January 30, 2024

PATHWAYS to PROSPERITY

Building Climate Resilience
Americans are increasingly experiencing the direct impacts of climate change, and Southern states are particularly at risk. The good news is that massive federal investments are available to reduce greenhouse gas emissions and help Americans adapt to a changing environment. As communities come together to access Bipartisan Infrastructure Act and Inflation Reduction Act funds, a shared, evidence-based understanding of state-specific climate and equity issues is essential for ensuring we mitigate the most severe impacts of climate change.

**WHY EQUITY?**

A review of resilience literature points to several characteristics that support a region’s capacity to withstand or rebound from shocks. Certainly, strong infrastructure and a diverse economy are important factors. But equally important are social cohesion, community problem-solving capacity, and trust in government. Inequality undermines social cohesion by eroding trust, heightening tensions, and deepening divisions. In short, equity is critical to resilience — without it, communities will be less adaptable to changing environmental conditions. [2][3][4][5]

**Climate shocks** 2023 was the hottest year on record and 2024 has a 33% likelihood of being hotter than 2023. Heat-related deaths have more than doubled since 2019, and heat is now the leading cause of weather-related death in the U.S. Southerners, many of whom lack health insurance, are particularly vulnerable to extreme heat. The number of “billion dollar” climate disasters have tripled since 2020 with FL and LA experiencing the largest damages per capita. Looking ahead, at least 1 in 5 properties in FL, LA, and WV have an 80% chance of flooding in the next 30 years.

Health and mental health  Life expectancy in the U.S. at 77.5 years is lower than in other high-income countries, and remains lower than pre-Covid. Drug overdose deaths have skyrocketed to over 108,000 in 2022 and pregnancy-related deaths have more than doubled since 1999. Both worsen during extreme heat days. American Indian, Alaskan Native, and Black Americans are experiencing the highest rates of drug overdose deaths and pregnancy-related deaths. Southern states suffer the highest age-adjusted death rates with KY, MS, and WV leading the way. Rates of anxiety and depression among American adults have tripled since 2019. Roughly 40% of adults in GA, LA, and WV are experiencing anxiety or depression. The share of high school students experiencing hopelessness has grown from 28% to 42% in the last 10 years.
Mitigation and adaptation  In 2022, Floridians experienced an average of 19 hours without electricity and West Virginians averaged 17 hours. From 2013 to 2022, Louisiana had 188 cumulative hours of power interruptions. The Bipartisan Infrastructure Act and the Inflation Reduction Act include funding to boost the resilience of the nation’s power grid and transition to sustainable energy. Addressing permitting delays will be essential to speed power fortification. In addition, 1 in 10 Southerners currently have no internet at home — not even a cellular data plan — and Southern states have among the lowest rates of public transit usage in the U.S. But federal funding is available to states to invest in public transit and expand internet access — both of which can connect employers and workers, lower transportation costs, and reduce greenhouse gas emissions.

Democracy Since 2020, 9 Southern states have passed laws that make voting more difficult. In AL, GA, KY, MS, SC, and TN, the majority of legislators had no opponent in the election, making them less inclined to listen to constituents or actively participate in the legislative process. A functioning democracy is crucial for fostering the civic engagement and learning that will be needed to deal with the complexity and vastness of climate change.

Addressing emissions  Greenhouse gas emissions have fallen by 16% since 2007 and need to reach net-zero by 2050 to avert the worst impacts of climate change. Efforts to reduce greenhouse gas emissions will spur extensive changes across the economy and generate new jobs on an unprecedented scale. New investments in clean energy, battery technology, hydrogen electrolysis, and carbon capture; transitioning transportation to zero-emission alternatives; expanding electric vehicle infrastructure; enhancing energy efficiency and weatherization; and extending broadband access will require millions of workers. Extensive programs will be needed to train workers in these new occupations.

Together, the Southern Economic Advancement Project (SEAP) — which works to lift up policies that address particular vulnerabilities in the South — and Fair Count — whose work focuses on strengthening pathways to civic participation — partnered with the National Conference on Citizenship to assemble and analyze this unique set of metrics to provide a state-by-state overview of climate shocks, climate adaptation activities, and civic health.

This data will be invaluable in aligning public and private sector efforts, guiding decisions on where to invest and which initiatives to prioritize, and building confidence and awareness among the public. This knowledge will empower communities to actively participate in shaping their own climate futures.

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DEFINING THE SOUTH

In this report, the South is defined as the 12 states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

Southern states include 211 of the 215 U.S. counties where the Black population is uniquely greater than the national average.

Disproportionate representation of racial/ethnic group by county
Population by race/ethnicity, 2022

Source: U.S. Census Bureau. Note: Color indicates the race/ethnicity that is higher than the national average in each county. Multi-ethnic indicates the county has more than one race/ethnicity greater than the national average.

The Black Belt, which stretches from Virginia to Louisiana, has a unique demographic makeup — vestiges of a violent history of enslaving millions on cotton and tobacco plantations located there. The Appalachian region from northern Alabama to West Virginia has long been dominated by extractive industries such as coal mining. As a whole, these 12 states have struggled from a history of underinvestment in transportation, infrastructure, education, and job training, and still have among the highest poverty rates in the United States today.
The effects of climate change are being widely felt. This section provides the most up-to-date available data on the direct impacts of climate shocks on lives and property.

In later sections of this report, these indicators serve as context for a unique analysis of the interactions between climate shocks, climate mitigation and adaptation, and our civic health.

**Indicators in this section**

- Billion-dollar weather and climate disasters
- FEMA disaster declarations, by county
- Flood risk
- Extreme heat days, by county
- Heat vulnerability, by county
- Heat-related deaths, by race/ethnicity
- Black carbon in the air
Weather and climate disasters, which are increasing in size and impact, are accelerating inequity.

U.S. billion-dollar weather and climate disaster events (inflation-adjusted)

Cost per million residents, 2020-23

Annual cost by type of disaster, 1980-2022

Source: NOAA. Notes: Adjusted for inflation using the Consumer Price Index (CPI). Due to an inherent delay in the accounting of damages, the 2023 number will increase in subsequent updates. Data includes events with less than $1 billion in damage at the time of the event, but which exceed $1 billion in damages after adjusting for inflation. These billion-dollar events account for >80% of the damage from all U.S. weather and climate events.

The number of climate disasters causing at least a billion dollars in damages has tripled since 2020 — from an annual average of 7 such large-scale disasters each year between 1980 and 2019 to an average of 22 such disasters annually from 2020 to 2023. Since 2020, Florida and Louisiana have experienced the largest damages per capita at over $5 billion per million residents. But, since 2020, every state has experienced one or more disasters with damages greater than $1 billion. In 2023, there were a record 28 billion-dollar climate disasters, causing $93 billion in damages all together. Local governments are rarely well-equipped to respond to the human needs for housing, transportation, and mental health services that last for months as communities struggle to rebuild after such disasters.

