BRACE

This guide presents data, tools, and resources to support practitioners in developing assessments of climate vulnerability, mitigation opportunities, and resilience. This guide breaks down several types of resources, outlines how to use this information, and provides a repository of additional resources. While this compilation of resources is extensive, it does not cover all possibilities. We encourage users to explore additional, localized resources.

What kind of information do I need?

Engage Regional, State, Local, and Tribal Partners

Before starting climate and health work, public health practitioners should prioritize regional, state, local, and Tribal partnerships. Local partners may be able to assist with accessing more localized and relevant resources, data, and information. Collaborating with local partners can enhance the quality of data used, strengthen program outcomes, and foster collective action. Regular communication and collaboration with partners ensure data are applied effectively, leading to better-informed decisions and improved community outcomes. Although many more exist, some partners to initially consider before starting climate and health work may include governmental agencies or non-governmental agencies like **National Association of County and City Health Officials (NACCHO)**, **Association of State and Territorial Health Officials (ASTHO)**, or the **National Indian Health Board (NIHB)**.

Read more about the importance of local partnerships in the "Get Ready, Stay Ready," "Partner," and "Listen and Assess" sections of the BRACE Implementation Guide.

Climate-Related Hazards and Exposures

Climate-related hazard and exposure data, such as temperature and precipitation data, offer crucial information about environmental conditions that may affect public health. These data may show how conditions have shifted, or may shift, in a changing climate. Climate-related hazard and exposure data resources may include both observations and predictive models, offering insights into past, present, and future climate conditions, including forecasts and projections.

Read more about this topic in Key Tactic 3.2 of the BRACE Implementation Guide.

How do I use climate-related hazard and exposure data?

Climate-related hazard and exposure data are important for identifying long-term weather patterns and areas susceptible to environmental risks and hazards, such as extreme heat and floods. They can be used to analyze the relationships between climate conditions and health outcomes, informing risk assessments, adaptation plans, and mitigation strategies. These data can help public health practitioners and communities identify locally relevant climate hazards, climate-health pathway vulnerabilities, and sources of community resilience.

Some example resources to help you begin your search:

- **Fifth National Climate Assessment Interactive Atlas:** The Fifth National Climate Assessment Interactive Atlas is a companion resource to the Fifth National Climate Assessment, the US government's official report on climate change. This resource provides county-level temperature and precipitation projection maps for various warming scenarios.
- **North American Land Data Assimilation System (NLDAS):** The NLDAS resource was developed by the Centers for Disease Control and Prevention's National Environmental Public Health Tracking Network. This resource offers detailed information about various environmental public health indicators that affect population health. These indicators were developed in collaboration with national, state, and local health partners.
- **U.S. Global Change Research Program (USGCRP) Global Change Information System**: The USGCRP coordinates research and investments across 15 federal agencies to address human and natural forces shaping the global environment, providing science, tools, and resources to navigate environmental challenges and build resilience. This resource provides a collection of data and current research on climate change from 15 government agencies.

See Table 1 for a list of suggested resources regarding Climate-Related Hazards and Exposures. We encourage you to look for additional resources in your local area and to explore the Climate and Health Program's website for updated resources.

Climate-Sensitive Health Indicators and Outcomes

Climate-sensitive health indicator and outcome data help provide a broad view of health by including metrics like disease prevalence and incidence, self-reported physical and mental health, and premature death rates. Partnering with local health departments is important for more detailed and up-to-date health data, as national-level data may lack this granularity.

Read more about this topic in Key Tactic 3.2 of the BRACE Implementation Guide.

How do I use climate-sensitive health indicator outcome data?

Climate-sensitive health indicator and outcome data are crucial for assessing public health status. Public health status may act as an indicator of community resilience against climate-sensitive health impacts, health disparities, and the complex interactions of climate stressors on health.

Climate-sensitive health indicator and outcome data facilitate informed decision-making and proactive public health strategies. These data can be used in various ways, including evaluating the effectiveness of climate interventions, understanding population health dynamics and disparities, guiding resource allocation and public health interventions, and tailoring health interventions to populations that are disproportionately at risk with poorer health or heightened sensitivity to the health effects of climate change.

Some example resources to help you begin your search:

- **Centers for Disease Control and Prevention Wide-ranging Online Data for Epidemiologic Research (CDC Wonder):** CDC WONDER is an online platform developed by the CDC that provides a wide range of public health data. It allows users to query, analyze, and visualize data on various health topics, supporting research, decision-making, and program evaluation.
- **National Emergency Medical Services Information System (NEMSIS):** NEMSIS is a nationwide system that standardizes and collects Emergency Medical Services (EMS) data from U.S. states and territories. It helps improve prehospital patient care by enabling the aggregation, sharing, and analysis of EMS data at local, state, and national levels.
- **PLACES: Local Data for Better Health**: PLACES offers health data for small areas across the U.S., helping local health departments better understand and address health issues in their communities. This resource provides model-based estimates of health measures for counties, places, census tracts, and ZIP code areas.

