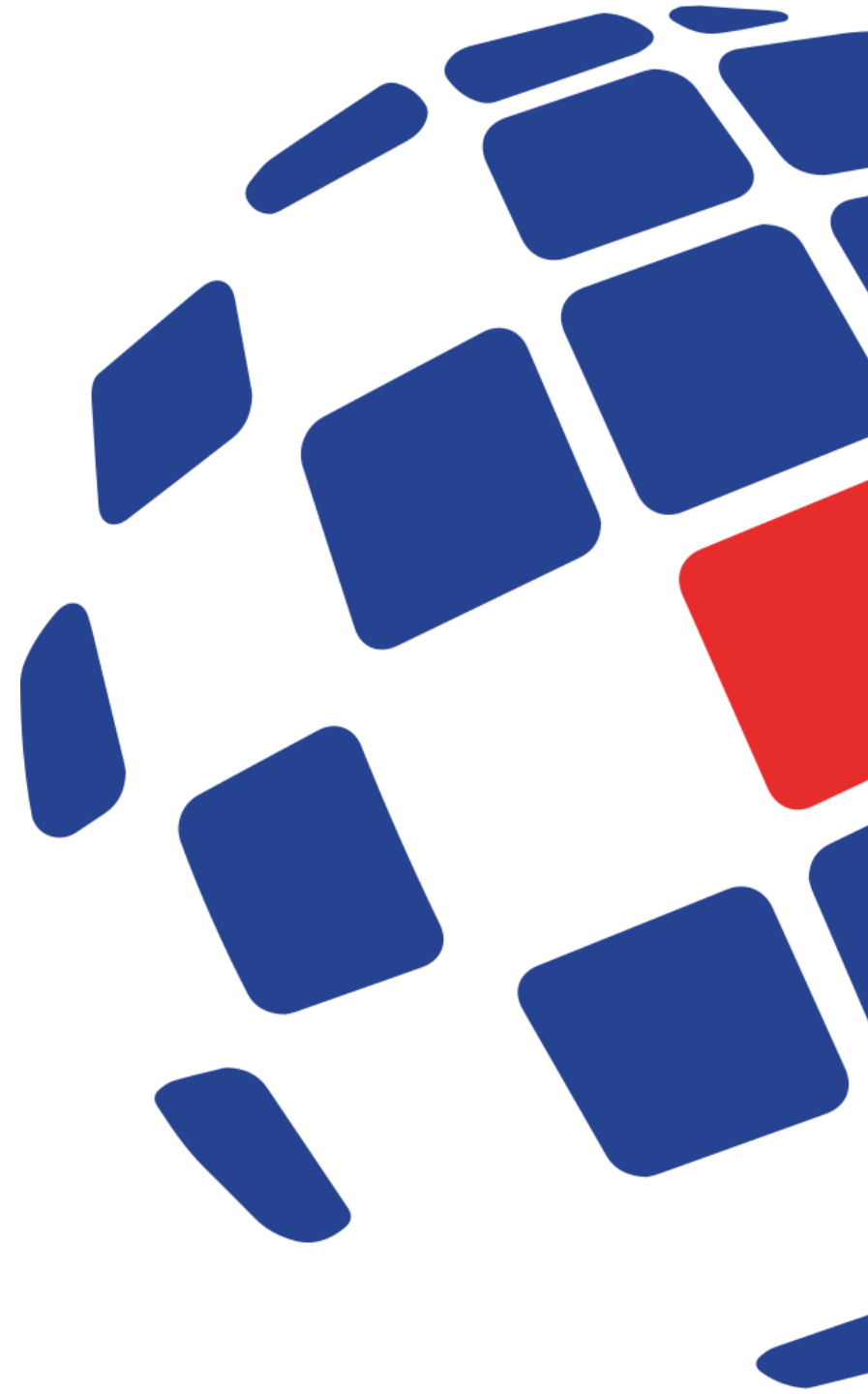




October 2023 - Barbados

Where does data come from?



Introduction



- GIS data can be expensive
- Increasingly free and open source data available
- Some sources might be closer than you think
- Some source are included just for your future reference
- What data can you use at work?
- We will look at example of both Vector and Raster data

