AidData GeoQuery Request Documentation

Report Info

Request Name	Request 04-07-22 01:26
Request Id	624e21b40e369003c4636902
Email	bachir.sabo@eleve.ensai.fr
Generated on	2022-04-06 19:35:39 (EDT)
Download Link	geo.aiddata.org/query/#!/status/624e21b40e369003c4636902

Processing Timeline

submitted	2022-04-06 19:26:44 (EDT)
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Citation

Please cite the following in any and all applications of the extracted datasets:

Goodman, S., BenYishay, A., Lv, Z., & Runfola, D. (2019). GeoQuery: Integrating HPC systems and public web-based geospatial data tools. Computers & Geosciences, 122, 103-112.

Contents of Request Zip

- request documentation (this pdf document)
- a comma separated value (CSV) file containing your data
- JSON file containing your request parameters
- GeoQuery paper (pdf)

For additional information, usage tips, guides and more please visit *geo.aiddata.org*.

To get in touch, please contact us via *geo@aiddata.org*.

Meta Information

Boundary

Title	Togo ADM1 - GeoBoundaries v4
Name	tgo_adm1_gb_v4
Version	v4
Description	GeoBoundaries boundary file for ADM1 in Togo.
Details	(no additional details)
Bounding Box	[[[-0.1439719, 11.139497], [-0.1439719, 6.112430099999926], [1.8025, 6.112430099999926], [1.8025, 11.139497], [-0.1439719, 11.139497]]]
Date Added	2021-09-08
Date Updated	2021-09-08
Source Name	geoBoundaries
Source Link	http://www.geoboundaries.org
Citation	Runfola, Daniel, Austin Anderson, Heather Baier, Matt Crittenden, Elizabeth Dowker, Sydney Fuhrig, Seth Goodman, Grace Grimsley, Rachel Layko, Graham Melville, Maddy Mulder, Rachel Oberman, Joshua Panganiban, Andrew Peck, Leigh Seitz, Sylvia Shea, Hannah Slevin, Rebecca Yougerman, Lauren Hobbs. "geoBoundaries: A global database of political administrative boundaries." Plos one 15, no. 4 (2020): e0231866.

Selection 1 - WorldPop Population Count

Title	WorldPop Population Count
Name	worldpop_pop_count_1km_mosaic
Version	2020
Column Names	Format: "worldpop_pop_count_1km_mosaic.<temporal>.<method>" for all combinations of <temporal> and <method> which can be found in the "Temporal Selection" and "Extract Types Selected" fields below (22 columns total)
Temporal Selection (0)	2020, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010
Extract Types Selected	count (total count of pixels per unit of analysis), sum (total population per unit of analysis)
Description	Estimated population count from WorldPop. Underlying dataset provides number of people per 1km pixel. The mapping approach is Random Forest-based dasymetric redistribution
Details	No additional processing of raw data.
Bounding Box	[[[-180, 83.99958319871001], [-180, -72.00041617728999], [179.99874929500004, -72.00041617728999], [179.99874929500004, 83.99958319871001], [-180, 83.99958319871001]]]
Date Added	2021-09-28
Date Updated	2021-09-28
Source Name	WorldPop
Source Link	https://www.worldpop.org/geodata/listing?id=64
Citation	WorldPop (www.worldpop.org - School of Geography and Environmental Science, University of Southampton; Department of Geography and Geosciences, University of Louisville; Departement de Geographie, Universite de Namur) and Center for International Earth Science Information Network (CIESIN), Columbia University (2018). Global High Resolution Population Denominators Project - Funded by The Bill and Melinda Gates Foundation (OPP1134076). https://dx.doi.org/10.5258/SOTON/WP00647
Variable Description	number of people
Resolution	0.00833
Factor	1.0