See Table 2 for a list of suggested resources regarding Climate-Sensitive Health Indicators and Outcomes. We encourage you to look for additional resources in your local area and to explore the Climate and Health Program's website for updated resources.

Climate Vulnerability, Resilience, and Community Characteristics

Climate vulnerability, resilience, and community characteristics data focus on a community's ability to withstand climate impacts, providing information regarding exposure to risks, sensitivity to hazards, and adaptive capacity. These resources provide analytical frameworks, toolkits, and strategies to evaluate vulnerability, inequity, assets, and resilience, offering both quantitative and qualitative insights. Resources may also include case studies, strategy compendia, and projections on how climate hazards may affect specific communities in the future.

Read more about this topic in Key Tactic 3.2 of the BRACE Implementation Guide.

How do I use climate vulnerability, resilience, & community characteristics data?

By analyzing factors such as socioeconomic status, demographic composition, and resource access, these data offer valuable insights into underlying inequities as well as existing strengths. Considering climate hazards, exposure, sensitivity, adaptive capacity, and community assets together can help public health practitioners gain a comprehensive view of local climate vulnerability and resilience. These resources may assist public health practitioners and communities in identifying vulnerabilities, mobilizing resources, and implementing targeted interventions to improve the ability to withstand and adapt to climate change impacts.

Some example resources to help you begin your search:

- **Tribal Climate Health Project:** The Tribal Climate Health Project, developed by the Pala Band of Mission Indians through funding from the EPA and other agencies, offers online trainings, tools, and a resource clearinghouse to help tribal health and environmental professionals address climate-related public health risks. This resource supports tribes in assessing vulnerabilities and implementing adaptation strategies with training and outreach efforts.
- **U.S. Climate Resilience Toolkit:** The U.S. Climate Resilience Toolkit provides a framework for communities to systematically assess and address their climate hazards. It allows communities to document their past, present, and future exposure to climate-related risks.
- **U.S. Climate Vulnerability Index (CVI):** The CVI is a data-driven tool that visualizes how cumulative vulnerabilities, such as social, economic, and environmental factors, impact communities across the U.S. This resource provides data from 184 sources to rank over 70,000 U.S. Census tracts, showing which communities are most affected by climate change.

See Table 3 for a list of suggested resources regarding Climate Vulnerability, Resilience, and Community Characteristics. We encourage you to look for additional resources in your local area and to explore the Climate and Health Program's website for updated resources.

Climate Mitigation

Climate mitigation data focuses on information that helps in understanding greenhouse gas (GHG) emissions as well as common co-pollutants and selecting actions that reduce emissions. These data highlight opportunities to slow or minimize climate change by reducing the concentrations of GHGs. Mitigation data may include existing climate action plans and GHG inventories developed by jurisdictions, other information on emissions sources, potential reduction strategies, and their ancillary health benefits.

Read more about this topic in Key Tactic 3.3 of the BRACE Implementation Guide.

How do I use climate mitigation data?

Climate mitigation reduces or prevents GHG emissions that contribute to climate change. By analyzing mitigation data, communities can identify significant sources of GHG emissions and implement strategies to reduce these emissions and to protect forests and other locations that absorb GHGs. These strategies often provide ancillary benefits such as improved air quality and physical activity. Effective use of mitigation data may involve a combination of quantitative analysis, Health Impact Assessments (HIAs), and community engagement to understand and optimize the health benefits of various strategies.

Some example resources to help you begin your search:

- **Environmental Protection Agency's (EPA) Environmental Benefits Mapping and Analysis Program - Community Edition (BenMAP-CE):** BenMAP-CE is an open-source program created by the EPA that estimates the health and economic impacts of air pollution-related deaths and illnesses. It allows users to input custom data or use preloaded datasets for the U.S. and China, including air quality, demographic, and economic information.
- **Environmental Protection Agency's (EPA) CO-Benefits Risk Assessment Health Impacts Screening and Mapping Tool (COBRA):** COBRA is a screening tool created by the EPA that enables state, local, and tribal government staff and others interested in the effects of air pollution to estimate the air quality and health benefits of different emissions scenarios.
- **Environmental Protection Agency's (EPA) Priority Climate Action Plans for States, MSAs, Tribes, and Territories:** This resource provides links to Priority Climate Action Plans (PCAPs) for states, Metropolitan Statistical Areas (MSAs), Tribes, and territories. The list is regularly updated as the EPA receives new PCAP submissions.

See Table 4 for a list of suggested resources regarding Climate Mitigation. We encourage you to look for additional resources in your local area and to explore the Climate and Health Program's website for updated resources.

