

National Aggregates of Geospatial Data Collection:
Population, Landscape And Climate Estimates (PLACE)
June, 2003

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Introduction

The *National Aggregates of Geospatial Data* collection is designed to help make geospatial data usable by analysts operating with data at the national level. Data were chosen that met the following criteria:

1. They were global in scope (though some omit polar regions).
2. They were capable of meaningful aggregation at the national level.
3. They were relevant to understanding human-environment interactions.

This is an initial collection that can grow over time as need and feasibility dictate.

Data Format

The data are available in Excel spreadsheet format, as a downloadable file from the web site.

Source Data

The following source data were used to calculate these aggregations. Brief descriptions are given for each dataset, along with the location of more complete documentation and original source data. A complete listing of the derived variables, including the classifications employed, follows.

National Boundaries and Population

The Gridded Population of the World (GPW v. 2) national boundary dataset served as the basis for all national aggregations. This dataset is based partly on the Digital Chart of the World, but introduces a number of changes, including correspondence with 1995 political boundaries. The dataset is available for download, along with documentation, at <http://sedac.ciesin.columbia.edu/plue/gpw/data.html> (under the title “national boundaries and coastlines”).

Population data also come from GPW, which uses national census data to allocate world population on a 2.5 arc-minute global grid. UN-adjusted 1995 data are used.

GPW data are available in both adjusted and unadjusted forms, for 1990 and 1995. Adjusted data apply a uniform conversion factor within each country to make the population total equivalent to the United Nations population counts (because some countries report census data that is discrepant with UN estimates). Users who wish to convert adjusted data in this collection to unadjusted can apply the conversion factor found in the following file: <ftp://ftp.ciesin.org/pub/gpw/ancillary/GPW2.xls>, which is documented in <ftp://ftp.ciesin.org/pub/gpw/ancillary/GPW2Codebook.rtf>.

Source Information: Center for International Earth Science Information Network (CIESIN), Columbia University; International Food Policy Research Institute (IFPRI); and World Resources Institute (WRI). 2000. Gridded Population of the World (GPW), version 2. Palisades, NY: CIESIN, Columbia University. Available at: <http://sedac.ciesin.columbia.edu/plue/gpw>.

Elevation

The United States Geological Survey (USGS) GTOPO30 data are based on eight sources of elevation information, including Digital Terrain Elevation Data, Digital Chart of the World, USGS Digital Elevation Models, Army Map Service Maps, International Map of the World, Peru Map, New Zealand DEM, and Antarctic Digital Database. This data set includes a global digital elevation model (DEM) with a horizontal grid spacing of 30 arc seconds (approximately 1 kilometer).

Source Information: USGS EROS Data Center. 1996. GTOPO30. Sioux Falls, SD USA. <http://edcwww.cr.usgs.gov/landdaac/gtopo30/gtopo30.html>.

Climate

Köppen Climate Classification data of the world, obtained from the Food and Agriculture Organization (FAO) Environment and Natural Resources Service (SDRN), were used for the analyses. The classification

system is based on annual and monthly averages of temperature and precipitation. The system differentiates five major climatic types, which are as follows:

- (A) Tropical Moist Climates (all months have average temperatures above 18 degrees Celsius)
- (B) Dry Climates (deficient precipitation during most of the year)
- (C) Moist Mid-latitude Climates with Mild Winters
- (D) Moist Mid-Latitude Climates with Cold Winters
- (E) Polar Climates (extremely cold winters and summers)

Additional sub-classifications are identified in the variable list at the end of this document.

Source Information: FAO's Environment and Natural Resources Service (SDRN) – Agrometeorology Group. 1997. Global Climate Maps. Köppen Climate Classification Map. <http://www.fao.org/WAICENT/FAOINFO/SUSTDEV/EIdirect/climate/EIsp0068.htm>.

Coastal Boundaries

Formerly known as Digital Chart of the World, the U.S. National Imagery and Mapping Agency's Level 0 Vector Smart Map coastline data were used for generating variables relating to proximity to coasts (100km and 200km). The scale of 1:1 million was used for this analysis.

Source Information: The U.S. National Imagery and Mapping Agency (NIMA). Vector Smart Map (VMap), Level 0: <http://www.nima.mil/publications/vmap0.html>

Biomes

The biome dataset was obtained from the World Wildlife Fund (WWF) Terrestrial Ecoregions of the World, which maps 14 biomes. This dataset is at the scale of 1:1 million.

