

Greenness

Description: Greenness was derived as a part of the morphometric analysis of the built environment that was conducted by the Cochrane Institute of Primary Care and Public Health, Cardiff University.

Normalized Difference Vegetation Index (NDVI) has been employed as an objective measure of greenness. The NDVI is a unitless index calculated from the reflectance measures in Colour Infrared (CIR) satellite data, comparing the amount of energy absorbed by the chlorophyll in the red portion and the amount scattered by the internal structure of the leaves in the near-infrared region. The index ranges between -1 and $+1$, with higher values reflective of healthy green vegetation and vice versa. The greenness was calculated in terms of mean, minimum, maximum and standard deviation in the NDVI values within the defined 0.5 and 1.0 kilometre around each UK Biobank participant's address of residence.

For more information and detailed description of the methodology and variables please refer to the 'MORPHOMETRIC ANALYSIS OF THE BUILT ENVIRONMENT IN UK BIOBANK: DATA ANALYSES AND SPECIFICATION MANUAL' in the 'Additional Resources' tab.

Description	File
Header file defining names and labels for columns in NDVI table	Wales_UKB_NDVI_Header.csv UKB_London_NDVI_Header.csv
Normalized Difference Vegetation Index greenness within pre-defined Euclidean buffers (0.5 Km, 1.0 Km) of UK Biobank participant's residence.	Wales_UKB_NDVI.csv UKB_London_NDVI.csv

Description of variables used

Column No.	Variable	Description
1	Encoded anonymised participant ID	-
2	NDVI_500m_mean	Mean NDVI within 0.5 Km Euclidean buffer of UK Biobank participant's residence
3	NDVI_500m_min	Minimum value of NDVI within 0.5 Km Euclidean buffer of UK Biobank participant's residence
4	NDVI_500m_max	Maximum value of NDVI within 0.5 Km Euclidean buffer of UK Biobank participant's residence
5	NDVI_500m_STD	Standard deviation in NDVI within 0.5 Km Euclidean buffer of UK Biobank participant's residence
6	NDVI_1000m_mean	Mean NDVI within 1.0 Km Euclidean buffer of UK Biobank participant's residence
7	NDVI_1000m_min	Minimum value of NDVI within 1.0 Km Euclidean buffer of UK Biobank participant's residence
8	NDVI_1000m_max	Maximum value of NDVI within 1.0 Km Euclidean buffer of UK Biobank participant's residence
9	NDVI_1000m_STD	Standard deviation in NDVI within 1.0 Km Euclidean buffer of UK Biobank participant's residence