

## BEST PRACTICE – CLIMATE CHANGE RELATED OPEN DATA

### BIG DATA CLIMATE CHALLENGE 2014

<http://www.unglobalpulse.org/big-data-climate-challenge-2014>

UN Global Pulse and the Secretary General's Climate Change Support Team hosted the Big Data Climate Challenge to bring forward data-driven evidence of the economic dimensions of climate change. The Big Data Climate Challenge is an initiative of the Secretary-General's 2014 Climate Summit at UN Headquarters in New York.



The Big Data Climate Challenge sourced projects from around the world that use Big Data and analytics to address real world impacts of climate change. The aim of this initiative is help build public understanding of how Big Data can reveal critical insights for strengthening resilience and mitigating emissions. Multidisciplinary initiatives from all relevant fields were invited apply to the Big Data Climate Challenge in 2014. This includes but is not limited to: energy, smart cities, transportation, natural resource management, agriculture and food systems, ecology, complex systems, green data centers, recycling, material sciences, climate risk management, disaster risk reduction and resilience, architecture and design, behavioral science, climate finance, and economic drivers such as carbon markets and subsidies. We welcome any climate-related project.

There were submissions from over 40 countries, and 20 topic areas. The winners of the Big Data Climate Challenge were announced in September 2014:

Big Data Climate Challenge Winners:

- [Global Forest Watch](#) (GFW) is a dynamic forest monitoring system from the [World Resources Institute](#) and partners: GFW empowers people to manage forests by combining satellite imaging, open data and crowdsourcing for open access to timely information about forests by governments, companies, NGOs and the public.

- [Climate-smart, site-specific agriculture decision-making tool](#) for Colombian rice farmers by the Site-Specific Agriculture Big Data Team at the [International Center for Tropical Agriculture \(CIAT\)](#): Using harvest monitoring data with climate data and seasonal forecasts, farming recommendations for rice growers are generated as a first step toward a system to support decision-making for farmers.

### SKOPJE GREEN ROUTS

[http://www.mk.undp.org/content/the\\_former\\_yugoslav\\_republic\\_of\\_macedonia/en/home/presscenter/articles/2014/09/19/new-app-guides-skopje-commuters-to-greener-travel-routes-.html](http://www.mk.undp.org/content/the_former_yugoslav_republic_of_macedonia/en/home/presscenter/articles/2014/09/19/new-app-guides-skopje-commuters-to-greener-travel-routes-.html)

Using “big data” for climate action Close cooperation between the United Nations Development Programme (UNDP), the Ministry of Environment and Physical Planning, the City of Skopje and the Faculty of Information and Computer Technology (FINKI) has resulted in the launch of an innovative new app—the Skopje Green Routes planner. The app provides travelers in Skopje with all the information they need to plan the quickest, cheapest and most environment-friendly routes to destinations in the capital. Carbon emissions data help commuters to make the “greenest” choice.



The app makes use of Google Transit, a feature of Google Maps that helps users plan their trips on public transport by calculating routes and transit times, and by providing directions to the nearest bus-stops. The Skopje Green Routes planner not only provides users with information about bus routes and timetables, bicycle rental-points and parking places; it also gives real-time information on traffic congestion and air pollution. The data on traffic flows, congestion and air pollution (CO<sub>2</sub> emissions) is taken from sensors installed by the city’s local authorities at the main road junctions and the most congested traffic routes in the city.

The Skopje Green Routes project was honored as one of the top seven “projects to watch” in a global contest organized by the UN Global Pulse to harness big data to fight climate change. The new app

was presented to representatives from governments and the public and private sectors at the UN Climate Summit hosted by Secretary-General Ban Ki-moon in New York on September 23, 2014.

### USDA APPS FOR AGRICULTURE

<https://usdaapps.devpost.com/>

USDA - U.S. Department of Agriculture was the beneficiary of this challenge, and Microsoft was the challenge sponsor.

Main aim of the challenge was **helping food producers to be more efficient and better by using data available at USDA with an app.**

Applicants had to create a working, interactive software application that that integrates one or more of the required USDA datasets. The Application had to include interactive functionality for the end user to access and/or analyse the USDA data.

#### CHALLENGE OUTCOMES

The challenge was to utilise a vast amount of agricultural data collected by the USDA and aggregate it through the use of technology to address certain issues or provide useful information for everyone related to the agricultural business, from planning to production and trade.

A list of winning solutions can be found on the following [link](#).

## ESRI Climate Resilience App Challenge 2014

[http://www.esri.com/software/landing\\_pages/climate-app](http://www.esri.com/software/landing_pages/climate-app)

Challenge beneficiary is Environmental Systems Research Institute, Inc. (Esri), a private mapping technology firm from USA, well connected to the public sector.

Esri Inc. as a Mapping technology firm launched in 2014 The Climate Resilience App Challenge, calling all developers to create an app by using its ArcGIS Platform, to help communities understand and prepare for climate risks. Apps may help communities prepare for, react to, and recover from severe events caused by climate, or enable everyday changes to reduce our carbon footprint. They could address challenges in public safety, transportation, economic development, healthcare, and more. The submission should provide a link to a working desktop, mobile, or web app that uses the ArcGIS Platform.

Challenge outcome was promotion of ESRI apps and services, positioning them as an industry leader and applying their technology to solve real world problems. The challenge aggregated various applications that can help in reaching SDGs and natural catastrophe management and all winning solutions needed to be already feasible and scalable. Except for the financial gain, the winners have gained exposure to their work and ideas.

### CHALLENGE WINNERS

#### [Minnesota Solar Suitability Analysis](#)

The Minnesota Solar Suitability Analysis app allows users to identify the optimal location for Solar Panel installations.

#### [FloodForecast](#)

FloodForecast allows send push alerts (SMS messaging) to users when their registered address is in eminent danger of flooding.

#### [Save the Rain](#)

The Save the Rain app helps to raise rainwater savings awareness by combining easy to use mapping tools with the latest climate data.