Selection 2 - Annual VIIRS Nighttime Lights v2 - Count of Cloud Free Coverage

Title	Annual VIIRS Nighttime Lights v2 - Count of Cloud Free Coverage
Name	viirs_ntl_annual_v20_cf_cvg
Version	2
Column Names	Format: "viirs_ntl_annual_v20_cf_cvg.<temporal>.<method>" for all combinations of <temporal> and <method> which can be found in the "Temporal Selection" and "Extract Types Selected" fields below (18 columns total)
Temporal Selection (0)	2020, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012
Extract Types Selected	count (total count of pixels per unit of analysis), sum (count of pixels with at least one cloud free measurement within each unit of analysis)
Description	Annual VIIRS nighttime lights product Version 2. Count of pixels within boundary with at least 1 cloud free observation of nighttime lights. Can be used in combination with VIIRS Nighttime Light Average product to determine if sufficient coverage exists with boundary features.
Details	
Bounding Box	[[[-180, 75.00208333335], [-180, -65.00208445335001], [180, -65.00208445335001], [180, 75.00208333335], [-180, 75.00208333335]]]
Date Added	2021-09-14
Date Updated	2021-09-14
Source Name	Earth Observation Group - VIIRS Nighttime Lights
Source Link	https://eogdata.mines.edu/products/vnl/
Citation	C. D. Elvidge, M. Zhizhin, T. Ghosh, F-C. Hsu, Annual time series of global VIIRS nighttime lights derived from monthly averages: 2012 to 2019, Remote Sensing
Variable Description	Cloud free measurements
Resolution	0.0041666667
Factor	1.0

Selection 3 - Annual VIIRS Nighttime Lights v2 - Average Value

Title	Annual VIIRS Nighttime Lights v2 - Average Value
Name	viirs_ntl_annual_v20_avg_masked
Version	2
Column Names	Format: "viirs_ntl_annual_v20_avg_masked.<temporal>.<method>" for all combinations of <temporal> and <method> which can be found in the "Temporal Selection" and "Extract Types Selected" fields below (9 columns total)
Temporal Selection (0)	2020, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012
Extract Types Selected	mean (average value measured within each unit of analysis)
Description	Annual VIIRS nighttime lights product Version 2. Average value with background pixels masked. Please use in combination with VIIRS Nighttime Light Cloud Free Coverage product to confirm sufficient cloud free measurements are available within your boundary features.
Details	
Bounding Box	[[[-180, 75.00208333335], [-180, -65.00208445335001], [180, -65.00208445335001], [180, 75.00208333335], [-180, 75.00208333335]]]
Date Added	2021-09-14
Date Updated	2021-09-14
Source Name	Earth Observation Group - VIIRS Nighttime Lights
Source Link	https://eogdata.mines.edu/products/vnl/
Citation	C. D. Elvidge, M. Zhizhin, T. Ghosh, F-C. Hsu, Annual time series of global VIIRS nighttime lights derived from monthly averages: 2012 to 2019, Remote Sensing
Variable Description	Radiance (nW cm^-2 sr^-1)
Resolution	0.0041666667
Factor	1.0

Selection 4 - Precipitation (Yearly Average) - UDel

Title	Precipitation (Yearly Average) - UDel
Name	udel_precip_v501_mean
Version	5.01
Column Names	Format: "udel_precip_v501_mean.<temporal>.<method>" for all combinations of <temporal> and <method> which can be found in the "Temporal Selection" and "Extract Types Selected" fields below (8 columns total)
Temporal Selection (0)	2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010
Extract Types Selected	mean (average precipitation per unit of analysis)
Description	Average monthly precipitation per year in millimeters. Created using UDel Precipitation dataset (v5.01)
Details	
Bounding Box	[[[-180.0, 83.5], [-180.0, -90.0], [180.0, -90.0], [180.0, 83.5], [-180.0, 83.5]]]
Date Added	2019-05-21
Date Updated	2019-06-06
Source Name	University of Delaware
Source Link	http://climate.geog.udel.edu/~climate/html_pages/download.html
Citation	Willmott, C. J. and K. Matsuura (2001) Terrestrial Air Temperature and Precipitation: Monthly and Annual Time Series (1950 - 1999), http://climate.geog.udel.edu/~climate/html_pages/README.ghcn_ts2.html.
Variable Description	millimeters
Resolution	0.5
Factor	1.0

