

CLIMATE
RESILIENCE
FOR AN
AGING
NATION

CLIMATE RESILIENCE FOR AN AGING NATION

Danielle Arigoni

Smart Growth Network | Dec 5, 2023





Learn more at
nationalhousingtrust.org

Nonprofit with 35+ years working on affordable housing preservation and sustainability

National leader in climate-resilient solutions through:

- Multifamily housing retrofits and development (4000 units in mid-Atlantic)
- Solar deployment
- Financing
- Policy advocacy
- Resident services

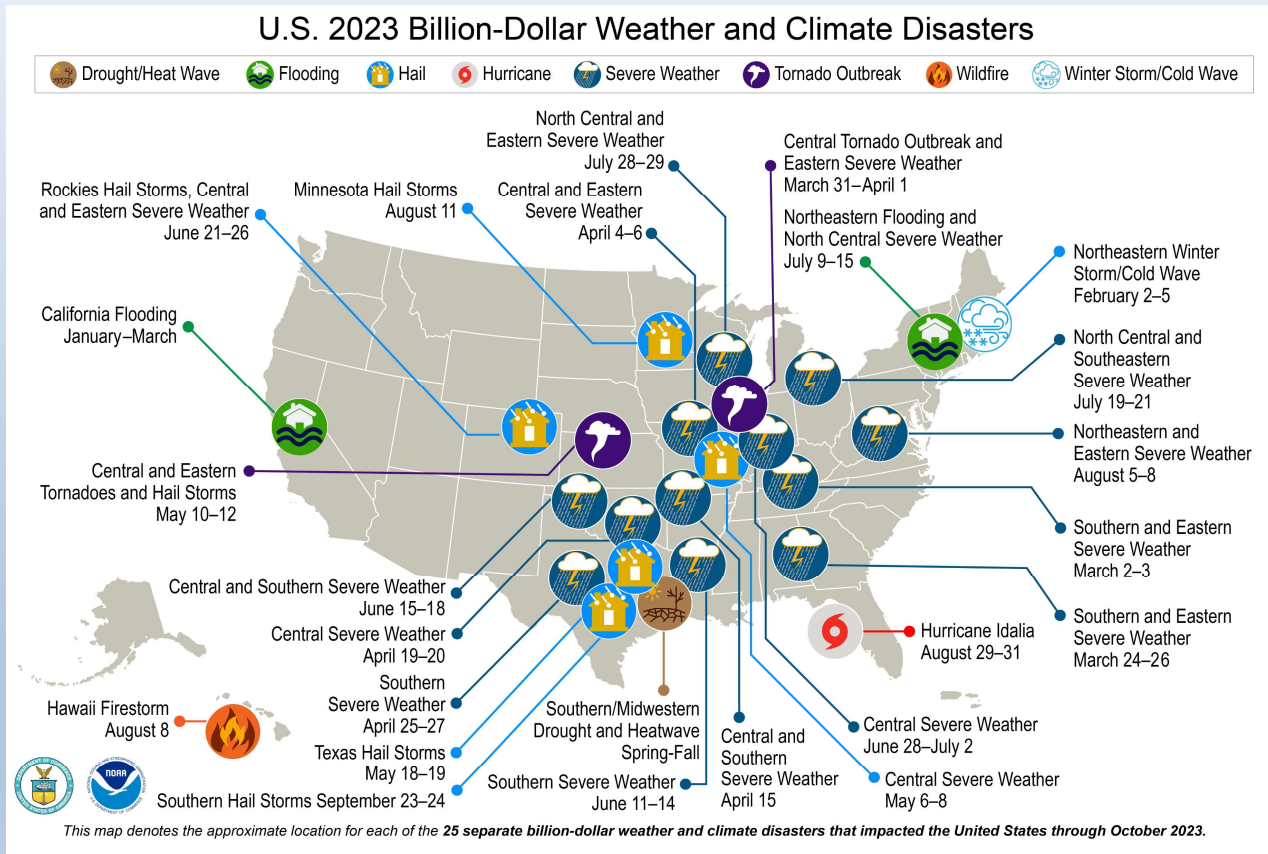


**Growing
Climate
Risks**



**Growing
Share of
Older
Adults**

GROWING CLIMATE RISKS



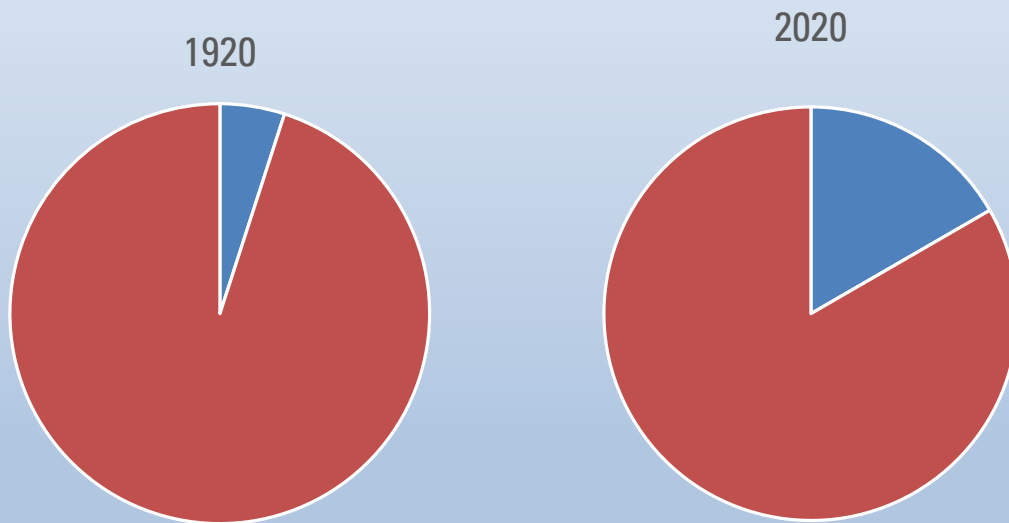
More billion-dollar disasters every year

- 2023: 25 as of Nov
- 2022: 18 events
- Since 1980: ave of 8 events per year

Source: <https://www.ncei.noaa.gov/access/billions/>

GROWING SHARE OF OLDER ADULTS

% of total population, 1920-2020



more people
>65 than <18
for first time ever,
