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ISSUE BRIEF

WHO CAN WEATHER THE STORM?

STATES FACING THE GREATEST HEALTH DAMAGE FROM CLIMATE CHANGE ARE THE LEAST EQUIPPED TO PROTECT THEIR RESIDENTS

Across the United States, climate change is intensifying extreme weather events, resulting in escalating public health harms and severe economic damage.[1] For example, devastating inland flooding in Texas in 2025 killed 134 people and damaged $1 billion worth of residential property; 2025's catastrophic wildfires in Southern California destroyed more than 10,000 buildings (at a cost of $63 billion) and triggered more than 8,000 health-care visits; and Hurricane Milton's 2024 landfall in Florida killed 32 people and damaged $34 billion in property.[2]

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Marines passing food supplies to a family affected by flooding from Hurricane Harvey in Orange, Texas.

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These climate costs are typically borne by disaster victims, insurers, state agencies, and the federal government. Given the retreat of federal leadership from climate policy—including the Trump administration's reversal of the EPA Endangerment Finding on the risks posed by greenhouse gases to human health and welfare—state governments are increasingly taking on responsibility for improving preparedness in order to reduce future costs and health impacts.[3]

Worsening climate impacts also come at a time when our understanding of tools to build resilience has expanded. Historically, climate adaptation approaches to strengthen awareness and preparedness for climate hazards have focused narrowly on improvements to early-warning systems and physical infrastructure. We now know that stronger climate adaptation will require *social* infrastructure—economic supports and policy protections that provide people with buffers against worsening climate shocks.

A new analysis led by NRDC sheds light on key state-level gaps between climate change–linked health damage and levels of preparedness. **We find that some of the most climate-burdened states are least equipped to help their residents recover from climate disasters and prepare for future dangers.**[4] The intersection of escalating climate risks and adaptation vulnerabilities demands state policy intervention. Better integrating social protections into state climate resiliency plans can help states close these gaps and better safeguard their residents.

STATE-LEVEL SOCIAL PROTECTION POLICIES PLAY A KEY ROLE IN PROTECTING AGAINST CLIMATE HAZARDS

Climate change represents a profound threat to public health.[5] Exposure to climate hazards such as extreme heat, wildfire smoke, and severe flooding can kill, cause serious illness and injury, and worsen chronic health conditions.[6] These extreme events especially harm low-income households, children, older adults, and both indoor and outdoor workers.[7] At the same time, economic precarity compounds climate-health vulnerabilities, because households unable to afford key resources (e.g., air conditioning, nutritious food, transportation, and housing) are more exposed to hazards, prone to more serious health harms from exposure, and less able to adapt to or avoid dangerous conditions.[8]

Social protection policies (SPPs) serve as public safety nets that can bolster economic security and reduce climate-health vulnerabilities across a range of domains. SPPs support access to health insurance, safe working conditions, livable wages, public transportation, and affordable housing.[9] These programs also help families cover the expense of home energy bills and wholesome food. In the United States, states hold substantial control over the administration, eligibility rules, and funding allocation of key SPPs, including Medicaid benefits, the Low-Income Home Energy Assistance Program (LIHEAP), and the Supplemental Nutrition Assistance Program (SNAP).[10] Over time, state control has generated severe regional disparities in SPP maturity (governance capacity, coverage breadth, funding levels, and legal enforcement mechanisms to buffer health and/or economic shocks).

CLIMATE-HEALTH BURDENS DO NOT CORRESPOND WITH STATE SAFETY NET PREPAREDNESS

As climate action stalls at the federal level under President Trump, state-level SPPs increasingly influence whether residents are protected from or left vulnerable to accelerating climate hazards. But until now, states have not been evaluated for their progress in developing policies that improve climate adaptation in the context of public health.

Our research team evaluated how states have been burdened by climate hazards over the past two decades and how they have responded through social protection policies.