Data

Primary Data

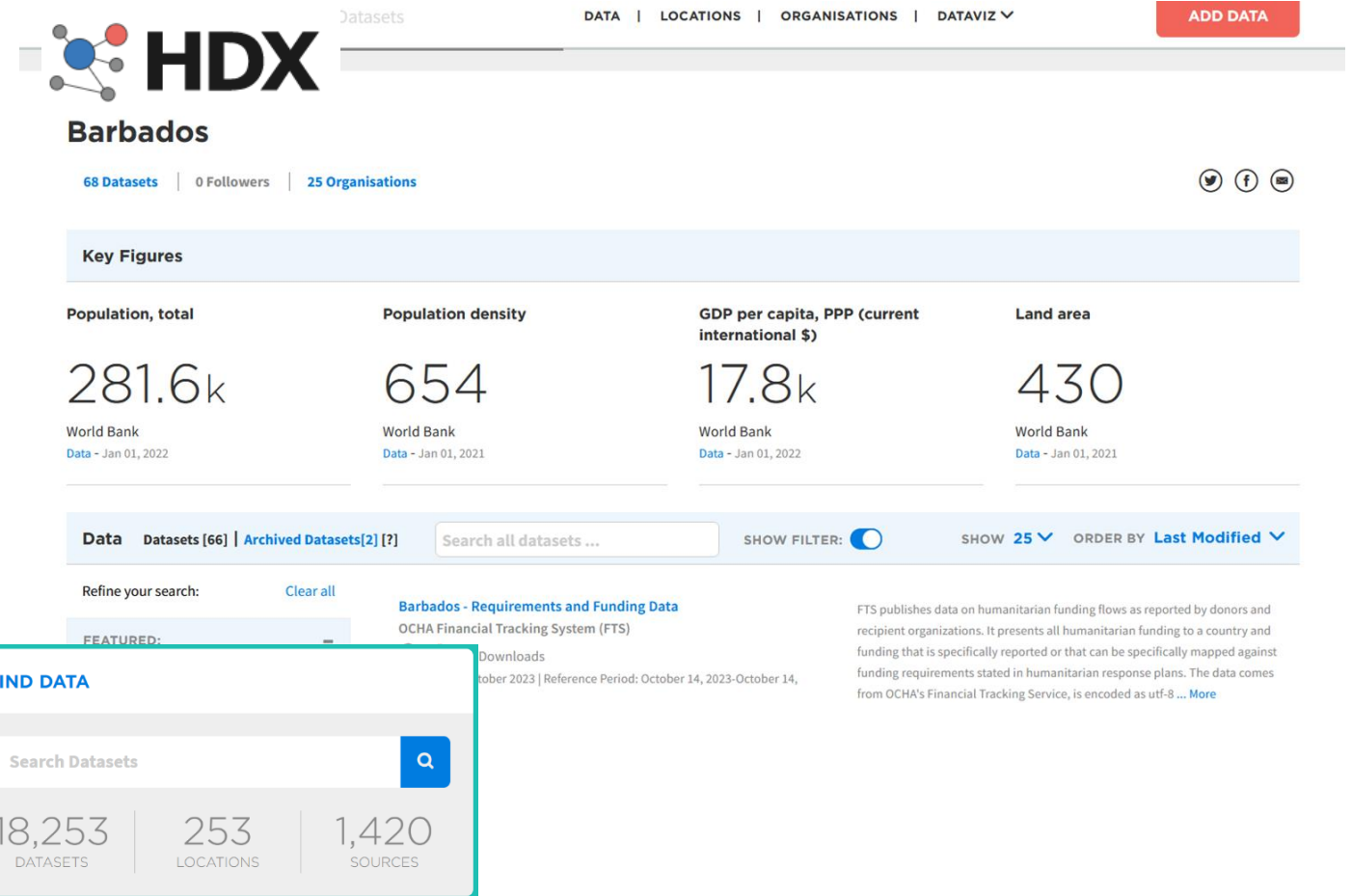
- Data collected directly in digital format for GIS use
- E.g. GPS, survey data, remote sensing images
- Factual and original

Secondary Data

- Data either digital or analog, originally captured in another format
- Conversion is required from the original format to a GIS format, e.g. scanning, digitizing
- Analysis and interpretation of primary data

Humanitarian Data Exchange

- HDX – data.humdata.org
- 18,000 data sets over 1,400 sources
- UN's Centre for Humanitarian Data



HDX Datasets DATA | LOCATIONS | ORGANISATIONS | DATAVIZ ADD DATA

Barbados

68 Datasets | 0 Followers | 25 Organisations

Key Figures

Population, total	Population density	GDP per capita, PPP (current international \$)	Land area
281.6k	654	17.8k	430
World Bank Data - Jan 01, 2022	World Bank Data - Jan 01, 2021	World Bank Data - Jan 01, 2022	World Bank Data - Jan 01, 2021

Data Datasets [66] | Archived Datasets[2] [?] Search all datasets ... SHOW FILTER: SHOW 25 ORDER BY Last Modified

Refine your search: Clear all

Barbados - Requirements and Funding Data
OCHA Financial Tracking System (FTS)
Downloads
October 2023 | Reference Period: October 14, 2023-October 14,

FTS publishes data on humanitarian funding flows as reported by donors and recipient organizations. It presents all humanitarian funding to a country and funding that is specifically reported or that can be specifically mapped against funding requirements stated in humanitarian response plans. The data comes from OCHA's Financial Tracking Service, is encoded as utf-8 ... [More](#)

