AidData GeoQuery Request Documentation

Report Info

Request Name	Request 10-09-23 09:31
Request Id	6523ac6ef9540b1089391732
Email	sara.ghivarello@isi.it
Generated on	2023-10-09 03:32:18 (EDT)
Download Link	geo.aiddata.org/query/#!/status/6523ac6ef9540b1089391732

Processing Timeline

submitted	2023-10-09 03:31:58 (EDT)
prepared	2023-10-09 03:32:06 (EDT)
processed	2023-10-09 03:32:06 (EDT)
completed	2023-10-09 03:32:18 (EDT)

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	Somalia ADM1 - GeoBoundaries v4
Name	som_adm1_gb_v4
Version	v4
Description	GeoBoundaries boundary file for ADM1 in Somalia.
Details	(no additional details)
Bounding Box	[[[40.98918, 11.9883881], [40.98918, -1.6620782], [51.4155133, -1.6620782], [51.4155133, 11.9883881], [40.98918, 11.9883881]]]
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 (21 columns total)
Temporal Selection (0)	2020, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2008, 2007, 2006, 2005, 2004, 2003, 2002, 2001, 2000
Extract Types Selected	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 - Monthly VIIRS Nighttime Lights v1 - Count of Cloud Free Coverage

Title	Monthly VIIRS Nighttime Lights v1 - Count of Cloud Free Coverage
Name	viirs_ntl_monthly_v10_vcmcfg_cf_cvg
Version	1
Column Names	Format: "viirs_ntl_monthly_v10_vcmcfg_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 (210 columns total)
Temporal Selection (0)	202012, 202011, 202010, 202009, 202008, 202007, 202006, 202005, 202004, 202003, 202002, 202001, 201912, 201911, 201910, 201909, 201908, 201907, 201906, 201905, 201904, 201903, 201902, 201901, 201812
Temporal Selection (1)	201811, 201810, 201809, 201808, 201807, 201806, 201805, 201804, 201803, 201802, 201801, 201712, 201711, 201710, 201709, 201708, 201707, 201706, 201705, 201704, 201703, 201702, 201701, 201612, 201611
Temporal Selection (2)	201610, 201609, 201608, 201607, 201606, 201605, 201604, 201603, 201602, 201601, 201512, 201511, 201510, 201509, 201508, 201507, 201506, 201505, 201504, 201503, 201502, 201501, 201412, 201411, 201410
Temporal Selection (3)	201409, 201408, 201407, 201406, 201405, 201404, 201403, 201402, 201401, 201312, 201311, 201310, 201309, 201308, 201307, 201306, 201305, 201304, 201303, 201302, 201301, 201212, 201211, 201210, 201209
Temporal Selection (4)	201208, 201207, 201206, 201205, 201204
Extract Types Selected	sum (count of pixels with at least one cloud free measurement within each unit of analysis), count (total count of pixels per unit of analysis)
Description	Monthly VIIRS nighttime lights product Version 1. 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	Excludes any data impacted by stray light
Bounding Box	[[[-180, 75.00208333335], [-180, -65.00208445335001], [180, -65.00208445335001], [180, 75.00208333335], [-180, 75.00208333335]]]
Date Added	2021-09-23
Date Updated	2021-09-23
Source Name	Earth Observation Group - VIIRS Nighttime Lights
Source Link	https://eogdata.mines.edu/products/vnl/

Citation	C. D. Elvidge, K. E. Baugh, M. Zhizhin, and F.-C. Hsu, “Why VIIRS data are superior to DMSP for mapping nighttime lights,” Asia-Pacific Advanced Network 35, vol. 35, p. 62, 2013.
Variable Description	Cloud free measurements
Resolution	0.0041666667
Factor	1.0

Selection 3 - Monthly Maximum Normalized Difference Vegetation Index - NDVI (LTDR v5 - AVHRR)