According to the 2018 National Climate Assessment, without significant steps to address and adapt to climate change, the size and frequency of climate disasters will increase, causing growing losses to property and infrastructure, and slowing our national economic growth. Along with impacts on human health and the environment, the annual economic losses could accumulate to hundreds of billions of dollars — more than the total economic output of many states. [1]

Disasters have been shown to increase inequity in part because low-income jobs and housing are more affected. In addition, marginalized groups, historically excluded from wealth-building opportunities, struggle to cope with the economic burdens of recovery or relocation. [2] Additionally, they are more likely to encounter inadequate or delayed investments in infrastructure and disaster recovery efforts, exacerbating the challenges they face. [3]
81% of Southerners (and 71% of non-Southerners) live in counties that have experienced at least one FEMA-declared disaster since 2020.

Number of FEMA disaster declarations by county
Jan 1, 2020 - Jan 13, 2024

Source: [FEMA](https://www.fema.gov). Notes: Includes all county-level disaster declarations (except Covid). For example: Dam/levee breaks, droughts, earthquakes, fires, floods, hurricanes, landslides, severe storms, tornadoes, and water crises.

Southerners have borne the brunt of climate disasters since 2020, with 81% of Southerners living in a county that had a disaster, compared to 71% of non-Southerners. In 7 of 12 Southern states (AL, AR, FL, LA, MS, NC, and SC), 100% of the population live in a county that has experienced a disaster during this time frame. In Louisiana, every county (parish) has experienced 12 or more FEMA-declared disasters since 2020.

Marginalized populations, including rural communities and people of color, often experience the worst impacts because they are more likely to live in areas susceptible to extreme weather. Although federal spending on disaster relief has more than doubled since 2020 compared to 2017 through 2019, the time- and document-intensive FEMA application process has been shown to actually increase inequity because it is too burdensome for smaller/rural municipalities and people with low-incomes. Moreover, the supply of housing decreases, while housing costs, including insurance, rise in the aftermath of disasters ([Flood Insurance](https://www.fema.gov/disaster-claim-flood-insurance), [Unaffordable Housing](https://www.fema.gov/unaffordable-housing)).

Hurricanes and other weather events often have heat-related health impacts, as response and recovery efforts include strenuous work in high temperatures — often without access to air conditioning. Some volunteers and residents have died in affected counties as a result of the arduous work in hot weather.
18% of properties in Southern states (42% in LA, 33% in WV, and 23% in FL) are at major risk of flooding within the next 30 years.

**Share of properties at major to extreme risk for flooding, by county**

Based on 30-year cumulative flood likelihood and projected depth of flooding

Source: First Street Foundation-Flood Model (FSF-FM). Notes: Properties at “major” to “extreme” risk of flooding have at least an 80% cumulative probability of being flooded over 30 years (at least a 5% chance in any given year). The FSF-FM incorporates flood protection measures (e.g. levees, flood walls, retention ponds, marsh/wetland restoration), multiple types of flooding risks (e.g. tides, rain, riverine and storm surges), as well as future environmental considerations.

Flooding from heavy downpours, swollen rivers, storm surge, or high tides are impacting every state — leading to property damage, business closures, job losses, school closures, and loss of life. The nonprofit First Street Foundation has developed technology that estimates a property’s flood risk, taking into account much of the existing flood protection infrastructure including levees, flood walls, and retention ponds. According to their assessments, 14.6 million properties nationwide are at substantial risk of flooding. 5.9 million of them are not currently within FEMA special flood hazard areas and, thus, not required to buy flood insurance. These properties may be in areas that previously were considered safe for development, but the actual risk is now greater than anticipated.

In Louisiana, West Virginia, Florida, more than 1 in 5 properties have an 80% or greater cumulative probability of flooding in the next 30 years. Meanwhile, the cost of flood insurance is set to increase by thousands of dollars each year in many counties (Flood insurance). Increasing flood resilience (e.g. raising buildings and critical equipment, reducing impervious surfaces) and investing in flood protection infrastructure including nature-based solutions (e.g. restoring barrier islands and wetlands) will be critical to climate adaptation.
The majority of Southerners experienced 15+ extreme heat days in 2021.

Number of extreme heat days (100°F Heat Index) by county
May - September 2021

Source: CDC/NASA. Notes: Data not available for Hawaii or Alaska.

2023 was the hottest year on record. The hottest 10 years, since NOAA began keeping records in 1850, have all been in the past decade. And temperatures will continue to climb. Scientists predict that 2024 has a 33% likelihood of being hotter than 2023. [1]

Heat has caused nearly twice as many deaths as flooding in the U.S. over the last 30 years. [2] Humidity reduces the human body’s ability to self-cool, making days that are hot and humid particularly deadly. [3] Older adults, young children, people who are overweight, those with preexisting conditions like diabetes or heart conditions, and pregnant women are at great risk to experience damage to vital organs and even die from extreme heat (Pregnancy-related Deaths). [4]

According to the most recent data available by county, in 2021, 92% of Southerners (versus 61% of non-Southerners) were exposed to 5+ days of extreme heat. 64% of Southerners (versus 28% of non-Southerners) were exposed to 15+ days of extreme heat.

Air conditioning (AC) is critical for keeping vulnerable people safe during extreme heat days. And weatherization is essential for reducing energy costs. Lower-income households are less likely to have AC, even in the South where AC is more widely available. They also tend to live in older buildings with poor insulation. The Inflation Reduction Act includes substantial funding that can be used for home weatherization, but only via tax credits for homeowners. [5] Ensuring renters have homes that protect them from extreme heat and high utility bills will be an important focus for increasing community resilience (Unaffordable Housing).
1 in 4 people in the South are vulnerable to extreme heat, which inhibits community resilience. In many counties, it is 1 in 3.

Social vulnerability to extreme heat by county, 2019
Share of population with 3+ heat exposure risk factors

Source: U.S. Census Bureau. Notes: Socially vulnerable to extreme heat is defined as having 3 or more risk factors among 10 specific risk factors identified in the 2019 Community Resilience Estimates for Heat. The Census Bureau’s Community Resilience Estimates for Heat (CRE for Heat) is an index designed to determine a community’s vulnerability to extreme heat exposure based on social characteristics and risk factors, including the share of households with older adults, lower incomes, or limited access to healthcare. Almost a quarter of the nation has three or more such risk factors, making them socially vulnerable to extreme heat. In many Southern counties, it’s one-third of the population.