Source Information: <http://www.worldwildlife.org/ecoregions/>. See also Olson, D.M., E. Dinerstein, E.D. Wikramanayake, N.D. Burgess, G.V.N. Powell, E.C. Underwood, J.A. D'Amico, H.E. Strand, J.C. Morrison, C.J. Loucks, T.F. Allnutt, J.F. Lamoreux, T.H. Ricketts, I. Itoua, W.W. Wettengel, Y. Kura, P. Hedao, and K. Kassem. 2001. Terrestrial ecoregions of the world: A new map of life on Earth. *BioScience* 51(11): 933-938.

Methods

Two related methods were used to calculate the variables in this dataset.

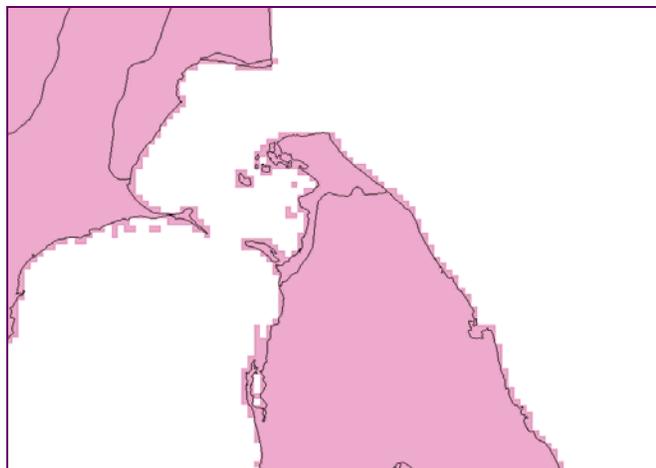
- 1) The variables reporting area measurements (in sq. km. or percent of total area) can be thought of as two-dimensional variables. They were calculated by overlaying the variable in question with national boundaries, and estimating the area within each national boundary that overlaps with the different values for that variable. For continuous variables, we assigned discrete classes; for categorical variables, we used the classifications provided in the source data. Such processing yields a measure, for example, of the percent of a country's territory that is within 100 kilometers of a coast.
- 2) The variables reporting population measurements (in number of people or percent of total population) can be thought of as three-dimensional variables. They were calculated by overlaying the variable in question with both national boundaries and gridded population, and then estimating the number of people within each national boundary that overlaps with the different values for that variable. This three-dimensional processing yields a measure, for example, of the percent of a country's population living within 100 kilometers of a coast.

For area estimation all the datasets were projected to Mollweide equal area projection. For population estimates data were converted to geographic (latitude/longitude) coordinate system to match with the reference coordinate system of GPW.

Coastal boundary data available in geographic (latitude/longitude) coordinate system were projected to cylindrical equidistant projection system. The projected data were buffered within 100 and 200 km from the coast. These two buffer layers were then unprojected to a geographic coordinate system to match with the GPW data.

Known Errors

1. An overlay problem arises when multiple data sets of disparate scales, qualities, and resolutions are combined. This problem is exacerbated in island states and other countries with long coastlines relative to their areas. As a result, sizable errors may be found in either population or area estimation. These inaccuracies arise for the following reasons:
 - a. The area estimates in the biome, climate zone, and elevation data sets do not exactly match the area estimates in the GPW national boundary data set, which leads to some mis-estimation of area and population (e.g., the estimated size of Jamaica not identical in the climate zone and GPW boundary data sets).
 - b. Country boundaries are linear features that are generally distorted in raster data, depending on the cell resolution (in other words, raster data do not accurately represent linear features). As a result, they introduce errors in both perimeter and shape. The graphic below shows southern India and northern Sri Lanka, where the zig-zag shape represents the raster data and the smooth line is vector data. Countries are usually represented as vector data, which are more accurate than raster data. However, the vector data are transformed here to raster data in order to make the PLACE calculations possible. This problem is worse for countries comprised of many islands and long coastlines because there are more boundaries susceptible to vector-raster disagreement.



2. For population-related variables, there is significant variation in the spatial resolution of the source data. Some countries collect and report population counts in very small census units, and others rely on much larger units. The larger the underlying census unit, the greater the error in any estimate that relies on these population estimates. We report the average size of the census unit for each country. It should be noted that these census units are frequently not uniform in size, and that for some purposes this average

resolution measure may not provide an adequate estimate of error. A detailed table that includes maps of the census units used here is found at <http://sedac.ciesin.org/plue/gpw/table.html>.

