

Expand your geospatial analysis capability with CIESIN.

Bring diverse spatial data into clear, usable analysis.

The GIS Service Center at the Center for Integrated Earth System Information (CIESIN) at Columbia Climate School helps organizations collect, integrate, visualize, and analyze geospatial data to deliver powerful insights tailored to project needs.

How CIESIN can support your GIS program:

Acquire & process

Collect, process, transform and integrate data from satellite imagery, LiDAR, drones, field surveys, and other sources across vector and raster formats.

Visualize & communicate

Large-scale data visualization via interactive map viewers, open APIs, and interactive dashboards that render quickly at any scale

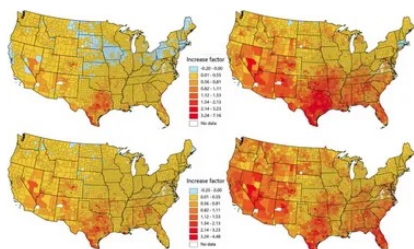
Analyze & model

Apply computational modeling and AI/machine learning, including model development validation

Publish & deliver

Digital and print cartographic design, web-based maps enabling user-friendly online analysis

Geospatial analysis in practice:



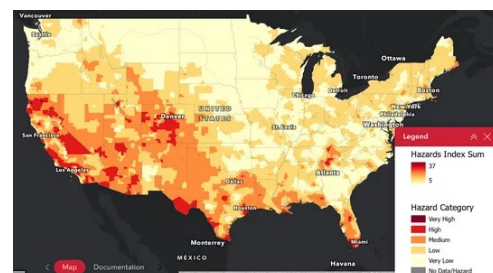
U.S. Solar-Powered Desalination Potential

Simulated desalination operations in different regions of the U.S. to estimate water production against modeled national water demand



Population Exposure to Tick-borne Diseases

Designed spatially representative household survey for Columbia's Eco-Epidemiology Lab to gauge human exposure to ticks and augment sampling data



U.S. Natural Hazards Index

Identified hazard index risks for 14 hazard types at the census tract level, aggregated "big data" layers (e.g., 40 yrs of hourly climate data at 1km resolution, NOAA Sea Level Rise data)