and increasingly
diverse

POOR UNDERSTANDING OF OLDER ADULTS



1 in 6 live in poverty

96% live independently

30% live alone

20% don't drive

1 in 9 live with dementia

20% need help with ADL

40% have ambulatory limitations

80% have 2+ chronic med issues

Engineers
Data analysts
Climatologists
Emergency
managers

**Growing
Climate
Risks**

Planners, New Urbanists, SG Advocates

**Growing
Share of
Older
Adults**

Gerontologists
Demographers
Health care
Aging advocates

FIFTH NATIONAL CLIMATE ASSESSMENT

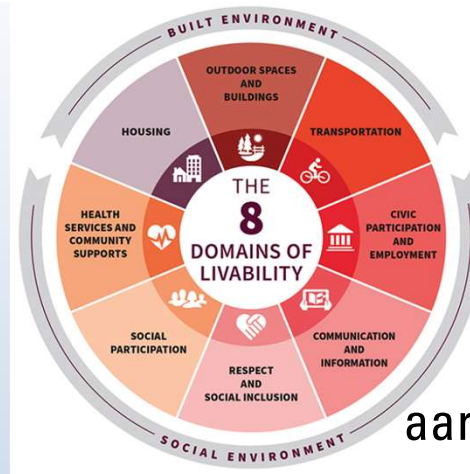
“Experiencing Climate Change”
chapter: Older adults +

- Food systems
- Utility costs
- Health impacts

Adaptation chapter: little/no
discussion of age



“Adaptation planning can more effectively reduce climate risk when it identifies not only **disparities in how people are affected** by climate change but also the **underlying causes of climate vulnerability.**”