Error Measurement

One quantitative measure of the degree to which values for a particular country are susceptible to these types of error is the variance among what we call “implicit total area” and “implicit total population” measures. For each group of variables (biome, climate zone, coastal proximity, density, and elevation), we report the implicit total area and implicit total population as the sum of the areas and populations for all classes within that group of variables. For example, the implicit biome total area is the sum of the 17 separate biome classes’ area measurements. The greater these implicit area measures diverge from each other, the greater the error.

Acknowledgment

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Codebook

VARIABLE NAME	VARIABLE DESCRIPTION
ISO3	International Standards Organization unique three-letter country or area code.
CONT	continent name.
CNTRYAR	country or area name.
ARDN1	land area (sq. km), where the population density is 0 persons per sq. km. * •
ARDN2	land area (sq. km), where the population density is 0-2 persons per sq. km. * •
ARDN3	land area (sq. km), where the population density is 2-4 persons per sq. km. * •
ARDN4	land area (sq. km), where the population density is 5-10 persons per sq. km. * •
ARDN5	land area (sq. km), where the population density is 10-15 persons per sq. km. * •
ARDN6	land area (sq. km), where the population density is 15-50 persons per sq. km. * •
ARDN7	land area (sq. km), where the population density is 50-100 persons per sq. km. * •
ARDN8	land area (sq. km), where the population density is 100-500 persons per sq. km. * •
ARDN9	land area (sq. km), where the population density is 500-1,000 persons per sq. km. * •
ARDN10	land area (sq. km), where the population density is 1,000-10,000 persons per sq. km. * •
ARDN11	land area (sq. km), where the population density is 10,000-50,000 persons per sq. km. * •
ARDN12	land area (sq. km), where the population density is >50000 persons per sq. km. * •
ARDN00	land area (sq. km), where the population density data are missing. * •
PARDN1	percent land area, where the population density is 0 persons per sq. km. •
PARDN2	percent land area, where the population density is 0-2 persons per sq. km. •
PARDN3	percent land area, where the population density is 2-4 persons per sq. km. •
PARDN4	percent land area, where the population density is 5-10 persons per sq. km. •
PARDN5	percent land area, where the population density is 10-15 persons per sq. km. •
PARDN6	percent land area, where the population density is 15-50 persons per sq. km. •
PARDN7	percent land area, where the population density is 50-100 persons per sq. km. •
PARDN8	percent land area, where the population density is 100-500 persons per sq. km. •
PARDN9	percent land area, where the population density is 500-1,000 persons per sq. km. •
PARDN10	percent land area, where the population density is 1,000-10,000 persons per sq. km. •
PARDN11	percent land area, where the population density is 10,000-50,000 persons per sq. km. •
PARDN12	percent land area, where the population density is >50000 persons per sq. km. •
PARDN00	percent land area, where the population density data are missing. •
AREL1	land area (sq. km), where the elevation is <5 meters. •
AREL2	land area (sq. km), where the elevation is 5-10 meters. •
AREL3	land area (sq. km), where the elevation is 10-25 meters. •
AREL4	land area (sq. km), where the elevation is 25-50 meters. •
AREL5	land area (sq. km), where the elevation is 50-100 meters. •
AREL6	land area (sq. km), where the elevation is 100-200 meters. •
AREL7	land area (sq. km), where the elevation is 200-400 meters. •
AREL8	land area (sq. km), where the elevation is 400-800 meters. •
AREL9	land area (sq. km), where the elevation is 800-1500 meters. •
AREL10	land area (sq. km), where the elevation is 1500-3000 meters. •
AREL11	land area (sq. km), where the elevation is 3000-5000 meters. •
AREL12	land area (sq. km), where the elevation is >5000 meters. •
AREL00	land area (sq. km), where the elevation data are missing. •
PAREL1	percent land area, where the elevation is <5 meters. •
PAREL2	percent land area, where the elevation is 5-10 meters. •
PAREL3	percent land area, where the elevation is 10-25 meters. •
PAREL4	percent land area, where the elevation is 25-50 meters. •
PAREL5	percent land area, where the elevation is 50-100 meters. •
PAREL6	percent land area, where the elevation is 100-200 meters. •

