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## Worldwide Research

DEGREE OF URBANISATION:  
HARMONIZED VARIABLE FOR CROSS-COUNTRY  
SURVEY RESEARCH

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## DEGREE OF URBANISATION: HARMONIZED VARIABLE FOR CROSS-COUNTRY SURVEY RESEARCH

Urbanicity plays an important role in shaping how people feel about their lives. Historically, cross-country analysis of survey data by urbanicity level had been limited by a lack of a universal definition of what constitutes various levels of urbanicity, such as urban vs. rural areas.

In partnership with the European Commission, the 2022 Gallup World Poll survey data now includes a new variable, Degree of Urbanisation (DEGURBA). This variable was developed by a coalition of six international organizations (the EU, FAO, ILO, OECD, UN-Habitat and the World Bank) and it provides a harmonized definition of different levels of urbanicity across the world. The UN Statistical Commission endorsed the Degree of Urbanisation for statistical comparisons in 2020. The Degree of Urbanisation approaches the concept of urbanicity as an urban-rural continuum and it classifies the entire territory of each country into different levels of urbanisation. To classify geographic areas, DEGURBA uses a combination of the following criteria: a minimum population density threshold applied population grid cells of 1km<sup>2</sup> in size and a minimum population size threshold applied to contiguous grid cells above the density threshold. As a result, geographic units are classified as:

- Cities (code 3),
- Towns and semi-dense areas (code 2), or
- Rural areas (code 1).

For more information about the DEGURBA classification, please go to:

[https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Degree\\_of\\_urbanisation\\_classification\\_-\\_2011\\_revision#Degree\\_of\\_urbanisation\\_classification](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Degree_of_urbanisation_classification_-_2011_revision#Degree_of_urbanisation_classification)

In the World Poll datasets, Gallup used the DEGURBA variable to classify respondents as living in one of the three types of areas. If Gallup was unable to classify respondents into a DEGURBA category, we coded such cases as 'not available' (code 9).

For countries where World Poll data were collected face-to-face, Gallup appended the Degree of Urbanization using the GHSL (Global Human Settlement Layer) file that is associated with the geographic coordinates (latitude/longitude) captured during the interview.

For countries where World Poll data were collected over telephone, Gallup matched respondents' reported postal codes or LAUs (local administrative units) to information from the European Commission, which mapped these geographical units to the appropriate Degree of Urbanisation.

Please note that for five countries/territories out of the 140+ surveyed by the Gallup World Poll in 2022, DEGURBA is currently not available: Japan, Myanmar, Northern Cyprus, Ukraine and the United Arab Emirates (UAE). For these respondents, the Degree of Urbanisation variable is blank, rather than 9 ("not available"). Gallup expects to update this information for Japan, Myanmar and UAE.

## Appendix A: Level used to match DEGURBA, by Country 2022

Country/Territory	Data Collection Mode	Level Used to Match DEGURBA
Afghanistan	Face-to-Face	GPS location of sampled ultimate cluster
Albania	Face-to-Face	GPS location of sampled ultimate cluster
Algeria	Face-to-Face	GPS location of sampled ultimate cluster
Argentina	Face-to-Face	GPS location of sampled ultimate cluster
Armenia	Face-to-Face	GPS location of sampled ultimate cluster
Australia	Telephone	Postal code
Austria	Telephone	Postal code
Azerbaijan	Face-to-Face	GPS location of sampled ultimate cluster
Bangladesh	Face-to-Face	GPS location of sampled ultimate cluster
Belgium	Telephone	Postal code
Benin	Face-to-Face	GPS location of sampled ultimate cluster
Bolivia	Face-to-Face	GPS location of sampled ultimate cluster
Bosnia and Herzegovina	Face-to-Face	GPS location of sampled ultimate cluster
Botswana	Face-to-Face	GPS location of sampled ultimate cluster
Brazil	Face-to-Face	GPS location of sampled ultimate cluster
Bulgaria	Face-to-Face	GPS location of sampled ultimate cluster
Cambodia	Face-to-Face	GPS location of sampled ultimate cluster
Cameroon	Face-to-Face	GPS location of sampled ultimate cluster
Canada	Telephone	Postal code
Chad	Face-to-Face	GPS location of sampled ultimate cluster
Chile	Face-to-Face	GPS location of sampled ultimate cluster
Colombia	Face-to-Face	GPS location of sampled ultimate cluster
Comoros	Face-to-Face	GPS location of sampled ultimate cluster
Congo, Democratic Republic of the	Face-to-Face	GPS location of sampled ultimate cluster
Congo	Face-to-Face	GPS location of sampled ultimate cluster
Costa Rica	Face-to-Face	GPS location of sampled ultimate cluster
Croatia	Face-to-Face	GPS location of sampled ultimate cluster
Cyprus	Telephone	Postal code and LAU
Czech Republic	Telephone	Postal code
Denmark	Telephone	Postal code
Dominican Republic	Face-to-Face	GPS location of sampled ultimate cluster
Ecuador	Face-to-Face	GPS location of sampled ultimate cluster
Egypt	Face-to-Face	GPS location of sampled ultimate cluster
El Salvador	Face-to-Face	GPS location of sampled ultimate cluster
Estonia	Telephone	Postal code and LAU
Eswatini	Face-to-Face	GPS location of sampled ultimate cluster
Ethiopia	Face-to-Face	GPS location of sampled ultimate cluster