Data Storytelling: Examples and How to Use Them

Data storytelling is a valuable tool for communicating information and informing action. Data stories may take various forms, including interactive StoryMaps and creative formats like comic books. Because any data can be used to tell a data story, the resources in this guide may provide raw information needed to develop a data story. This section of the guide offers examples of different kinds of data stories. These examples highlight different storytelling approaches that can be adapted to specific topics, audiences, and goals.

Read more about this topic in Key Tactic 3.4 of the BRACE Implementation Guide.

How do I use data stories?

Data stories help communicate the ways in which climate change impacts different communities. By visualizing data in an accessible manner, data stories can empower interest holders to better understand climate-related challenges, actively participate in identifying community priorities, and develop strategies that address climate change. Data stories can also be tailored to specific audiences, making them a useful tool to communicate public health and environmental risks — whether through an interactive map, a creative visual narrative, or a straightforward report.

Some example resources to help you begin your search:

- **Background Stories**: This website translates complex content into clear visuals for nontechnical audiences. This website provides a variety of resources focused on environmental sustainability, social equity, and science communication.
- **Environmental Protection Agency's Data Stories**: These interactive narratives combine data visualization with storytelling to highlight how data from the Environmental Protection Agency can be used.
- **Seattle King County's Comic Book:** This comic book format is a creative approach to data storytelling that translates public health data into an engaging and accessible story for the local community.
- **Story Maps - Convergence of Climate-Health-Vulnerabilities:** This website provides a variety of Story Maps that cover a range of climate extremes including heat, drought, hurricanes, severe weather, and winter storms.

See Table 5 for a list of examples of Data Stories. We encourage you to look for additional resources in your local area and to explore the Climate and Health Program's website for updated resources.

We want to hear from you!

Do you have suggestions for additional resources? Can we help you find something?
- For all inquiries, email climateandhealth@cdc.gov.

Not sure what information you need?
- Engage with Climate and Health: A Training for Health Department Personnel to get started. The course includes climate and health basics, integrates climate and health into health department activities, and provides tools and examples to help health departments build climate resilience.

Below is a selection of resources on climate adaptation, mitigation, and research compiled by the CDC's Climate and Health Program. This list is not an exhaustive collection. If any hyperlinks are inactive, please search for the resource by its title, as the host site may have been reorganized.

Table 1: Climate-Related Hazards and Exposures Resource List				
Data Source	**Type of Resource**	**Setting**	**Source**	**Data Description**
ARSET | Satellite Remote Sensing for Urban Heat Islands	Training	Urban	Federal Government	This training resource addresses the use of remote sensing in determining where "hot spots" of land surface temperature are located in urban communities in the United States.
CDC, Climate and Health, Data and Tools	Toolkit	National	Federal Government	This toolkit connects users to different federal sources for tracking, open data, and various toolkits across the United States, with a specific focus on heat and flooding.
Climate Central Urban Heat Index	Data Repository	Urban	Independent Organization	This data repository resource contains information for selecting Urban Heat Island Analyses in the United States.
EPA Climate Change Indicators in the United States	Data Repository	National	Federal Government	The EPA's climate indicators resource compiles data from various contributors to track and provide evidence of climate change impacts, including temperature shifts, altered precipitation patterns, and extreme weather events linked to greenhouse gas emissions.
NOAA, NCEI U.S. Climate Normals	Data Repository	National	Federal Government	This data repository resource is a suite of data products that provide information about typical climate conditions for thousands of locations across the United States.
Data.gov | Climate and Health Datasets	Data Repository	National	Federal Government	Data.gov provides datasets that can be filtered by human health and climate. This data repository resource contains information relevant to the United States.
DHHS Climate and Health Outlook Portal	Story Map	National	Federal Government	This story map shows monthly county-level forecasts for heat, wildfire, and drought in the United States and county-level individual risk factors that may increase vulnerability to the impacts of these climate-related hazards.
EPA Adaptation Organon (AO) for Resilient Natural Resources	Toolkit	National	Federal Government	This resource is a structured framework developed by EPA experts to integrate climate-smart design and resilience theory into natural resource management. It serves as a logic model, process guide, and information resource to support adaptation planning, offering examples, tools, and guidance for researchers and practitioners through an interactive slide deck and future website.
Heat.gov | The Climate Explorer	Data Visualization	National	Federal Government	This data visualization resource contains information about climate change projections for the United States, especially concerning heat.
IPCC data	Data Repository	National	Federal Government	This is the archive for the climate, socio-economic, and environmental data used in the reports produced by the IPCC. This data repository contains information relevant to the United States.