Selection 5 - Air Temperature (Yearly Average) - UDel

Title	Air Temperature (Yearly Average) - UDel
Name	udel_air_temp_v501_mean
Version	5.01
Column Names	Format: "udel_air_temp_v501_mean.<temporal>.<method>" for all combinations of <temporal> and <method> which can be found in the "Temporal Selection" and "Extract Types Selected" fields below (8 columns total)
Temporal Selection (0)	2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010
Extract Types Selected	mean (average air temperature per unit of analysis)
Description	Average monthly air temperature per year in degrees Celsius. Created using UDel Air Temperature dataset (v5.01)
Details	
Bounding Box	[[[-180.0, 83.5], [-180.0, -90.0], [180.0, -90.0], [180.0, 83.5], [-180.0, 83.5]]]
Date Added	2019-05-21
Date Updated	2019-06-06
Source Name	University of Delaware
Source Link	http://climate.geog.udel.edu/~climate/html_pages/download.html
Citation	Willmott, C. J. and K. Matsuura (2001) Terrestrial Air Temperature and Precipitation: Monthly and Annual Time Series (1950 - 1999), http://climate.geog.udel.edu/~climate/html_pages/README.ghcn_ts2.html.
Variable Description	degrees Celsius
Resolution	0.5
Factor	1.0

Selection 6 - OCO-2 (v10r) - CO2 Concentration (yearly)

Title	OCO-2 (v10r) - CO2 Concentration (yearly)
Name	oco2_v10r_xco2_yearly
Version	10r
Column Names	Format: "oco2_v10r_xco2_yearly.<temporal>.<method>" for all combinations of <temporal> and <method> which can be found in the "Temporal Selection" and "Extract Types Selected" fields below (6 columns total)
Temporal Selection (0)	2020, 2019, 2018, 2017, 2016, 2015
Extract Types Selected	mean (average co2 concentration (ppm) per unit of analysis)
Description	The average concentration of carbon dioxide in a column of dry air extending from Earth's surface to the top of the atmosphere. The raster used is the result of aggregating one year of data to a 10km grid and then using a linear interpolation to fill gaps. The underlying data were produced by NASA's OCO-2 project, and obtained from the OCO-2 data archive maintained at the NASA Goddard Earth Science Data and Information Services Center.
Details	
Bounding Box	[[[-180.0, 90.0], [-180.0, -90], [180, -90], [180, 90.0], [-180.0, 90.0]]]
Date Added	2021-09-14
Date Updated	2021-09-22
Source Name	NASA Goddard Earth Science Data and Information Services Center
Source Link	https://disc.gsfc.nasa.gov/datasets/OCO2_L2_Lite_FP_10r/summary
Citation	OCO-2 Science Team/Michael Gunson, Annmarie Eldering (2020), OCO-2 Level 2 bias-corrected XCO2 and other select fields from the full-physics retrieval aggregated as daily files, Retrospective processing V10r, Greenbelt, MD, USA, Goddard Earth Sciences Data and Information Services Center (GES DISC), Accessed: [2021-07-20], 10.5067/E4E140XDMPO2
Variable Description	co2 concentration in parts per million (ppm)
Resolution	0.1
Factor	1.0

Selection 7 - Population (GPW V4.11, UN Adjusted)