Learn more at
aarp.org/livablecommunities



CLIMATE RESILIENCE FOR AN AGING NATION (D. ARIGONI)

OLDER ADULTS BEAR THE BRUNT

Louisiana: Hurricane Katrina (2005), 70% of people who died were over 65

California: Camp Fire (2018) 85% were over 60

North Carolina: Hurricane Florence (2018) 2/3 were over 60

Oregon (2021): heat waves median age of people who died was 67

Texas: Winter Storm Uri (2021) 2/3 were over 60

Florida: Hurricane Ian (2022) 2/3 were over 60

Hawai'i: Lahaina wildfires (2023) 73% were over 60

**Over 20 years:
no change**

WORLD

Half of Katrina victims were 75 or older

As New Orleans residents keep an eye on the movement of a storm named Gustav, there's a new report on the deaths from Hurricane Katrina, which hit the gulf coast three years ago Friday.



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Aug. 28, 2008, 7:02 PM EDT / Source: The Associated Press

As New Orleans residents warily track another threatening storm, a new report presents the clearest picture yet of deaths from Katrina

August 28, 2008
NBC News

<https://www.nbcnews.com/id/wbna26444326>

AGING

Nearly Half of Tar Heels Killed by Hurricane Florence Were 70 or Older

Hurricane Florence was especially lethal for older North Carolinians who made up two-thirds of the people who died during and because of the storm.



by Thomas Goldsmith

[Facebook](#) [Twitter](#) [LinkedIn](#) [Email](#)

October 8, 2018
North Carolina Health News

<https://www.northcarolinahalthnews.org/2018/10/08/nearly-half-of-tar-heels-killed-by-hurricane-florence-were-70-or-older/>

July 11, 2018
PBS News Hour

<https://www.pbs.org/newshour/show/amid-new-hurricane-season-maria-still-taking-a-toll-on-puerto-ricos-elderly>

Amid new hurricane season, Maria still taking a toll on Puerto Rico's elderly

Jul 11, 2018 6:25 PM EDT

February 10, 2019
Los Angeles Times

<https://www.latimes.com/local/lanow/la-me-ln-camp-fire-seniors-mobile-home-deaths-20190209-story.html>

CALIFORNIA

Must Reads: Poor, elderly and too frail to escape: Paradise fire killed the most vulnerable residents



SUBSCRIBERS ARE READING >

CALIFORNIA
'Widespread flooding' expected as intense Hilary pounds Southern California

CALIFORNIA
Hilary timeline: When will the storm hit? How bad will it get where I live?

WORLD & NATION
The real story behind that photo of a weirdly unscathed house in the rubble of Lahaina

ADVERTISEMENT



Vulnerable and Trapped: A Look at Those Lost in Hurricane Ian

October 21, 2022
New York Times

Give this article



138

<https://www.nytimes.com/2022/10/21/us/hurricane-ian-victims.html?smid=url-share>

By [Eliza Fawcett](#), [Mitch Smith](#), [Ava Sasani](#), [Frances Robles](#) and [Eden Weingart](#)

Oct. 21, 2022

NAPLES, Fla. — Rose Marie Santangelo had survived hurricanes in her decades living near the water in Florida. She thought she was prepared for Hurricane Ian.

But like so many other Floridians, Ms. Santangelo underestimated this storm. Her aunt, who had retired from a career in radiology, had underestimated this storm.

“She really thought that it wouldn’t hit here,” her niece, said. “And then when it did take a turn, it was going to be bad.”

Ian caused more deaths in Florida — at least 139 — than any other hurricane in almost 90 years. Five other people died from the storm in North Carolina, as well as one in Virginia. Like Ms.

But the storm’s impact, while broadly felt, was not even.

Most of the victims were older adults. Two-thirds of them were 60 or older, and 30 were past their 80th birthdays.

The people who died were concentrated in exposed coastal areas and on barrier islands. Though deaths were reported in 21 counties, nearly half came from Lee County, in southwest Florida.

And a large number of victims — at least 58 — drowned, as Ian’s [size, relatively slow movement](#) and massive storm surge multiplied its threat.