FIND DATA

Search Datasets

18,253 DATASETS | 253 LOCATIONS | 1,420 SOURCES

OpenStreetMap (OSM)

- Collaborative project for free editable map of the world
- Settlements and populated areas
- Transport and road networks
- download.geofabrik.de

GEOFABRIK  *downloads*

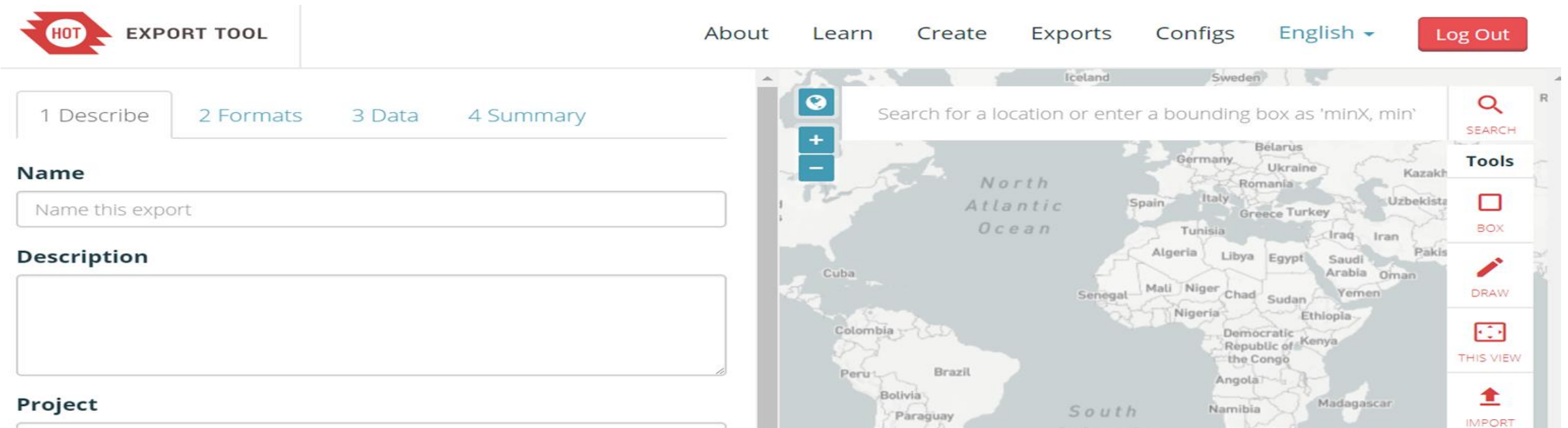
OpenStreetMap Data Extracts

Welcome to Geofabrik's free download server. This server has data extracts from the [OpenStreetMap project](#) which are normally updated every day. Select your continent and then your country of interest from the list below. (If you have been directed to this page from elsewhere and are not familiar with OpenStreetMap, we highly recommend that you read up on OSM before you use the data.) This download service is offered for free by Geofabrik GmbH.



HOT - Humanitarian OSM Team

- OSM Humanitarian team - export.hotosm.org
- Specialized areas and topics
- Requires registration



The screenshot shows the HOT Export Tool interface. At the top left is the HOT logo and 'EXPORT TOOL' text. Navigation links include 'About', 'Learn', 'Create', 'Exports', 'Configs', 'English' (with a dropdown arrow), and a red 'Log Out' button. Below the navigation is a progress bar with four steps: '1 Describe', '2 Formats', '3 Data', and '4 Summary'. The 'Describe' step is active. The form includes a 'Name' field with the placeholder 'Name this export', a 'Description' text area, and a 'Project' field. On the right, a map of the Atlantic Ocean region is displayed with a search bar and a 'Tools' sidebar containing icons for 'SEARCH', 'BOX', 'DRAW', 'THIS VIEW', and 'IMPORT'.

GADM

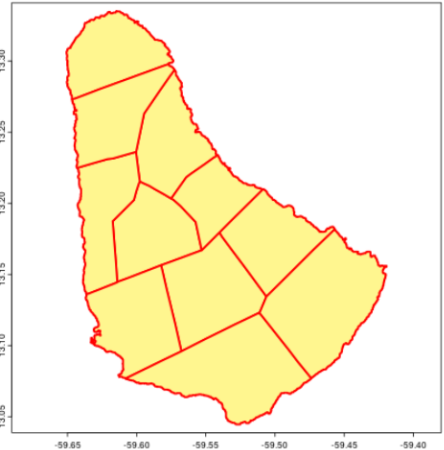
- GADM - Global Administrative Boundaries
- Preferable to use borders from HDX, if available
- gadm.org

GADM Maps Data About

Download GADM data (version 4.1)

Country
Barbados

[Geopackage](#)
[Shapefile](#)
GeoJSON: [level-0](#), [level1](#)
KMZ: [level-0](#), [level1](#)



The map displays the administrative boundaries of Barbados, with the land area shaded in yellow and the boundaries outlined in red. The map includes a coordinate grid with latitude values from 13.05 to 13.30 and longitude values from -59.65 to -59.40.