Title	Population (GPW V4.11, UN Adjusted)
Name	gpw_v4_rev11_count
Version	4.11
Column Names	Format: "gpw_v4_rev11_count.<temporal>.<method>" for all combinations of <temporal> and <method> which can be found in the "Temporal Selection" and "Extract Types Selected" fields below (10 columns total)
Temporal Selection (0)	2020, 2015, 2010, 2005, 2000
Extract Types Selected	sum (total population per unit of analysis), count (total count of pixels per unit of analysis)
Description	Population count (UN Adjusted values) from Gridded Population of the World v4 revision 11. GPWv4 depicts the distribution of human population across the globe. Source data provided in 30 arc-second (~1 km) grid cells.
Details	No additional processing of raw data.
Bounding Box	[[[-180.0, 90], [-180.0, -90.0], [180, -90.0], [180, 90], [-180.0, 90]]]
Date Added	2021-09-14
Date Updated	2021-09-14
Source Name	CIESIN
Source Link	https://sedac.ciesin.columbia.edu/data/set/gpw-v4-population-count-adjusted-to-2015-unwpp-country-totals-rev11
Citation	Center for International Earth Science Information Network - CIESIN - Columbia University. 2018. Gridded Population of the World, Version 4 (GPWv4): Population Count Adjusted to Match 2015 Revision of UN WPP Country Totals, Revision 11. Palisades, NY: NASA Socioeconomic Data and Applications Center (SEDAC). https://doi.org/10.7927/H4PN93PB. Accessed 13 July 2021.
Variable Description	number of people
Resolution	0.00833
Factor	1.0

Selection 8 - Ozone Concentration

Title	Ozone Concentration
Name	ambient_air_pollution_2013_o3
Version	2013
Column Names	Format: "ambient_air_pollution_2013_o3.<temporal>.<method>" for all combinations of <temporal> and <method> which can be found in the "Temporal Selection" and "Extract Types Selected" fields below (4 columns total)
Temporal Selection (0)	2013, 2012, 2011, 2010
Extract Types Selected	mean (average ozone concentration for each unit of analysis)
Description	Ozone concentration (ug/m3) from TM5 FASST simulation. Since the ozone (summer) season varies throughout the globe, it was calculated using a running 3-month average (of daily 1 hour max values) for each grid cell over a full year and the maximum of these values was selected.
Details	(no additional details)
Bounding Box	[[[-180.0, 70.0], [-180.0, -55.900000000000006], [180.0, -55.900000000000006], [180.0, 70.0], [-180.0, 70.0]]]
Date Added	2017-05-08
Date Updated	2017-05-08
Source Name	Ambient air pollution exposure estimation for the Global Burden of Disease 2013
Source Link	http://www.healthdata.org/research-article/ambient-air-pollution-exposure-estimation-global-burden-disease-2013
Citation	Brauer M, Freedman G, Frostad J, van Donkelaar A, Martin RV, Dentener F, Van Dingenen R, Estep K, Amini H, Apte JS, Balakrishnan K, Barregard L, Broday DM, Feigin V, Ghosh S, Hopke PK, Knibbs LD, Kokubo Y, Liu Y, Ma S, Morawska L, Sangrador JLT, Shaddick G, Anderson HR, Vos T, Forouzanfar MH, Burnett RT, Cohen A. Ambient air pollution exposure estimation for the Global Burden of Disease 2013. Environmental Science & Technology. 2015 Nov 23. doi: 10.1021/acs.est.5b03709.
Variable Description	Ozone concentration (ug/m3)
Resolution	0.1
Factor	1.0

