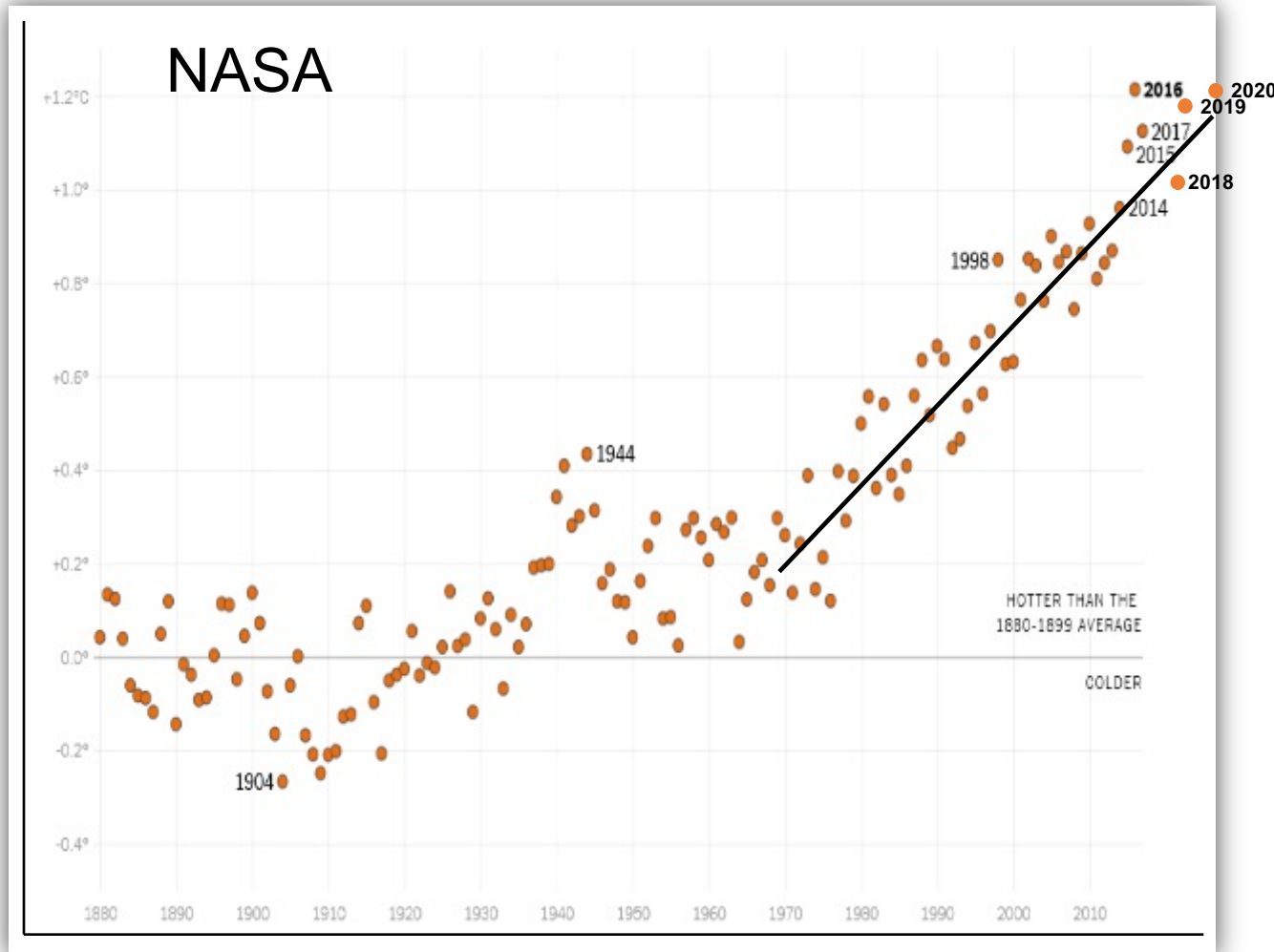
Meeting of the Association
for Health Care Journalists

St. Louis, MO 2023

It's getting hotter.

