



## DATA & APPLICATIONS ONLINE

### Climate

#### Overview

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

#### Selected Data

**Global Summer Land Surface Temperature Grids (LSTs) and Global Urban Heat Island (UHI)** gridded data products represent global summer daytime maximum and nighttime minimum surface temperatures in urban areas. Urban extents are from GRUMP; LSTs are from 2013 MODIS composite data.

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

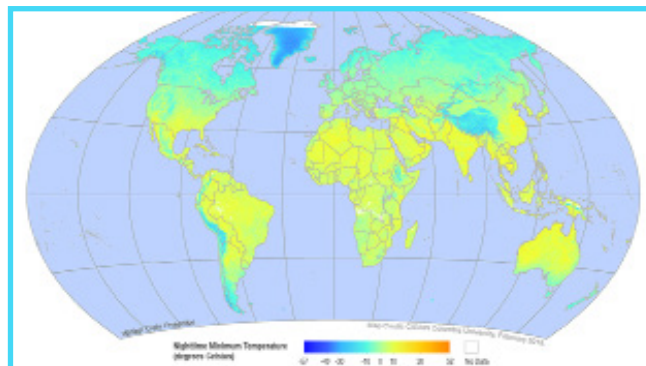
**Low Elevation Coastal Zone (LECZ) Population Estimates** provides country-level estimates of the world's urban and rural populations located in the LECZ—all areas below 10 m elevation—for 1990, 2000, 2010, and 2100.

**Population, Landscape, and Climate Estimates** is a tabular data set with easy-to-use national-level estimates of population and land area in relation to environmental characteristics.

**Global Population Projection Grids Based on Shared Socioeconomic Pathways** are companion data sets of future scenarios of population growth, projecting GPW population grids to 2100, at 1/8 degree and 1km spatial resolution.

**Global Urban Land Extent Projection and Base Year Grids by SSP Scenarios** are a set of global, spatially explicit urban land scenarios consistent with the Shared Socioeconomic Pathways 2000–2100, at 1/8 degree and 1km spatial resolution.

**Shared Socioeconomic Pathways (SSPs) Literature Database** encompasses ~1400 papers 2014–2019 that track the use of the scenario framework developed by the climate change community.



**Synthetic Assessment of the Global Distribution of Vulnerability to Climate Change** data set consists of maps and index measuring vulnerability to climate change of 100 countries based on the Vulnerability-Resilience Indicator Model; for 2005, 2050, and 2100.

**Effects of Climate Change on Global Food Production** investigates the spatial implications of climate change on world crop production, 1970–2080; it is an update to a crop modeling study by the NASA GISS. SEDAC produced the extensive map gallery.

#### Mapping Resources

The **Population Estimation Service**, **SEDAC Map Viewer**, **SEDAC Map Services**, and the **Hazards Mapper** and **HazPop** tools let users integrate and understand climate-related data in new ways.



**Socioeconomic Data and Applications Center (SEDAC)**

CIESIN-The Earth Institute at Columbia University  
Palisades, New York  
[sedac.ciesin.columbia.edu](https://sedac.ciesin.columbia.edu)



**EODIS DAACs**

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