Multi-Resolution Land Characteristics Consortium, National Land Cover Database	Data Repository	National	Federal Government	This data repository contains national land cover information for a wide variety of environmental, land management, and modeling applications relevant for the United States.
NASA Earth Science Data	Data Repository	National	Federal Government	NASA's Earthdata website is one of the largest data repository resources of Earth observation data, including data relevant for the United States.
National Flood Hazard Layer	Data Repository	National	Federal Government	This data repository resource is a compilation of effective Flood Insurance Rate Map (FIRM) databases, relevant for the United States.
National Significant Wildland Fire Potential Outlook	Data Visualization	National	Federal Government	This data visualization and map resource provide weekly fire potential outlooks and monthly assessments of fire potential in the United States.
NCICS State Climate Summaries	Data Repository	State-specific	Independent Organization	This resource provides historical climate conditions with future pathways of greenhouse gas emissions for the United States.
NOAA Climate Data	Data Repository	Global	Federal Government	This resource provides free access to NCDC's archive of global historical weather and climate data in addition to station history information and a variety of tools. These data include quality controlled daily, monthly, seasonal, and yearly measurements of temperature, precipitation, wind, and degree days as well as radar data and 30-year Climate Normals.
NOAA Local Climatological Data	Data Repository	National	Federal Government	This data repository is a suite of monitoring services that track key climate indicators relevant to the United States.
NYS GIS ClearingHouse	Data Visualization	State-specific	State Government	This data repository is a searchable GIS data visualization and repository resource for New York State.
Open Street Map	Data Visualization	Global	International Organization	This data visualization resource contains worldwide data about roads, trails, cafés, railway stations, and more.
CDC NCHS Urban-Rural Classification Scheme for Counties	Toolkit	Rural, Urban	Federal Government	This data visualization resource contains GIS data relevant for the United States, for both urban and rural communities.
The NCA5 Atlas	Data Repository	National	Federal Government	Interactive data repository atlas that provides access to data compiled for the Fifth National Climate Assessment (NCA5), including information for the United States.
Tribal Climate Tool	Data Visualization	Tribal	University	This data visualization resource provides climate change projections and summaries for priority geographies, including tribal land.
USGCRP Global Change Information System	Data Repository	National	Federal Government	This data repository resource contains information relevant to the United States, including: articles, indicators, people, books, findings, reports, organizations, figures, datasets, tables, and journals
USGS Earth Explorer	Data Visualization	National	Federal Government	This data visualization resource is a web tool that allows users to search, view, and download various types of data from the USGS.
World Urban Database	Toolkit	Global, Urban	International Organization	This data visualization resource is a community-based project on urban morphology relevant to climate, weather, and environment studies on a worldwide basis.

NYC Climate Dashboard	Dashboard	State-specific	State Government	The NYC Climate Dashboard monitors the city's progress toward climate goals by tracking carbon reduction efforts, neighborhood preparedness, and the impact on environmental justice communities. It highlights key climate indicators and data on city policies aimed at improving these outcomes.
First Street: The Standard for Climate Risk Financial Modeling	Data Visualization; Toolkit	National	Independent Organization	This toolkit makes the connection between climate change and financial risk at scale for financial institutions, companies and governments. It includes financial risk modeling, case studies, research, and more.
Argonne National Laboratory Climate Risk & Resilience Portal	Data Repository	National	Federal Government	ClimRR (Climate Risk and Resilience Portal) is a free tool that helps people, communities, and organizations across the U.S. understand future climate risks by providing access to climate projections. It supports anyone—from local planners to residents—in making informed decisions to prepare for climate impacts and improve resilience.
New York Climate Smart Communities	Training	State-specific	State Government	The Climate Smart Communities Certification program recognizes New York local governments that have completed a rigorous set of climate mitigation and adaptation actions to achieve certification.
Americares | Climate Resilient Health Clinics	Toolkit	National	Independent Organization	The Climate Resilience for Frontline Clinics Toolkit equips community health centers and free clinics with practical resources to help healthcare providers, patients, and administrators adapt to climate-driven challenges.
Headwaters Economics | Analysis Tools	Toolkit	National	Independent Organization	This toolkit provides free analysis tools to help users better understand socioeconomic data and trends for their communities, counties, states, or regions.
US Forest Service | Climate Tools and Data	Toolkit	National	Federal Government	This toolkit provides climate data, information, and tools to support climate-informed decision-making.
National Environmental Public Health Tracking Network Data Explorer	Data Visualization	National	Federal Government	This data visualization tool is a CDC tool to view health, environmental, and population data in interactive maps, charts, and more.
US Global Change Research Program	Data Repository	United States	Federal Government	This resource facilitates collaboration across 15 federal member agencies to advance understanding of the changing Earth system
U.S. Global Change Research Program | NCA5 Webinar Series	Webinar	National	Federal Government	This resource includes a series of one-hour webinars where authors present findings from each chapter of the Fifth National Climate Assessment (NCA5).
WMO/WHO | Global Knowledge for Climate and Public Health	Toolkit	Global	International Organization	ClimaHealth is a global, open-access platform created by the WHO and WMO to provide actionable knowledge on health risks from climate change and environmental hazards. Serving as a technical resource, it brings together expertise from both organizations and is continually updated to support users across the climate, environment, and health fields.