10 warmest years since 1880:

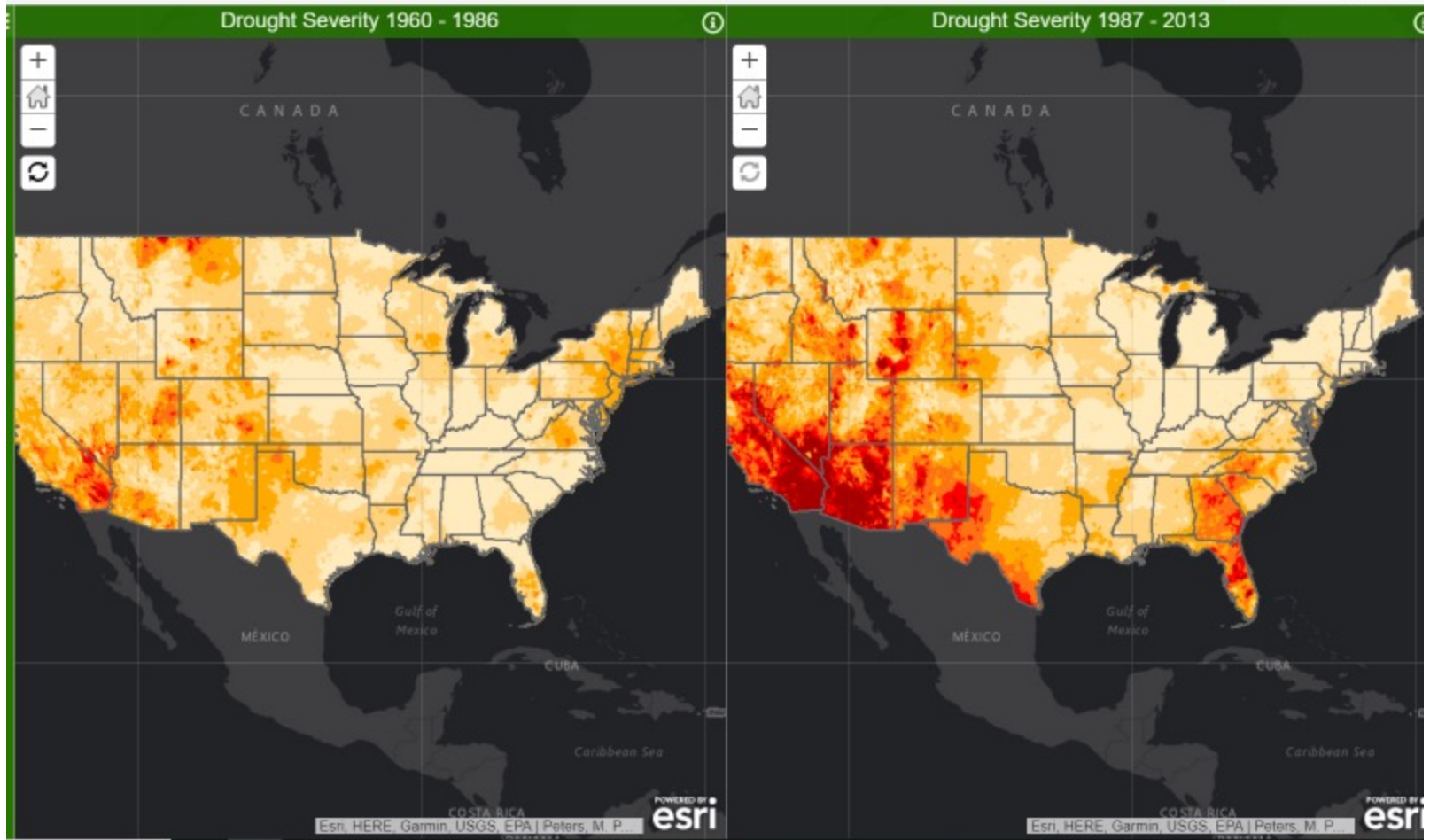
1. 2016, 2020
3. 2019
4. 2017
5. 2015, 2022
7. 2018
8. 2021
9. 2014
10. 2010