Recent data shows that 92% of Southerners were exposed to 5+ days of extreme heat over a 5-month period in 2021, while 64% were exposed to 15+ days (Extreme Heat Days). Between 2016 and 2020, heat-related weather events caused an estimated 290,000 excess hospital visits per summer, costing roughly $1 billion annually.[1] A study by the U.S. Treasury Department finds that many Southern counties with high heat exposure are also socially vulnerable — particularly in the Mississippi Delta region.[2] Communities across Alabama, Mississippi, Louisiana, and Arkansas tend to score higher in social vulnerability as they are likely to have lower incomes, limited access to healthcare, and many households with older adults. Additional factors can exacerbate heat exposure such as fewer trees and more pavement which can cause “heat islands”. Planting trees and providing shade at bus stops can help mitigate the impacts of heat in vulnerable communities.[3][4]
Heat-related deaths have more than doubled in 4 years, reaching at least 2,160 deaths in 2023. Heat-related death rates are highest among American Indians and Alaska Natives.

Heat-related deaths, U.S.
1999-2023

![Graph showing heat-related deaths and rates per 100,000 population by race/ethnicity from 1999 to 2023.]

Source: [CDC, Wonder](https://www.cdc.gov). Notes: 2022 and 2023 data are provisional (p). Includes deaths for which heat was listed as either the underlying or contributing cause of death. Due to an inherent delay in the reporting of official heat fatalities, the 2023 number will likely rise in subsequent updates. AN=Alaska Native. Deaths are identified using ICD–10 underlying/contributing cause-of-death codes: P81.0, T67, and X30. Rates are age-adjusted.

Heat-related deaths have increased in recent years, becoming the primary cause of weather-related deaths in the U.S. [1] 2023 was the hottest year on record and saw record high heat-related deaths (Extreme Heat Days). According to 2023 provisional data, over 2,100 Americans died from heat-related causes. Since 2018, American Indians and Alaska Natives were most likely to die from heat, and again had the highest rate of heat-related deaths according to 2023 provisional data—2.3 heat-related deaths per 100,000 population. Black and Hispanic people died at higher rates compared to white and Asian people.

Disproportionate mortality rates are a result of underlying inequities. Due to historical redlining and zoning, people of color and low income families are more likely to live in areas with fewer trees and more pavement, creating “heat islands,” exacerbating medical conditions like hypertension and heart disease, and increasing the risk of heat-related deaths. [2] [3] [4] [5]

Older adults, infants and children, pregnant people, people with low incomes, and outdoor workers are among the most vulnerable to extreme heat exposure. [6] [7] While air conditioning is critical for keeping vulnerable people safe during extreme heat days, concern around affordability, blackouts, and power outages are high, as record numbers of intense heat days increase air conditioning demands (Electric Power Interruptions). [8] [9] [10] The Inflation Reduction Act includes substantial funding that can be used for home weatherization that reduces the cost of air conditioning, but only via tax credits for homeowners, leaving many vulnerable people without aid. [11]
The gains we’ve made in reducing airborne black carbon (soot) are fading, as wildfires have increased pollution levels in recent years.

Black carbon pollution levels across 30 sites in the U.S.
Annual concentration in micrograms per cubic meter

Source: Dr. Charles Stanier, Dr. Gregory Carmichael, and Dr. Peter S. Thorne analysis of data from IMPROVE/Colorado State University. Notes: Data is averaged across 30 primarily rural locations with long-term monitoring. Commonly known as soot, black carbon is emitted by diesel-fueled vehicles, industrial processes, residential fireplaces and woodstoves. Wildfires are its largest natural source.

Black carbon, or soot, is a type of solid particle that absorbs light and releases heat energy into the air, contributing to global warming and air pollution. EPA regulations helped to steadily decrease the presence of black carbon released from sources such as automobiles, trucks, and factories. However, rising global temperatures and human activity have led to more frequent wildfires that release that same particle — reversing over 20 years of U.S. progress. Black carbon is a component of fine inhalable particulate matter, known as PM$_{2.5}$, which is 30 times smaller than the diameter of a single strand of hair. When PM$_{2.5}$ is ingested into the body, usually through the lungs, it can wreak havoc on the cardiovascular and respiratory systems. Studies show that both short and long term exposure to black carbon can cause increased emergency room visits, asthma attacks, heart attacks, strokes, and even premature death.

The Clean Air Act has been a primary driver in the reduction of black carbon across the U.S., but more steps must be taken to curb the rising trend, including switching to zero-emission vehicles, investing in wildfire prevention and management, expanding investment in public transit, continued reduction of coal and fossil-fuel reliance, and increasing reliance on renewable energy (Greenhouse Gas Emissions, Public Transportation). Utilizing air quality tools like AirNow.gov and the Air Quality Flag Program can also help communities to alert vulnerable residents so they can reduce their exposure and minimize harm.
This section tracks measures of key climate mitigation and resilience initiatives. It also highlights metrics of a functioning democracy which is crucial for fostering active civic engagement and learning, especially when dealing with the complexity and vastness of climate change.

**Indicators in this section**

- Greenhouse gas emissions
- Electric power interruptions, by state
- Weatherization, by state
- Cost of flood insurance, by county
- Public transportation, by state
- Uncontested seats in state legislatures
- State voting laws
Greenhouse gas emissions have fallen by 16% since 2007 but need to decrease to net-zero by 2050 to avert the worst impacts of climate change.

U.S. greenhouse gas emissions by economic sector
Emissions in million metric tons of carbon dioxide equivalent

Source: U.S. EPA. Notes: Types of gasses include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. Gross total emissions excludes the emissions and removals of greenhouse gasses due to Land Use, Land-Use Change, and Forestry (LULUCF).

With climate impacts increasing in intensity, it is imperative to address the reduction of greenhouse gas emissions — the main drivers of climate change. Mitigating greenhouse gas emissions not only helps manage climate-related risks but it will open up extensive new job opportunities and reduce air pollutants that lead to serious illnesses and premature death (Black Carbon).

Achieving the necessary level of greenhouse gas mitigation to prevent the most severe impacts of climate change will demand an unparalleled investment of time, resources, and labor, spanning every sector of the economy. As such, the development and deployment of new technologies in clean energy, batteries, hydrogen electrolysis, and carbon capture have the potential to generate millions of jobs. Such initiatives will include transitioning public transportation and heavy-duty vehicles to zero-emission alternatives; expanding electric vehicle infrastructure; investing in energy efficiency enhancements and weatherization programs; extending broadband access; fostering sustainable and regenerative practices in agriculture, forestry, and soil management; and greatly expanding programs to support workers affected by climate or energy transitions (Public Transportation, Home Weatherization, Lack of Internet).
FL customers averaged 19 hours of power interruptions in 2022, and WV averaged 17, compared to 6 hours for the average U.S. customer.