Environmental Defense Fund | Building a vital Earth for everyone	Toolkit	National	Independent Organization	The Environmental Defense Fund (EDF) is a nonprofit organization that tackles environmental issues like climate change and pollution through science-based solutions, policy advocacy, and partnerships.
CDC Climate and Health: A Training for Health Department Staff	Training	National	Federal Government	This training is designed for any public health professional working in a state, tribal, local, or territorial health department in the United States.

Table 2: Climate-Sensitive Health Indicators and Outcomes Resource List				
Data Source	**Type of Resource**	**Setting**	**Source**	**Data Description**
CDC EPHT	Data Repository	United States	Federal Government	This data repository resource brings together health and environmental data from various sources in the United States.
CDC WONDER	Data Repository	United States	Federal Government	This data repository resource contains various health data sets relevant for the United States.
data.HRSA.gov	Data Repository	United States	Federal Government	This data repository resource contains various health information in the United States, including Health Care Professions, Health Facilities, Population Characteristics, Economics, Health Professions Training, Hospital Utilization, Hospital Expenditures, and Environment at the county, state, and national levels.
California Healthy Places Index	Data Repository	State-specific	State Government	This data repository provides detailed data and recommended actions on state specific areas that shape health, like housing, transportation, education, and more.
HHS emPOWER Map	Data Visualization	United States	Federal Government	This data visualization resource displays claims made by Medicare beneficiaries for electricity-dependent durable medical and assistive equipment.
NIEHS Climate and Health Outcomes Research Data Systems	Data Repository	United States	Federal Government	This data repository provides data on environmental factors, exposures, and health outcomes in the United States.
CDC PLACES Data	Data Repository	United States	Federal Government	This data repository resource contains health data for small areas across the United States.
Climate Risk and Resilience Portal (ClimRR)	Data Repository	United States	Federal Government	This resource models over 60 climate variables to provide climate-related projections for the United States. The resource includes local-level information, climate data maps, and other kinds of downloadable data.
American Public Health Association (APHA) Climate, Health and Equity	Toolkit	United States	Independent Organization	This webpage hosts a variety of resources about climate, health, and equity, including toolkits, newsletters, training, and more.
County Health Rankings & Roadmaps	Data Repository	National	Independent Organization	This resource allows people to find zip code-level data about the health of various communities.
WHO Health Economic Assessment Tool	Toolkit	International	International Organization	This resource is a user-friendly, web-based tool used to estimate the health and economic impacts of increased walking and cycling.
Lancet Countdown	Data Repository	International	University	This resource is an international research collaboration that monitors the evolving impacts of climate change on health.

Table 3: Climate Vulnerability, Resilience, and Community Characteristics Resource List				
Data Source	**Type of Resource**	**Setting**	**Source**	**Data Description**
American Community Survey Data Tables	Data Repository	National	Federal Government	This resource provides census and survey data for various communities across the United States.
California Adaptation Clearinghouse	Data Repository	State-specific	Independent Organization	The resource is the State of California's consolidated searchable database of resources for local, regional and statewide climate adaptation planning and decision-making.
California Healthy Places Index	Data Repository	State-specific	State Government	This data repository provides detailed data and recommended actions on state specific areas that shape health, like housing, transportation, education, and more.
California Healthy Places Index Extreme Heat Edition	Data Repository	State-specific	Independent Organization	This interactive data repository contains resources to increase community resilience to extreme heat.
CDC NSSP BIOSENSE Platform	Data Repository	National	Federal Government	This data repository resource guides users through integrating facilities with BioSense Platform, update your Master Facility Tables, get started using the Platform tools, and comply with HL7 case notifications from mapping guides in the United States. Requires login.
CDC Environmental Justice Dashboard	Data Visualization	National	Federal Government	This data visualization resource contains data on environmental exposures, community characteristics, and health burden information in the United States with an environmental justice emphasis.
CDC ATSDR Environmental Justice Index	Data Repository	National	Federal Government	The Environmental Justice Index (EJI) is the first national, place-based tool designed to measure the cumulative impacts of environmental burden through the lens of human health and health equity. The EJI delivers a single rank for each community to identify and map areas most at risk for the health impacts of environmental burden.
CDC ATSDR EJI Indicators	Place and Health - Geospatial Research, Analysis, and Services Program (GRASP)	Data Repository	National	Federal Government	This resource is part of CDC ATSDR's Environmental Justice Index. The indicators included in the EJI, help users identify communities that may be disproportionately affected by socioeconomic, environmental, and health burdens.
CDC ATSDR EJI Explorer	Place and Health - Geospatial Research, Analysis, and Services Program (GRASP)	Data Repository; Data Visualization	National	Federal Government	This resource is part of CDC ATSDR's Environmental Justice Index. This resource includes a map, downloadable data, data tables, and county maps.
CDC ATSDR EJI Indicators: Climate Burden Module	Place and Health -	Data Repository	National	Federal Government	This resource is part of CDC ATSDR's Environmental Justice Index. The Climate Burden Module (CBM) contains environmental indicators that are or have been influenced by climate change, such as extreme heat and wildfires. The CBM