VARIABLE NAME	VARIABLE DESCRIPTION
PAREL7	percent land area, where the elevation is 200-400 meters. •
PAREL8	percent land area, where the elevation is 400-800 meters. •
PAREL9	percent land area, where the elevation is 800-1500 meters. •
PAREL10	percent land area, where the elevation is 1500-3000 meters. •
PAREL11	percent land area, where the elevation is 3000-5000 meters. •
PAREL12	percent land area, where the elevation is >5000 meters. •
PAREL00	percent land area, where the elevation data are missing. •
ARCZ1	land area (sq. km), in climatic zone of water (W).
ARCZ2	land area (sq. km), in climatic zone of polar (E).
ARCZ3	land area (sq. km), in climatic zone of cold, subarctic-severe winter, no dry season, cool summer (Dfc).
ARCZ4	land area (sq. km), in climatic zone of cold, subarctic-severe dry winter, cool summer (Dwc).
ARCZ5	land area (sq. km), in climatic zone of cold, subarctic-severe dry winter, no dry season, cool summer (Dfd).
ARCZ6	land area (sq. km), in climatic zone of temperate, marine west coast-mild with no dry season, cool summer (Cfc).
ARCZ7	land area (sq. km), in climatic zone of dry, highland (H).
ARCZ8	land area (sq. km), in climatic zone of cold, humid continental-humid with severe winter, no dry season, warm summer (Dfb).
ARCZ9	land area (sq. km), in climatic zone of temperate, marine west coast-mild with no dry season, warm summer (Cfb).
ARCZ10	land area (sq. km), in climatic zone of dry, mid-latitude steppe (BSk).
ARCZ11	land area (sq. km), in climatic zone of cold, humid continental-humid with severe dry winter, warm summer (Dwb).
ARCZ12	land area (sq. km), in climatic zone of dry, mid-latitude desert (BWk).
ARCZ13	land area (sq. km), in climatic zone of temperate, Mediterranean-with dry warm summer (Csb).
ARCZ14	land area (sq. km), in climatic zone of temperate, humid subtropical-mild with no dry season, hot summer (Cfa).
ARCZ15	land area (sq. km), in climatic zone of cold, humid continental-humid with severe winter, no dry season, hot summer (Dwa).
ARCZ16	land area (sq. km), in climatic zone of temperate, Mediterranean-mild with dry, hot summer (Csa).
ARCZ17	land area (sq. km), in climatic zone of cold, humid continental-humid with severe winter, no dry season, hot summer (Dfa).
ARCZ18	land area (sq. km), in climatic zone of temperate, humid subtropical-mild with dry winter, hot summer (Cwa).
ARCZ19	land area (sq. km), in climatic zone of dry, subtropical steppe (BSh).
ARCZ20	land area (sq. km), in climatic zone of dry, subtropical desert (BWh).
ARCZ21	land area (sq. km), in climatic zone of tropical, tropical savanna (Aw).
ARCZ22	land area (sq. km), in climatic zone of tropical, tropical monsoonal (Am).
ARCZ23	land area (sq. km), in climatic zone of tropical, tropical wet (Af).
ARCZ24	land area (sq. km), in climatic zone of temperate, humid subtropical-mild with dry winter, warm summer (Cwb).
ARCZ00	land area (sq. km), where climatic zone data are missing.
PARCZ1	percent land area, in climatic zone of water (W).
PARCZ2	percent land area, in climatic zone of polar (E).
PARCZ3	percent land area, in climatic zone of cold, subarctic-severe winter, no dry season, cool summer (Dfc).
PARCZ4	percent land area, in climatic zone of cold, subarctic-severe dry winter, cool summer (Dwc).
PARCZ5	percent land area, in climatic zone of cold, subarctic-severe dry winter, no dry season, cool summer (Dfd).
PARCZ6	percent land area, in climatic zone of temperate, marine west coast-mild with no dry season, cool summer (Cfc).
PARCZ7	percent land area, in climatic zone of dry, highland (H).
PARCZ8	percent land area, in climatic zone of cold, humid continental-humid with severe winter, no dry season, warm summer (Dfb).
PARCZ9	percent land area, in climatic zone of temperate, marine west coast-mild with no dry season, warm summer (Cfb).
PARCZ10	percent land area, in climatic zone of dry, mid-latitude steppe (BSk).
PARCZ11	percent land area, in climatic zone of cold, humid continental-humid with severe dry winter, warm summer (Dwb).
PARCZ12	percent land area, in climatic zone of dry, mid-latitude desert (BWk).
PARCZ13	percent land area, in climatic zone of temperate, Mediterranean-with dry warm summer (Csb).
PARCZ14	percent land area, in climatic zone of temperate, humid subtropical-mild with no dry season, hot summer (Cfa).
PARCZ15	percent land area, in climatic zone of cold, humid continental-humid with severe winter, no dry season, hot summer (Dwa).
PARCZ16	percent land area, in climatic zone of temperate, Mediterranean-mild with dry, hot summer (Csa).
PARCZ17	percent land area, in climatic zone of cold, humid continental-humid with severe winter, no dry season, hot summer (Dfa).
PARCZ18	percent land area, in climatic zone of temperate, humid subtropical-mild with dry winter, hot summer (Cwa).
PARCZ19	percent land area, in climatic zone of dry, subtropical steppe (BSh).
PARCZ20	percent land area, in climatic zone of dry, subtropical desert (BWh).

