

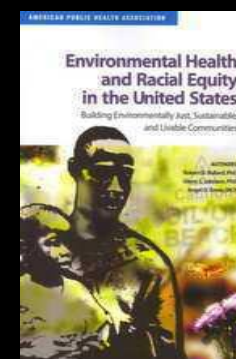
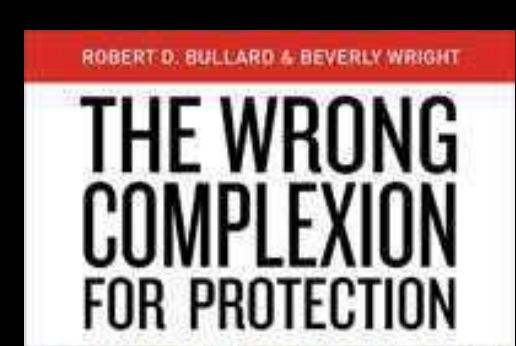
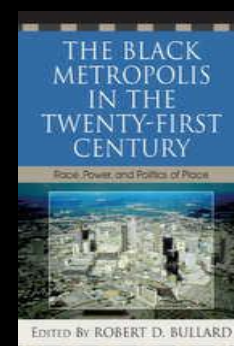
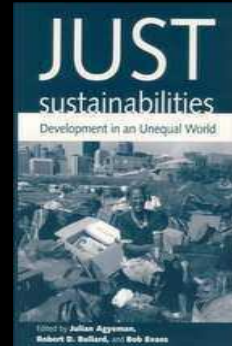
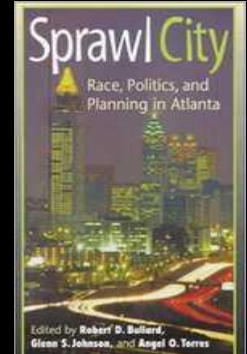
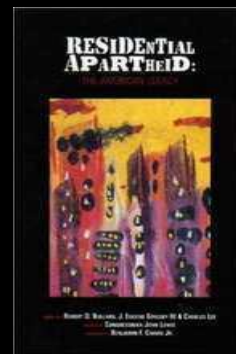
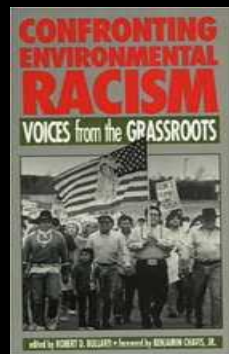
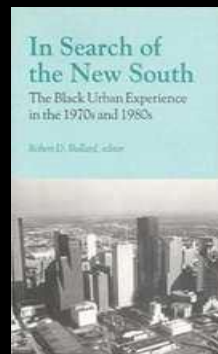
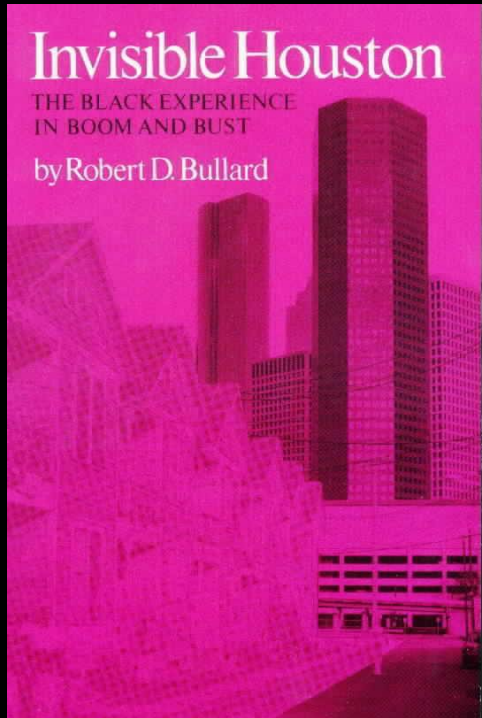
# **RESPONDING TO DISASTERS: WHY EQUITY MATTERS**

**Dr. Robert D. Bullard, Director  
Bullard Center for Environmental and  
Climate Justice  
Texas Southern University  
Houston, Texas**

# CONNECTING THE DOTS...

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# BOOKS I'VE WRITTEN OVER FOUR DECADES



HAVING THE FACTS IS NOT ENOUGH. WE MUST MARRY FACTS WITH ACTION.



# Environmental Justice Principle

- Environmental justice embraces the principle that all people and communities are entitled to equal protection of environmental, energy, health, employment, education, housing, transportation, and civil rights laws



# EJ Reaches the White House

## February 11, 1994

- On February 11, 1994, President Clinton signed Executive Order 12898
- EO 12898 reinforced existing two existing laws, Title VI of the Civil Rights Act of 1964 and the National Environmental Policy Act of 1969
- Present at the EO signing in the Oval Office were cabinet officials, 4 members of Congress, 4 grassroots EJ leaders, a lawyer, and two sociologists









PRESIDENT BIDEN  
SIGNS  
ENVIRONMENTAL  
JUSTICE EXECUTIVE  
ORDER 14097  
(APRIL 21, 2023)