Average annual duration of electric power interruptions, by state

Hours per customer

Source: U.S. Energy Information Administration. Notes: "Momentary" interruptions that last 5 minutes or less are generally omitted. Data reported by utilities using IEEE standard as well as any other method.

Climate shocks tend to cause the longest power interruptions. In 2022, two major hurricanes hit Florida, and Floridians experienced an average of 19 hours without power. Over the last ten years, from 2013 to 2022, Louisiana had the highest cumulative hours (188) of power interruptions of all states, and West Virginia had the third highest hours of interruptions (128). Power interruptions can be deadly, particularly following climate shocks which tend to occur during the hottest or coldest times of year — leaving residents without air conditioning or heat sources (Heat-related Deaths). In addition, carbon monoxide deaths spike during power outages. A grassroots effort to provide electricity during emergencies has sprung up in Louisiana. Churches and community centers within 15 minutes of all Louisianans will have solar panels and battery storage installed and serve as “Community Lighthouses”.

As weather events become larger, affecting a wide swath of the country, the fragmented nature of the nation’s power grid impedes the transfer of power to affected areas. A more integrated system would make the U.S. energy infrastructure more resilient. Such a system would also support the transmission of renewable energy generated in one region to other regions with lower wind and solar resources. The Inflation Reduction Act includes funding to boost the development of U.S. electricity transmission infrastructure. Louisiana has secured over $300 million in federal grant funding to fortify its electric grid in New Orleans. But nationwide, much permitting for the implementation of this new infrastructure is delayed, slowing the country’s transition to sustainable energy. These delays will need to be addressed to speed the country’s reduction of greenhouse gas emissions (Greenhouse Gas Emissions).
Most states weatherize only a tiny fraction of their residents’ homes each year.

Percent of housing units weatherized, 2021
Using federal government funding streams

Source: National Association for State Community Services Programs and U.S. Census Bureau. Notes: Includes housing units weatherized using funds from U.S. Department of Energy (Weatherization Assistance Program), U.S. Department of Health and Human Services (Low-Income Home Energy Assistance Program), and American Rescue Plan Act.

Home weatherization reduces greenhouse gas emissions as well as household energy expenditures through repairs, insulation, and replacement of mechanical systems (e.g. HVAC and water heaters) and building structures (e.g. doors, windows, roofs). In 2021, state and local governments received enough federal funding to weatherize only 63,601 homes, which amounts to a tiny fraction of a percent of the 142 million homes in the U.S. In 2021, only seven states weatherized more than 0.1% of their homes – Vermont leading at 0.3%.

While the federal government is about to dramatically expand the number of homes that are weatherized each year through Inflation Reduction Act funding, it falls short in that the funding is distributed only via tax credits for homeowners. In addition, pre- and post- disaster funds should include weatherization and fortification of buildings. The “Strengthen Alabama Homes” program is an encouraging model that fortifies and weatherizes homes through grants rather than tax credits. It has made Alabama the nation’s leader in retrofitting homes to reduce severe weather damage (FEMA Disaster Declarations). Importantly, the growing market for building retrofits and energy efficiency upgrades will stimulate increasing demand for workers in the construction trades.
The average cost of flood insurance is projected to increase by 120% in the South and 82% outside the South once full-risk prices are completely implemented.

Average cost of full-risk flood insurance (Risk Rating 2.0) by county
Single-family home policyholders in the National Flood Insurance Program

Source: FEMA. Notes: The full-risk cost of insurance is what policyholders will pay at their full actuarial rate under National Flood Insurance Program’s pricing approach (Risk Rating 2.0). Cost of insurance is defined as all premiums, fees, assessments and surcharges for a policy.

The National Flood Insurance Program (NFIP), run by FEMA, was established in 1968. All homes and businesses in flood-prone areas (as determined by FEMA) that have a government-backed mortgage are required to buy NFIP insurance. Other homes and businesses can purchase NFIP insurance on a voluntary basis, and 90% of all flood insurance in the U.S. is through NFIP.[1]

In 2021, NFIP began raising policy rates to more accurately reflect each property’s flood risk. By law, NFIP rates cannot increase by more than 18% per year, so some policyholders are on a “glide path” to their full-risk cost of insurance. Once the new price structure is fully implemented, the average cost of insurance is projected to be $1,950 in Southern states — 20% higher than outside the South.

As flood insurance costs increase, many policyholders — including poorer families with heirs properties — are dropping their coverage, leaving them even more financially vulnerable. [2] The number of NFIP policies in force has declined from 5.7 million in 2009 to 4.7 million in 2023. Louisiana has 52,000 fewer policies in force. And West Virginia has nearly 10% fewer policies. For property owners who are required to purchase insurance, rising flood insurance costs increase the cost of living and can make new property development less feasible. It can also drive home prices down, leaving homeowners with an asset worth less than the mortgage. [3]
Southern states have among the lowest rates of public transportation usage in the country.

Percent of workers commuting by public transportation, 2022
Workers 16 years and over

Source: Census Bureau ACS 1-yr data.

Public transit generates fewer greenhouse gas emissions and less wear and tear on roads (per passenger mile traveled) than private cars.\textsuperscript{[1]} Mass transit also requires less space for parking lots and can reduce highway congestion.\textsuperscript{[1]} While electric cars reduce greenhouse gas emissions compared with gas-powered cars, they are not environmentally neutral. Each car requires the mining of lithium and cobalt (with significant environmental impacts and human risks) and the disposal of its batteries can generate additional pollution.\textsuperscript{[2]} At the end of the day, electric-powered public transit emits fewer greenhouse gasses than gas-powered transit and has a lower environmental impact than electric cars (per passenger mile traveled).

Certain regions of the United States, and other wealthy countries in Europe and Asia, have invested substantially in public transportation and prioritized transit-oriented development, which encourages public transit ridership. But, as a whole, the U.S. has invested more in highways than public transportation and, as such, American public transit usage is very low. Thus, the transportation sector produces a higher amount of greenhouse gasses than any other sector in the U.S. economy (Greenhouse Gas Emissions). In New York and Washington DC, about 20% of workers use public transportation to get to work. Across the South, fewer than 2% of workers use public transit. The Bipartisan Infrastructure Law includes funding that can help states invest in flexible public transit options that will be in demand as boomers age in place.\textsuperscript{[1]}
In 6 Southern states, more than 50% of seats went uncontested in the latest state legislature election.

Uncontested seats in state legislatures
2022-2023 election cycles

Source: Ballotpedia, compiled from each state’s election administration. Notes: The data here includes state legislative seats up for election in 2022, except for 4 states (LA, MS, NJ, VA), which held state legislative elections in 2023. In FL, HI, LA, OK, and TX, elections were canceled if only one candidate filed for a seat or advanced from the primary election, and in LA, a candidate could win the election outright by receiving more than 50% of the vote in the primary. In any case where the general election race was canceled, for our purposes, that seat was considered uncontested.