The coordinate reference system is [longitude/latitude](#) and the [WGS84](#) datum.
Description of [file formats](#).

Natural Earth

- Contains both vector and raster mapping data
- Most useful scale is 1:10M
- naturalearthdata.com



Large scale data, 1:10m



[Cultural](#) [Physical](#) [Raster](#)

Downloads

Data themes are available in three levels of detail. For each scale, themes are listed on Cultural, Physical, and Raster category pages.

Stay up to date! Know when a new version of Natural Earth is released by subscribing to our [announcement list](#).

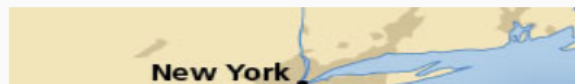
Overwhelmed? The [Natural Earth quick start kit](#) (165 mb) provides a small sample of Natural Earth themes styled in an ArcMap .MXD document and in a QGIS document. Download all vector themes as [SHP](#) (279 mb) or as [SQLite](#) (222 mb).

Natural Earth is the creation of many [volunteers](#) and is supported by [NACIS](#). It is free for use in any type of project. [Full Terms of Use](#) »

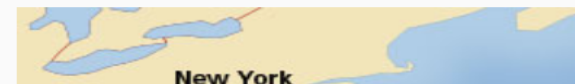
Large scale data, 1:10m



Medium scale data, 1:50m



Small scale data, 1:110m



WorldPop

- Geospatial analysis to produce estimates of population
- Gridded raster population density layer
- <https://youtu.be/A1AvguSj41Q?t=1217>



The image shows the top portion of the WorldPop website. At the top left is the 'world pop' logo with three colored icons (green, purple, orange) representing different regions. To the right are navigation links: 'ABOUT OUR WORK', 'NEWS', 'DATA', and 'CONTACT'. Further right is a search bar with a 'Search' button and a globe icon. Below the navigation is a large banner featuring a satellite-style map of the world with population density overlaid in yellow and green. The text 'WorldPop: High resolution age-structured population distribution maps' is overlaid on the map in large white font.

SRTM

- Shuttle Radar Topography Mission (NASA)
- 30 meters resolution - <https://dwtkns.com/srtm30m/>
- 90m – <https://cgiarcsi.community/data/srtm-90m-digital-elevation-database-v4-1/>



ABOUT ▾ BLOG DATA ▾ SHOWCASE EVENT ▾ SHAREPOINT



SRTM 90m Digital Elevation

30-Meter SRTM Tile Downloader

This interface attempts to ease the pain of downloading 30-meter resolution elevation data from the Shuttle Radar Topography Mission.

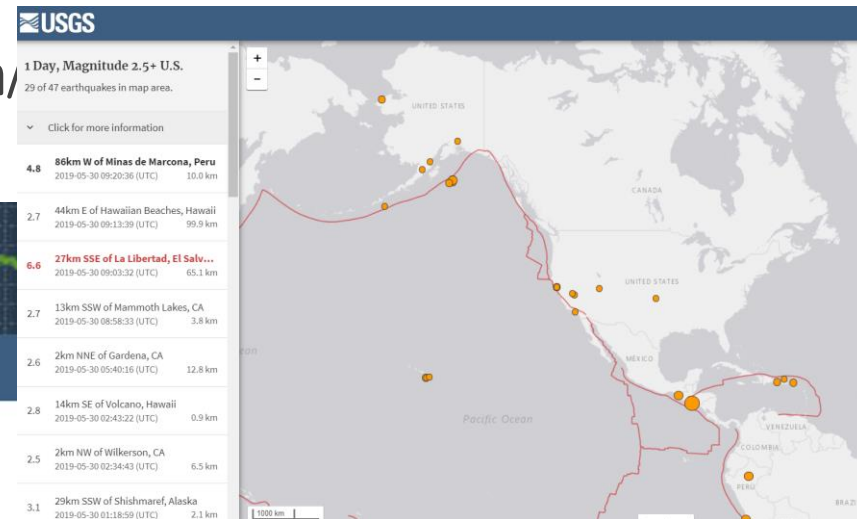
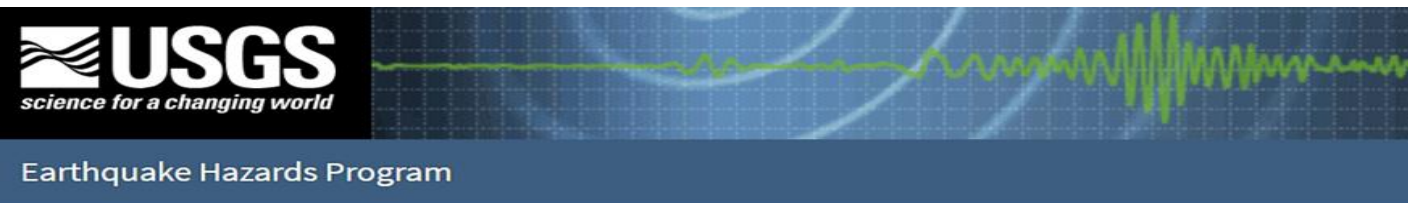
Click on **yellow tiles** to download their corresponding data.