# UNEQUAL PROTECTION

*Environmental Justice  
& Communities of Color*

EDITED BY  
**ROBERT D. BULLARD**

A S I E R R A C L U B B O O K

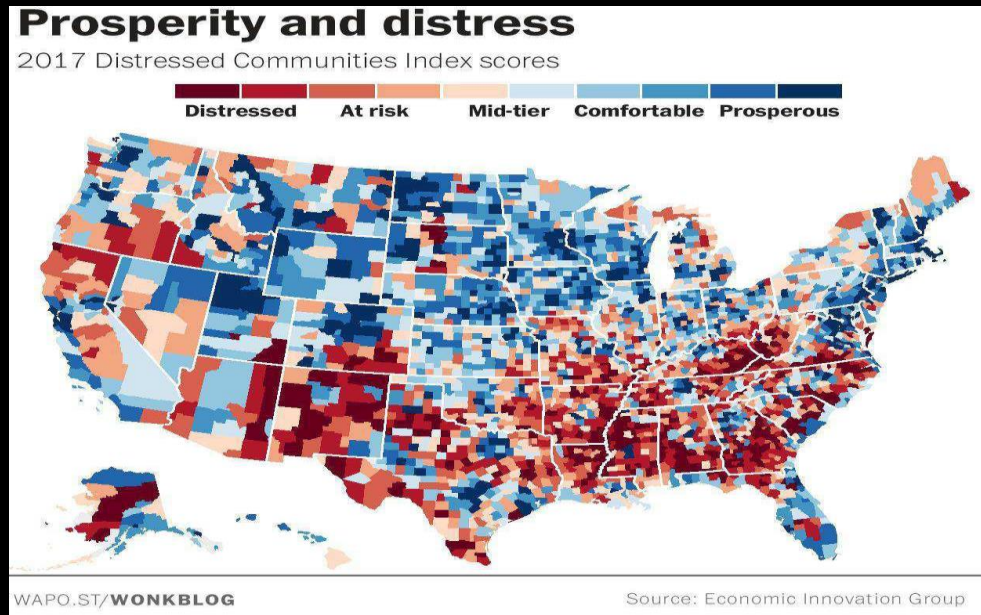
## WHY JUSTICE MATTERS

In the United States, all communities are not created equal

If a community happens to be poor, working class or inhabited largely by people of color, it generally receives less protection

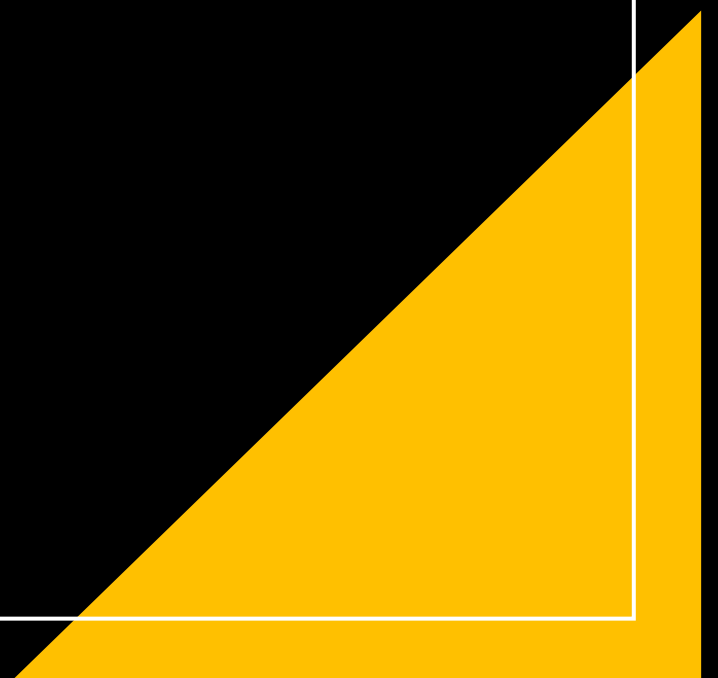


# Why Your Zip Code Matters



- Your **Zip Code** is a powerful predictor of health and well-being
- It is no accident that the poorest people within the U.S. have the worst health, the most degraded physical environments, and the greatest vulnerability to climate change

“WHEN WE FAIL TO PROTECT  
OUR MOST VULNERABLE  
POPULATIONS, WE PLACE  
EVERYONE AT RISK”





