

Open Data Resources and Strategies - Efficient Discovery and Use of Global to Local Open Data

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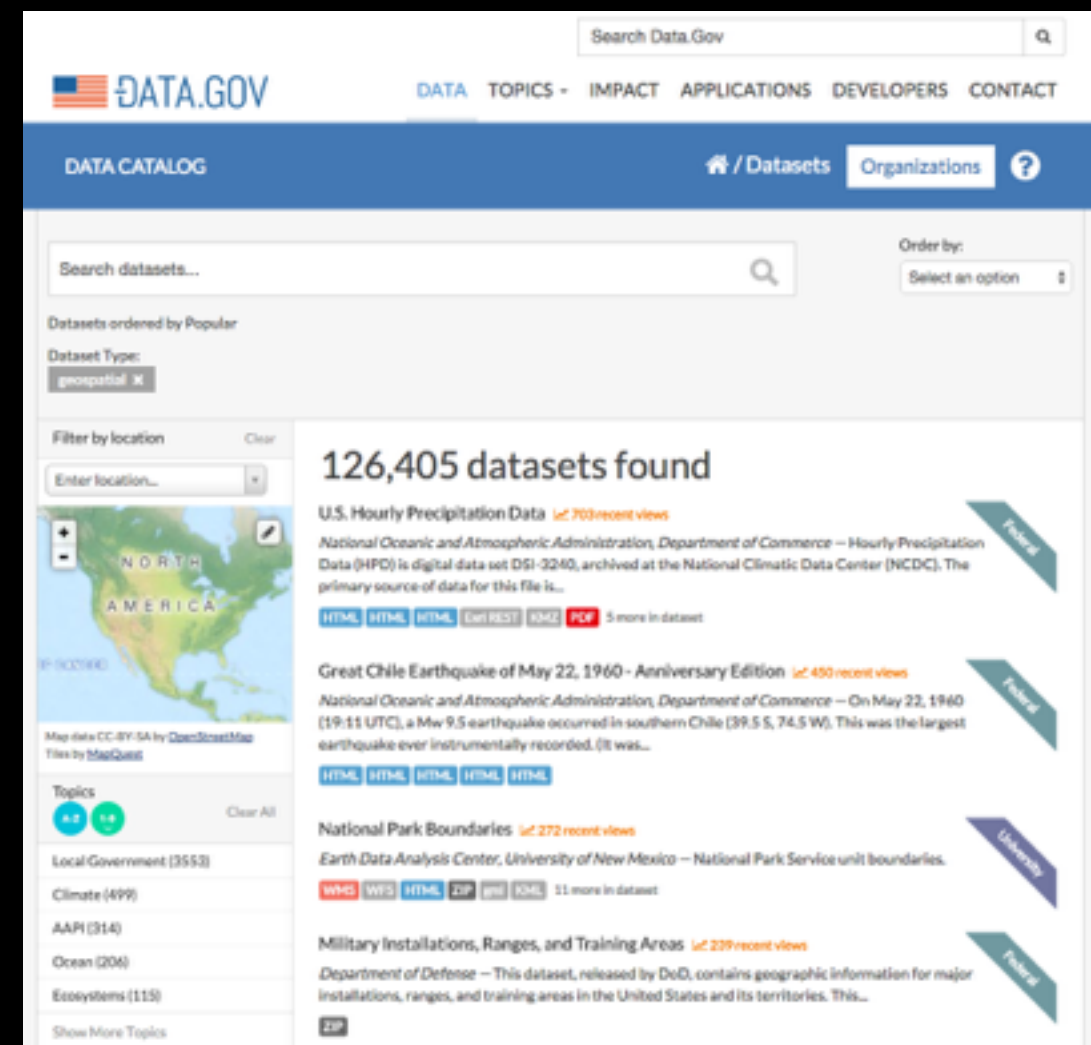
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Presentation Outline

- Introduction
- Current Context
- Where & How You Can Get Stuff
- Interlude - Where Your Stuff Can Go
- Demonstrations of Search Interfaces and Automated Interactions via Web Services



The geospatial data community has a long tradition of Open Data and Data Sharing



... and Open
Standards to support
data discovery,
visualization and
access



FGDC - *Content
Standard for Digital
Geospatial Metadata*

ISO - 19115,
19115-2, 19115-1
and related standards



- Open Geospatial Consortium
- Web Map Services (visualization)
 - Web Feature Services (WFS - data access, vector)
 - Web Coverage Services (WCS - data access, raster)
- ... and many others

The rest of the Open Data community is

OMB Memorandum M-13-13 (pg. 1-2)

*Specifically, this Memorandum requires agencies to collect or create information in a way that supports **downstream information processing and dissemination activities**. This includes using **machine readable and open formats, data standards, and common core and extensible metadata** for all new information creation and collection efforts. It also includes agencies ensuring **information stewardship** through the use of **open licenses** and **review of information for privacy, confidentiality, security, or other restrictions** to release. Additionally, it involves agencies building or modernizing information systems in a way that maximizes interoperability and information accessibility, maintains internal and external data asset inventories, enhances information safeguards, and clarifies information management responsibilities.*

23, 2012) ⇨

- Executive Order 13642 - *Making Open and Machine Readable the New Default for Government Information* (May 9, 2013) ⇨
- OMB Memorandum M-13-13 - *Open Data Policy - Managing Information as an Asset* (May 9, 2015) ⇨

statements - examples

- Nature ⇨
- PLOS | ONE ⇨
- General increased recognition of value and benefits of adopting Open Data Principles