Resource	Type	Scale	Source	Description
Geospatial Research, Analysis, and Services Program (GRASP)				contains indicators relating to heat, wildfires, and extreme events.
Climate Adaptation Knowledge Exchange (CAKE-X)	Data Repository	National	Independent Organization	This data repository resource contains climate adaptation case studies and resources. relevant for the United States.
Council on Environmental Quality| Climate and Economic Justice Screening Tool (CEJEST)	Data Visualization	Rural	Federal Government	This data visualization resource contains various indicators mapping communities that are disadvantaged in the United States, especially for rural communities.
Climate Mapping for Resilience and Adaptation	Toolkit	National	Federal Government	This toolkit contains a framework to help communities systematically consider and address their climate hazards in the United States.
The U.S. Climate Vulnerability Index	Data Visualization	National	Independent Organization	This data visualization resource aims to help identify which communities face the greatest challenges from the impacts of a changing climate with an environmental justice emphasis.
EPA Climate Change Adaptation Resource Center (ARC-X)	Data Repository	Rural	Federal Government	This interactive data repository resource aims to help local governments effectively deliver services to their communities, especially to rural ones in the United States.
EPA EJ Screen	Data Visualization	National	Federal Government	This data visualization resource is a web-based tool that aims to provide easy access to reports and maps on factors concerning environmental justice in the United States.
EPA Heat Island Community Action Database	Toolkit	National	Federal Government	This toolkit contains a database of dozens of examples of state and local voluntary climate initiatives in the United States, with an emphasis on heat and flooding.
EPA Heat Island Compendium	Data Repository	National	Federal Government	This data repository resource promotes strategies for lowering temperatures in communities within the United States.
EPA Heat Island Newsletter	Newsletter	National	Federal Government	This newsletter contains information regarding funding opportunities, webcasts, publications, and events of interest to the urban heat island community in the United States.
HHS OT	Federal Resources for Health Sector Emissions Reduction/Resilience	Data Repository	National	Federal Government	This resource features federal funding opportunities, tools, and support for environmental health resilience in the United States.
MA Climate Change Clearinghouse	Toolkit	State-specific	State Government	This toolkit is Massachusetts's initiative for building statewide capacity for climate change adaptation and resilience.
Maine Adaptation Toolkit	Toolkit	State-specific	State Government	This toolkit is Maine's initiative to provide a centralized source for the information relevant for designing and implementing climate adaptation measures.
NASA Applied Remote Sensing Training Program	Training	National	Federal Government	This training covers a range of NASA datasets, web portals, and analysis tools and their applications to health and climate change in the United States.
Tribal Climate Health Project's Exposures.	Toolkit	Tribal	Independent Organization	This toolkit contains resilience tools created by and for Tribes.

Impacts, and Strategies Inventory (EISI) Tool				
U.S. Climate resilience toolkit - human health topic	Toolkit	National	Federal Government	This toolkit contains general climate and health information relevant for the United States.
US Climate Resilience Toolkit	Toolkit	National	Federal Government	This toolkit is a guide for documenting climate hazards and creating workable solutions to reduce your climate-related risks.
USGS Climate Explorer	Toolkit	National	Federal Government	This toolkit aims to help people create strategies for adapting to climate change in the United States.
Department of Health and Human Services | Utah Healthy Places Index	Data Repository	State-specific	State Government	The Utah Healthy Places Index (HPI) is a data and policy tool designed to advance health equity by mapping neighborhood-level social conditions that impact health, like education, job opportunities, and clean air. Developed by the Utah Department of Health and Human Services in partnership with the Public Health Alliance of Southern California, it supports equitable community investments and statewide policy development.
OMB's Environmental Justice Scorecard	Data Repository	National	Federal Government	The Phase Two Environmental Justice Scorecard details federal agency actions in FY 2023 to advance environmental justice. It expands on the Phase One Scorecard by focusing on the Justice40 Initiative, enforcing environmental and civil rights laws, integrating environmental justice into decision-making, and embedding it across the federal government.
USDA Forest | Service Climate Risk Viewer | US Nature4Climate	Toolkit	National	Federal Government	This resource is a digital mapping tool that will support climate-informed risk and resource planning for National Forest System lands across the U.S. The tool draws from 30 datasets to demonstrate the overlap of multiple values with climate exposure and vulnerability, and current management direction of National Forest System lands. Resource managers can use this information to assess the need for climate adaptation to maintain valued resources and to identify gaps between current practices and needed adaptation practices.
Headwaters Economics | Analysis Tools	Toolkit	National	Independent Organization	This toolkit provides free analysis tools to help users better understand socioeconomic data and trends for their communities, counties, states, or regions.
NOAA CAP	Partnership Program	National	Federal Government	This resource is an applied research program that aims to expand society's regional capacity to adapt to climate impacts in the United States.