Uncontested elections, meaning elections with only one candidate option, are widespread in the United States, particularly at the state level. In the 2022-2023 state legislative election cycle, 11 states had only one candidate for a majority of their state legislature races.

Research shows state legislators elected in unopposed elections tend to perform more poorly, showing up to vote less often and introducing fewer bills compared to their colleagues elected in competitive contests. And scholars say that lack of political competition may result in more poorly functioning legislatures that are less responsive and less reflective of the citizens they serve — including on key issues such as climate action. According to a March 2023 survey, 58% of U.S. adults say their state elected officials are doing too little to address climate change.
9 Southern states have passed laws restricting voter access since 2021.

State voting laws passed, by whether they expand or restrict access to voting
Jan 1, 2021 - October 1, 2023

Source: Brennan Center for Justice. Notes: “Mixed” indicates that a state has passed both restrictive and expansive voting laws.

Since the 2020 election, 29 states have passed laws that make it harder for Americans to vote, including laws that limit early voting, institute stricter ID requirements, limit mail-in and absentee ballots, close polling places early, purge voter rolls, and more. For example, in late 2023, the NC legislature overrode the governor’s veto to enact a new law that would shorten the window to return mail ballots, ban the use of ballot drop boxes, and increase the chances that voters using same-day registration do not have their ballots counted. [1] [2]

Barriers to voting and civic participation, such as those enacted in these new laws, disproportionately impact people of color. [3] [4] These same communities are also disproportionately impacted by climate change, have fewer resources to respond to climate catastrophes, and are the last to recover from economic losses associated with disasters. [5] [6] Research shows many voters of color care deeply about climate change, but voter suppression efforts and restrictive voting legislation pose serious challenges for their voices and interests on climate action to be represented in the political process. [7] [8]
Beyond governments, American society has always depended on an array of civic institutions to provide critical information to constituents, hold governments accountable, and offer support to families and workers to be healthy, educated, and productive. This section examines civic institutions and whether they are effective and sufficiently available.

**Indicators in this section**

- Lack of health insurance, by county
- Lack of internet, by county
- News deserts, by county
Because many Southern states have refused Medicaid expansion, 15% of working-age Southerners lack health insurance, compared to only 11% of working-age Americans in non-Southern states.

Lack of health insurance coverage by county, 2018-22 (5-yr average)
Percent of population age 19-64

Sources: Census Bureau’s American Community Survey 2018-22 and Kaiser Family Foundation.
Notes: North Carolina has high uninsured rates because Affordable Care Act (ACA) Medicaid expansion only just started Dec. 1, 2023. Wisconsin has relatively low uninsured rates (despite not adopting ACA Medicaid expansion) because Wisconsin has partially expanded Medicaid, under a Medicaid waiver, to include all adults under 100 percent federal poverty level. If Wisconsin were to adopt the ACA Medicaid expansion, coverage would extend to nearly all adults with incomes up to 138% of the federal poverty level.

The impacts of climate change are inextricably connected to poorer health outcomes. Between 2016 and 2020, heat-related weather events caused an estimated 290,000 excess hospital visits per summer, costing roughly $1 billion annually. Americans without health insurance bear the brunt, as they often have limited access to healthcare and financial resources, leading them to forgo treatment for pre-existing conditions. In 2010, the Affordable Care Act began to dramatically reduce the number of uninsured people across the country through Medicaid expansion and new subsidies for health insurance “marketplaces.” 10 states (6 of them in the South) have still not adopted Medicaid expansion.

Medicaid has a history of providing equity-focused programs, and a shift towards climate-focused policies could help mitigate climate-related inequities. Oregon was the first state to use Medicaid coverage for the distribution of air filters, cooling units, and generators to protect from air pollution and extreme temperatures. Replicating best practices at the state and local level are crucial to supporting vulnerable communities.
11% of Southerners have no internet at home — not even a cellular data plan — compared to 8% of non-Southerners.

Lack of internet access by county, 2018-22 (5-yr average)
Percent of households without internet access

Source: [Census Bureau’s American Community Survey 2018-22](https://www.census.gov/). Note: “Lacking internet access” means the household has no internet subscription, no cellular data plan, and no access to the internet without a subscription (such as through property-wide Wi-Fi service in an apartment building).

Broadening access to broadband internet yields benefits beyond connecting workers to opportunities and improving access to goods and services. It also contributes to a reduction in greenhouse gas emissions. ([Greenhouse Gas Emissions](https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator)) The Covid pandemic expedited the shift to online services and remote work, yet this transformation hasn’t been universally accessible due to limited broadband availability, especially in rural areas. Across the South, 127 rural counties are considered “internet access poor” because 25% or more of all households lack internet. Expanding broadband, particularly in rural communities, enables easier access to e-commerce, telecommuting, job prospects, and virtual healthcare, thereby reducing the overall demand for transportation and lowering greenhouse gas emissions. Yet, over 1 in 10 Southerners have no internet access at home — not even a cellular plan.

The Bipartisan Infrastructure Law is sending $42.45 billion directly to states to collaboratively plan and execute broadband expansion in partnership with local and regional communities. Extending internet access in rural areas tends to be costly as residents are dispersed across vast areas. Municipal and regional utility companies were created to provide essential services, including broadband, to underserved communities. However, due to lobbying by private telecom companies, numerous states have enacted laws preempting localities from constructing and managing their own internet infrastructure.
75% of Southern counties are “news deserts,” counties with no or only one newspaper, compared to 50% of non-Southern counties.  

Counties with no or only one newspaper (“news deserts”)  
News deserts as of 2022

Source: Northwestern Medill Local News Initiative.

Local journalism, a critical source of trusted information, has been in rapid decline in recent years, and it is estimated that by 2025, a third of local news rooms will have shuttered their doors since 2005. “News deserts”, counties that have zero or just one newspaper, make up 75% of Southern counties, compared to 50% of non-Southern counties.[1]

The disappearance of local news presents a number of challenges, especially as the prevalence of mis- and dis-information strains the public’s trust.[2] Several studies have demonstrated local news is one of the most trusted sources of information across party lines.[3] Climate change, often polarized between party lines, can be perceived more openly with local news as its medium.[4] A Louisiana case study focusing on citizens’ attitudes toward climate change mitigation efforts found that Republicans were far more likely to perceive local news sources as accurate than national, and were more willing to engage in mitigation efforts when presented with local reporting.[5]

Responding to the local news crisis requires creative solutions. The American Journalism Project recently made a $2 million grant to Deep South Today, and The National Trust for Local News launched a subsidiary for the state of Georgia in December, 2023.[6][7] Each of these efforts demonstrates the vital role that philanthropy can play in ensuring that communities have access to reporting that directly impacts them, and that those communities retain control of their own local news. At the state and federal level, legislation such as the Local Journalism Sustainability Act (a bipartisan bill that would provide tax credits for subscriptions and employment at local news organizations) could provide needed support to the struggling industry.[8][9][10]
In addition to its direct impacts, climate change will have indirect physical, mental, and financial tolls. This section examines key metrics of community well-being to inform decisions on where to invest and which initiatives to prioritize.