# RACE, PLACE, AND ENVIRONMENTAL JUSTICE AFTER HURRICANE KATRINA

Struggles to Reclaim, Rebuild, and  
Revitalize New Orleans and the Gulf Coast



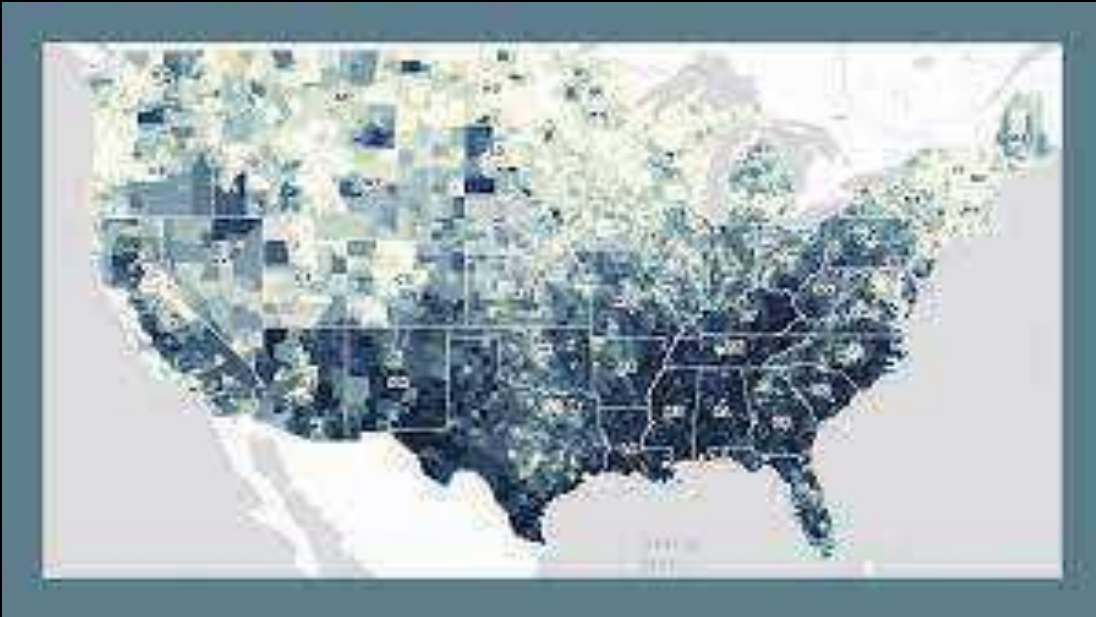
FOREWORD BY MARC H. MORIAL

\*\*\*\*\* EDITED BY \*\*\*\*\*  
**ROBERT D. BULLARD  
AND BEVERLY WRIGHT**

## Protecting the Most Vulnerable People and Places

- In major disasters, the most vulnerable populations generally suffer the earliest and most damaging setbacks because of where they live, their limited income and economic means, and their lack of access to health care
- **Social vulnerability** involves the basic provision of health care, the livability of places, overall indicators of quality of life, and accessibility of lifelines (goods, services, emergency response personnel), housing, capital, and political representation

# Climate Vulnerability Index



- The Climate Vulnerability Index (CVI) found 10 of the country's most vulnerable counties are in the South, many along the **Gulf Coast** where there are high rates of poverty and health problems.
- **Half** are in Louisiana, which faces dangers from flooding, hurricanes, and industrial pollution.
- St. John the Baptist Parish ranks as the most vulnerable county in the U.S.

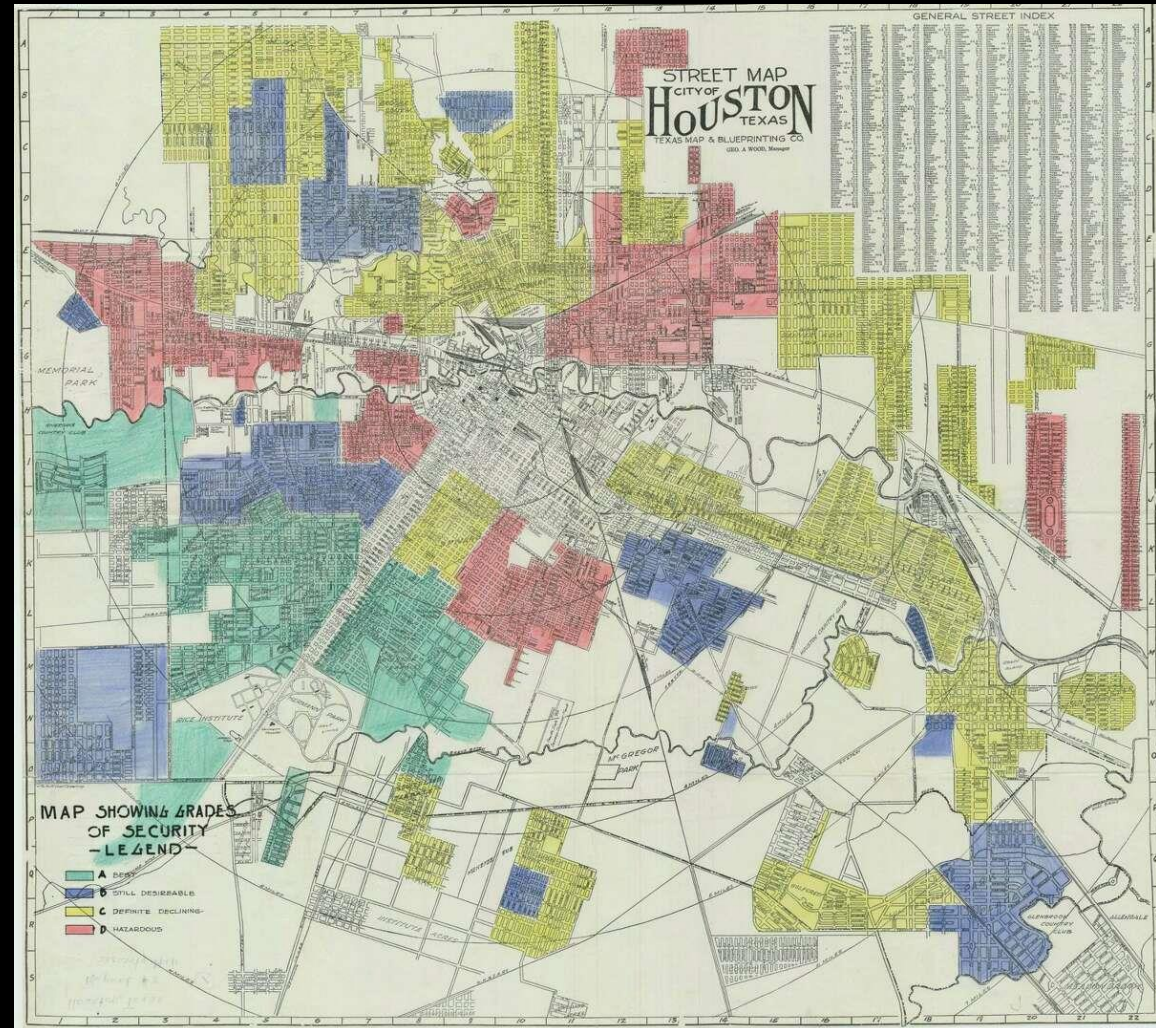
Source: Lewis et al. (2023)