Selection 9 - Particulate Matter (PM2.5) Concentration

Title	Particulate Matter (PM2.5) Concentration
Name	ambient_air_pollution_2013_fus_calibrated
Version	2013
Column Names	Format: "ambient_air_pollution_2013_fus_calibrated.<temporal>.<method>" for all combinations of <temporal> and <method> which can be found in the "Temporal Selection" and "Extract Types Selected" fields below (4 columns total)
Temporal Selection (0)	2013, 2012, 2011, 2010
Extract Types Selected	mean (average PM2.5 concentration for each unit of analysis)
Description	Particulate matter (PM2.5) estimate, based on prediction model using combination of satellite-based estimate and TM5-FASST simulation.
Details	(no additional details)
Bounding Box	[[[-180.0, 70.0], [-180.0, -55.900000000000006], [180.0, -55.900000000000006], [180.0, 70.0], [-180.0, 70.0]]]
Date Added	2017-05-08
Date Updated	2017-05-08
Source Name	Ambient air pollution exposure estimation for the Global Burden of Disease 2013
Source Link	http://www.healthdata.org/research-article/ambient-air-pollution-exposure-estimation-global-burden-disease-2013
Citation	Brauer M, Freedman G, Frostad J, van Donkelaar A, Martin RV, Dentener F, Van Dingenen R, Estep K, Amini H, Apte JS, Balakrishnan K, Barregard L, Broday DM, Feigin V, Ghosh S, Hopke PK, Knibbs LD, Kokubo Y, Liu Y, Ma S, Morawska L, Sangrador JLT, Shaddick G, Anderson HR, Vos T, Forouzanfar MH, Burnett RT, Cohen A. Ambient air pollution exposure estimation for the Global Burden of Disease 2013. Environmental Science & Technology. 2015 Nov 23. doi: 10.1021/acs.est.5b03709.
Variable Description	PM2.5 concentration (ug/m3)
Resolution	0.1
Factor	1.0

Interpreting CSV Column Names

Each CSV will contain a column labeled "asdf_id" which has values for each feature that are unique (within that boundary dataset), one or more columns for your extract data, followed by the original source attributes for the boundary file (e.g., from GADM)

The standard format for extract data column names is a three part string delimited by periods (.)

<dataset>.<filter>.<method>

where

<dataset> is the name of the dataset which was extracted

<filter> describes how the dataset was filtered. This is usually a temporal value (e.g., YYYY format for year such as "1999", "none" for temporally invariant data, or a unique hash describing more complex filters, such as for aid datasets)

<method> is the extract method used to aggregate dataset values to boundary features (e.g., "mean", "sum")

Notes - Aid data extracts

The <filter> component of aid data extracts is a unique hash that corresponds to the filter combination used to generate that particular aid data extract (e.g., donor, sector, year, status). For each aid data extract you request, you will see three columns in the CSV that have the same <dataset> and <filter> sections of the column name with the <methods> of the three being different.

These three <method> values are:

- "sum" is the total aid for each feature within the boundary based on the distribution of aid used when building the aid data

- "potential" is the maximum aid that could have been allocated to each feature regardless of the distribution of aid used

- "reliability" is a ratio of sum:potential representing a simplistic measure of how accurate the distribution and aggregation of aid was relative to the boundary features used during the extract process

Notes - Categorical extracts

Data extracted using the categorical method will have multiple columns with the same <dataset> and <filter> where the .<method> for each is "categorical_.<category>.

For a simple landcover dataset this might look like:

- landcover.2000.categorical_water

- landcover.2000.categorical_forest

- landcover.2000.categorical_desert

Usage Notes

- If you attempt to merge GeoQuery results wth vector data (e.g., shapefiles) downloaded from GADM, the GADM data may not always contain a unique id field to merge on. In these cases, please feel free to contact us and we can provide you with a modified file that contains a unique field for merging ("asdf_id" field, found in all result csvs).

Notes About Aid Datasets

- When requesting aid data using a very specific filter (usually resulting in only a single project match), the location count shown in GeoQuery may be inaccurate. This can result in aid filters which appear valid while building your request, but result in no aid data in your results csv. This is due to a slight reduction in the accuracy of location counts for the web page in order to make the responses fast enough for user interaction.

- The year filter for aid data is based on project start and end dates (determined by earliest and latest transactions). Because projects are represented by year ranges, multiple aid data selections for individual years may contain duplicate aid. This will result in an inflated total if you sum the aid from each individual year (compared to a single selection for all years). Limited source information on individual or even yearly transactions for a project prevent us from offering more granular temporal aid values for projects.

- All aid data selections result in commitment values, regardless of whether you filter by commitment values or disbursement values (or both). This is due to the notably better project coverage of commitments vs disbursements (e.g., World Bank aid dataset has 99% commitment coverage vs ~75% for disbursements).

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