Table 4: Mitigation Resource List				
Data Source	**Type of Resource**	**Setting**	**Source**	**Data Description**
U.S. Climate Resilience Toolkit's Climate and Hazard Mitigation Planning (CHaMP) Tool	Toolkit	National	Federal Government	This resource is a mapping tool that provides historical and projected climate and hazard data to support climate-informed infrastructure and Hazard Mitigation Plans. It helps planners integrate climate information into their efforts, visualize vulnerabilities, and communicate risks to residents and authorities.
CDC Health Impact Assessment (HIA)	Toolkit	National	Federal Government	This resource offers guidance on evaluating the health impacts of policies and projects related to climate mitigation.
EPA CO-Benefits Risk Assessment Health Impacts Screening and Mapping Tool (COBRA)	Toolkit	National	Federal Government	This resource provides assessments of the health co-benefits of Greenhouse Gas (GHG) emissions reduction strategies.
EPA Environmental Benefits Mapping and Analysis Program - Community Edition (BenMAP-CE)	Toolkit	National	Federal Government	This resource provides a tool for estimating the health benefits of changes in air quality and emissions.
EPA Greenhouse Gas Inventory Data Explorer	Data Repository	National	Federal Government	This resource is an interactive tool for accessing and visualizing EPA greenhouse gas emissions data at national and state levels. It allows users to create charts, examine trends, and download data, with notes on differences between EPA and state government estimates.
Urban Heat Hot Spots	Data Repository; Data Visualization	Urban	Independent Organization	This resource includes a variety of downloadable datasets and maps related to urban heat islands, such as population exposure data, intensity maps, rankings, and more.
Tree Equity Score	Data Repository	National	Independent Organization	This resource was created to help address damaging environmental inequities by prioritizing human-centered investment in areas with the greatest need. This resource includes a national explorer, local analyzers, a starter guide, data stories, data visualizations, and more.
Park Score	Report	Urban	Independent Organization	This resource ranks the 100 most populous cities in the United States and analyzes each of them across five main categories: equity, access, investment, amenities, and acreage.
Forest Network Information	Data Visualization	National	Independent Organization	This resource provides a map and list of the oldest known forests in the United States, with information and details about each of the parks.
EPA Priority Climate Action Plans for States, MSAs,	Climate Action Plans	National	Federal Government	The resource includes a list of the Priority Climate Action Plans (PCAPs) developed for each U.S. state, Metropolitan Statistical

Tribes, and Territories				Area (MSA), Tribe, and territory. This list of resources will continue to be updated as EPA receives PCAP submittals.
Climate-XChange | The State Climate Policy Dashboard - Climate-XChange	Dashboard	National	Independent Organization	This resource compiles all state-level climate policy information in one place and features resources that enable data-driven decision-making. This resource includes various tools and interactive features, so users can easily compare policies across states or view the entire policy landscape within a state.
Zero Energy Project | All Cities with Climate Action Plans	Climate Action Plans	National	Independent Organization	This resource includes a listing that identifies all the currently known municipalities committed to building climate action plans and includes links to their actual plans. Zero Energy Project will keep this list up to date as the climate action movement expands.
ICLEI USA | GHG Contribution Analysis	Data Repository; Toolkit	National	Independent Organization	This resource provides a variety of tools and resources to support communities in analyzing Greenhouse Gas (GHG) contributions and tracking progress in GHG mitigation.
EPA Facility Level GHG Emissions Data	Data Repository	National	Federal Government	This resource is part of EPA's Data Explorer Tool and provides information about Greenhouse Gas (GHG) Emissions Data from Large Facilities.
EPA | Mapping Greenhouse Gas Emissions Where You Live - Climate Change Lesson Plan	Worksheet	National	Federal Government	This resource is an archived document from the EPA that supports users in mapping Greenhouse Gas (GHG) Emissions where they live.
EPA | Clean Energy, Air, Health, and Related Economic Impacts: Assessing the Multiple Benefits of State and Local Clean Energy Initiatives	Fact Sheet	National	Federal Government	This resource outlines the benefits of state and local clean energy initiatives according to the EPA. The fact sheet also highlights additional tools and resources for state and local governments.
Safe Routes Partnership | Making Strides: 2022 State Report Cards on Support for Walking, Bicycling, and Active Kids and Communities	Report	National	Independent Organization	This resource provides an overview of how well states support walking, bicycling, and active communities, focusing on policy and funding in four key areas: Complete Streets and Active Transportation, Federal and State Active Transportation Funding, Safe Routes to School, and Active Neighborhoods and Schools. The report includes detailed grading criteria and allows for progress tracking by comparing scores from 2016, 2018, 2020, and 2022.
Bike League | States | League of American Bicyclist	Data Repository	National	Independent Organization	This resource is focused on the Bicycle Friendly State Program and provides rankings, report cards, and national reports. The Bicycle Friendly State program encourages state Departments of Transportation and legislatures to adopt practices that promote bicycling safety and accessibility. It ranks all 50 states based on public data and surveys, producing report cards to guide improvements. The program's goal is to support state-level efforts in creating a Bicycle Friendly America for Everyone, with the most recent rankings completed in 2022.