VARIABLE NAME	VARIABLE DESCRIPTION
PARCZ21	percent land area, in climatic zone of tropical, tropical savanna (Aw).
PARCZ22	percent land area, in climatic zone of tropical, tropical monsoonal (Am).
PARCZ23	percent land area, in climatic zone of tropical, tropical wet (Af).
PARCZ24	percent land area, in climatic zone of temperate, humid subtropical-mild with dry winter, warm summer (Cwb).
PARCZ00	percent land area where climatic zone data are missing.
ARCP2	land area (sq. km), within 200 km of the coast.
ARCP1	land area (sq. km), within 100 km of the coast.
PARCP2	percent land area, within 200 km of the coast.
PARCP1	percent land area, within 100 km of the coast.
ARBI1	land area (sq. km), in the biome class of tropical & subtropical moist broadleaf forests.
ARBI2	land area (sq. km), in the biome class of tropical & subtropical dry broadleaf forests.
ARBI3	land area (sq. km), in the biome class of tropical & subtropical coniferous forests.
ARBI4	land area (sq. km), in the biome class of temperate broadleaf & mixed forests.
ARBI5	land area (sq. km), in the biome class of temperate conifer forests.
ARBI6	land area (sq. km), in the biome class of boreal forests/taiga.
ARBI7	land area (sq. km), in the biome class of tropical & subtropical grasslands, savannas & shrublands.
ARBI8	land area (sq. km), in the biome class of temperate grasslands, savannas & shrublands.
ARBI9	land area (sq. km), in the biome class of flooded grasslands & savannas.
ARBI10	land area (sq. km), in the biome class of montane grasslands & shrublands.
ARBI11	land area (sq. km), in the biome class of tundra.
ARBI12	land area (sq. km), in the biome class of Mediterranean forests, woodlands & scrub.
ARBI13	land area (sq. km), in the biome class of deserts & xeric shrublands.
ARBI14	land area (sq. km), in the biome class of mangroves.
ARBI98	land area (sq. km), in the biome class of lake.
ARBI99	land area (sq. km), in the biome class of rock and ice.
ARBI00	land area (sq. km) where the biome data are missing.
PARBI1	percent land area, in the biome class of tropical & subtropical moist broadleaf forests.
PARBI2	percent land area, in the biome class of tropical & subtropical dry broadleaf forests.
PARBI3	percent land area, in the biome class of tropical & subtropical coniferous forests.
PARBI4	percent land area, in the biome class of temperate broadleaf & mixed forests.
PARBI5	percent land area, in the biome class of temperate conifer forests.
PARBI6	percent land area, in the biome class of boreal forests/taiga.
PARBI7	percent land area, in the biome class of tropical & subtropical grasslands, savannas & shrublands.
PARBI8	percent land area, in the biome class of temperate grasslands, savannas & shrublands.
PARBI9	percent land area, in the biome class of flooded grasslands & savannas.
PARBI10	percent land area, in the biome class of montane grasslands & shrublands.
PARBI11	percent land area, in the biome class of tundra.
PARBI12	percent land area, in the biome class of Mediterranean forests, woodlands & scrub.
PARBI13	percent land area, in the biome class of deserts & xeric shrublands.
PARBI14	percent land area, in the biome class of mangroves.
PARBI98	percent land area, in the biome class of lake.
PARBI99	percent land area, in the biome class of rock and ice.
PARBI00	percent land area where the biome data are missing.
T_ARDN	implicit total country area for area-by-density variables (sum of ARDN1 through ARDN00).
T_AREL	implicit total country area for area-by-elevation variables (sum of AREL1 through AREL00).
T_ARCZ	implicit total country area or area-by-climatic-zone variables (sum of ARCZ1 through ARCZ24).
T_ARBI	implicit total country area for area-by-biome variables (sum of ARBI1 through ARBI00).
POPDN1	number of persons living in area(s) where the population density is 0 person per sq. km. * •
POPDN2	number of persons living in area(s) where the population density is 0-2 persons per sq. km. * •
POPDN3	number of persons living in area(s) where the population density is 2-5 persons per sq. km. * •
POPDN4	number of persons living in area(s) where the population density is 5-10 persons per sq. km. * •
POPDN5	number of persons living in area(s) where the population density is 10-5 persons per sq. km. * •
POPDN6	number of persons living in area(s) where the population density is 15-50 persons per sq. km. * •
POPDN7	number of persons living in area(s) where the population density is 50-100 persons per sq. km. * •
POPDN8	number of persons living in area(s) where the population density is 100-500 persons per sq. km. * •

