

FACT SHEET: The President’s Climate Data Initiative: Empowering America’s Communities to Prepare for the Effects of Climate Change

“Climate change is a fact. And when our children’s children look us in the eye and ask if we did all we could to leave them a safer, more stable world, with new sources of energy, I want us to be able to say yes, we did.”— President Barack Obama, State of the Union Address, January 28, 2014

Last June, President Obama launched a Climate Action Plan to cut carbon pollution, prepare communities for the impacts of climate change, and lead international efforts to address this global challenge. The plan recognizes that even as we act to curb the carbon pollution that is driving climate change, we must also prepare our citizens and communities for the climate impacts that are already underway across the country.

Delivering on a commitment in the President’s Climate Action Plan, the Obama Administration is today launching the Climate Data Initiative—a broad effort to leverage the Federal Government’s extensive, freely-available climate-relevant data resources to stimulate innovation and private-sector entrepreneurship in support of national climate-change preparedness.

President Obama is committed to ensuring that communities across America have access to the information and tools they need to protect themselves from harm today and potential damage in the future. This means connecting regional and city planners, resource managers, farmers, hospitals, and businesses with data-driven tools to help them better understand, manage, and prepare for the real-world impacts associated with climate change. Maps of future sea-level rise, for instance, can help builders decide where to break ground out of harm’s way, while other online tools can help water utility operators identify potential threats to the local water supply.

Insights gathered from data can help communities and businesses better understand and manage the risks associated with climate change. However, taking data about climate that is collected by satellites and scientific equipment and turning it into easy-to-use information and tools takes analysis, innovation, and cutting-edge technology expertise.

Through the Climate Data Initiative, the Obama Administration is today issuing a call to America’s top private-sector innovators to leverage open government data resources and other datasets to build tools that will make America’s communities more resilient to climate change and to forge cross-sector partnerships to make those tools as useful as possible. In response to this call to action, today’s launch includes a number of commitments by Federal agencies and private-sector partners:

Administration Commitments:

The Climate Data Initiative builds on two significant Administration commitments: (1) to strengthen America’s resilience to climate change, and (2) to make government-held data more accessible to the public, entrepreneurs, researchers, and others as fuel for innovation and economic growth. New steps by the Administration include:

- **Launch of climate.data.gov.** With leadership from the National Oceanic and Atmospheric Administration (NOAA) and National Aeronautics and Space Administration (NASA), the Administration is launching climate.data.gov—a new climate-focused section of Data.gov,

the Federal Government's open data platform, hosted by the General Services Administration, that will make Federal data about our climate more open, accessible, and useful to citizens, researchers, entrepreneurs, and innovators. Climate.data.gov will initially focus on coastal flooding and sea level rise in its beta phase, and already includes more than 100 curated, high-quality datasets, web services, and tools that can be leveraged by innovators to help communities prepare for the future. Over time, these data and resources will expand to provide information on other climate-relevant threats, such as to human health, energy infrastructure, and our food supply.

- **Launch of NASA and NOAA Innovation Challenge on Coastal Vulnerability and Preparedness.** Today, NOAA and NASA are launching an innovation challenge to encourage entrepreneurs, technologists, and developers to create and deploy data-driven visualizations and simulations that help people understand their exposure to coastal-inundation hazards and other vulnerabilities. This "[Coastal Flooding Challenge](#)" will culminate in a two-day event on April 12-13, 2014, as part of broader activities around the International Space Apps Challenge—a global mass collaboration inviting teams of problem-solvers to leverage publicly available data to design innovative solutions for global challenges.
- **Release of New Infrastructure and Geographic Map Data Relevant to Climate-Preparedness.** To help communities and citizens plan for the risks of coastal flooding and other climate-change-related impacts, the U.S. Geological Survey, U.S. Department of Homeland Security, U.S. Department of Defense, and National Geospatial-Intelligence Agency are [releasing today](#) a collection of datasets containing mapping information about hundreds of thousands of the Nation's infrastructure units and geographical features, including bridges, roads, railroad tunnels, canals, and river gauges. Providing wider access to these data to mission partners and the general public can advance preparedness for climate change impacts and other disasters. These data, which have been reviewed by DHS, DoD, USGS, and NGA and deemed non-sensitive, are being made available via user-friendly mapping services on Geoplatform.gov and [Climate.data.gov](#).
- **NOAA Request for Information on Increasing Access to Environmental Data:** To increase access to and use of its vast library of environmental data, NOAA has [issued](#) a [request for information](#) (RFI) seeking comment from industry, non-profits, research laboratories, universities, and private-sector partners to help make NOAA's vast data holdings available in a rapid, scalable manner to the public. Of the 20 terabytes of data NOAA gathers each day only a small percentage is easily accessible to the public. Through the RFI, American companies will be able to provide potential solutions for NOAA to turn this untapped information into usable products or services. Respondents have until March 24, 2014, to submit a written statement of interest, including a proposed way forward.
- **Support for Climate Data & Tools in the President's Budget.** Recognizing the critical importance of data and information to meet the challenge of climate change, the President's proposed FY15 Budget includes support for State, local, and tribal preparedness efforts, analysis of vulnerabilities of critical infrastructure, and development and dissemination of better information and planning tools, including the Climate Resilience Toolkit and Climate Data Initiative. The Budget also includes a new \$1 billion Climate Resilience Fund, within a fully paid for \$56 billion Opportunity, Growth, and Security Initiative, that expands on