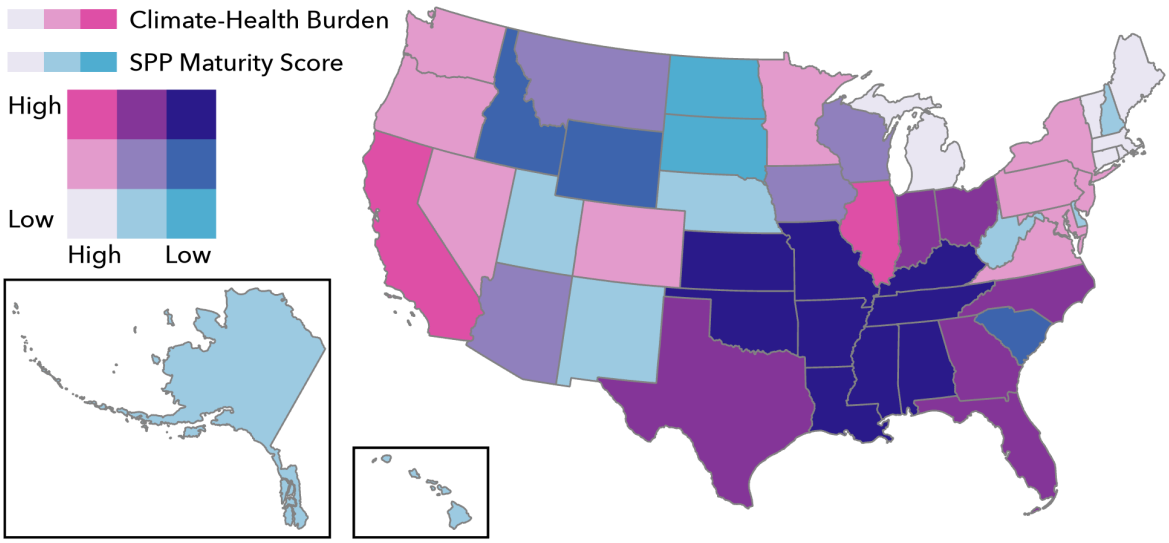
- **Climate-Health Burden Ranking:** We estimated cumulative health and economic damage from climate hazards in every state from 2005 through 2024, considering a wide range of risks—drought, flooding, severe storms, tropical cyclones, wildfires (including wildfire smoke), and extreme heat—from federal reports and academic research.[11]
- **Social Protection Policy Ranking:** We evaluated the maturity of 21 SPPs in every state, using data from 2019 through 2025 across five policy domains: (1) wages and leave, (2) nutrition, (3) health, (4) housing and energy, and (5) transportation. For each policy and in each state, we assigned maturity scores based on policy-specific metrics (financial benefit levels, eligibility stringency, population coverage rates, infrastructure support, and legal enforceability). The policies we evaluated are listed in Table 1.

TABLE 1: SOCIAL PROTECTION POLICIES INCLUDED IN OUR ANALYSIS

Policy Domain	Social Protection Policy (SPP)	Year Evaluated
1. Wages and Leave	1. Minimum wage[12]	2025
	2. Paid family leave[13]	2025
	3. Paid sick leave[14]	2025
	4. Unemployment insurance[15]	2023
	5. Temporary Assistance for Needy Families (TANF)[16]	2024
2. Nutrition	6. Supplemental Nutrition Assistance Program (SNAP)[17]	2022
	7. Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)[18]	2021
3. Health	8. Medicaid expansion[19]	2025
	9. Medicare Savings Programs[20]	2023
	10. Children's Health Insurance Program (CHIP)[21]	2026
	11. Approved Medicaid Section 1115 waiver for climate hazard(s)[22]	2024
	12. Behavioral health-care preparedness and home health-care preparedness[23]	2019
	13. Occupational protections from extreme heat[24]	2025
	14. Occupational protections from wildfire smoke[25]	2025
4. Housing and Energy Security	15 Affordable rental housing for low-income renters[26]	2025
	16. Energy efficiency policies[27]	2024
	17. Weatherization policies[28]	2024
	18. Energy utility disconnection policies[29]	2025
5. Transportation	19. State spending on public transit[30]	2024
	20. Share of federal funds spent on bicycle/pedestrian projects[31]	2024
	21. Smart growth policy for development[32]	2024

Source: Limaye et al. (2026).

FIGURE 1: JOINT RANKING OF CLIMATE-HEALTH BURDENS AND SOCIAL PROTECTION POLICY MATURITY SCORES



Source: Adapted from Limaye et al. (2026).

Our analysis reveals a major geographic mismatch between accumulating climate-health burdens and state safety net readiness. Figure 1 displays both climate-health burdens and social safety net maturity. Southeastern states suffered heavy climate damage to health from 2005 through 2024 but have the least-mature social safety nets in place. Conversely, states in coastal regions that have faced lower climate-health burdens over the past two decades have more-advanced social protections on the books.

Ideally, we would see an overlap between the greatest climate-health burdens and highest SPP maturity scores, indicating that states that need stronger safety nets have them in place; indeed, this is the case in the states shaded in bright pink on the map. However, it is troubling to see that so many states with high climate-health burdens also have lower SPP maturity scores, as is the case for states shaded in dark blue and purple in Figure 1. As mentioned above, these states are concentrated in the Southeast.