VARIABLE NAME	VARIABLE DESCRIPTION
POPDN9	number of persons living in area(s) where the population density is 500-1,000 persons per sq. km. * •
POPDN10	number of persons living in area(s) where the population density is 1,000-10,000 persons per sq. km. * •
POPDN11	number of persons living in area(s) where the population density is 10,000-50,000 persons per sq. km. * •
POPDN12	number of persons living in area(s) where the population density is >50000 persons per sq. km. * •
POPDN00	number of persons living in area(s) where the population density data are missing. * •
PPOPDN1	percent population, in area(s) where the population density is 0 person per sq. km. •
PPOPDN2	percent population, in area(s) where the population density is 0-2 persons per sq. km. •
PPOPDN3	percent population, in area(s) where the population density is 2-5 persons per sq. km. •
PPOPDN4	percent population, in area(s) where the population density is 5-10 persons per sq. km. •
PPOPDN5	percent population, in area(s) where the population density is 10-5 persons per sq. km. •
PPOPDN6	percent population, in area(s) where the population density is 15-50 persons per sq. km. •
PPOPDN7	percent population, in area(s) where the population density is 50-100 persons per sq. km. •
PPOPDN8	percent population, in area(s) where the population density is 100-500 persons per sq. km. •
PPOPDN9	percent population, in area(s) where the population density is 500-,1000 persons per sq. km. •
PPOPDN10	percent population, in area(s) where the population density is 1,000-10,000 persons per sq. km. •
PPOPDN11	percent population, in area(s) where the population density is 10,000-50,000 persons per sq. km. •
PPOPDN12	percent population, in area(s) where the population density is >50000 persons per sq. km. •
PPOPDN00	percent population, in area(s) where the population density data are missing. •
POPEL1	population, in area(s) where the elevation is <5 meters. * •
POPEL2	population, in area(s) where the elevation is 5-10 meters. * •
POPEL3	population, in area(s) where the elevation is 10-25meters. * •
POPEL4	population, in area(s) where the elevation is 25-50 meters. * •
POPEL5	population, in area(s) where the elevation is 50-100 meters. * •
POPEL6	population, in area(s) where the elevation is 100-200 meters. * •
POPEL7	population, in area(s) where the elevation is 200-400 meters. * •
POPEL8	population, in area(s) where the elevation is 400-800 meters. * •
POPEL9	population, in area(s) where the elevation is 800-1500 meters. * •
POPEL10	population, in area(s) where the elevation is 1500-3000 meters. * •
POPEL11	population, in area(s) where the elevation is 3000-5000 meters. * •
POPEL12	population, in area(s) where the elevation is >5000 meters. * •
POPEL00	population, in area(s) where the elevation data are missing. * •
PPOPEL1	percent population, in area(s) where the elevation is <5 meters. •
PPOPEL2	percent population, in area(s) where the elevation is 5-10 meters. •
PPOPEL3	percent population, in area(s) where the elevation is 10-25 meters. •
PPOPEL4	percent population, in area(s) where the elevation is 25-50 meters. •
PPOPEL5	percent population, in area(s) where the elevation is 50-100 meters. •
PPOPEL6	percent population, in area(s) where the elevation is 100-200 meters. •
PPOPEL7	percent population, in area(s) where the elevation is 200-400 meters. •
PPOPEL8	percent population, in area(s) where the elevation is 400-800 meters. •
PPOPEL9	percent population, in area(s) where the elevation is 800-1500 meters. •
PPOPEL10	percent population, in area(s) where the elevation is 1500-3000 meters. •
PPOPEL11	percent population, in area(s) where the elevation is 3000-5000 meters. •
PPOPEL12	percent population, in area(s) where the elevation is >5000 meters. •
PPOPEL00	percent population, in area(s) where the elevation data are missing. •
POPCZ1	population, in climatic zone of water (W). *
POPCZ2	population, in climatic zone of polar (E). *
POPCZ3	population, in climatic zone of cold, subarctic-severe winter, no dry season, cool summer (Dfc). *
POPCZ4	population, in climatic zone of cold, subarctic-severe dry winter, cool summer (Dwc). *
POPCZ5	population, in climatic zone of cold, subarctic-severe dry winter, no dry season, cool summer (Dfd). *
POPCZ6	population, in climatic zone of temperate, marine west coast-mild with no dry season, cool summer (Cfc). *
POPCZ7	population, in climatic zone of dry, highland (H). *
POPCZ8	population, in climatic zone of cold, humid continental-humid with severe winter, no dry season, warm summer (Dfb).*
POPCZ9	population, in climatic zone of temperate, marine west coast-mild with no dry season, warm summer (Cfb).
POPCZ10	population, in climatic zone of dry, mid-latitude steppe (BSk). *
POPCZ11	population, in climatic zone of cold, humid continental-humid with severe dry winter, warm summer (Dwb). *