existing climate-change preparedness programs to ensure we are doing everything we can to support the safety and security of our communities and resources. The Fund will help us better understand and prepare for climate change by investing in research and unlocking data and information, including new sea-level rise analyses.

- **Expanding Stakeholder Outreach & Engagement.** The White House, NASA, NOAA, and other Federal agencies will convene innovators, community leaders, scientists, communicators, and citizens to identify needs for data and data-driven tools, spur innovative collaborations and partnerships, and get feedback on how to best make data, information tools, and other resources on climate change available and useful to people, businesses, and communities. This process began today with two collaborative stakeholder workshops during which climate and technology experts will brainstorm innovative new climate resilience tools and ways to provide increased data-access to wide audiences. These workshops will precede the public launch.

Private Sector Commitments

- **Esri: Providing Communities with Map-Based Planning Tools and Collaboration Platforms.** Esri is unveiling a new two-part initiative to help communities more effectively build climate-resilience. First, Esri will develop and publish a series of free and open "maps and apps" developed in partnership with 12 cities that help address the most urgent climate-relevant needs shared among thousands of users of Esri's ArcGIS platform—such as preparing for droughts, heat waves, or flooding. Second, Esri is announcing today a climate-focused [geo-collaboration portal](#)—an online destination to discover, contribute, and share resources critical to confronting the impacts of climate change. Additionally, Esri recently announced, during one of the largest gatherings of GIS developers and in response to the President's call to action, a [Climate Resilience App Challenge](#) to inspire more than 2,500 developers to focus their creative attention on creating mapping and analytical tools that help communities see, understand, and prepare for climate risks. Prizes will be awarded and the resulting apps will be openly shared in July.
- **Intel Corporation: Fostering Regional Partnerships and Hosting Hackathons to Boost the Development of Climate Resilience Tools.** Intel Corporation, as part of its Code for Good program, is announcing its sponsorship of three regional partnerships including "hackathon" events focused on climate resilience in the Chesapeake Bay, New Orleans, and San Jose. In each location, Intel will join with local partners to convene teams of engineering and computer science students, and other interested local citizens, and challenge them to develop new software applications and tools to make good use of available data sets related to climate -change resilience. Each hackathon will have a focus area tailored to priorities of its host community, with an emphasis on driving a sense of local ownership of the tools that emerge from the event. These tools will be broadly communicated and made available for use in other localities.
- **Google: Providing Vast Cloud Computing Resources to Spur Creation of High-Resolution Drought and Flood Mapping, Apps, and Tools for Climate Risk Resilience** Google is [today announcing](#) it will donate significant cloud computing and storage resources to support the creation of global, high-resolution maps, tools, and data products that will be made freely available to the public to help manage the risks of extreme heat, drought, sea-