Country/Territory	Data Collection Mode	Level Used to Match DEGURBA
Finland	Telephone	Postal code
France	Telephone	Postal code
Gabon	Face-to-Face	GPS location of sampled ultimate cluster
Georgia	Face-to-Face	GPS location of sampled ultimate cluster
Germany	Telephone	Postal code
Ghana	Face-to-Face	GPS location of sampled ultimate cluster
Greece	Face-to-Face	GPS location of sampled ultimate cluster
Guatemala	Face-to-Face	GPS location of sampled ultimate cluster
Guinea	Face-to-Face	GPS location of sampled ultimate cluster
Honduras	Face-to-Face	GPS location of sampled ultimate cluster
Hong Kong, S.A.R. of China	Telephone	LAU (District)
Hungary	Telephone	Postal code
Iceland	Telephone	Postal code
India	Face-to-Face	GPS location of sampled ultimate cluster
Indonesia	Face-to-Face	GPS location of sampled ultimate cluster
Iran	Telephone	LAU (Shahrestan)
Iraq	Face-to-Face	GPS location of sampled ultimate cluster
Ireland	Telephone	Postal code
Israel	Face-to-Face	GPS location of sampled ultimate cluster
Italy	Telephone	Postal code
Cote D'Ivoire	Face-to-Face	GPS location of sampled ultimate cluster
Jamaica	Face-to-Face	GPS location of sampled ultimate cluster
Japan	Telephone	Not currently available
Jordan	Face-to-Face	GPS location of sampled ultimate cluster
Kazakhstan	Face-to-Face	GPS location of sampled ultimate cluster
Kenya	Face-to-Face	GPS location of sampled ultimate cluster
Kosovo	Face-to-Face	GPS location of sampled ultimate cluster
Kuwait	Telephone	LAU (Mintaqah)
Kyrgyzstan	Face-to-Face	GPS location of sampled ultimate cluster
Lao People's Democratic Republic	Face-to-Face	GPS location of sampled ultimate cluster
Latvia	Telephone	Postal code and LAU
Lebanon	Face-to-Face	GPS location of sampled ultimate cluster
Lesotho	Face-to-Face	GPS location of sampled ultimate cluster
Liberia	Face-to-Face	GPS location of sampled ultimate cluster
Libya	Telephone	LAU (muhafazat/governorates)
Lithuania	Face-to-Face	GPS location of sampled ultimate cluster
Luxembourg	Telephone	Postal code
Madagascar	Face-to-Face	GPS location of sampled ultimate cluster
Malawi	Face-to-Face	GPS location of sampled ultimate cluster
Malaysia	Face-to-Face	GPS location of sampled ultimate cluster

Country/Territory	Data Collection Mode	Level Used to Match DEGURBA
Mali	Face-to-Face	GPS location of sampled ultimate cluster
Malta	Telephone	Postal code and LAU
Mauritania	Face-to-Face	GPS location of sampled ultimate cluster
Mauritius	Telephone	LAU (District)
Mexico	Face-to-Face	GPS location of sampled ultimate cluster
Moldova, Republic of	Face-to-Face	GPS location of sampled ultimate cluster
Mongolia	Face-to-Face	GPS location of sampled ultimate cluster
Montenegro	Face-to-Face	GPS location of sampled ultimate cluster
Morocco	Face-to-Face	GPS location of sampled ultimate cluster
Mozambique	Face-to-Face	GPS location of sampled ultimate cluster
Myanmar	Telephone	Not currently available
Namibia	Face-to-Face	GPS location of sampled ultimate cluster
Nepal	Face-to-Face	GPS location of sampled ultimate cluster
Netherlands	Telephone	Postal code
New Zealand	Telephone	Postal code
Nicaragua	Face-to-Face	GPS location of sampled ultimate cluster
Niger	Face-to-Face	GPS location of sampled ultimate cluster
Nigeria	Face-to-Face	GPS location of sampled ultimate cluster
North Macedonia	Face-to-Face	GPS location of sampled ultimate cluster
Northern Cyprus	Telephone	Not available
Norway	Telephone	Postal code
Pakistan	Face-to-Face	GPS location of sampled ultimate cluster
Palestinian Territories	Face-to-Face	GPS location of sampled ultimate cluster
Panama	Face-to-Face	GPS location of sampled ultimate cluster
Paraguay	Face-to-Face	GPS location of sampled ultimate cluster
Peru	Face-to-Face	GPS location of sampled ultimate cluster
Philippines	Face-to-Face	GPS location of sampled ultimate cluster
Poland	Face-to-Face	GPS location of sampled ultimate cluster
Portugal	Telephone	Postal code
Puerto Rico	Face-to-Face	GPS location of sampled ultimate cluster
Romania	Face-to-Face	GPS location of sampled ultimate cluster
Russian Federation	Face-to-Face	GPS location of sampled ultimate cluster
Saudi Arabia	Telephone	LAU (District)
Senegal	Face-to-Face	GPS location of sampled ultimate cluster
Serbia	Face-to-Face	GPS location of sampled ultimate cluster
Sierra Leone	Face-to-Face	GPS location of sampled ultimate cluster
Singapore	Telephone	All respondents coded as 3 Cities
Slovakia	Face-to-Face	GPS location of sampled ultimate cluster
Slovenia	Telephone	Postal code
South Africa	Face-to-Face	GPS location of sampled ultimate cluster