# Environmental Threats Track Closely with Historical Racial Redlining

Redlined Neighborhoods are More Likely to Be:

- Waste Dumping Grounds
- Pollution “Sacrifice Zones”
- Nature Deprived Areas
- Urban Heat Islands
- Food Deserts
- Energy Insecurity “Hot-Spots”
- Flood Zones
- Left Out of FEMA Disaster Recovery Funding



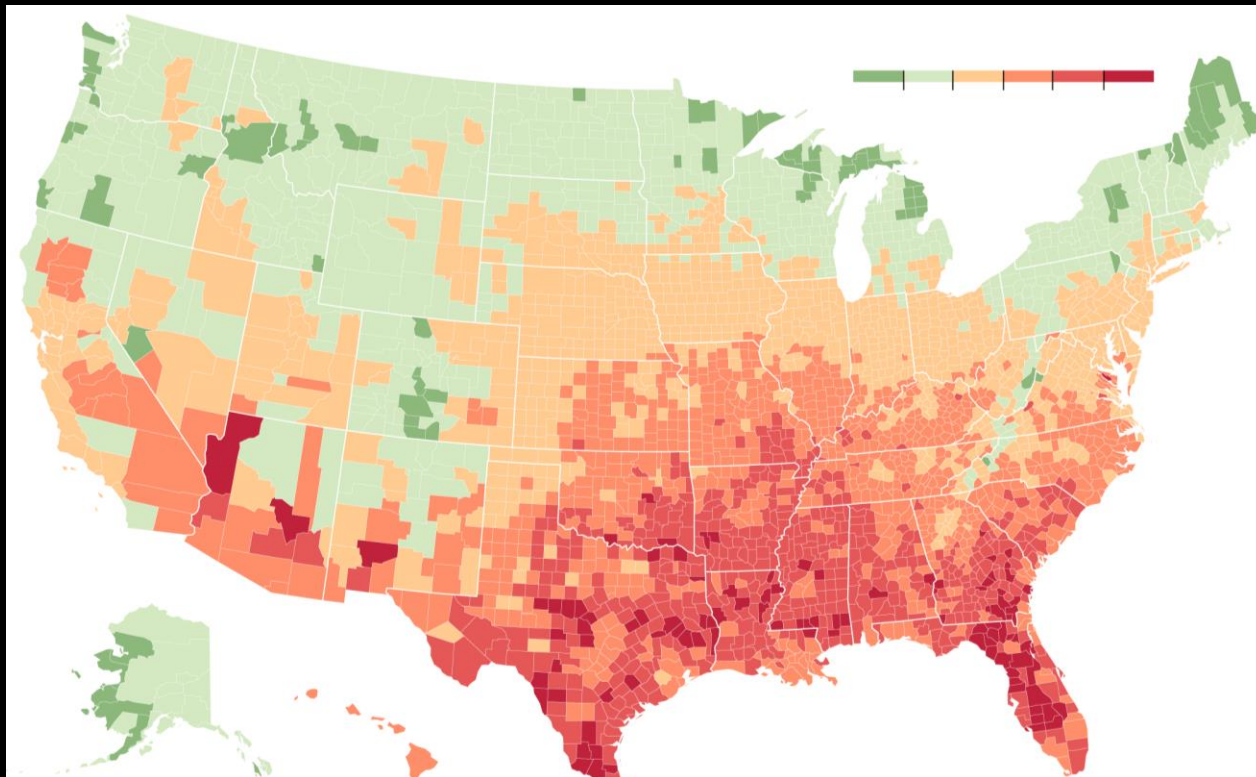
CLIMATE CHANGE WILL  
IMPACT EVERY REGION  
OF THE UNITED STATES







# Climate Change Will Hit the Poorest Regions and Poorest People Hardest



- A 2017 UC Berkeley study found without effective climate action, the nation, as a whole, could see as much as **1.2 percent** shaved off of its GDP per +1°C on average by the end of this century
- Parts of the American South hit hardest with up to a **20 percent** decline in economic activity due to global warming by the end of the century

