

DATA & APPLICATIONS ONLINE

Water

Overview

The NASA Socioeconomic Data and Applications Center (SEDAC) offers a variety of data sets on water resources and consumption. Data and maps are available for download at sedac.ciesin.columbia.edu/theme/water.

Selected Data

Trends in Global Freshwater Availability measures changes in the terrestrial water cycle by assessing small changes in Earth's gravity field. Based on NASA GRACE satellite data 2002–2016, it can help evaluate emerging threats to water and food security.

Global Reservoir and Dam collection contains 6,862 spatially-explicit records of reservoirs delineated from high resolution satellite images, representing area only; associated dams include multiple attributes.

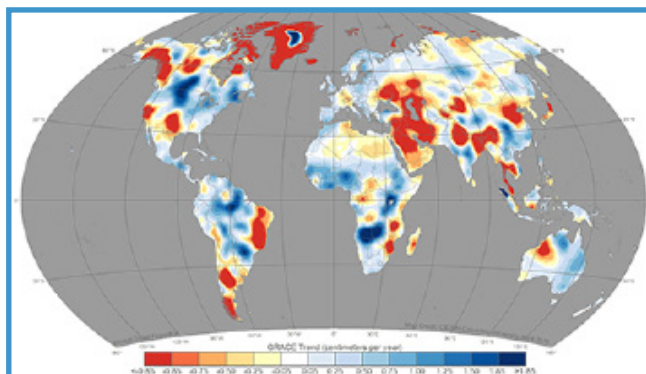
Indicators of Coastal Water Quality collection consists of a gridded data set of chlorophyll-a concentrations derived from NASA SeaWiFS satellite measurements, to identify trends 1998–2007; a tabular time series; and ancillary data.

Gridded Population of the World (GPW) Land and Water Area consists of two rasters measuring surface areas of land and water in square km per pixel, aggregated for faster global processing.

Global Agricultural Lands collection combines MODIS and SPOT Image Vegetation Sensor data with agricultural inventory data to show the proportion of land area used as cropland and pasture in 2000.

Sea Level Rise Impacts on Ramsar Wetlands of International Importance assesses the area and percent area likely to be inundated under 1 m and 2 m sea level rise scenarios, for 613 sites.

Global Drought Hazard Frequency and Distribution is a 2.5-minute grid based upon the Weighted Anomaly of Standardized Precipitation, using average monthly precipitation data 1980–2000, to assess global drought hazard; **Global Flood Hazard Frequency and Distribution** is a 2.5-minute grid derived from a global listing of extreme flood events 1985–2003.



Natural Disaster Hotspots Collection flood and drought data sets are among more than 29 thematic data sets in this collection, to inform disaster prevention and preparedness measures.

The Environmental Performance Index (EPI) biennially assesses country performance of environmental goals. The 2020 EPI uses 32 performance indicators across 11 issue categories, including sanitation and drinking water, water resources, and ecosystem services, to compare 180 countries.

Fifth Assessment Report (AR5) Observed Climate Change Impacts is the latest of seven iterative data sets (including IPCC Emissions Scenarios) with observed responses to climate change across a wide range of systems and regions.

Mapping Resources

The **SEDAC Map Viewer** enables visualization of all SEDAC data set map layers, organized by approximately 15 interdisciplinary topics, with an innovative four-window map view option. Also, perform simple to advanced visualizations and analysis via **SEDAC Map Services**.

The **Hazards Mapper** can visualize socioeconomic, infrastructure, natural disaster, and environment data and map layers, for analysis of potential impacts and exposure.



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