

AidData GeoQuery Request Documentation

Report Info

| | |
|---------------|---|
| Request Name | Request 04-07-22 01:51 |
| Request Id | 624e277a48eade62e70959e5 |
| Email | bachir.sabo@eleve.ensai.fr |
| Generated on | 2022-04-06 20:27:19 (EDT) |
| Download Link | geo.aiddata.org/query/#!/status/624e277a48eade62e70959e5 |

Processing Timeline

| | |
|-----------|---------------------------|
| submitted | 2022-04-06 19:51:22 (EDT) |
| prepared | 2022-04-06 19:51:32 (EDT) |
| processed | 2022-04-06 20:27:18 (EDT) |
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Citation

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

Goodman, S., Ben Yishay, 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 | Côte d'Ivoire ADM1 - GeoBoundaries v4 |
| Name | civ_adm1_gb_v4 |
| Version | v4 |
| | |
| Description | GeoBoundaries boundary file for ADM1 in Côte d'Ivoire. |
| Details | (no additional details) |
| Bounding Box | [[[-8.584146518999944, 10.745650689000058], [-8.584146518999944, 4.360553222000021], [-2.492308867999952, 4.360553222000021], [-2.492308867999952, 10.745650689000058], [-8.584146518999944, 10.745650689000058]]] |
| 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 (6 columns total) |
| Temporal Selection (0) | 2020, 2015, 2010 |
| 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 with 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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Acknowledgements

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