

## JRC Dataset

### GHS Urban Centre Database 2015, multitemporal and multidimensional attributes, R2019A

#### Description:

The Global Human Settlement Layer (GHSL) produces new global spatial information, evidence-based analytics, and knowledge describing the human presence in the planet. The Joint Research Centre (JRC) and the Directorate General for Regional Development (DG REGIO) of the European Commission support the GHSL activities. The GHSL contributes to the international partnership "GEO Human Planet Initiative". The GHSL methods rely on automatic spatial data mining technologies allowing the extraction of analytics and knowledge from large amount of heterogeneous data including global, fine-scale satellite-image data streams, census data, and crowd sources or volunteering geographic information sources. Spatial data reporting objectively and systematically about the presence of population and built-up infrastructures are necessary for any evidence-based modelling or assessing of i) human and physical exposure to threats as environmental contamination and degradation, natural disasters and conflicts, ii) impact of human activities on ecosystems, and iii) access to resources. The GHS Urban Centre Database (GHS- UCDB) describes spatial entities called "urban centres" accordingly to a set of multi-temporal thematic attributes gathered from the GHSL sources integrated with other sources available in the open scientific domain. The Urban Centres are defined by specific cut-off values on resident population and built-up surface share in a 1x1 km global uniform grid. The input data it is generated by the GHSL, and the operating parameters are set in the frame of the "degree of urbanization" (DEGURBA) methodology. The DEGURBA is a methodology for delineation of urban and rural areas made for international statistical comparison purposes that is developed by the European Commission, the Organization for Economic Co-operation and Development (OECD), the Food and Agriculture Organization of the United Nations (FAO), UN-Habitat and the World Bank. The reference GHSL input data used to delineate the Urban Centres are included in the Community pre-Release of GHS Data Package (GHS CR2018) in support to the GEO Human Planet Initiative. The parameter set used to delineate the Urban Centres from the input data are included in the GHSL settlement classification model SMODv9s10E 2018. The reference epoch for the spatial delineation of the Urban Centres is 2015. The attributes of the GHS-UCDB have different time depth for a maximum of 40 years, depending on availability of the input sources.

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#### Keywords:

Accessibility, Biome, CO2, Climate, DDR, DEGURBA, Earthquake, Elevation, Environment, Flood, GDP, GHS-UCDB, GHSL, Greenness, Heatwave, Land Use Efficiency, Nightlight, Open space, PM2.5, Pollution, Precipitation, Remoteness, River basin, SDG, Settlement model, Soil, Storm surge, Sustainable Development Goal, Temperature, UCDB, Urban Centre, Urban centre, built-up areas, degree of urbanisation, multitemporal, population, settlement model, urban, urban-rural classification

#### Related resources:

## Data access

### GHS\_STAT\_UCDB2015MT\_GLOBE\_R2019A

The data is distributed as one ZIP file, which is composed of several files, i.e., XLS, CSV and SHP. The XLS file contains short documentation and the attributes. The CVS files contains the attributes. The shapefile contains the polygons of Urban Centres 2015 (vectorised from 1x1 km grid in World Mollweide projection), and selected attributes.

[http://cidportal.jrc.ec.europa.eu/ftp/jrc-opendata/GHSL/GHS\\_STAT\\_UCDB2015MT\\_GLOBE\\_R2019A/](http://cidportal.jrc.ec.europa.eu/ftp/jrc-opendata/GHSL/GHS_STAT_UCDB2015MT_GLOBE_R2019A/)

## Publications

### Description of the GHS Urban Centre Database 2015

Florczyk, A., Melchiorri, M., Corban, C., Schiavina, M., Maffenini, L., Pesaresi, M., Politis, P., Sabo, F., Carneiro Freire, S., Ehrlich, D., Kemper, T., Tommasi, P., Airaghi, D. and Zanchetta, L., Description of the GHS Urban Centre Database 2015, Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-79-99753-2 (online), doi:10.2760/037310 (online), JRC115586.

DOI:[10.2760/037310](https://doi.org/10.2760/037310)

### Atlas of the Human Planet 2018

Carneiro Freire, S., Corban, C., Ehrlich, D., Florczyk, A., Kemper, T., Melchiorri, M., Pesaresi, M. and Schiavina, M., Atlas of the Human Planet 2018, EUR 29497 EN, Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-79-98185-2 (online), doi:10.2760/124503 (online), JRC114316.

DOI:[10.2760/124503](https://doi.org/10.2760/124503)

## Other resources

### GHSL website

Project Web site

<http://ghsl.jrc.ec.europa.eu/>

## Additional information:

Issue date: 2019-01-28

Landing page: <https://ghsl.jrc.ec.europa.eu/>

Geographic area: World

Temporal coverage: From: 1975-01-01 – To: 2018-12-30

Update frequency: None

Language: English

Data theme(s): Regions and cities; Science and technology

EuroVoc domain(s): 36 SCIENCE; 72 GEOGRAPHY

Identifier: <http://data.europa.eu/89h/53473144-b88c-44bc-b4a3-4583ed1f547e>