<https://climate.nasa.gov/vital-signs/global-temperature/>

Drought severity has Increased

www.fs.fed.us/nrs/atlas



1960 - 1987

1987 - 2013

Hurricanes are stronger

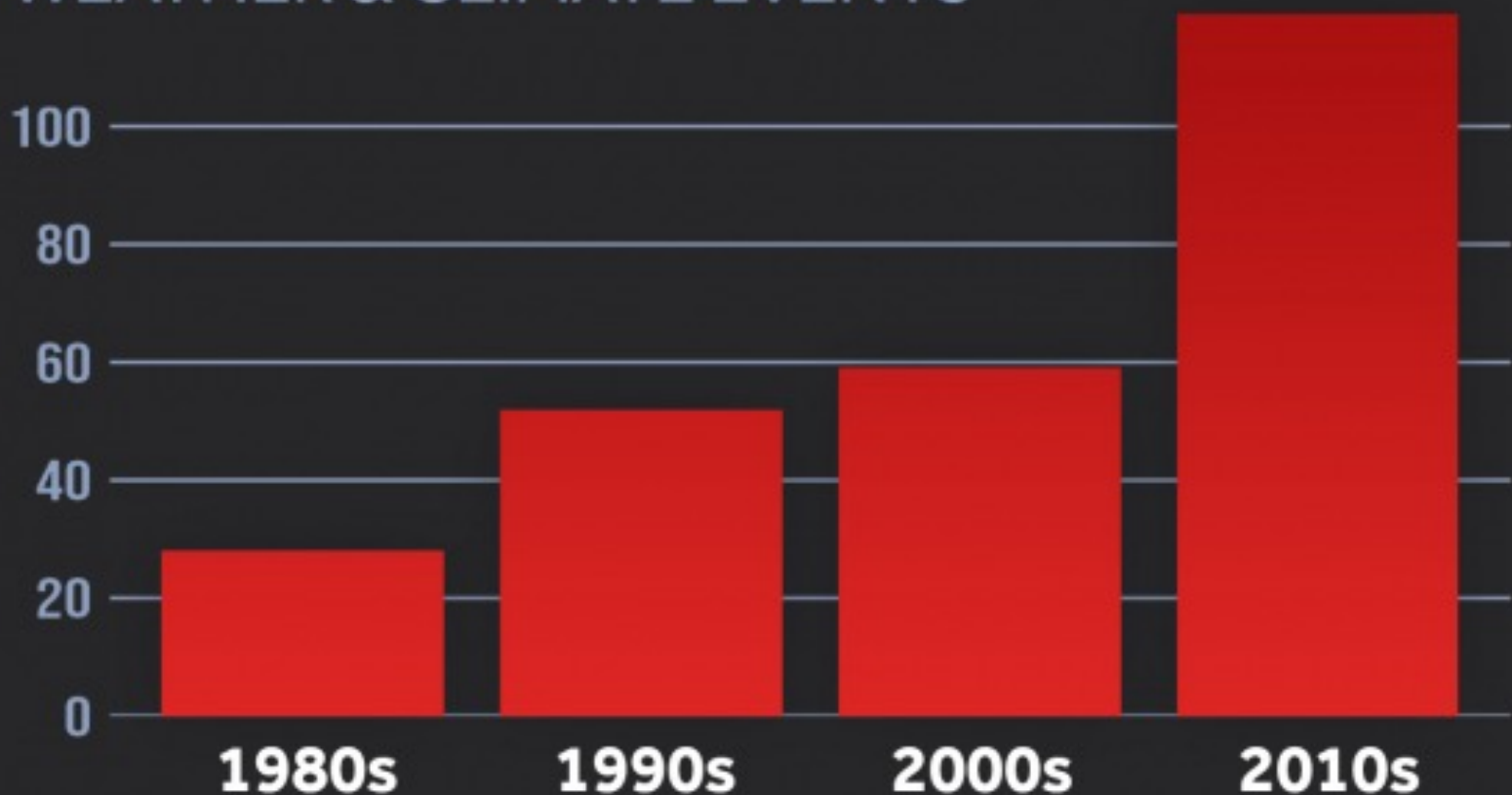
- Frequency of strong (class 4-5) hurricanes has doubled.
- Hurricanes are moving slower and producing more rainfall.

