

## DATA & APPLICATIONS ONLINE

### Hazards

#### Overview

The NASA Socioeconomic Data and Applications Center (SEDAC) offers a variety of data sets on hazards and disaster risk. Data and maps are available for download at [sedac.ciesin.columbia.edu/theme/hazards](https://sedac.ciesin.columbia.edu/theme/hazards).

#### Select Data

**Annual PM2.5 Concentrations for Countries and Urban Areas** uses MODIS, MISR and SeaWiFS AOD data w/GWR and urban extents from Global Rural-Urban Mapping Project (GRUMP), 1998–2016. Population-weighted country averages are for 2008–2015.

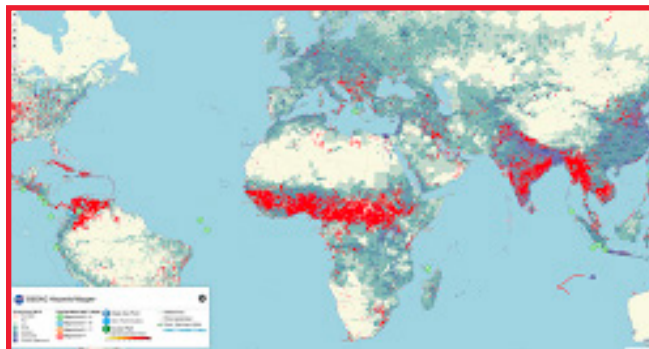
**Geocoded Disasters** encompasses 39,953 locations for 9,924 disasters worldwide 1960–2018, including all EM-DAT-recorded floods, storms, earthquakes, landslides, droughts, volcanic activity and extreme temperatures; some are at administrative level 3.

**Food Insecurity Hotspots** consists of gridded data identifying the level of intensity and frequency of food insecurity over ten years (2009–2019), and hotspots of consecutive food insecurity events, for five regions: Central America and the Caribbean, Central Asia, East Africa, Southern Africa, and West Africa.

**Global Fire Emissions Indicators** is comprised of a time-series of raster data for total area burned and total carbon content for 1997–2015, in gridded and tabular versions.

**Global Summer Land Surface Temperature Grids (LSTs)** and **Global Urban Heat Island (UHI)** gridded data products represent global summer day-time maximum/nighttime minimum surface temperatures in urban areas. Urban extents are from the Global Rural-Urban Mapping Project (GRUMP) collection; LSTs are from 2013 MODIS composite data.

**Population Exposure Estimates in Proximity to Nuclear Power Plants, Locations** combines a global data set of plant locations with PRIS, a database of nuclear reactors maintained by the International Atomic Energy Agency, for reactor specification and performance history attributes as of March 2012.



**Natural Disaster Hotspots Collection** estimates risk of earthquake, volcano, landslide, flood, drought, and cyclone at sub-national scales for over 29 thematic data sets, to inform disaster prevention and preparedness measures.

**Agency for Toxic Substances and Disease Registry (ATSDR) Hazardous Waste Site Polygon Data** consists of 2,080 polygons for selected hazardous waste sites considered or in consideration for cleanup on the EPA National Priorities List, compiled 2010.

#### Mapping Resources

Use the **Hazards Mapper** to visualize socioeconomic, infrastructure, natural disaster, and environment data and map layers, to analyze potential impacts and exposure. Access the **Hazards and Population Mapper (HazPop)**, a free IOS/Android mobile application that can quickly assess diverse disasters and air pollution status in relation to other data, and provide estimates of the total population in proximity to a recent hazard event or other locations. Use the **SEDAC Map Viewer** to visualize all SEDAC data set map layers, organized by approximately 15 interdisciplinary topics, with an innovative four-window map view option; and perform simple to advanced visualizations and analysis via **SEDAC Map Services**. Explore the **Global COVID-19 Viewer** to visualize spatially-explicit trends in COVID-19 infection and mortality rates, alongside population-related and location-specific risk factors.



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**EOSDIS DAACs**  
SEDAC is one of twelve NASA Earth Observing System Data and Information System (EOSDIS) Distributed Active Archive Centers (DAACs)