Our analysis found that five states—California, Oregon, Washington, Arizona, and New York—lead the nation in proactively adapting safety net programs to strengthen climate resilience. For instance:

- **California and Oregon** deployed Medicaid Section 1115 waivers to provide direct health-related social supports, including air conditioners, air filtration units, and housing remediation for enrollees with chronic respiratory or cardiovascular conditions sensitive to heat and smoke.[33]
- **New York** established a comprehensive cross-agency Extreme Heat Action Plan integrating Medicaid coverage for cooling equipment, expanded LIHEAP energy bill relief, and asthma remediation services.[34]
- **Washington and Oregon** expanded flexibility in state LIHEAP funding allocations to guarantee higher utility support for medically vulnerable enrollees during extreme temperature events.[35]
- **Arizona** integrated health department initiatives with social services to establish targeted heat preparedness protocols for outdoor workers and vulnerable populations.[36]

Despite these innovations, even leading states suffer from enrollment barriers, underfunded home energy assistance (LIHEAP), and low Supplemental Nutrition Assistance Program (SNAP) participation rates. Southeastern states (such as Texas, Louisiana, and North Carolina) lack explicit SPP integration in climate planning entirely, leaving highly exposed populations vulnerable to severe economic and health shocks.

RECOMMENDATIONS

Infrastructure improvements alone cannot protect households from the cascading financial and health damage of climate change. Leaders in Congress and state governments can adopt a more expansive adaptation strategy that integrates social protection policies. Such an approach strengthens community preparedness and buffers populations against climate-driven health and economic shocks.

1. Formally incorporate SPPs into state climate adaptation plans: States can mandate cross-sector collaboration among state environmental, health, and human services agencies to explicitly position social protection policies as primary climate adaptation tools.

2. Expand Medicaid 1115 waivers for climate preparedness equipment: State health agencies can secure federal Medicaid waivers to cover home cooling systems, air filtration units, and energy efficiency upgrades for enrollees with chronic medical conditions worsened by heat or wildfire smoke.

3. Reform and adequately fund energy assistance (LIHEAP): Congress can increase state funding allocations for summer cooling programs and eliminate caps on seasonal energy assistance. More broadly, states can prohibit utility disconnections during extreme heat events, including for families not eligible for home energy bill assistance.

4. Enact enforceable occupational heat and air quality safeguards: States can pass mandatory state labor protections requiring shaded rest breaks, hydration access, and modified work schedules during extreme heat and high-hazard smoke events.

5. Streamline enrollment and broaden eligibility: Federal agencies and state governments can modernize administrative systems to boost take-up rates for nutrition and housing assistance among eligible high-risk, climate-vulnerable populations.

6. Restore funding to monitor climate damage: Congress can restore funding and staff to restart federal monitoring of health and economic impacts of climate and weather disasters. The Trump administration halted such monitoring by the National Oceanic and Atmospheric Administration (NOAA) in 2025.

STUDY METHODOLOGY

Climate-Health Burdens

To assess state climate-health risks, we combined four metrics from three data sources: the NOAA Billion-Dollar Weather and Climate Disaster database (which tracked two metrics, (1) annual financial costs and (2) premature mortality caused by drought, flooding, severe storms, tropical cyclones, and wildfires from 2005 through 2024); (3) estimates of heat-related deaths from the U.S. Centers for Disease Control and Prevention WONDER database from 2005 through 2024; and (4) estimates of wildfire smoke burdens (2006–2020) from the academic literature.[37] We calculated each state's cumulative burden for each data source, ranked each state by its total burden for each metric, and averaged the four metric-specific ranks for each state to determine its overall climate-health burden ranking. Finally, we categorized the overall rankings for all states into tertiles (the low, medium, and high categories in Figure I).

Social Protection Policy (SPP) Maturity

Our analysis of SPP maturity spanned 21 policies in in the five domains listed in Table I. We analyzed public SPP data from the federal government (which provides data for some SPPs for all states), supplemented by data from nonprofit organizations and academic research. We analyzed each SPP and assessed its maturity by assigning a score (1 = low, 2 = medium, 3 = high) based on one of the following five metrics: (1) amount of financial benefit for eligible populations, measured by laws (such as minimum wage laws) and direct subsidies; (2) stringency of program eligibility rules, such as Medicaid income requirements; (3) percentage of eligible enrollees receiving benefits (such as nutrition assistance), as determined from federal estimates; (4) equipment and infrastructure support, such as through state provision of energy-efficient appliances to homeowners to reduce energy bills; or (5) the extent to which social protections (such as occupational heat precautions) were operationalized through state law versus voluntary policies lacking legal enforcement. We summed SPP maturity scores within each domain and then across all domains to calculate domain-specific and total SPP maturity scores. Finally, we ranked states by total SPP maturity scores and categorized them into tertiles (the low, medium, and high categories in Figure I).

For more information on these methods, see the full peer-reviewed journal article:
Vijay S. Limaye et al., "Challenges in Weathering the Storm: The Mismatch Between Climate-Health Burdens and Social Protection Policies," *Health Affairs* 45, no. 11 (2026), https://doi.org/10.1377/hlthaff.2025.01657.

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