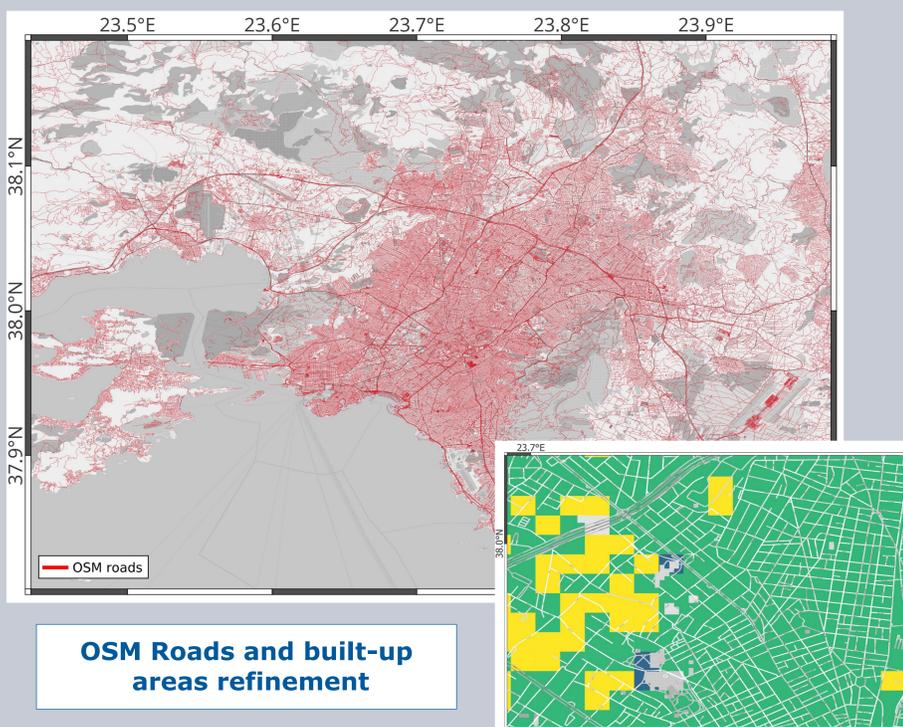
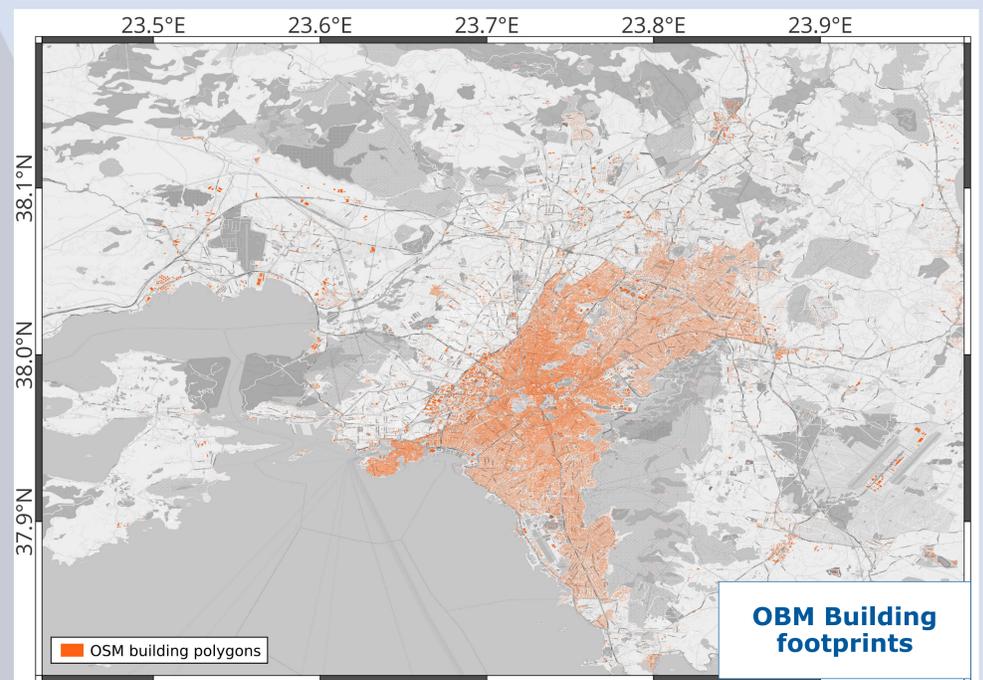
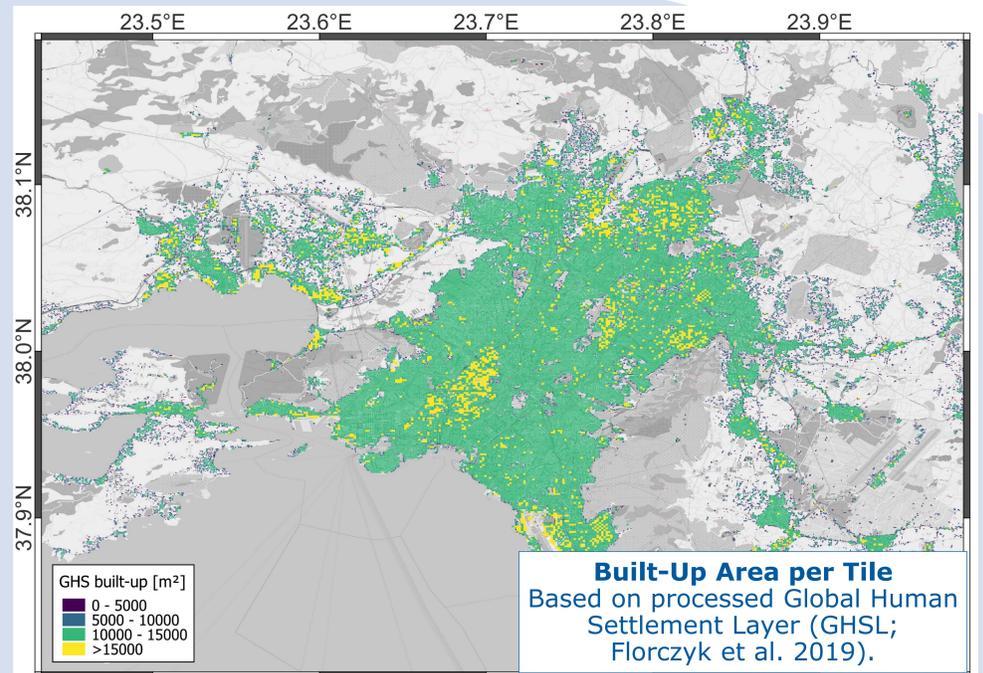