Source: Hsiang et al. (2017)





# Climate Change Hits People of Color Hardest

- Climate change impacts fall disproportionately on people of color communities who are least able to prepare for, and recover from heat waves, poor air quality, flooding, and other impacts, according to a 2021 EPA report
- Black Americans are **34%** more likely to currently live in areas with the highest projected increases in childhood asthma diagnoses and **40%** more likely to currently live in areas with the highest projected increases in extreme temperature related deaths
- Latinos are **43%** more likely to live in communities that would lose work hours due to intense heat and **50%** more likely to live in areas with the highest estimated increases in traffic delays due to coastal flooding
- American Indians and Alaska Natives are **48%** more likely to live in areas that will be inundated by flooding from sea level rise

Source: US EPA (2021)

CLIMATE CHANGE AND SOCIAL  
VULNERABILITY IN THE UNITED STATES

A Focus on Six Impacts

SEPTEMBER 2021





# THE WRONG COMPLEXION FOR PROTECTION

*How the Government Response  
to Disaster Endangers  
African American Communities*

**ROBERT D. BULLARD** and **BEVERLY WRIGHT**

“[K]nown as the father of environmental justice. . . . Dr. Bullard . . . is one of the foremost experts of environmental justice in the world.”

—THE NEW YORK TIMES

# Will Government Response to Climate Change Be Fair?

- Government response to natural and human-made disasters over the past eight decades has not treated all communities fairly.
- Will the response to the climate crisis be any different?

WHO GETS FEDERAL DISASTER  
FUNDING AND WHO GETS  
LEFT OUT AND LEFT BEHIND

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# Disasters Widen Racial Wealth Gap



- Climate change will widen the racial wealth gap.
- Researchers from Rice University and the University of Pittsburgh found, in counties badly hit by natural disasters (areas with at least \$10 billion in damages) white communities gained an average **\$126,000** in wealth following the damage and recovery efforts.
- Communities of color lose up to **\$29,000** on average in personal wealth following events like hurricanes and wildfires.

Source: Howell and Elliott (2018)



