

Resilience and GIS

Transform Your World
on the Esri® Platform

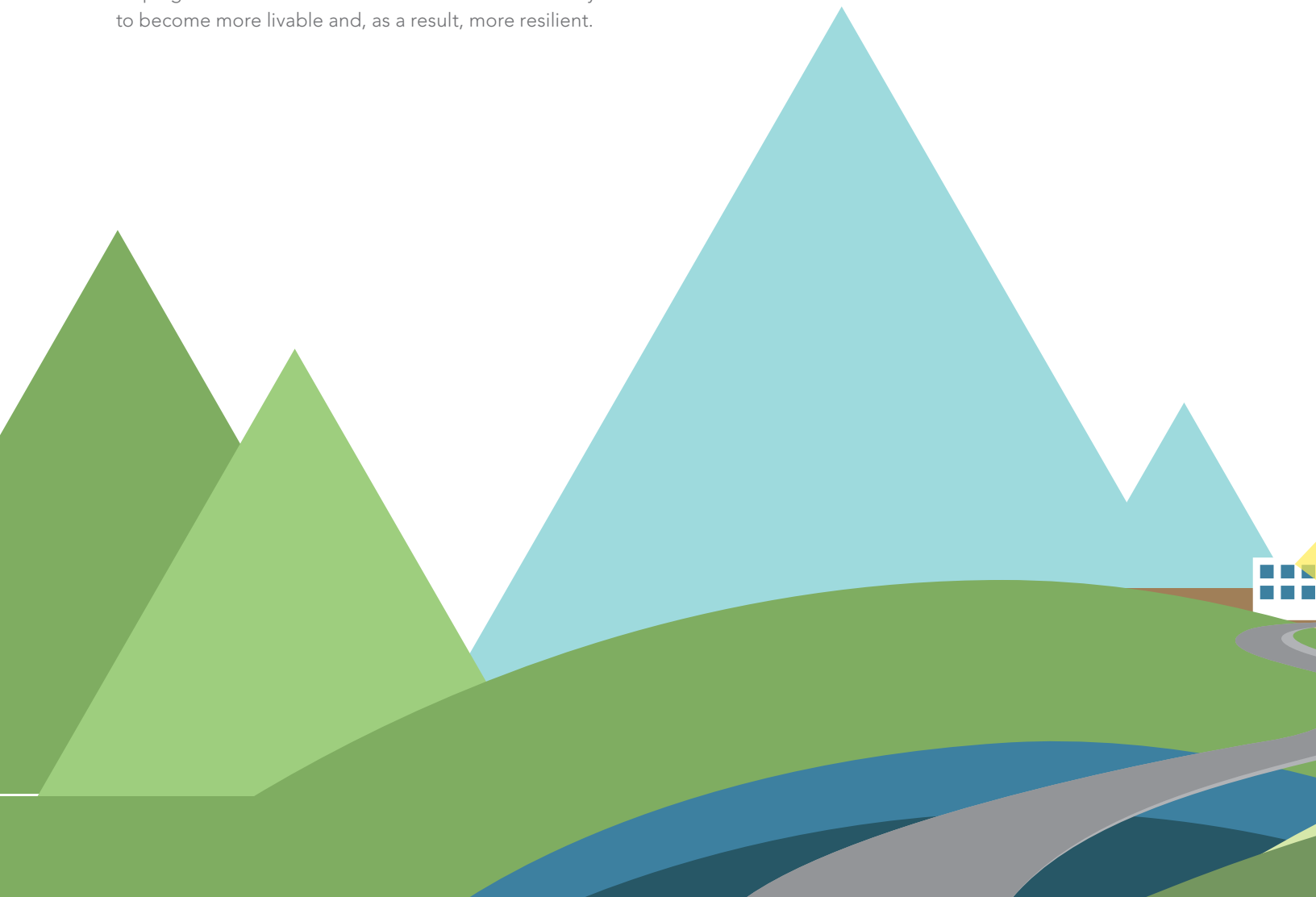


Esri Supports the White House Climate Data Initiative

Esri inspires and empowers people to positively impact the future through a deep, geographic understanding of the changing world around them. More than 350,000 worldwide use Esri® geographic information system (GIS) technology to think and plan geographically, solve real-world problems, and make critical decisions that shape our planet.

Today, many organizations, governments, industry leaders, academics, and nongovernmental organizations (NGOs) have come together with a common mission under President Obama's Climate Action Plan: strengthen the country's resilience to the health impacts of climate change. Understanding the geography of climate change is critical to mitigating its health effects and creating a vibrant and sustainable future. Esri is committed to helping communities work smarter and more efficiently—to become more livable and, as a result, more resilient.