VARIABLE NAME	VARIABLE DESCRIPTION
POPCZ12	population, in climatic zone of dry, mid-latitude desert (BWk). *
POPCZ13	population, in climatic zone of temperate, Mediterranean-with dry warm summer (Csb). *
POPCZ14	population, in climatic zone of temperate, humid subtropical-mild with no dry season, hot summer (Cfa). *
POPCZ15	population, in climatic zone of cold, humid continental-humid with severe winter, no dry season, hot summer (Dwa). *
POPCZ16	population, in climatic zone of temperate, Mediterranean-mild with dry, hot summer (Csa). *
POPCZ17	population, in climatic zone of cold, humid continental-humid with severe winter, no dry season, hot summer (Dfa). *
POPCZ18	population, in climatic zone of temperate, humid subtropical-mild with dry winter, hot summer (Cwa). *
POPCZ19	population, in climatic zone of dry, subtropical steppe (BSh). *
POPCZ20	population, in climatic zone of dry, subtropical desert (BWh). *
POPCZ21	population, in climatic zone of tropical, tropical savanna (Aw). *
POPCZ22	population, in climatic zone of tropical, tropical monsoonal (Am). *
POPCZ23	population, in climatic zone of tropical, tropical wet (Af). *
POPCZ24	population, in climatic zone of temperate, humid subtropical-mild with dry winter, warm summer (Cwb). *
POPCZ00	population where climatic zone data are missing. *
PPOPCZ1	percent population, in climatic zone of water (W).
PPOPCZ2	percent population, in climatic zone of polar (E).
PPOPCZ3	percent population, in climatic zone of cold, subarctic-severe winter, no dry season, cool summer (Dfc).
PPOPCZ4	percent population, in climatic zone of cold, subarctic-severe dry winter, cool summer (Dwc).
PPOPCZ5	percent population, in climatic zone of cold, subarctic-severe dry winter, no dry season, cool summer (Dfd).
PPOPCZ6	percent population, in climatic zone of temperate, marine west coast-mild with no dry season, cool summer (Cfc).
PPOPCZ7	percent population, in climatic zone of dry, highland (H).
PPOPCZ8	percent population, in climatic zone of cold, humid continental-humid with severe winter, no dry season, warm summer (Dfb).
PPOPCZ9	percent population, in climatic zone of temperate, marine west coast-mild with no dry season, warm summer (Cfb).
PPOPCZ10	percent population, in climatic zone of dry, mid-latitude steppe (BSk).
PPOPCZ11	percent population, in climatic zone of cold, humid continental-humid with severe dry winter, warm summer (Dwb).
PPOPCZ12	percent population, in climatic zone of dry, mid-latitude desert (BWk).
PPOPCZ13	percent population, in climatic zone of temperate, Mediterranean-with dry warm summer (Csb).
PPOPCZ14	percent population, in climatic zone of temperate, humid subtropical-mild with no dry season, hot summer (Cfa).
PPOPCZ15	percent population, in climatic zone of cold, humid continental-humid with severe winter, no dry season, hot summer (Dwa).
PPOPCZ16	percent population, in climatic zone of temperate, Mediterranean-mild with dry, hot summer (Csa).
PPOPCZ17	percent population, in climatic zone of cold, humid continental-humid with severe winter, no dry season, hot summer (Dfa).
PPOPCZ18	percent population, in climatic zone of temperate, humid subtropical-mild with dry winter, hot summer (Cwa).
PPOPCZ19	percent population, in climatic zone of dry, subtropical steppe (BSh).
PPOPCZ20	percent population, in climatic zone of dry, subtropical desert (BWh).
PPOPCZ21	percent population, in climatic zone of tropical, tropical savanna (Aw).
PPOPCZ22	percent population, in climatic zone of tropical, tropical monsoonal (Am).
PPOPCZ23	percent population, in climatic zone of tropical, tropical wet (Af).
PPOPCZ24	percent population, in climatic zone of temperate, humid subtropical-mild with dry winter, warm summer (Cwb).
PPOPCZ00	percent population where climatic zone data are missing.
POPCP2	population, within 200 km of the coast. *
POPCP1	population, within 100 km of the coast. *
PPOPCP2	percent population, within 200km of the coast.
PPOPCP1	percent population, within 100 km of the coast.
POPBI1	population, in the biome class area(s) of tropical & subtropical moist broadleaf forests. *
POPBI2	population, in the biome class area(s) of tropical & subtropical dry broadleaf forests. *
POPBI3	population, in the biome class area(s) of tropical & subtropical coniferous forests. *
POPBI4	population, in the biome class area(s) of temperate broadleaf & mixed forests. *
POPBI5	population, in the biome class area(s) of temperate conifer forests. *
POPBI6	population, in the biome class area(s) of boreal forests/taiga. *
POPBI7	population, in the biome class area(s) of tropical & subtropical grasslands, savannas & shrublands. *
POPBI8	population, in the biome class area(s) of temperate grasslands, savannas & shrublands. *
POPBI9	population, in the biome class area(s) of flooded grasslands & savannas. *
POPBI10	population, in the biome class area(s) of montane grasslands & shrublands. *
POPBI11	population, in the biome class area(s) of tundra. *
POPBI12	population, in the biome class area(s) of Mediterranean forests, woodlands & scrub. *