Tiles come as zipped SRTMHGT files at 1-arcsecond resolution (3601x3601 pixels) in a latitude/longitude projection (EPSG:4326), downloaded from [NASA servers](#).

For the older and coarser 90-meter data, try [this downloader](#). For manual bulk downloads, a GeoJSON indexing DEM file names [lives here](#), use this base URL.

By Derek Watkins. Built with Mapbox GLJS. Tiles from CartoDB. Questions or comments to dwtkns@gmail.com.

- Earthquakes: United States Geological Survey - usgs.gov
- earthquake.usgs.gov/earthquakes/
- earthquake.usgs.gov/earthquakes/search/



USGS
1 Day, Magnitude 2.5+ U.S.
29 of 47 earthquakes in map area.

Click for more information

4.8	86km W of Minas de Marcona, Peru	2019-05-30 09:20:36 (UTC)	10.0 km
2.7	44km E of Hawaiian Beaches, Hawaii	2019-05-30 09:13:39 (UTC)	99.9 km
6.6	27km SSE of La Libertad, El Salv...	2019-05-30 09:03:32 (UTC)	65.1 km
2.7	13km SSW of Mammoth Lakes, CA	2019-05-30 08:58:33 (UTC)	3.8 km
2.6	2km NNE of Gardena, CA	2019-05-30 05:40:16 (UTC)	12.8 km
2.8	14km SE of Volcano, Hawaii	2019-05-30 02:43:22 (UTC)	0.9 km
2.5	2km NW of Wilkerson, CA	2019-05-30 02:34:43 (UTC)	6.5 km
3.1	29km SSW of Shishmaref, Alaska	2019-05-30 01:18:59 (UTC)	2.1 km

Search Earthquake Catalog

Search results are limited to 20,000 events. To get URL for a search, click the search button, then copy the URL from the browser address bar.

- [Help](#)
- [ANSS Comprehensive Earthquake Catalog \(ComCat\) Documentation](#)
- [Developer's Corner - bulk access to catalog, tools for obtaining specific products](#)
- [Significant Earthquakes Archive](#)

← Earthquakes

Latest Earthquakes

Earthquake Lists, Maps & Statistics

Search Earthquake Catalog

Real-time Feeds & Notifications

HydroSHEDS

- Rivers - HydroSheds: United States Geological Survey
- hydrosheds.org

USGS
science for a changing world

HydroSHEDS

Data Produced by:

Home
Overview
Data Sources
Data Set Development
Quality Assessment
Data Availability
Data Formats

HydroSHEDS

(**Hydro**logical data and maps based on **SH**uttle **E**levation **D**erivatives at multiple **S**cales)