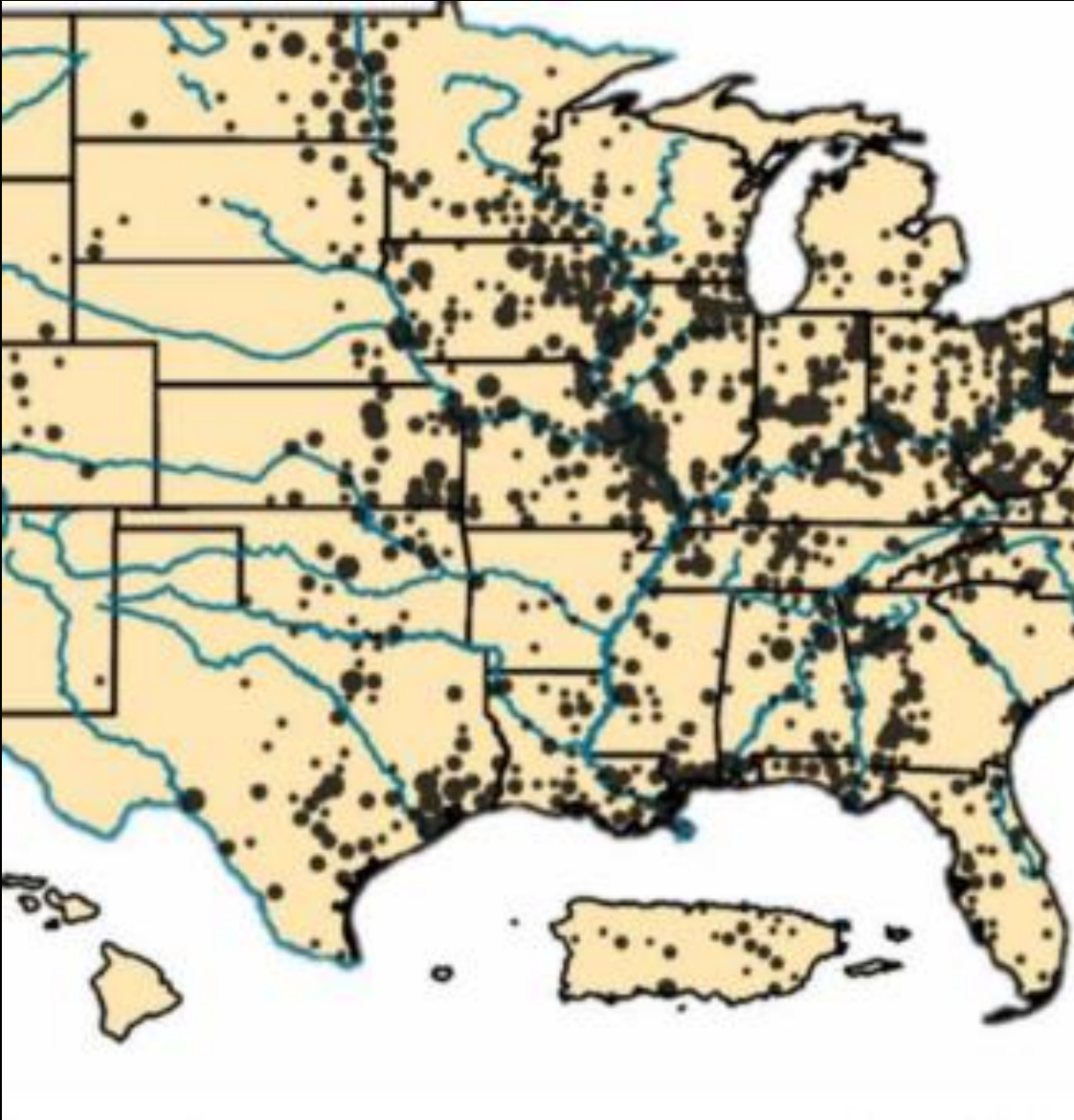


**National Advisory Council**  
**Report to the FEMA Administrator**  
*November 2020*

# FEMA Aid Not Reaching Greatest Need

- The poorest renters were **23%** less likely than higher-income renters to get housing help.
- The poorest homeowners received about **half** as much to rebuild their homes compared with higher-income homeowners.
- FEMA was about **twice** as likely to deny housing assistance to lower-income disaster survivors because the agency judged the damage to their home to be "insufficient."
- Many disaster survivors are fighting displacement.

Source: FEMA National Advisory Council (2020)



## Managed Retreat Leaves the Most Vulnerable People Behind

- A 2019 study analyzing more than **40,000** properties in voluntary buyouts in flood-prone areas found FEMA's program is not helping the most vulnerable population
- The most vulnerable is being left behind in flood zones

Mach et al. (2019)





# Disaster Buyouts Favor More Affluent Americans

- Disaster buyouts inherently benefit American households with more wealth.
- The most FEMA buyouts were in neighborhoods **85 percent** or more non-Hispanic Whites, even though they make up about **62 percent** of the US population.

Source: National Public Radio (2019)



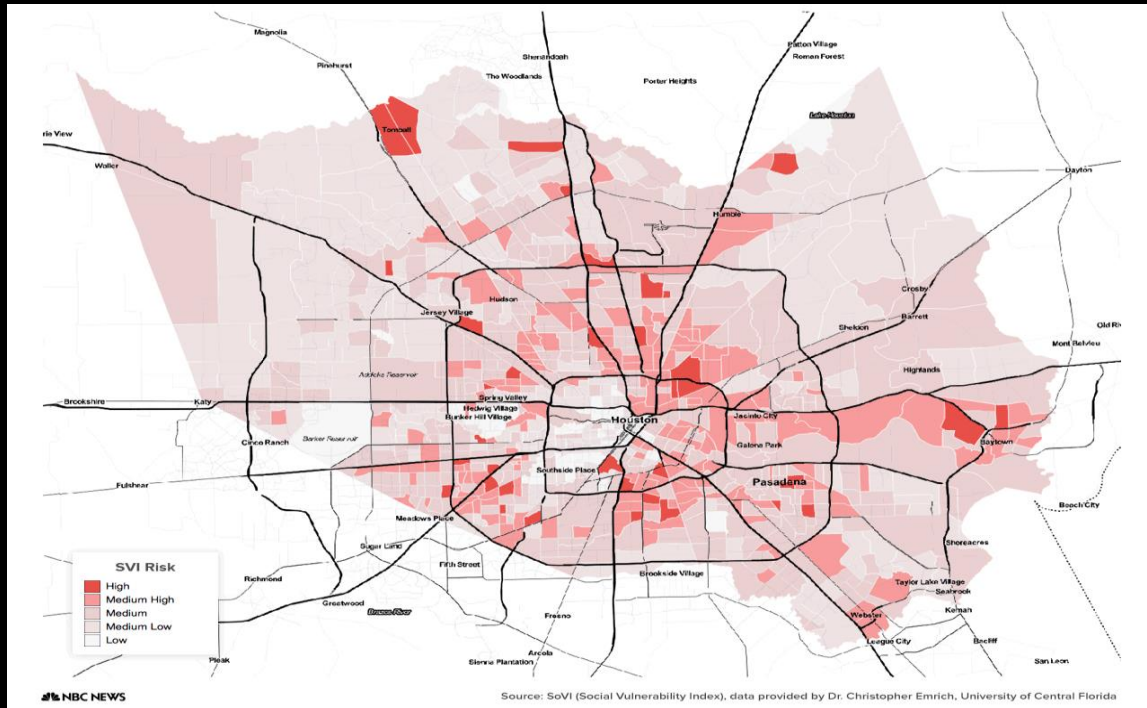


# Theft from Redlining and Climate Change Flooding

- People of color redlined neighborhoods now face greater flooding risks.
- Homes worth a combined **\$107 billion** are now **25 percent** more likely to be flooded than non-redlined homes.
- More than **58 percent** "of households in neighborhoods that were once designated **undesirable** for mortgage lending are non-white" and "history has shown that when storms hit, communities of color in these formerly redlined areas often suffer the most."