level rise and flooding. Google is committing to provide one petabyte (1,000 terabytes) of cloud storage to house satellite observations, digital elevation data, and climate and weather model datasets drawn from government open data and contributed by scientists as well as 50 million hours of high performance cloud computing on the Google Earth Engine geospatial analysis platform. To leverage these resources, Google is announcing today new partnerships with the Desert Research Institute, the University of Idaho, and the University of Nebraska to (1) provide drought mapping and monitoring for the entire continental United States in near real-time and (2) model water consumption from vegetation across the entire planet. To better manage climate-related flooding, Google is also challenging the innovation community to leverage these vast cloud computing resources by collaborating in the development of an open and freely available global terrain model at unprecedented resolution - one petabyte of storage could support better than 1 meter resolution which will help the public and planners worldwide better anticipate and map the risks of coastal floods and other disasters. Google is also committing to support analysis and visualization of these scientific data to make information about impacts such as sea-level rise, storm surges, extreme heat, and drought easily accessible to the public.

- **CartoDB: Announcing New Grants Program to Support Creation of Data-Driven Tools.** CartoDB will launch a grants program to support foundations and nonprofits in creating data-driven tools or efforts with respect to helping communities, companies, or citizens with resilience and preparedness for climate change impacts such as flooding, drought, and heat waves. The company [will solicit grant applications](#) and offer between \$50 and \$3500 for successful applications to be used on CartoDB infrastructure to help make climate resilience apps or projects possible. The money is to be spent in a year, but funded projects are free to reapply in the future.
- **Climate Central: Releasing New Web Tools to Assess Local-Scale Sea Level Rise.** Climate Central will release a free web tool providing local projections, maps, and assessments of exposure to sea level rise and coastal flooding tabulated for every coastal zip code, municipality, county, and state in the U.S., along with planning, legislative and other geographic districts. Exposure assessments will cover more than 100 demographic, economic, infrastructure and environmental variables using data drawn mainly from federal sources, including NOAA, USGS, FEMA, DOT, DOE, DOI, EPA, FCC and the Census. Climate Central has already developed its [Surging Seas Risk Finder](#) tool for Florida, New Jersey, and New York, which is geared toward city, state, and Federal planners, and commits to completing the balance of coastal states this year. Climate Central will conduct at least 100 more informational webinars and briefings with officials, planners and other stakeholders across the country in 2014.
- **Microsoft Research: Providing Climate Scientists with New Tools and Computing Resources.** Microsoft Research is announcing [a new program](#) to provide climate change scientists and decision-makers free access to cloud computing resources to conduct research and analysis of climate data. Microsoft Research will grant 12 months of free cloud computing resources to 40 awardees selected from project proposals submitted by June 15, 2014. Each award provides up to 180,000 hours of free cloud computing time and 20 Terabytes of cloud storage. Microsoft is also announcing a new, free climate data resource, Adaptable FetchClimate, for retrieving past and present observations and for future climate-prediction information. FetchClimate will continue to be available as a free intelligent

environmental information-retrieval service and will now be adaptable as a cloud-based system that can be re-implemented and adapted to the specific needs of new projects.

- **Circle of Blue and Qlik: Developing New Tools and Visualizations to Better Understand Climate Impacts.** Circle of Blue, a nonprofit news and science organization, has partnered with Qlik, a data-analytics company, to develop a series of tools to improve understanding of water, food, and energy in a changing climate. Today the two organizations will launch [an interactive visual dashboard](#) that analyzes and integrates data into displays of current and past levels of water reservoirs in California, and which can be scaled to compare hyper-local data and research with national and global trends. Current data, particularly water-related, is often compartmentalized and not available in comparative, visual formats. This new interactive display application, will help the public, water managers, and researchers, and others to build more resilient communities and ecosystems by helping the nation better understand, monitor, compare and manage its water supplies in this era of climate change.
- **100 Resilient Cities, an effort Launched by the Rockefeller Foundation: Supplying Data on Local Demand and Market Opportunities for Resilience Tools.** 100 Resilient Cities (100RC) is working to build urban resilience in 100 member cities around the world and develop the practice of resilience. As cities work to build resilience, they will demand new resilience-building tools from the marketplace. 100RC will provide to the Climate Data Initiative's stakeholder engagement community with information from their 100 member cities on which types of resilience tools are most needed and could be most useful to inform efforts and direct investment in areas of greatest need, and pool demand for these tools as a signal to innovators of the market opportunity.
- **Code for Philly: Using City Buses to Help Monitor Local Climate Change-Related Pollution.** Code for Philly, Code for America's Philadelphia Brigade, is announcing the development of a new mobile sensor network they aim to run on city buses to gather temperature and pollution data across the city, allowing researchers to track the effects of climate change on and its pollutants in areas across an entire city. This data will be combined with [OpenTreeMaps](#), a platform for crowdsourced tree inventory and urban forestry analysis, to determine the value of trees in combating climate change. The data will also be openly available so developers can incorporate and convey information on local pollution and heat levels in real time to citizens.
- **The World Bank: Launching New Initiative for Global Use of Open Data for Climate and Disaster Resilience.** The World Bank is launching today a new Field Guide that serves as a model for how communities around the globe can best leverage open data for resilience to disasters and climate change impacts. As part of the World Bank's Open Data for Resilience Initiative (OpenDRI), the Field Guide builds on work active across more than 20 countries to map millions of buildings and urban infrastructure; open more than 1,000 geospatial datasets to the public; and spur the development of innovative applications based on those data. The OpenDRI Field Guide will be presented at stakeholder workshops and events across the globe. Additionally, to establish a versatile framework for free access to risk data, the World Bank will share the Field Guide and other resources with at least 24 partner countries by 2016.