To reinforce this commitment and support the Obama administration's Climate Data Initiative, Esri has launched the following: the Partnerships for Resilience program, the Collaborative Resource portal, a tool to enable immediate viewing of spatial data on the Data.gov open data portal, and the Esri Human Health and Climate Change App Challenge. Together, these elements encourage innovators to leverage data to create tools that help communities take action to protect public health.



The Effects of Climate Change on Human Health

Populations throughout the world experience the impacts of climate change every day. While extreme weather events—such as severe drought and record heat waves—jeopardize property and infrastructure, these events also threaten public health. Rising temperatures, for example, can lead to more smog, longer allergy seasons, and an increased incidence of injuries.

The real effects of climate change on populations' well-being are also becoming more evident. Over the past three decades, for example, the percentage of Americans with asthma has more than doubled. Ongoing climate change poses real threats to these individuals and similarly vulnerable populations.

To diminish the global health threat imposed by climate change, governments, communities, and organizations must take steps toward a more sustainable future. Through applied geography, you better understand how climate change affects health and take action now to protect generations to come.

As the White House expands its Climate Data Initiative to include more than 150 health-related open data resources, Esri is committed to doing its part to help populations boost climate change resilience. Esri is taking action by unleashing the power of GIS for communities to analyze and visualize data and create predictive models to understand and then reduce the health impacts of climate change.



Partnerships for Resilience

Transforming the way public health is approached in the wake of climate change can't be done alone. Public and private partnerships will be key to identifying health risks and solutions. Esri's Partnerships for Resilience group brings together leaders from U.S. government and professional organizations who will work together in its Executive Whiteboard Session to achieve this critical goal.

Governments

Esri will collaborate with municipalities of all sizes—from the City of New Orleans to Wake County, North Carolina—to elicit feedback on the key planning and decision-making needs for counteracting the impacts on human health as a result of climate change. The Partnerships for Resilience group will use GIS technology to develop practical methods and approaches that address the most pressing health needs.

Professional Organizations



Data.gov Visualization Tool

In partnership with the Data.gov team at the US General Services Administration (GSA), Esri is making it easier for the public to visualize and analyze climate change and health-related data with the click of a button. Esri's new ArcGIS® visualization tool is housed on Data.gov, the US government's registry for all open data shared through services from federal agencies. The registry includes thousands of geospatial APIs and data in common and open formats.

Working with GSA through the open-source GitHub repository, Esri has added support for using geospatial datasets that are served by ArcGIS for Server. The new Data.gov Open with ArcGIS button allows any member of the public to create custom visualizations, analyze health and climate change data, and build informative story maps to share insights with local communities and businesses.

The screenshot displays the Data.gov Visualization Tool interface. On the left, there is a 'Filter by location' section with a search bar and a map of North America. Below the map are 'Topics' and 'Topic Categories' filters. The 'Topics' list includes Climate (150), Agriculture (19), Ecosystems (18), Disasters (10), and Safety (9). The 'Topic Categories' list includes Human Health (150), Ecosystem Vulnerability (33), and Water (27). The main content area shows '150 datasets found' and lists several datasets with their respective view counts and download options. The datasets listed are:

- U.S. Hourly Precipitation Data** (439 recent views): National Oceanic and Atmospheric Administration, Department of Commerce -- Hourly Precipitation Data (HPD) is digital data set D51-3240, archived at the National Climatic Data Center (NCDC). The primary source of data for this file is...
Download options: CSV, Hard-length and 6 tool, Wget, Esri REST, KML, HTML. 1 more in dataset.
- Climate Data Online (CDO)** (569 recent views): National Oceanic and Atmospheric Administration, Department of Commerce -- Climate Data online or CDO provides access to climate data products through a simple, searchable online web mapping service. Users can find a variety of NCDC...
Download option: HTML.
- Food Access Research Atlas** (493 recent views): Department of Agriculture -- The Food Access Research Atlas presents a spatial overview of food access indicators for low-income and other census tracts using different measures of supermarket...
Download options: HTML, PDF, Download.
- CDC WONDER: Cancer Statistics** (195 recent views): U.S. Department of Health & Human Services -- The United States Cancer Statistics (USCS) online databases in WONDER provide cancer incidence and mortality data for the United States for the years since 1999, by...
Download option: HTML.
- Food Price Outlook** (181 recent views): Department of Agriculture -- The Consumer Price Index (CPI) for food is a component of the all-items CPI. The CPI measures the average change over time in the prices paid by urban consumers for...
Download option: HTML.