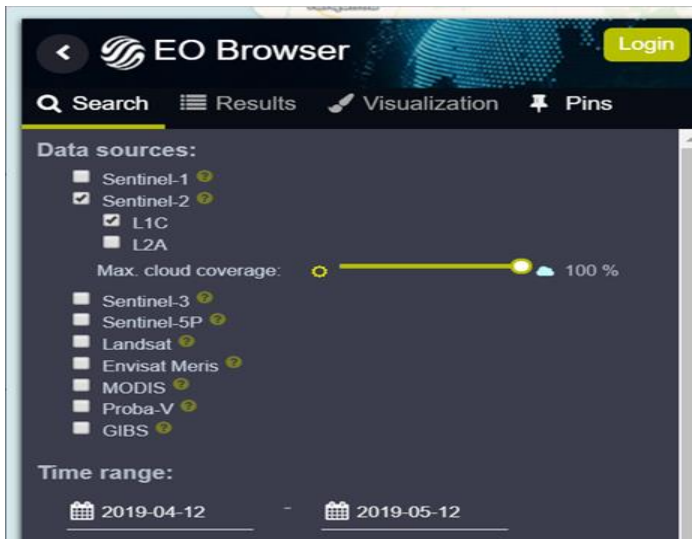
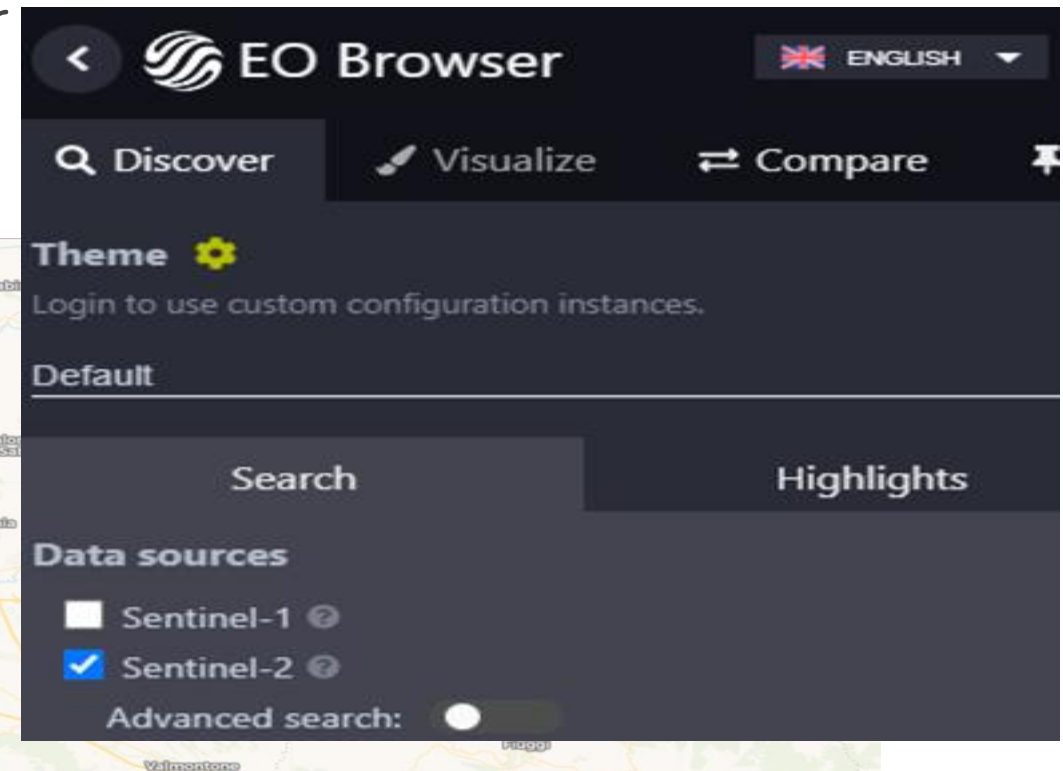
HydroSHEDS is a mapping product that provides hydrographic information for regional and global-scale applications in a consistent format. It offers a suite of geo-referenced data sets (vector and raster) at various scales, including river networks, watershed boundaries, drainage directions, and flow accumulations. HydroSHEDS is based on high-resolution elevation data obtained during a Space Shuttle flight for NASA's Shuttle Radar Topography Mission (SRTM).

Amazon Basin

Rivers derived at 500 m resolution
0 500 1000
Kilometers

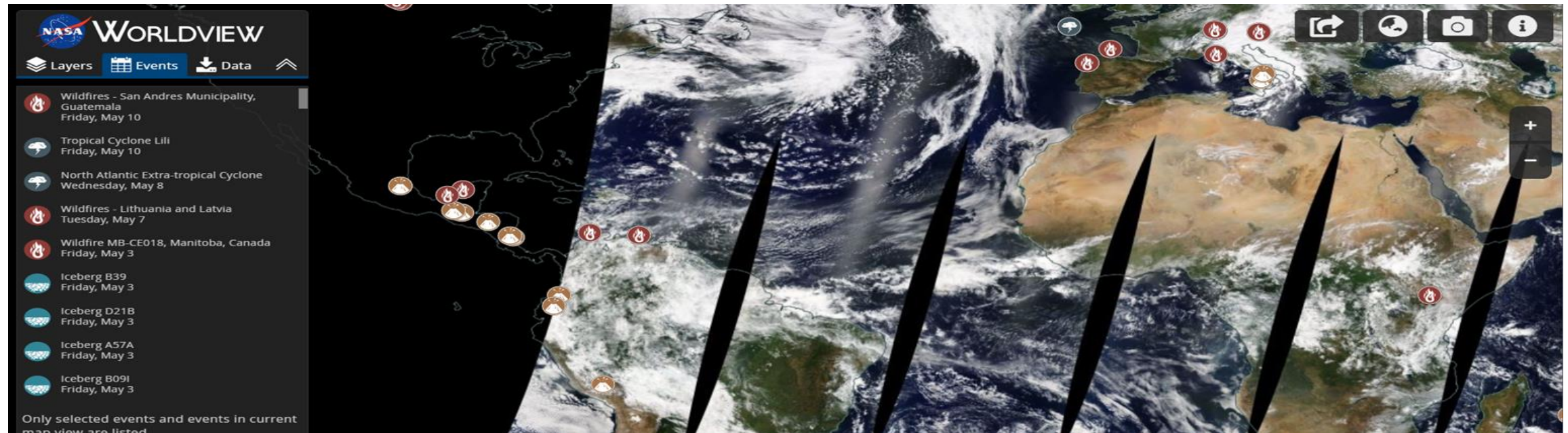
EO Browser

- Sentinel and other satellite imagery
- Sentinel useful source of flood extent data
- <https://apps.sentinel-hub.com/eo-browser>