**Indicators in this section**

- Life expectancy, by race/ethnicity
- Death rates, by state
- Drug overdoses, by race/ethnicity
- Pregnancy-related deaths, by race/ethnicity
- Unaffordable housing, by county
- Likelihood of eviction/foreclosure, by state
- Anxiety and depression, by state
- Youth mental health, by sex and sexual identity
Life expectancy inched upward in 2022 after 2 years of decline during the pandemic. Life expectancy is lowest for Black and American Indian persons.

Life expectancy at birth by race/ethnicity, U.S.

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022 (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>78.8</td>
<td>77.5</td>
<td>80.0</td>
<td>78.8</td>
</tr>
<tr>
<td>Asian</td>
<td>85.6</td>
<td>84.5</td>
<td>81.9</td>
<td>80.0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>77.5</td>
<td>77.5</td>
<td>74.8</td>
<td>72.8</td>
</tr>
<tr>
<td>White</td>
<td>74.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td></td>
<td></td>
<td></td>
<td>71.8</td>
</tr>
<tr>
<td>American Indian/AN</td>
<td></td>
<td></td>
<td></td>
<td>67.9</td>
</tr>
</tbody>
</table>

Source: CDC. Notes: AN= Alaskan Native. Life expectancy at birth is the average number of years that a newborn would live if death patterns of the population at the time of their birth did not change during their lifetime. This means that any future changes to mortality rates would not be taken into account. Estimates for 2022 are provisional (p).

In 2020, as Covid ravaged the nation, Americans’ life expectancy, which is based on death patterns, dropped 1.8 years. Then, in 2021, while other wealthy nations were able to mitigate the impacts of Covid and their life expectancy increased, in the U.S. life expectancy fell another 0.6 years.[1][2] Based on provisional 2022 data, U.S. death rates have improved slightly and life expectancy has increased. Still, life expectancy — at 77.5 years — remains 1.3 years lower than 2019 pre-Covid.

As weather-related deaths and adverse pollution-related health impacts increase, climate change is anticipated to shorten life expectancy across the globe (Heat-related Deaths, Black Carbon). How we mitigate its impacts is crucial to preserving longevity. The Air Quality Life Index finds that the average person would have gained 2.25 years of life if air pollution globally was reduced to World Health Organization recommendations.[3] A separate study from 2012 found that the reduction in air pollution in the U.S. from the previous decade was associated with an increase in life expectancy.[4]

American Indian/Alaska Native populations have the lowest life expectancy in the U.S. at 67.9 years, followed by Black Americans at 72.8 years. Life expectancy for white Americans is on par with the (low) national average at 77.5 years. Hispanic Americans and Asian Americans have life expectancy of 80 years and 84.5 years respectively.
Southern states — led by WV, MS, and KY — have the highest death rates in the nation.

Death rates per 100,000 population, 2022
Age-adjusted

In 2022, the death rate in America remained higher than pre-Covid. Death rates in the South are stunningly high. In 2022, West Virginia and Kentucky had age-adjusted death rates nearly twice as high as New York and California. While heart disease and cancer remain the leading causes of death in the U.S., unintentional injuries are now the 3rd leading cause of death.

Drug overdose deaths, one of these unintentional injuries, continue to skyrocket, with over 108,000 deaths in 2022. Opioid overdoses are more likely during heat waves and may surge as summers get hotter (Drug Overdose Deaths). Pregnancy-related deaths are about 3 times higher in the U.S. than other wealthy countries and will increase as we experience more extreme heat days (Pregnancy-related Deaths). Heat-related deaths have more than doubled since 2019 and will continue to grow with experts predicting 2024 has a 33% chance of being hotter than 2023 (Heat-related Deaths, Extreme heat days). As summers get hotter, diseases such as dengue fever and Zika virus are likely to become more common in the U.S.

Lack of health insurance contributes to these high deaths rates, and more working-age Southerners lack health insurance than non-Southern, working-age Americans (Lack of Health Insurance).
Drug overdose deaths, more likely in the face of extreme heat and other natural disasters, have increased over 500% since 1999, reaching at least 108,490 deaths in 2022.

Drug overdose deaths, U.S.
1999-2022

Natural disasters can cause huge shocks to the daily lives of Americans, adversely affecting housing, health, and an overall sense of security (Likelihood of Eviction/Foreclosure, Lack of Health Insurance, Anxiety/Depression). Studies found that opioid and substance abuse were more likely to increase in the aftermath of a natural disaster.\[1\][2][3]

Substance use can alter the body’s ability to regulate its temperature, and more frequent extreme weather temperatures further complicate the issue.\[4\] Multiple studies found that accidental overdose deaths related to cocaine usage — which can increase the body’s core temperature — were higher on hotter days.\[5\] Overdose deaths related to opioid usage – which can reduce the body’s temperature – has been evidenced to be higher on both hotter days and colder days.\[6\][7][8]

The number of drug overdose deaths in America rose dramatically from about 17,000 in 1999 to 70,000 in 2019 (pre-Covid), and then skyrocketed by 50% in just 2 years — reaching nearly 107,000 deaths in 2021. With 2022 data not yet final, deaths have increased yet again as the U.S. reached a high of 108,490 drug overdose deaths. West Virginia had by far the highest drug overdose death rate of all states.\[9\]

Between 2002 and 2019, drug overdose death rates were highest among American Indians and white Americans but, since 2020, the rate of drug overdose deaths among Black Americans has surpassed the rate of white Americans.\[10\] Supplemental funding for federal programs like the Substance Abuse Prevention and Treatment Block Grant are crucial for states and local governments to mitigate the looming effects of climate on the overdose crisis.\[11\]
Pregnancy-related deaths spiked during the pandemic, and pregnancy-related death rates for Black and American Indian people remain 2-3 times higher than for other groups.

Pregnancy-related deaths, U.S.
1999-2022

Sources: CDC, Wonder Mortality Data (deaths) and CDC, Wonder Natality Data (births). Notes: AN= Alaska Native. 2022 data is provisional (p). A pregnancy-related death is defined as a death while pregnant or within 42 days of termination of pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes. Pregnancy-related deaths are identified using ICD–10 underlying cause-of-death codes: A34, O00–O95, and O98–O99.