Hawaii

Many of first victims identified in Hawaii fires are over the age of 70

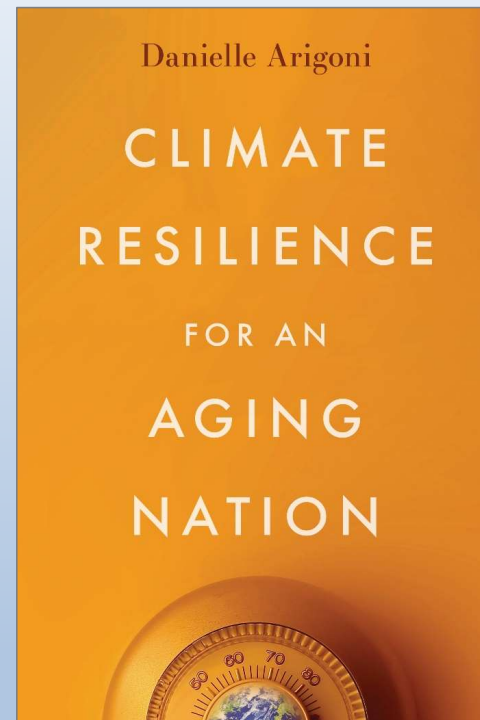
~~While full list probably represent broader cross section of ages, deaths underscore risk for elderly people in fast-moving blazes~~

The Guardian
August 18, 2023

https://www.theguardian.com/us-news/2023/aug/18/first-victims-hawaii-fires-over-age-70?CMP=share_btn_tw



WHAT CAN WE DO ABOUT IT?



1. Acknowledge that **climate change impacts older adults differently** – and not just during disasters
2. Recognize that **individual and institutional preparedness is not enough**
3. Lean into solutions that **build community resilience** for all ages.



TAKEAWAY #1: CLIMATE CHANGE IMPACTS OLDER ADULTS DIFFERENTLY

DISASTERS



OUR "NEW NORMAL"



FOR OLDER ADULTS, DISASTERS MEAN:

- **Financial impacts** from loss or damage to property
- **Health impacts** from interrupted care, persistent damage to homes, and/or evacuation



FOR OLDER ADULTS, OUR 'NEW NORMAL' MEANS:

- **Health impacts** more intense for those with pre-existing health conditions, and those who live alone

12,000

deaths caused by heat-related illness each year

80%

of are people over 60



FOR OLDER ADULTS, OUR
'NEW NORMAL' MEANS:

- **Financial impacts**
from cost of insurance
and utilities

45%

of households age 75-plus
were housing cost
burdened in **2019**, paying

30%

or more of income for
housing



17%

of low-income older adults went without basic necessities to pay for utilities

\$842/yr to \$5431

is the expected annual flood insurance premium in Louisiana following update of FEMA maps

November 28, 2023
Washington Post

The Washington Post
Democracy Dies in Darkness

<https://www.washingtonpost.com/nation/2023/11/28/puerto-rico-power-outages-death-rates/>

Light analysis shows where Puerto Rico hurricane damage was especially deadly

By [Arelis R. Hernández](#), [Andrew Ba Tran](#) and [Dylan Moriarty](#)

November 28, 2023 at 6:00 a.m. EST

- Access to fresh food, clean water
- Power for in-home medical equipment
- Power for building systems (elevators, HVAC)

TAKEAWAY #2: INDIVIDUAL AND INSTITUTIONAL PREPAREDNESS IS NOT ENOUGH





15%

OF PEOPLE OVER 65 LIVE IN POVERTY

ONE IN NINE

PEOPLE OVER 65 LIVE WITH ALZHEIMER'S



96%

of people over 65 live
outside congregate settings



20%

of people 55-64 are childless
compared to 11% of >75

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15 PEOPLE DIED

IN A WAREHOUSE AFTER BEING EVACUATED FROM A
NURSING HOME, FOLLOWING AN APPROVED PLAN

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TAKEAWAY #3: BUILD COMMUNITY RESILIENCE



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WHAT?