Each dataset entry is marked with a 'Federal' label on the right side.



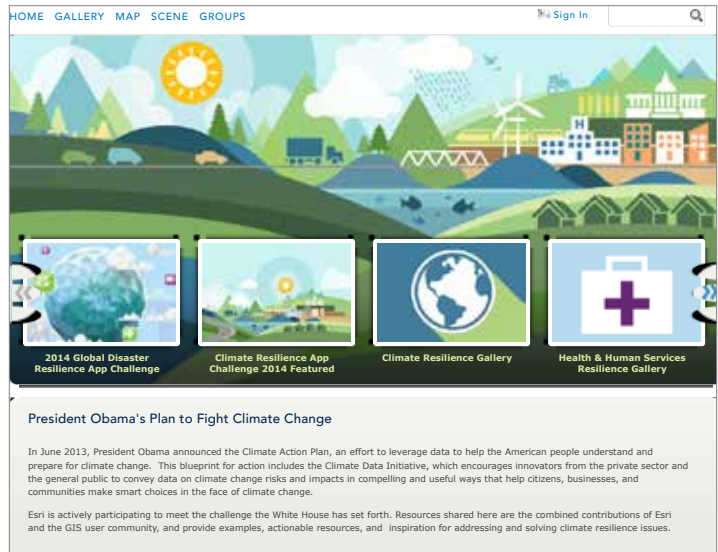
Collaborative Resource Portal

Esri's Collaborative Resource portal provides an online destination for the GIS community to discover, contribute, and share innovative resources that are critical to confronting the impacts of climate change. This website offers a starting point for data and ideas and will grow over time as more scientists, government organizations, and communities engage in the Climate Data Initiative. This site is built using Esri's ArcGIS Online technology.

In conjunction with the Partnerships for Resilience group, Esri will unlock authoritative data at the nexus of health and climate sciences. Esri will also publish a series of maps and apps in line with the Climate Data Initiative's more than 150 health-related open datasets. Communities around the world will be able to access this data via the Collaborative Resource portal and Data.gov. A sample of the data Esri and partners plan to share include the following:

- 15-minute interval rain levels
- Daily climate reports from 30 data sources
- Social vulnerability to environmental hazards
- Air quality impacts
- Water quality and supply
- Environmental impacts on health disparities

Visit the portal at
resilience.maps.arcgis.com



Resilient Communities Gateway

This web page connects all of Esri's resilient communities, resources, and activities in one accessible location. This information hub provides a network of resources and best practices for governments, professional trade associations, startups, developers, businesses, academia, and nongovernmental organizations (NGOs) to discover and use in their participation in the Climate Data Initiative.

Visit the gateway at
esri.com/resilientcommunities

The Esri Human Health and Climate Change App Challenge

Responding to President Obama's Climate Action Plan, Esri challenges the worldwide GIS community to build map and analytical tools that help communities visualize, understand, and reduce climate change health risks. The Esri Human Health and Climate Change App Challenge is open to everyone—developers, start-ups, governments, academics, and NGOs.

Participants are encouraged to create apps using Esri's ArcGIS platform that provide decision-making support for health professionals and empower the public to take action. Apps should help private and public organizations combine open data to gain new insights into the impacts of climate change on health. Esri will award prizes and share the winning apps on its Collaborative Resource portal. Judges will also select the best apps to be featured at the Esri Health and Human Services GIS Conference.

For more information,
visit esri.com/resilientcommunities.

App Challenge Key Dates

June 1, 2015 Competition opens

August 14, 2015 Competition closes at 5:00 PM (PDT)

September 1, 2015 Winners announced

September 14, 2015 Top app winners honored at conference

Prizes

Winners will receive the following:

First Place \$10,000 or software equivalent

Second Place \$5,000 or software equivalent

Third Place \$2,000 or software equivalent





Understanding our world.

Esri inspires and enables people to positively impact their future through a deeper, geographic understanding of the changing world around them.

Governments, industry leaders, academics, and nongovernmental organizations trust us to connect them with the analytic knowledge they need to make the critical decisions that shape the planet. For more than 40 years, Esri has cultivated collaborative relationships with partners who share our commitment to solving earth's most pressing challenges with geographic expertise and rational resolve. Today, we believe that geography is at the heart of a more resilient and sustainable future. Creating responsible products and solutions drives our passion for improving quality of life everywhere.



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