Pregnant people are some of the most vulnerable in society, and growing research shows that they face heightened vulnerability due to climate change impacts. Heat exposure, diseases from contaminated water, and respiratory issues are among several potential risks that can cause higher rates of pregnancy-related illnesses such as anemia, (pre)eclampsia, low birth weight, preterm birth, and miscarriage (FEMA Disaster Declarations, Extreme heat days, Heat Vulnerability, Black Carbon, Flood Risk).[1][2][3]

In 2020 and 2021, pregnancy-related deaths spiked in the U.S., jumping from 20 deaths per 100,000 live births in 2019 (754 overall deaths) to 33 per 100,000 live births in 2021 (1,205 overall deaths). According to GAO estimates, 25% of pregnancy-related deaths that occurred in 2020 and 2021 listed Covid as a contributing cause of death.[4] Provisional data for 2022 shows that pregnancy-related deaths decreased to 22 per 100,000 live births (819 overall deaths). Still, pregnancy-related deaths in the U.S. remain higher than pre-Covid in 2019 and have more than doubled since 1999, with both the Black and American Indian and Alaska Native populations at increased risk.[5] Black and Indigenous people have historically faced racial discrimination, bias, and inequity in health care systems, for pregnancy-related and other care.[6][7][8][9][10][11][12]

In addition to addressing systemic racism in health care, increasing air filtration in areas that experience wildfires frequently, or offering doctor’s appointments in the evening for areas that have high heat exposure, are among practices that can help reduce the impacts of climate change on pregnant people and reduce pregnancy-related deaths.[2]
One-fourth of U.S. renters pay 50% or more of their household income on housing costs.

Severe housing cost burdens by county, 2018-22 (5-yr average)
Percent of renter households paying half or more of household income on housing costs

Source: Census Bureau’s American Community Survey 2018-22.

Lack of affordable housing in the United States has been exacerbated by severe weather events caused by climate change. Moreover, not enough homes are equipped with the protection and resilience needed to withstand recurring severe weather events, further straining Americans in the wake of disasters (Flood Risk, Home Weatherization).

From 2018 to 2022, at least 1 in 4 renters in several Southern states (Louisiana and Florida: 29%; Mississippi and South Carolina: 26%; West Virginia, Georgia and Alabama: 25%) paid at least half of their total household income toward housing costs. In October 2023, nearly 1 in 3 Americans feared eviction or foreclosure (Likelihood of Eviction/Foreclosure). Having to spend the majority of their income on rent means less money for families to spend on necessities like clothing, food, and utilities, but also for emergency savings. Many renters in homes unable to weather climate disasters are financially unprepared to find new housing, especially in the South.

Renters are rarely the focus of policy solutions regarding climate resilient housing, as many government incentives target homeowners through tax credits. For communities to be resilient, it will be critical to include and consider the rental community in building affordable, climate-resilient housing.
30% of Americans who are late on their rent or mortgage said they feared eviction or foreclosure. In MS and LA, 50% of these adults feared losing their home—the highest rates in the nation.

As extreme weather events become more frequent in the U.S., the fear of eviction or foreclosure looms for many Americans. In the South, 29% of adults who were past-due on rent or mortgage feared that eviction or foreclosure was likely. Among Southern states, fears are highest in MS (52%), LA (50%), and KY (43%). Fears of eviction and foreclosure are substantiated by the rise in climate-related evictions, the rising cost of home insurance, and home insurance companies removing coverage from disaster-prone regions.[1][2][3]. A 2021 study found a significant rise in evictions the year of and the year after an extreme weather event, with high cost burdens playing a large role.[4][5] Counties receiving more aid per household from FEMA experienced fewer evictions within two years of a weather disaster. A separate study found that places with landlord-friendly laws had a sharp increase in evictions after a disaster, regardless of whether tenant protections were in place.[6]

Addressing climate change in the housing sector using a multi-pillar approach is crucial in ensuring community resilience. Federal legislation such as the Inflation Reduction Act and the Bipartisan Infrastructure Law present an opportunity to improve the resilience and sustainability for housing across the nation.[7][8]
One-third of Americans report symptoms of anxiety or depression, up from 11% in 2019. In LA and WV, over 40% of adults reported symptoms of anxiety or depression — the highest rates in the nation.

**Symptoms of anxiety or depression, October 18-30, 2023**

<table>
<thead>
<tr>
<th>Percent of adults who experienced symptoms of anxiety or depression in the last two weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.4–31.8%</td>
</tr>
<tr>
<td>31.9–34.3%</td>
</tr>
<tr>
<td>34.4–35.5%</td>
</tr>
<tr>
<td>35.6–36.3%</td>
</tr>
<tr>
<td>36.4–41.0%</td>
</tr>
</tbody>
</table>

Source: [CDC](https://www.cdc.gov) and [Census Bureau's Household Pulse Survey](https://www.census.gov). Notes: This indicator is based on self-report of the frequency of anxiety and depression symptoms, derived from responses to the first two questions of the eight-item Patient Health Questionnaire (PHQ-2) and the seven-item Generalized Anxiety Disorder (GAD-2) scale.

Americans face a growing mental health crisis, with the percentage of adults reporting symptoms of anxiety and depression tripling from 11% in 2019 to 34% in October 2023.\(^1\) 41% of adults in Louisiana and 40% in West Virginia reported symptoms of anxiety and depression — the highest rates in the nation — followed by Georgia (38%) with the 4th highest rate.

As negative outcomes from the mental health crisis escalate, researchers find that climate fears have taken a toll on Americans.\(^2\)\(^3\)\(^4\)\(^5\)\(^6\)\(^7\) A nationally representative survey from spring 2023 finds that 74% of Americans believe that global warming is happening right now, 48% believe that it is currently harming people across the nation, and more than half believe it will harm future generations in the U.S. and across the globe.\(^8\)\(^9\) A 2022 poll by the American Psychiatric Association found that nearly half of Americans agree that climate change is impacting their mental health.\(^10\) Research about the effects of climate change on mental health has led to terms such as “eco-anxiety” and “ecological grief,” defined as the “sense of loss or the anxiety people feel related to climate change, including the loss of a stable future.”\(^11\) While experts describe this as a normal response to this crisis, there is concern on how it may shape one’s views or outlook on the future, particularly for young people ([Youth Mental Health](https://www.healthandwellness.org)).