**Hurricane Patricia:
strongest ever recorded
in Western Hemisphere**



UNITED STATES BILLION-DOLLAR DISASTERS

WEATHER & CLIMATE EVENTS



1980-2019 billion-dollar weather and climate disasters (CPI-adjusted).
Source: NOAA/NCEI. Produced 2/12/2020



There are human consequences

- Extreme weather events displace over 20 million people a year worldwide
- Nearly 500,000 have been killed by climate-related events in the past 20 years
- 33% of Americans say they have personally been affected by an extreme weather event in the past two years.

Extreme weather events threaten mental health

PTSD, depression, general anxiety,

Substance abuse,

Sleep disorders,

Domestic abuse and interpersonal violence



E.g., 2017's Hurricane Maria in Puerto Rico

**More than 1/5th needed mental
health services**

**13% increased use of medication
for emotional problems**

Suicide increased by 18%

The rate of PTSD doubled





Lasting impacts:
Alberta wildfire,
2016

After one year:

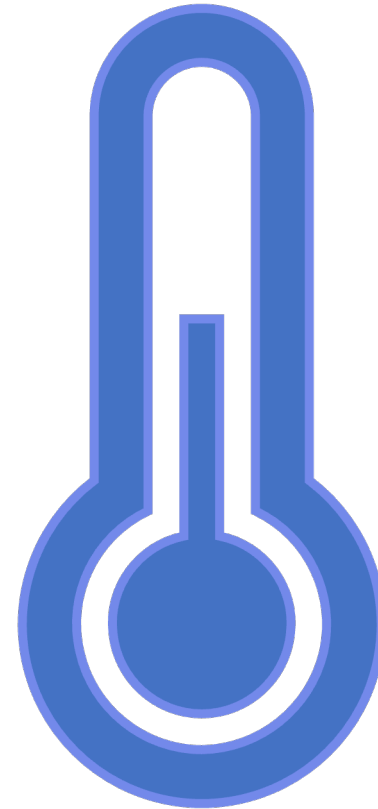
- 15% probable PTSD
- 15% depression
- 15% anxiety
- 8% substance abuse
- 38% mental health problems overall
- Significantly elevated over baseline




Impacts of gradual and chronic changes

Higher temperatures associated with

- Increases in suicide
- Increases in psychiatric hospitalization
- Increases in aggression
- Decreases in happiness and positive mood
- Impact on physical and mental functioning



Indirect impacts



Involuntary
displacement

Threats to
economic
status

Food
insecurity

All are linked to lower mental health

Experiencing these as a child is associated with adult mental illness

Increases in anxiety

“my feelings had almost a physical manifestation – I felt stress, panic”

