Quantifying Europe's Cycling Infrastructure using OSM (QECIO): Metadata

General Information

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With assistance from Arnaud Briol, John Hammerschlag and Gautier Radermecker, data scientists from Agilytic, as a part of the 1% for the Planet programme.

Date of data collection:
PBF files collected in July 2023 from Geofabrik.

Date of last code update:
31 July 2023.

Information about geographic location:
37 countries including 27 EU member states.

Methodology: https://european-cyclists-federation.github.io/Documents/Methodology.pdf

Keywords: cycle infrastructure, Open Street Map (OSM).

Data and files overview

Description:
The country folder contains the cycle networks per area of analysis (NUTS3). It contains information on the OSMid, type of infrastructure, surface, smoothness, width, and a link to the OSM website of each way.

The CSV file contains information, on the country, the NUTS3, the date of creation of the summary, and values of interest.

Units of measure:
The units for the data sets are either in kilometres (km) for lengths or percentages (%) for ratios.

Format of the files:
The files are in geopackage (GPKG format) and can be opened using Geospatial software, such as ArcGIS, or QGIS.

A comma separated values (CSV) file with numerical results (summaries for each NUTS3 area) is also available.

Creation of files:
Cycle networks were extracted between 25 and 31 July 2023.

Sharing and accessing information

Restrictions:
Please consider that this is work in progress. Data might get updated as we improve our heuristics.

Links to publications:
Please visit our previous edition here.

Recommended citation for the data.
Not yet established.

Description of csv file columns

Column CSV file	Description
Country	The NUTS 0 country code.
City	Name of the NUTS 3 region.
Lat, Lon	Latitude, Longitude.
Area	Area in square kilometres.
Date	Last time the code was executed.
local_oneway_km	Length of one-way local roads.
local_twoway_km	Length of two-way local roads.
local_contra_km	Length of local roads with contraflow cycling.
overview-local-road-network	Total length of the local road network
overview-cycle-tracks-km	Total length of the cycle tracks.
overview-shared_pedestrians-km	Total length of the cycle and pedestrian tracks.
overview-limited-access-km	Total length of the limited access roads.
overview-total-cycle-infrastructure	Total length of the analysed roads for surface analysis. This is the sum of tracks, lanes, cycle and pedestrian tracks and limited access roads.
overview-busways-km	Total length of bus and cycle lanes.
overview-cycle_streets-km	Total length of cycle streets.
overview-ext-cycle-infrastructure	Total length of the extended cycle infrastructure.
sum_total_surface	Total length of analysed roads with surface tag.
sum_total_smoothness	Total length of analysed roads with smoothness tag.
sum_total_width	Total length of analysed roads with width tag.
percentage_with_surface_tag	Share of roads with the tag. Calculated as sum_total_surface/overview-total-cycle-infrastructure
percentage_with_smoothness_tag	Share of roads with the tag. Calculated as sum_total_smoothness/overview-total-cycle-infrastructure
percentage_with_width_tag	Share of roads with the tag. Calculated as sum_total_width/overview-total-cycle-infrastructure
surface-type-infra-type*-surface-type*-km	Total length of a given cycle infrastructure and their respective surface.
percent_surface_type-infra-type*-surface-type*-km	Share of a given cycle infrastructure type and surface to the total infrastructure type.
surface-quality-infra-type*-surface-type*-km	Total length of a given cycle infrastructure and their respective quality.
percent_surface_quality-infra-type*-quality-type*-km	Share of a given cycle infrastructure type and quality to the total infrastructure type.
type-infra-type*-directionality*	Total length of a given cycle infrastructure and their directionality.
ratio-cycle_tracks-main_roads	Ratio cycle tracks to main roads.
ratio-cycle_infra-main_roads	Ratio of analysed roads for surface to main roads. Not presented in the dashboard.
ratio-contraflow	Ratio of contraflow cycling.

infra-type* = cycle tracks | cycle and pedestrian tracks |cycle lanes| limited access roads| bus and cycle lanes | cycle streets.
surface-type* =asphalt/concrete | blocks/slabs/cobbles | stabilised gravel | gravel/dirt | unknown | unrecognised
quality-type* = perfectly rideable | well rideable | moderately rideable | badly rideable | not rideable | unknown
directionality* = unidirectional | bidirectional

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