OBMGapAnalysis - Automatic building completeness assessment with open settlement datasets

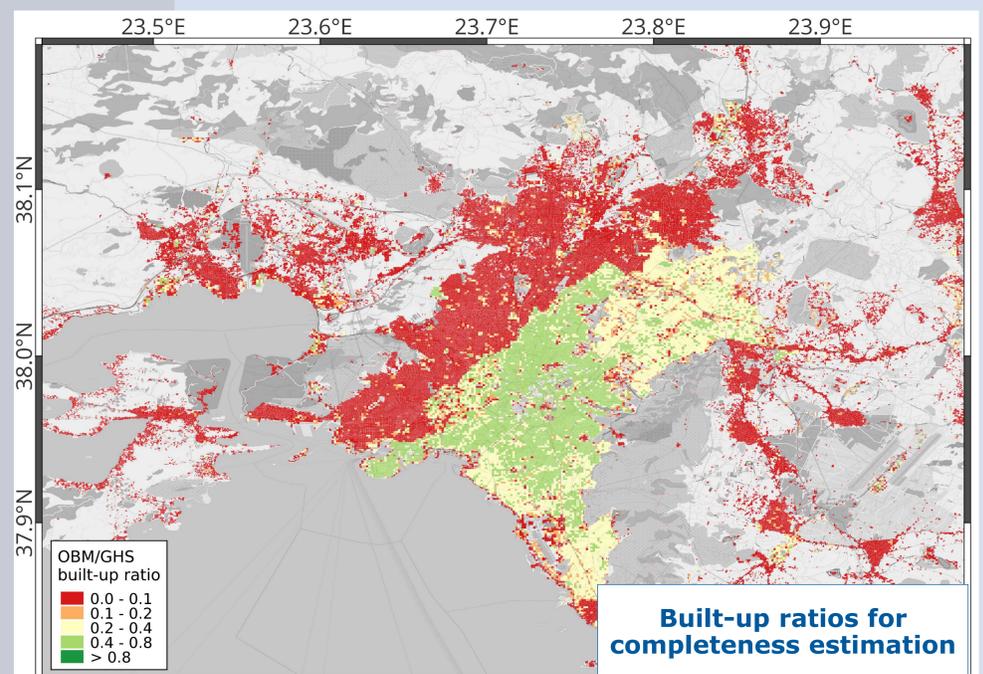
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Abstract

A tool named **OBMGapAnalysis** has been developed as part of **OpenBuildingMap**, a system that continuously retrieves and processes building data from OpenStreetMap (OSM) and may also be implemented in other similar projects. It is a processing chain for settlement layers designed to evaluate the completeness state of OSM buildings on a level-18 QuadTree tile resolution (ca.100 – 150 m depending on the latitude). The input data for this tool is any set of raster files that contain the spatial distribution of human settlements, such as the Global Human Settlement (GHS) built-up area (30 m grid) from the Joint Research Centre (JRC) of the European Commission, the World Settlement Footprint (10 m resolution) from the Deutsche Zentrum für Luft- und Raumfahrt (DLR) or any self-produced land cover classification from remote sensing approaches. The processing of these raster files results in gridded values of built-up areas that are directly compared with the built-up areas in OSM as defined by the building footprints. By comparing these values, a completeness state can be assigned. Since there is a considerable difference between the spatial resolutions of OSM and the settlement layers, the tool can optionally take as input the streets from OSM to refine the built-up model under the assumption that streets are not buildings but are often included in raster files as built-up area. The results of this processing chain are stored in a database for public access and may serve as an input for further analyses such as the Global Dynamic Exposure (GDE) model or other applications. This poster explains in detail the results of the first case study (Greece) as well as how it scales up to a global gapanalysis.



Result



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