Climate-responsive **infrastructure** investments
Expanded **housing** options
Multiple **transportation** alternatives
Improved **communication** during disasters

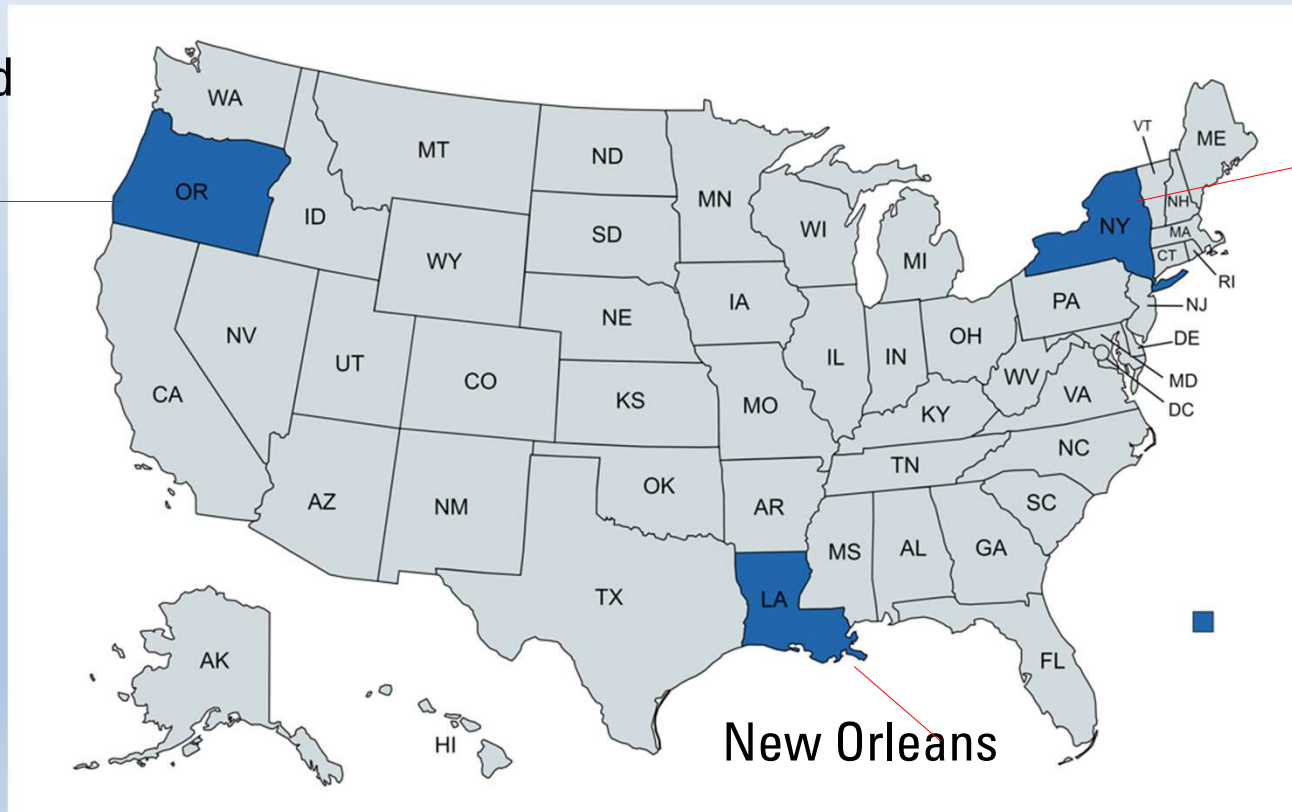


WHO?

Improved policies and practices by **utilities**
Explicit consideration of climate in **healthcare**
Aging is considered by **emergency managers**
Climate seen as the work of **aging advocates**

CASE STUDIES IN CLIMATE RESILIENCE FOR AN AGING COMMUNITY (OR STATE)

Portland, OR and
Multnomah
County,



State of New
York

New Orleans

THANK YOU

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resilienceforanagingnation.com



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