Where and How You
Can Get Stuff

Full-service Geospatial Data Repositories (examples)

- New Mexico Resource Geographic Information System ⇨
- Texas Natural Resources Information System ⇨
- The National Map Small Scale Data Collection ⇨ (web services ⇨)
- Global Land Cover Facility ⇨



General and Domain-Specific Data Repositories (examples)

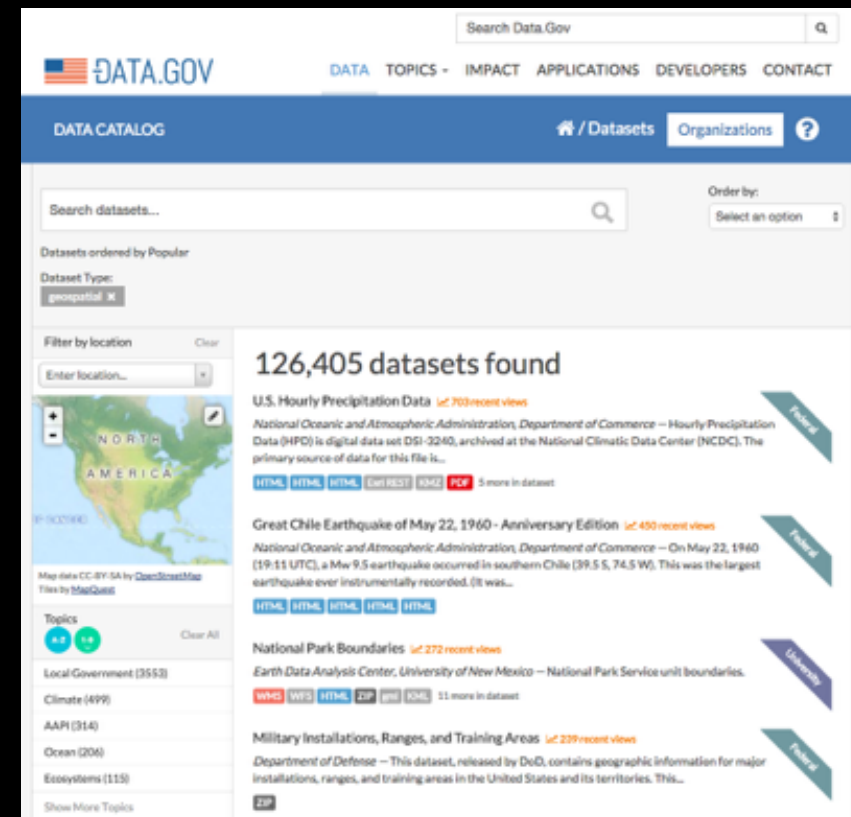


- Find one for yourself: re3data.org ⇔
- Figshare ⇔
- Dryad ⇔
- Zenodo ⇔
- American FactFinder ⇔, FTP server ⇔, CSV Files ⇔
- DataZoa (commercial) ⇔

dataZoaTM

Metadata Focused Data Discovery/Access

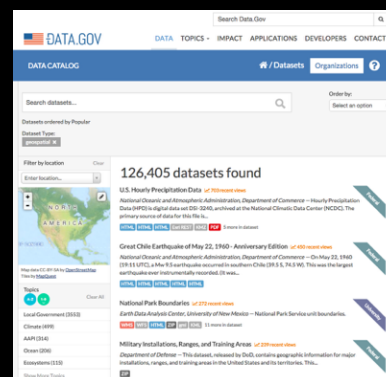
- data.gov ⇔ (data catalog ⇔)
- [GEOPLATFORM.gov](https://geoplatform.gov) ⇔
- DataONE ⇔
- Global Earth Observation
System of Systems (GEOSS)
⇔



(interlude)
Where Your Stuff
Can Go

Many of the Same Players

- NM RGIS
- A wide variety of the increasingly popular data sharing platforms
- Metadata publication/registration through data.gov or GEOSS



Interacting with Remote Data Sources

Some Concepts

- Open Standards
- Web Services
- Application Programming Interface (API)

Searching and Using data.gov

Open Geospatial Consortium Web Services

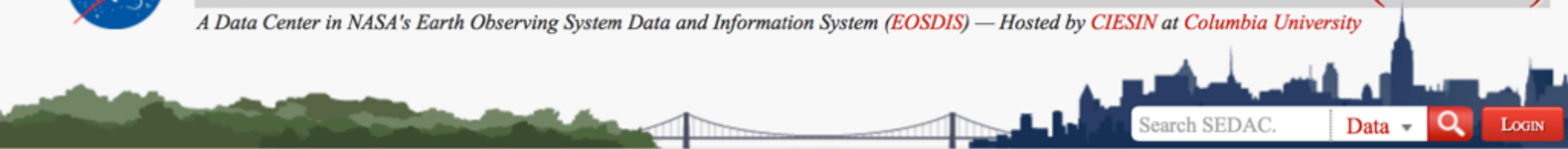
<http://sedac.ciesin.columbia.edu/maps/services#U.S.%20Census%20Grids>

in Quantum GIS



SOCIOECONOMIC DATA AND APPLICATIONS CENTER (SEDAC)

A Data Center in NASA's Earth Observing System Data and Information System (EOSDIS) — Hosted by CIESIN at Columbia University



Search SEDAC.

Data ▼



LOGIN

US Census API

<http://www.census.gov/developers/>

in iPython Notebook



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