Country/Territory	Data Collection Mode	Level Used to Match DEGURBA
South Korea	Telephone	LAU (city, city district, or county)
Spain	Telephone	Postal code
Sri Lanka	Face-to-Face	GPS location of sampled ultimate cluster
Sweden	Telephone	Postal code
Switzerland	Telephone	Postal code
Taiwan, Province of China	Telephone	LAU (county/ district)
Tajikistan	Face-to-Face	GPS location of sampled ultimate cluster
Tanzania	Face-to-Face	GPS location of sampled ultimate cluster
Thailand	Face-to-Face	GPS location of sampled ultimate cluster
Gambia	Face-to-Face	GPS location of sampled ultimate cluster
Togo	Face-to-Face	GPS location of sampled ultimate cluster
Tunisia	Face-to-Face	GPS location of sampled ultimate cluster
Türkiye	Face-to-Face	GPS location of sampled ultimate cluster
Uganda	Face-to-Face	GPS location of sampled ultimate cluster
Ukraine	Telephone	Not available
United Arab Emirates	Telephone	Currently not available
United Kingdom of Great Britain and Northern Ireland	Telephone	Postal code
United States of America	Telephone	Postal code
Uruguay	Face-to-Face	GPS location of sampled ultimate cluster
Uzbekistan	Face-to-Face	GPS location of sampled ultimate cluster
Venezuela	Face-to-Face	GPS location of sampled ultimate cluster
Vietnam	Face-to-Face	GPS location of sampled ultimate cluster
Yemen	Face-to-Face	GPS location of sampled ultimate cluster
Zambia	Face-to-Face	GPS location of sampled ultimate cluster
Zimbabwe	Face-to-Face	GPS location of sampled ultimate cluster

## Appendix B: Assigning DEGURBA Values for Face-to-Face Countries

### Direct inputs:

- Population settlement raster file coded by Degree of Urbanisation: it is in Mollweide projection (Esri 5409), resolution 1sq km, 1000mx1000m units.  
<https://ghsl.jrc.ec.europa.eu/download.php?ds=smod>
- The survey data file to merge with LONGITUDE/LATITUDE : by default, the projection is WG 84 / ESPG 4326

### Input required for quality control :

- Country shape file from GADM: projection is WG 84 / ESPG 4326 [Database of Global Administrative Boundaries \(GADM\) | DANTE Project \(dante-project.org\)](#)

**General consideration:** For accurate assignment of DEGURBA values, coordinates are always reprojected to Mollweide (Esri 5409) – that is the DEBURGA raster file projection. Regardless of which tool is used, this is required.

### The following steps detail the assignment process:

1. The first step involves creation of a shapefile from Supra-bounding box of the survey data: Supra-bounding box is used to make sure every point is processed accurately, as some points may be out of the country-bounding box due to error. The bounding box of the survey dataset is [Ymax=Max(LATITUDE), Ymin=Min(LATITUDE), Xmax=Max(LONGITUDE), Xmin=Min(LONGITUDE)]. The Supra-bounding box is [Ymax+0.5, Ymin-0.5, Xmax+0.5, Xmin-0.5]. Expanding the bounding box is a way to make sure that we can process points that are on the boundary.
2. The second step involves creating a subset of the DEGURBA raster file by clipping the whole raster file to the Supra-bounding box created in step 1.
3. Process each point (X,Y) of the survey dataset separately (the geo-file being in ESRI 5409):
  - Extract the raster value from the DEBURGA clipped subset
  - If value is missing (due to resolution) ArcMap for example would fix this automatically:
    - Clip the DEBURGA around the specific point with the box (Y+1,Y-1, X+1, X-1):
    - Extract the value of the raster file at X,Y in the above subset of the DEBURGA raster file
4. Quality control:
  - Ensure (X,Y) is within country boundary: GADM shapefile at the country level is used here. If any GPS did not meet Gallup's quality standards, they were not included in the analysis.
  - A spatial-join method was used to combine the World Poll data to the GHS FUA data. This method combines the attributes of each data source based on their spatial relationship. No data was appended to World Poll interviews that did not fall within an FUA. The resulting data was mapped against other shapefiles, and the World Poll's "Major Cities" item to ensure accuracy.