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**Pathways to Prosperity**

January 30, 2024  

32
High rates of U.S. high school students experienced persistent feelings of sadness or hopelessness.

Mental health among U.S. high school students, by sex and sexual identity

Fall 2021

<table>
<thead>
<tr>
<th>Category</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor mental health during the past 30 days</td>
<td>18%</td>
<td>41%</td>
</tr>
<tr>
<td>Persistent feelings of sadness or hopelessness</td>
<td>29%</td>
<td>57%</td>
</tr>
<tr>
<td>Seriously considered attempting suicide</td>
<td>14%</td>
<td>30%</td>
</tr>
<tr>
<td>Attempted suicide</td>
<td>7%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Poverty rates of U.S. high school students that experienced persistent feelings of sadness or hopelessness, seriously considered suicide, or attempted suicide increased by 50%, 38%, and 25%, respectively. While reports of worsening mental health were higher among all teens, female and LGBTQ+ students fared worst according to Fall 2021 data. The share of female students that experienced persistent feelings of sadness or hopelessness, poor mental health in the last 30 days, and seriously considered suicide, was twice the share of male students. Over half of LGBTQ+ students experienced persistent feelings of sadness or hopelessness and poor mental health, while nearly half seriously considered attempting suicide — rates 2 to 3 times higher than that of heterosexual students.

Growing research shows that young people are significantly impacted by climate change. In a global study of over 10,000 young people, 59% reported that they were very or extremely worried about climate change, while 84% were at least moderately worried. Young people are uniquely affected by climate change, as they struggle with the physical and mental impacts from both short-term events (severe weather disasters like wildfires, hurricanes, and floods) and ongoing crises (droughts and poor air quality). Disruptions to schooling and education, unstable housing and displacement, and hunger are just some of the physical effects of climate change that can severely harm youth development.

Yet, many young people have channeled their fears and concerns into action, challenging politicians and policymakers to make policy decisions that reflect their rhetoric to build a better future for the youth.
REFERENCES

Foreword

U.S. billion-dollar weather and climate disaster events (inflation-adjusted)

Number of FEMA disaster declarations by county

Share of properties at major to extreme risk for flooding, by county

Number of extreme heat days (100°F Heat Index) by county
1. 2023 was the world’s warmest year on record, by far. (2024, January 12). National Oceanic and Atmospheric Administration; U.S. Department of Commerce. https://www.noaa.gov/news/2023-was-worlds-warmest-year-on-record-by-far


Social vulnerability to extreme heat by county, 2019


Heat-related deaths, U.S.


https://www.brookings.edu/articles/the-u-s-needs-better-more-accessible-home-weatherization-programs/

Black carbon pollution levels across 30 sites in the U.S.


https://doi.org/10.1093/pnasnexus/pgad005

https://www.cdc.gov/climateandhealth/effects/air_pollution.htm

https://www.epa.gov/clean-air-act-overview/air-pollution-current-and-future-challenges#toxic

https://www.thelancet.com/journals/lanplh/article/pii/S2542-5196(23)00235-8/fulltext


https://www.cdc.gov/climateandhealth/effects/air_pollution.htm

https://www.airnow.gov/

https://www.airnow.gov/air-quality-flag-program/

U.S. greenhouse gas emissions by economic sector

https://doi.org/10.7930/NCA4.2018.CH13

https://iea.blob.core.windows.net/assets/beceb956-0dca-4d73-89fe-1310e3046d68/NetZeroBy2050-ARoadmapfortheGlobalEnergySector_CORR.pdf

Average annual duration of electric power interruptions, by state

https://www.eia.gov/todayinenergy/detail.php?id=54639

https://doi.org/10.1056/nejmc2113554

4. Zullo, R. (2022, December 31). After strain from another winter storm, experts say it's time to fix the electric grid. Louisiana Illuminator. 


https://crsreports.congress.gov/product/pdf/IN/IN11981


https://emp.lbl.gov/queues

https://yaleclimateconnections.org/2022/10/permitting-americas-next-big-climate-conundrum/

**Percent of housing units weatherized, 2021**


https://www.brookings.edu/articles/the-u-s-needs-better-more-accessible-home-weatherization-programs/

3. Alabama leads nation in homes designated to reduce severe weather damage; more states center resiliency programs around FORTIFIED. (2023, May 1). Insurance Institute for Business & Home Safety. 

**Average cost of full-risk flood insurance (Risk Rating 2.0) by county**

https://doi.org/10.1017/s0898030614000153

https://scholarship.law.unc.edu/cgi/viewcontent.cgi?article=1569&context=ncbi


**Percent of workers commuting by public transportation, 2022**


https://medium.com/@dineshhgoundla/electric-cars-are-not-better-the-superiority-of-public-transit-over-cars-9004748c56fe

https://www.transportation.gov/grants/SMART
Uncontested seats in state legislatures

State voting laws passed, by whether they expand or restrict access to voting

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Drug overdose deaths, U.S.


2. 2022 was the world’s warmest year on record, by far. (2024, January 12). National Oceanic and Atmospheric Administration; U.S. Department of Commerce. https://www.noaa.gov/news/2023-was-worlds-warmest-year-on-record-by-far


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Symptoms of anxiety or depression, October 18-30, 2023


Mental health among U.S. high school students, by sex and sexual identity


ABOUT THIS SERIES

As the impacts of climate change become increasingly visible, Americans have a once-in-a-generation opportunity to mitigate these impacts with support from Bipartisan Infrastructure Act and Inflation Reduction Act funds. As communities come together to access these federal funds, Pathways to Prosperity: Building Climate Resilience provides easily accessible data and analysis that community leaders can use to develop a shared, evidence-based understanding of state-specific climate and equity issues. These 25 one-pagers represent a comprehensive set of high-demand indicators that civic leaders can use to gain consensus, set priorities and forge partnerships.

Pathways to Prosperity: Building Climate Resilience empowers communities to actively participate in shaping their own climate futures with a focus on the states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

About Fair Count (FairCount.org) Founded by Stacey Abrams in 2019 and anchored in Georgia, Fair Count works to build long-term power in communities that have been historically undercounted in the decennial census, underrepresented at the polls, and whose communities are often torn apart in redistricting.

About the Southern Economic Advancement Project (TheSEAP.org) SEAP works to broaden economic power and build a more equitable future in the South through research, policy, and network-building. Focused on 12 Southern states and marginalized/vulnerable populations within the region, SEAP amplifies the efforts of existing organizations and networks that work toward similar goals. The organization was founded by Stacey Abrams in 2019.

About the National Conference on Citizenship (NCoC.org) NCo is committed to strengthening democracy by supporting local leaders and nonpartisan projects dedicated to citizen engagement and public service. Our vision is one of full participation in our democracy, and that in doing so our democracy equitably and inclusively reflects the combined voices, dreams, and actions of all who call our country home.
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This report is dedicated to all of the data heroes — in state, local, federal government, institutions, nonprofits, and volunteer organizations — who make these types of analyses possible.