Title	Monthly Maximum Normalized Difference Vegetation Index - NDVI (LTDR v5 - AVHRR)
Name	ltdr_avhrr_ndvi_v5_monthly
Version	5
Column Names	Format: "ltdr_avhrr_ndvi_v5_monthly.<temporal>.<method>" for all combinations of <temporal> and <method> which can be found in the "Temporal Selection" and "Extract Types Selected" fields below (1296 columns total)
Temporal Selection (0)	202012, 202011, 202010, 202009, 202008, 202007, 202006, 202005, 202004, 202003, 202002, 202001, 201912, 201911, 201910, 201909, 201908, 201907, 201906, 201905, 201904, 201903, 201902, 201901, 201812
Temporal Selection (1)	201811, 201810, 201809, 201808, 201807, 201806, 201805, 201804, 201803, 201802, 201801, 201712, 201711, 201710, 201709, 201708, 201707, 201706, 201705, 201704, 201703, 201702, 201701, 201612, 201611
Temporal Selection (2)	201610, 201609, 201608, 201607, 201606, 201605, 201604, 201603, 201602, 201601, 201512, 201511, 201510, 201509, 201508, 201507, 201506, 201505, 201504, 201503, 201502, 201501, 201412, 201411, 201410
Temporal Selection (3)	201409, 201408, 201407, 201406, 201405, 201404, 201403, 201402, 201401, 201312, 201311, 201310, 201309, 201308, 201307, 201306, 201305, 201304, 201303, 201302, 201301, 201212, 201211, 201210, 201209
Temporal Selection (4)	201208, 201207, 201206, 201205, 201204, 201203, 201202, 201201, 201112, 201111, 201110, 201109, 201108, 201107, 201106, 201105, 201104, 201103, 201102, 201101, 201012, 201011, 201010, 201009, 201008
Temporal Selection (5)	201007, 201006, 201005, 201004, 201003, 201002, 201001, 200912, 200911, 200910, 200909, 200908, 200907, 200906, 200905, 200904, 200903, 200902, 200901, 200812, 200811, 200810, 200809, 200808, 200807
Temporal Selection (6)	200806, 200805, 200804, 200803, 200802, 200801, 200712, 200711, 200710, 200709, 200708, 200707, 200706, 200705, 200704, 200703, 200702, 200701, 200612, 200611, 200610, 200609, 200608, 200607, 200606
Temporal Selection (7)	200605, 200604, 200603, 200602, 200601, 200512, 200511, 200510, 200509, 200508, 200507, 200506, 200505, 200504, 200503, 200502, 200501, 200412, 200411, 200410, 200409, 200408, 200407, 200406, 200405
Temporal Selection (8)	200404, 200403, 200402, 200401, 200312, 200311, 200310, 200309, 200308, 200307, 200306, 200305, 200304, 200303, 200302, 200301, 200212, 200211, 200210, 200209, 200208, 200207, 200206, 200205, 200204
Temporal Selection (9)	200203, 200202, 200201, 200112, 200111, 200110, 200109, 200108, 200107, 200106, 200105, 200104, 200103, 200102, 200101, 200012, 200011, 200010, 200009, 200008, 200007, 200006, 200005, 200004, 200003
Temporal Selection (10)	200002, 200001, 199912, 199911, 199910, 199909, 199908, 199907, 199906, 199905, 199904, 199903, 199902, 199901, 199812, 199811, 199810, 199809, 199808, 199807, 199806, 199805, 199804, 199803, 199802
Temporal Selection (11)	199801, 199712, 199711, 199710, 199709, 199708, 199707, 199706, 199705, 199704, 199703, 199702, 199701, 199612, 199611, 199610, 199609, 199608, 199607, 199606, 199605, 199604, 199603, 199602, 199601

Temporal Selection (12)	199512, 199511, 199510, 199509, 199508, 199507, 199506, 199505, 199504, 199503, 199502, 199501, 199412, 199411, 199410, 199409, 199408, 199407, 199406, 199405, 199404, 199403, 199402, 199401
Extract Types Selected	max (maximum NDVI value per unit of analysis), mean (average NDVI value per unit of analysis), min (minimum NDVI value per unit of analysis), count (total count of pixels per unit of analysis)
Description	Monthly value for Normalized Difference Vegetation Index (NDVI). Created using the NASA Long Term Data Record (v5) AVHRR data. Created by aggregating daily data to monthly by taking the maximum value.
Details	All negative NDVI values were truncated to 0 and saturated pixels were adjusted to the max of the normal NDVI range (10000).
Bounding Box	[[[-180.0, 90.0], [-180.0, -90.0], [180.0, -90.0], [180.0, 90.0], [-180.0, 90.0]]]
Date Added	2021-09-23
Date Updated	2021-09-23
Source Name	NASA LAADS DAAC
Source Link	https://ladsweb.modaps.eosdis.nasa.gov/missions-and-measurements/applications/ltdr/
Citation	Pedelty JA, Devadiga S, Masuoka E et al. (2007) Generating a Long-term Land Data Record from the AVHRR and MODIS Instruments. Proceedings of IGARRS 2007, pp. 1021–1025. Institute of Electrical and Electronics Engineers, NY, USA.
Variable Description	positive NDVI values 0:10000
Resolution	0.05
Factor	10000.0

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).

Terms of Use

The database and derived products produced by this tool are governed by the licenses described at http://http://geoquery.org/toolsguides. By clicking submit you agree to the terms, which are summarized as:

As long as you:

Attribute: You must attribute any public use of the database, or works produced from the database, in the manner specified in the license. For any use or redistribution of the database, or works produced from it, you must make clear to others the license of the database and keep intact any notices on the original database.

You are free:

To Share: To copy, distribute and use the database.

To Create: To produce works from the database.

To Adapt: To modify, transform and build upon the database.

This is not a license. It is simply a handy reference for understanding the ODC-BY 1.0 — it is a human-readable expression of some of its key terms. This summary has no legal value, and its contents do not appear in the actual license. Read the full ODC-BY 1.0 license text at geo.aiddata.org/license for the exact terms that apply.

Acknowledgements

GeoQuery is an academic research project based out of AidData at William and Mary dedicated to enabling the use of spatial data in decision-making.

This work was performed in part using computational facilities at the College of William and Mary which were provided with assistance from the National Science Foundation, the Virginia Port Authority, and Virginia's Commonwealth Technology Research Fund.