EOSDIS Worldview

- NASA's Earth Observing System Data and Information System
- <https://worldview.earthdata.nasa.gov>
- <https://earthdata.nasa.gov/worldview>



USGS EarthExplorer

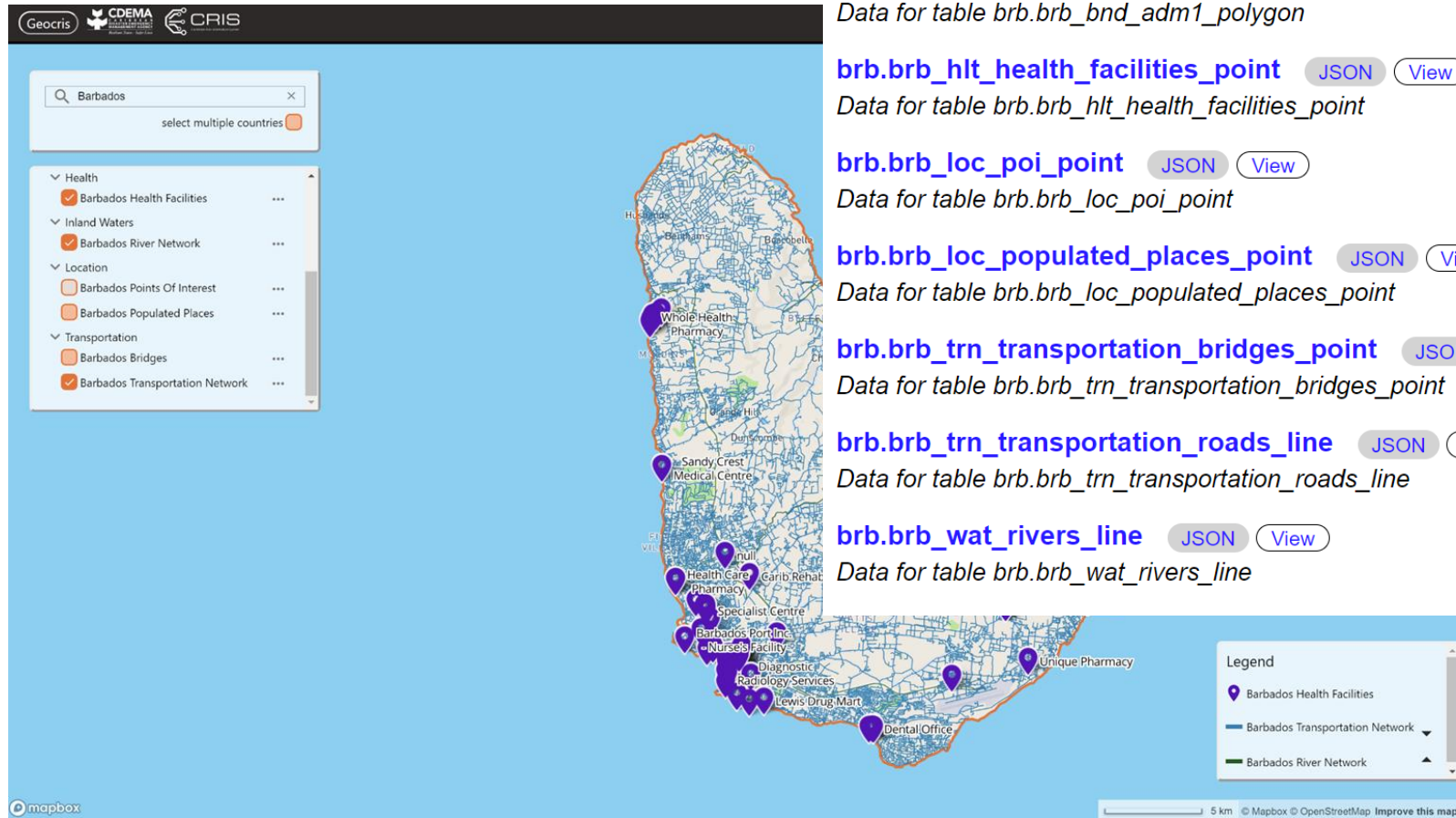
- EarthExplorer: United States Geological Survey (USGS)
- <https://earthexplorer.usgs.gov>

The screenshot shows the USGS EarthExplorer website. At the top left is the USGS logo with the tagline "science for a changing world". Below it is the page title "EarthExplorer - Home" and a "Page Expires In 1:59:39" timer. A navigation bar includes "Home", "Login", "Register", "RSS", and "Feedback". The main content area is divided into a search criteria panel on the left and a map view on the right. The search panel has tabs for "Search Criteria", "Data Sets", "Additional Criteria", and "Results". Under "Search Criteria", there are sections for "1. Enter Search Criteria", "Address/Place" (with a search box and "Show" and "Clear" buttons), "Coordinates" (with "Predefined Area", "Shapefile", and "KML" options, and a "No coordinates selected" message), and "Date Range" (with "Result Options" and date pickers). The map view shows a satellite image of the Caribbean region with "Map" and "Satellite" tabs, and options for "(coordinates)", "Options", and "Overlays". A "Clear Criteria" button is located at the top right of the map area.

