JRC Dataset

UI - Removal capacity of NO2 by vegetation (LUISA Platform REF2014)

Description:
Removal by urban vegetation was calculated as the product of deposition velocity and NO2 concentration. Air pollutant deposition velocity was assessed following the approach proposed by Pistocchi et al. (2010) that estimates deposition velocity (DV) as a linear function of wind speed at 10 m height (w) and land cover type. NO2 concentration levels were estimated from a concentration map derived from Land Use Regression (LUR) models. Areas covered by vegetation were calculated by combination of detailed maps of urban vegetation and forest, aggregated to 100-meter resolution. For urban vegetation, the green layers of the Global Human Settlement Layer were used (Florczyk et al., 2014, Pesaresi et al, 2013). For forests, the High Resolution Global Forest map developed by Hansen (2014) was used. In overlapping areas, the maximum value of both maps was applied. Final map of vegetation had values between zero (no vegetation) and one (totally covered by vegetation).

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How to cite:

Keywords:
EU Reference Scenario 2014, FUA, LUISA, LUR models, NO2, Urban indicator, air quality, nitrogen dioxide, pollution, removal capacity, vegetation

Related resources:
Data access
UI - Removal capacity of NO2 by vegetation (FUA)
The compressed zip file contains data of the removal capacity of NO2 by vegetation, expressed in micrograms cubic meter (µg/m3), for Functional Urban Areas (FUAs), from 2010 to 2050. The data is stored in csv format.

Publications
European cities: territorial analysis of characteristics and trends - An application of the LUISA Modelling Platform (EU Reference Scenario 2013 - Updated Configuration 2014)
DOI:10.2788/737963

Additional information:
Last Modified: 2015-11-20
Issue date: 2015-12-18
Geographic area: European Union
Temporal coverage: From: 2010-01-01 – To: 2050-12-31
Geographic information:
Geographic bounding box: 73.04° N, 38.04° E, 32.97° S, -12.34° W