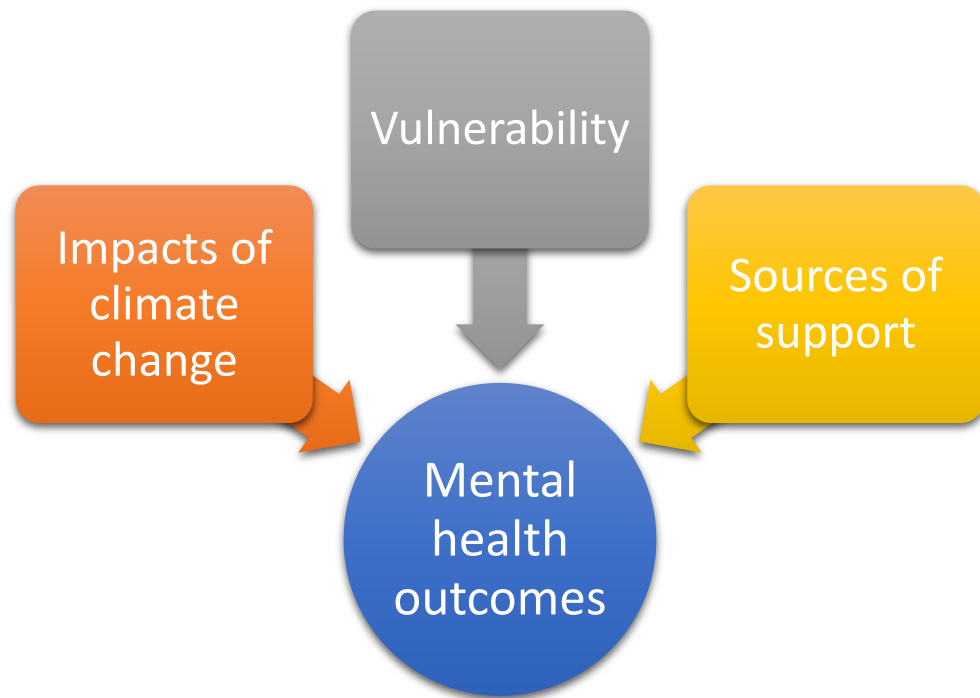
“I was depressed and disempowered... I stopped eating properly”

“I would get to the stage where I would freeze”

Anxiety is a real problem.

- About 20% of people reported functional impairment due to climate anxiety in US studies
- Climate anxiety is associated with standard clinical measures of anxiety and depression

The mental health impacts of climate change depend on the interaction of a number of factors



Individuals need skills to maintain their mental health

Short-term response: emotion-focused coping

- Cognitive reframing
- Detach and destress
- Emotional skills and self-regulation
- Time in nature

Problem—focused coping

Activism and engagement

- Increases efficacy
- Enables positive group interactions
- Enhances a sense of meaning
- Long-term impacts need to be studied

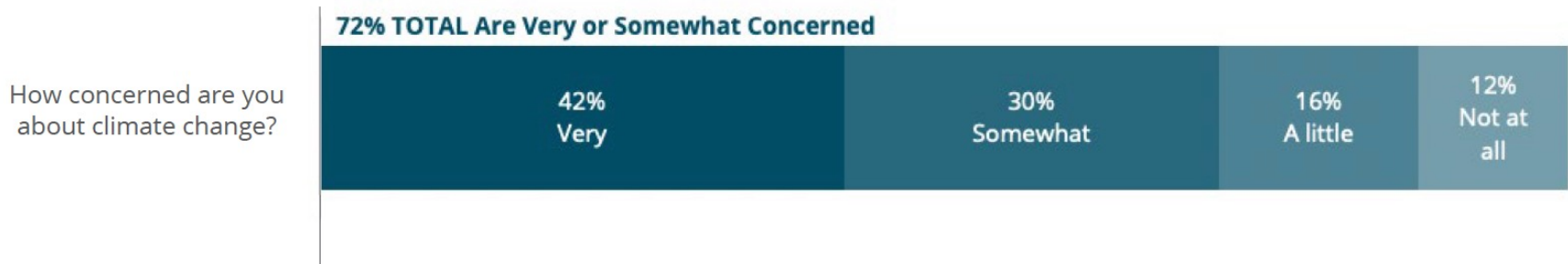


Some Reasons for Optimism

- Worst case emissions scenario increasingly unlikely
- Arc is bending towards reductions in greenhouse gas emissions
- New renewable energy is cheaper than new fossil fuel energy
- Energy from renewables now exceeds that from coal
- Inflation Reduction Act has created substantial incentives to further transition the US economy to renewables

Awareness is growing.

January 2023 U.S. data



What predicts individual resilience?

Social support

Emotional coping

Individual action

Optimism