

JRC Dataset

GHS built-up grid, derived from Landsat, multitemporal (1975, 1990, 2000, 2014)

Description:

The Global Human Settlement Layer (GHSL) project is supported by European Commission, Joint Research Center and Directorate-General for Regional and Urban Policy. The GHSL produces new global spatial information, evidence-based analytics, and knowledge describing the human presence in the planet. The GHSL relies on the design and implementation of new spatial data mining technologies allowing to process automatically and extract 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. These data contain a multitemporal information layer on built-up presence as derived from Landsat image collections (GLS1975, GLS1990, GLS2000, and ad-hoc Landsat 8 collection 2013/2014). The data have been produced by means of Global Human Settlement Layer methodology in 2015. The main product is the built-up are grid published in the production grid at high resolution, i.e. at around 38m in Spherical Mercator (EPSG:3857).

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Pesaresi, Martino; Ehrlich, Daniele; Florczyk, Aneta; Freire, Sergio; Julea, Andreea; Kemper, Thomas; Soille, Pierre; Syrris, Vasileios(2015): GHS built-up grid, derived from Landsat, multitemporal (1975, 1990, 2000, 2014). European Commission, Joint Research Centre (JRC) [Dataset] PID: http://data.europa.eu/89h/jrc-ghsl-ghs_built_ldsmt_globe_r2015b

Keywords:

GHSL, GLS1975, GLS1990, GLS2000, LANDSAT8, Landsat, Landsat ETM, Landsat MSS, Landsat MT, built-up areas, global map, land cover, multi-temporal classification, remote sensing, urban

Related resources:

Data access

GHS_BUILT_LDSMT_GLOBE_R2015B

The data are organised in several datasets. The main product (GHS_BUILT_LDSMT_GLOBE_R2015B) is a multitemporal built-up grid (built-up classes: 1975, 1990, 2000, 2014 epoch), which has been produced at high resolution (approx. 38m). This dataset has been used to derive additional layers per each epoch. All datasets are offered at high, middle and low resolution (approx. 38m in Spherical mercator, 250m in Mollweide and 1km in Mollweide, respectively). Each dataset is distributed in a compressed ZIP, that contains TIF file with pyramids and documentation.

http://cidportal.jrc.ec.europa.eu/ftp/jrc-opendata/GHSL/GHS_BUILT_LDSMT_GLOBE_R2015B/

Publications

Operating procedure for the production of the Global Human Settlement Layer from Landsat data of the epochs 1975, 1990, 2000, and 2014

Pesaresi M, Ehrlich D, Ferri S, Florczyk A, Carneiro Freire S, Halkia S, Julea A, Kemper T, Soille P, Syrris V. Operating procedure for the production of the Global Human Settlement Layer from Landsat data of the epochs 1975, 1990, 2000, and 2014. EUR 27741. Luxembourg (Luxembourg): Publications Office of the European Union; 2016. JRC97705

DOI:[10.2788/656115](https://doi.org/10.2788/656115)

Other resources

GHSL website

Project Web site

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

GHSL Data Packages. Instructions for data access. V1.0

http://ghsl.jrc.ec.europa.eu/documents/GHSL_data_access.pdf

Additional information:

Last Modified: 2015-01-12

Issue date: 2015-01-12

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

Geographic area: World

Temporal coverage: From: 1975-01-01 – To: 2014-12-30

Update frequency: None

Language: English

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

EuroVoc domain(s): 36 SCIENCE; 72 GEOGRAPHY

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