Source: Redfin Real Estate News (2021)

# Hurricane Harvey Flooding and Disaster Aid



- Hurricane Harvey storm-induced “flooding was significantly greater in Houston neighborhoods with a higher proportion of non-Hispanic Black and socioeconomically deprived residents” (Chakraborty et al. 2019).
- However, Harvey aid disproportionately went to White and more affluent households (Billings et al. 2021)
- Homeowners in majority people of color neighborhoods were less likely to qualify for federal grants to rebuild their homes

# Climate-Driven Floods Will Disproportionately Affect Black Communities

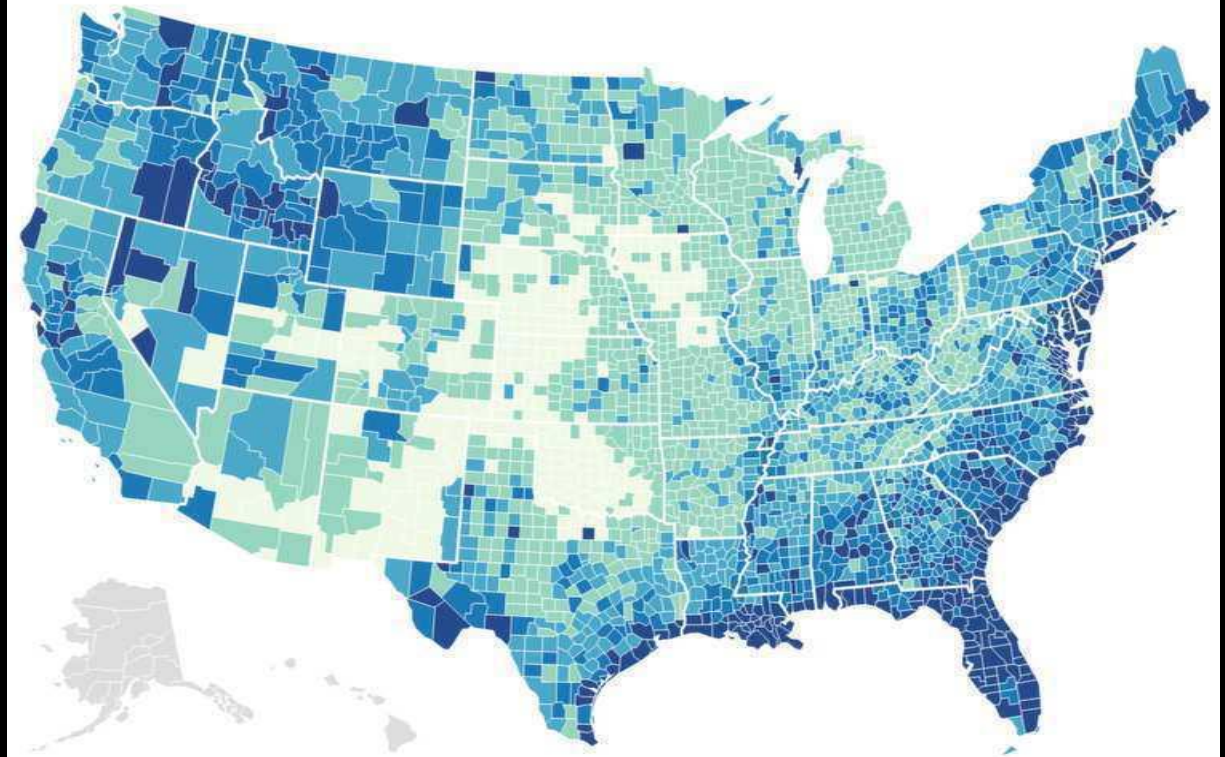
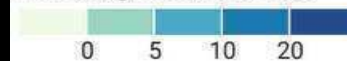
- Flood risks in the U.S. will increase by **25%** in next thirty years
- In the coming three decades, people living in the Gulf Coast and Southeast will suffer more damaging floods, with a **40%** increase in flood risks in communities where at least one-fifth of the population is Black

Wing et al. (2022)

## Where flood risk is projected to rise fastest in the US

A new analysis projects changes in flood risk between 2020 and 2050 by zooming in on every neighborhood across the U.S. The map shows county-level data on the average annual loss due to flood damage.

Percentage rise, 2020-2050



Flood damage measured in 2020 U.S. dollars.