GEOCRIS

- CDEMA
- <https://geocris2.cdema.org/>

<https://geocris2.cdema.org/features/collections.html>



The screenshot displays the Geocris web application interface. At the top, there are logos for Geocris, CDEMA, and CRIS. A search bar contains the text "Barbados" and a "select multiple countries" button. Below the search bar is a list of data layers with checkboxes: Health (Barbados Health Facilities), Inland Waters (Barbados River Network), Location (Barbados Points Of Interest, Barbados Populated Places), and Transportation (Barbados Bridges, Barbados Transportation Network). The map shows Barbados with several purple location pins and blue lines representing roads and rivers. A legend in the bottom right corner identifies the symbols for Barbados Health Facilities, Barbados Transportation Network, and Barbados River Network. The mapbox logo is visible in the bottom left corner.

[brb.brb_bnd_adm0_polygon](#) [JSON](#) [View](#)

Data for table *brb.brb_bnd_adm0_polygon*

[brb.brb_bnd_adm1_polygon](#) [JSON](#) [View](#)

Data for table *brb.brb_bnd_adm1_polygon*

[brb.brb_hlt_health_facilities_point](#) [JSON](#) [View](#)

Data for table *brb.brb_hlt_health_facilities_point*

[brb.brb_loc_poi_point](#) [JSON](#) [View](#)

Data for table *brb.brb_loc_poi_point*

[brb.brb_loc_populated_places_point](#) [JSON](#) [View](#)

Data for table *brb.brb_loc_populated_places_point*

[brb.brb_trn_transportation_bridges_point](#) [JSON](#) [View](#)

Data for table *brb.brb_trn_transportation_bridges_point*

[brb.brb_trn_transportation_roads_line](#) [JSON](#) [View](#)

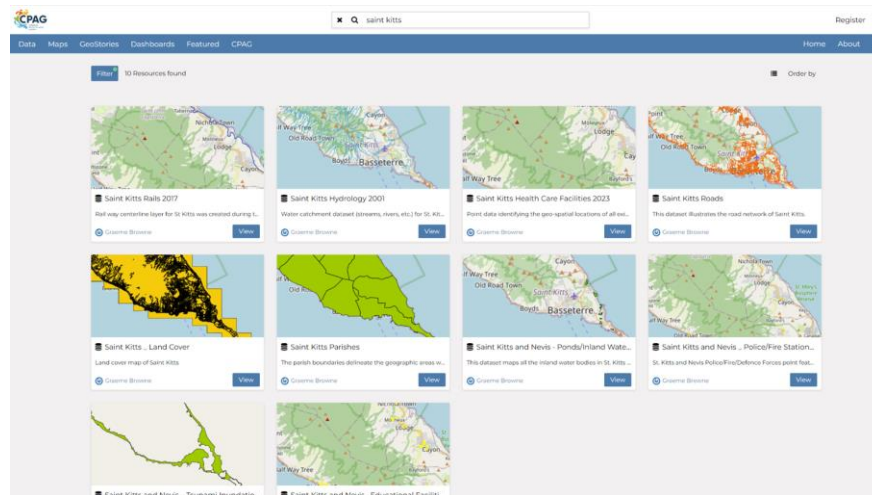
Data for table *brb.brb_trn_transportation_roads_line*

[brb.brb_wat_rivers_line](#) [JSON](#) [View](#)

Data for table *brb.brb_wat_rivers_line*

OTHER REGIONAL RESOURCES

- GEONODES
- World Bank - some countries have a country specific portal for disaster risk reduction.
- Caribbean Protected Areas - some useful baseline info
- <https://geonode.thecpag.org>
- Caribbean Geoportal - caribbeangeoportal.com



LOCAL DATA

- Who are data providers in your country? What can they give you?
- Survey Department
- Planning Department
- Bureau of Statistics
- Public Works Department
- Environment/Fisheries Departments
- Health ministry
- Public Health
- Education Department
- Telecoms Companies
- Utilities
- Community Mapper or groups

Conclusion

- Key data sources
- Vector data - HDX, GADM and OSM
- Raster data - SRTM satellite and WorldPop
- Lots of data available online!
- Data might be sitting on a colleague's computer!



This programme is
gratefully supported
by



USAID
FROM THE AMERICAN PEOPLE



MAP ACTION

mapaction.org