VARIABLE NAME	VARIABLE DESCRIPTION
POPBI13	population, in the biome class area(s) of deserts & xeric shrublands. *
POPBI14	population, in the biome class area(s) of mangroves. *
POPBI98	population, in the biome class area(s) of lake. *
POPBI99	population, in the biome class of rock and ice. *
POPBI00	population where biome class data are missing. *
PPOPBI1	percent population, in the biome class area(s) of tropical & subtropical moist broadleaf forests.
PPOPBI2	percent population, in the biome class area(s) of tropical & subtropical dry broadleaf forests.
PPOPBI3	percent population, in the biome class area(s) of tropical & subtropical coniferous forests.
PPOPBI4	percent population, in the biome class area(s) of temperate broadleaf & mixed forests.
PPOPBI5	percent population, in the biome class area(s) of temperate conifer forests.
PPOPBI6	percent population, in the biome class area(s) of boreal forests/taiga.
PPOPBI7	percent population, in the biome class area(s) of tropical & subtropical grasslands, savannas & shrublands.
PPOPBI8	percent population, in the biome class area(s) of temperate grasslands, savannas & shrublands.
PPOPBI9	percent population, in the biome class area(s) of flooded grasslands & savannas.
PPOPBI10	percent population, in the biome class area(s) of montane grasslands & shrublands.
PPOPBI11	percent population, in the biome class area(s) of tundra.
PPOPBI12	percent population, in the biome class area(s) of Mediterranean forests, woodlands & scrub.
PPOPBI13	percent population, in the biome class area(s) of deserts & xeric shrublands.
PPOPBI14	percent population, in the biome class area(s) of mangroves.
PPOPBI98	percent population, in the biome class area(s) of lake.
PPOPBI99	percent population, in the biome class area(s) of rock and ice.
PPOPBI00	percent population where biome class data are missing.
RSLTN1	average resolution of the census units used to estimate population density, in square kilometers; calculated as the land area divided by number of census units.
RSLTN2	square root of RSLTN1, in kilometers.
T POPDN	implicit total country population for population-by-density variables (sum of POPDN1 through POPDN00).
T POPEL	implicit total country population for population-by-elevation variables (sum of POPEL1 through POPEL00).
T POPCZ	implicit total country population or population-by-climatic-zone variables (sum of POPCZ1 through POPCZ24).
T POPBI	implicit total country population for population-by-biome variables (sum of POPBI1 through POPBI00).
GPW95POP	GPW 1995 total population. *
*	Population figures are expressed in thousands.
.	Categories are mutually exclusive. Where number values within variable description overlap (between class breakdowns), the higher end of the lower range is inclusive and the lower end of the higher range is exclusive. For example, ARDN1 is defined as "land area (sq. km.), where the population density is: 0 person per sq. km." and ARDN2 is defined as "land area (sq. km.), where the population density is: 0-2 persons per sq. km." Although the labels suggest possible overlap, ARDN2 is actually calculated as >0-2 persons per sq. km. Likewise, POPDN2 is actually calculated as, "number of persons living in area(s) where the population density is: >0-2 persons per sq. km."