- Antioch University New England: Creating New Academic Center for Climate Preparedness and Resilience.** Antioch University New England (AUNE) is announcing the creation of a new Center for Climate Preparedness and Community Resilience, to be launched later this year. The Center will expand on a decade of AUNE's [climate adaptation research and modeling efforts](#), [community engagement/technical assistance](#), and [professional science sustainable development and climate change education](#). The launch of the new Center will include [a convening](#) in May, 2014, in partnership with the **U.S. Environmental Protection Agency**, of municipal, county and regional leaders on the frontlines of climate change adaptation, from the upper Chesapeake Bay watershed to Maine, to leverage the data-driven expertise of a wide range of organizations and individuals.
- MIT Climate CoLab: Crowdsourcing Solutions to Global Climate Change Preparedness.** The Massachusetts Institute for Technology (MIT) Center for Collective Intelligence runs the [Climate CoLab](#), an online platform to crowdsource solutions for what to do about global climate change. Over 10,000 people from around the world have registered as members and have submitted more than 400 proposals in contests ranging from how to generate electricity with fewer harmful emissions, to how to increase public understanding about climate change. The MIT Climate CoLab recently launched two global crowdsourcing contests, in line with the White House Climate Data Initiative, to generate solutions to climate change preparedness and resilience: (1) What can be done to adapt to the impacts of climate change? and (2) How can crowdsourcing provide more efficient disaster risk management? To help the public understand the potential impacts of climate change, MIT Climate CoLab's platform also includes computer simulation models to predict phenomena such as temperature change and sea level rise.
- EcoHack: Launching New Hackathon Climate Data Track.** EcoHack, an annual hackathon focused on tackling real scientific and environmental challenges through code, visualization, and hardware hacking, will launch and promote a new dedicated track to support climate data and application hacks. [The event](#) will take place this year on May 9 – 10th in New York City, San Francisco, and São Paulo, Brazil. At each of the three locations, organizers will work to identify one or more high-impact climate-relevant products or outcomes resulting from the hackathons—with the goal of creating a finished visualization, app, or website to help expand the reach and impact of these tools.
- Alliance for Water Efficiency:** Over the next three years, [Alliance for Water Efficiency](#) will provide assistance to communities across the country to help them achieve water use reductions or expand water conservation programs, through webinars, workshops, and new tools. This includes AWE's [Water Conservation Tracking Tool](#), which enables utilities to evaluate the water savings, costs, and benefits of a variety of conservation programs, and track savings over time. AWE is also announcing it will build over the next three years an Outdoor Water Savings Research Program to produce actionable data on the potential and actual water savings from outdoor conservation measures. AWE will work with at least ten communities to customize and distribute its online [Household Water Calculator](#), which empowers citizens to make better decisions about their water use through data, allowing consumers to calculate their own water use and compare it to a neighboring and water-efficient home, and then receive a personalized efficiency plan to help them use water more wisely.

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