Map: The Conversation/CC-BY-ND • Source: Wing, et al. 2022

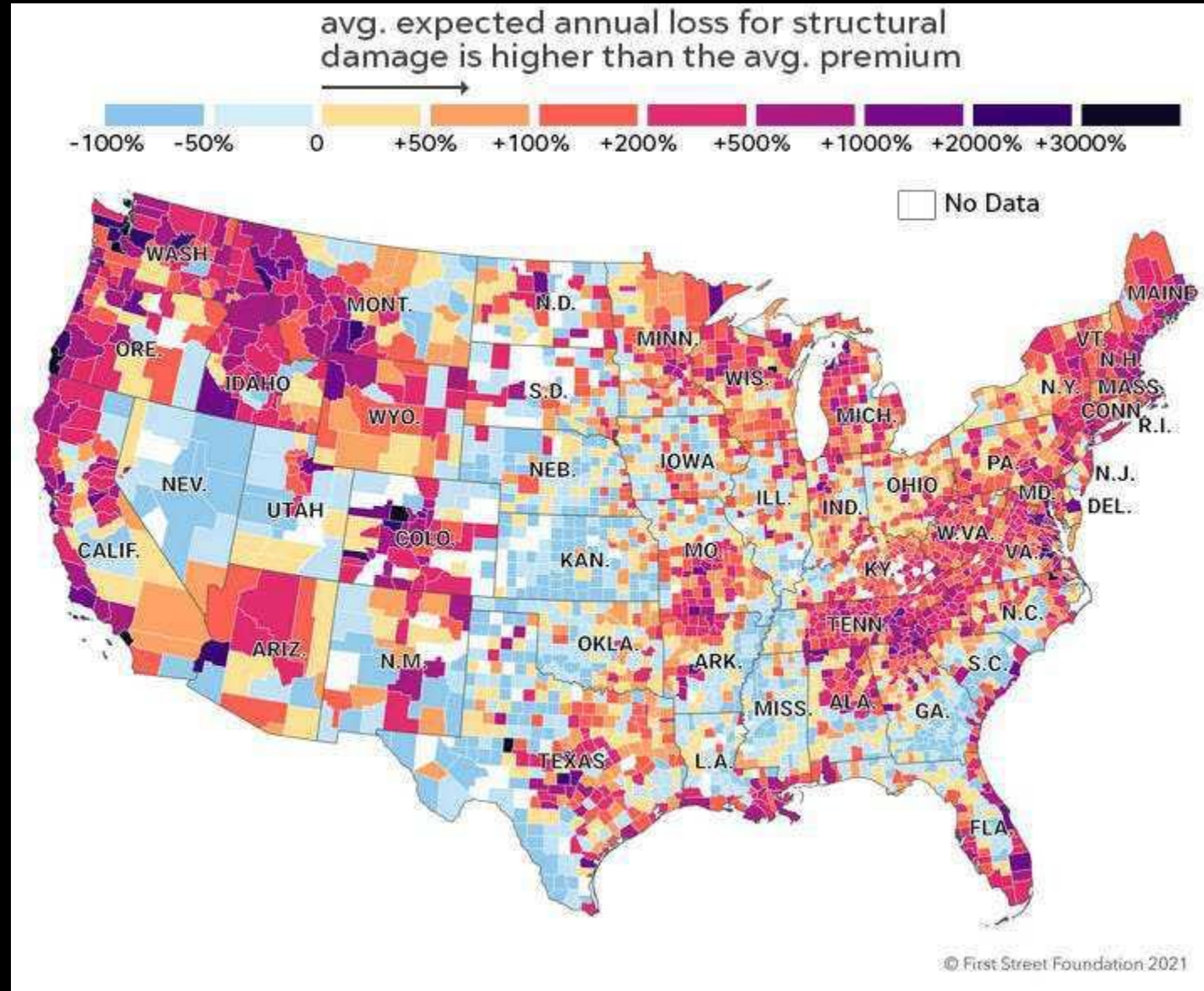


# Where Flood Insurance Costs Are Rising the Most

Four in five policyholders in the top Southern states impacted by flooding will see their premiums rise:

- **Texas: 86%**
- **Mississippi: 84%**
- **Florida: 80%**
- **Louisiana: 80%**
- **Alabama: 79%**
- **Georgia: 76%**

Source: FEMA (2021)



President Biden signs “*Executive Order on Tackling the Climate Crisis at Home and Abroad*” (Jan 27, 2021)



©Jim Watson—AFP/Getty Images



# President Biden's JUSTICE40 Initiative



**BIDEN  
HARRIS**

THE BIDEN PLAN TO  
**SECURE ENVIRONMENTAL  
JUSTICE AND  
EQUITABLE ECONOMIC  
OPPORTUNITY**

[LEARN MORE →](#)

THE UNITED STATES  
**BIDEN  
HARRIS**

- President Biden's "Justice40" Initiative is a plan to deliver **40%** of the overall benefits of climate investments to disadvantaged communities -- environmental justice communities that historically have been left behind economically and overly polluted.
- Develop and implement cross-sector and interdisciplinary initiatives that place justice and equity at the center



# MOVING BEYOND COST BENEFIT ANALYSIS

- White House Environmental Justice Advisory Council advise to FEMA, “move beyond **cost benefit analysis** in disaster recovery funding.”
- The WHEJAC recommended FEMA supplement cost benefit analysis with other tools, i.e., Social Vulnerability Index (SVI), Environmental Justice Index (EJI), and Climate and Economic Justice Screening Tool (CEJST)



# Inflation Reduction Act of 2022



- Clean Energy Electricity and Energy Transmission - \$121 billion
- Clean Transportation - \$25 billion
- Buildings and Energy Efficiency - \$52 billion
- Energy Security & Domestic Manufacturing – \$50 billion
- Environmental Justice - \$60 billion
- Rural Conservation and Agriculture - \$30 billion
- Drought and Water Security - \$4 billion
- Green Bank - \$27 billion

# Thank You!

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