Table 5: Data Storytelling Resource List				
Data Source	**Type of Resource**	**Setting**	**Source**	**Data Description**
Climate Changes Health Comic	Comic	State-specific	Independent Organization	This resource is a comic that was created by Seattle artist Mita Mahato illustrates the impacts of climate change on community health in Seattle and King County, Washington and what people can do to prevent further harm.
Convergence of Climate-Health Vulnerabilities	Story Map	State-specific	University	This resource represents a collaboration among climatologists, public health researchers and professionals, environmental scientists, social science researchers, and community stakeholders to identify and address the impact of extreme weather and climate events on communities in the Carolinas. This resource includes story maps, tools, and other resources to support this mission.
Kansas Data Stories	Data Story	State-specific	State Government	This resource includes examples of data stories, as well as tracking data specific to Kansas.
New York City Data Stories	Data Story	State-specific	State Government	This resource includes examples of data stories, interactive data tools, neighborhood data reports, and more.
Resilience on Seattle's Waterfront	Story Map	State-specific	University	This resource includes examples of data stories, as well as science communication training, climate-related resources, and more.
Washington vs Federal Environmental Justice Mapping Tools	Data Visualization	State-specific	University	This resource is the Washington Environmental Health Disparities Map. It is a free, publicly available online tool that features customizable map views to pinpoint where living and economic conditions combine with pollution to contribute to inequitable health outcomes and unequal access to healthy communities. This tool was created in a community-academic-government collaboration including University of Washington's Department of Environmental and Occupational Health Sciences, Front and Centered, Washington State Department of Health, Washington State Department of Ecology, and Puget Sound Clean Air Agency.
Youth Perspectives of Recreation Access in NH	Story Map	State-specific	Independent Organization	This resource includes data stories about climate issues across New Hampshire.
HEALTHQUAL Data Toolkit	Toolkit	State-specific	University	This resource includes a variety of data resources that include video tutorials on data analysis, visualization and reporting.
Background Stories	Data Story	National	Independent Organization	This resource provides specialized guidance around social, environmental, and scientific data, systems, and processes. This resource translates complex issues into clear visuals.
MIT	Data Storytelling Studio: Climate Change	Training	National	University	This resource is a course that focuses on visualizing systems and data, emphasizing climate change datasets, and covers methods for research, analysis, creative presentation, and storytelling. It explores the emotional, ethical, and practical impacts of visualization and includes exercises, readings, and a final project.
NASA Science	What Is Climate Change?	Data Story	National	Federal Government	This resource is an example of a data story about climate change, created by NASA.

EPA	Data Stories	Data Story	National	Federal Government	This resource includes a few examples of data stories and highlights how EPA data can be used on various environmental issues.
Minnesota Climate Change Vulnerability Assessment Summary	Data Story	State-specific	State Government	This resource is a Climate Change Vulnerability Assessment conducted by the Minnesota Department of Health to evaluate the state's vulnerability to five climate hazards—vector-borne diseases, drought, extreme heat, air pollution, and flooding—by mapping vulnerable populations and historic hazard occurrences. The assessment helps identify populations most at risk and their capacity to cope with these hazards.
YouTube	National Endowment for the Humanities' Spotlight on the Humanities	Lectures and Exhibits	National	University	This resource is a series of recorded presentations on YouTube that are examples of data stories. This work was supported by a National Endowment of the Humanities' Spotlight on the Humanities grant for Plymouth State University's Sustainability Studies program.
University of New Hampshire's Research Communication	PowerPlay	Theater and Performing Arts	State-specific	University	This resource is a performance and is an example of a data story. Research Communication is designed to improve the ability of climate resilience professionals to empathize more closely with and assist communities more constructively to consider strategies, including retreat, in the face of increasing risk.
Mapping Blue Space	Data Story	State-specific	Independent Organization	This resource is an example of a data story and discusses the relationship between "blue space" (i.e. marine and coastal areas) and mental health.
National League of Cities: The Top 5 Ways Cities Are Addressing Climate Change	Data Story	Urban	Independent Organization	This resource is an example of a data story focused on climate mitigation strategies across five U.S. cities.