(car)Road density 2015 per neighborhood

Spatial scale / resolution: Neighborhood

Spatial coverage: Netherlands

Temporal range: 2015

Data format input data: Lines / ESRI Shape file and File Geodatabase (FileGDB)

Data format output data: Polygons / ESRI Shape file

Data source input data: TOP10 NL 2015 (BRT)

Data storage outputdata:

..\Geodata\Data_aanvragen\Thao_Lam\Traffic\Road_density.gdb\Roadlength_per_neighborhood

Data description:

The dataset '(car)Road density 2016 per neighborhood' is derived from the dataset TOP10 NL 2015 which is a national dataset with topographical data in a scale range from 1:5.000 to 1:25.000. The Top10 NL is made up from several point, line and polygon layers from which we used the line feature layer named WEGDEEL_HARTLIJN.

The derived car road density layer gives for each neighborhood in 2015 the road length density per neighborhood in meters per hectare.

Data processing:

The input layer WEGDEEL_HARTLIJN was imported in a ESRI file geodatabase and a selection was made of all roads suitable for cars using the following selection criterion.

Select from WEGDEEL_HARTLIJN where:
HOOFDVERKEERSGEB 'gemengd verkeer' OR HOOFDVERKEERSGEBRUIK_1 = 'overig' OR HOOFDVERKEERSGEBRUIK_1 = 'snelverkeer'
(this criterium excludes the road classes 'busverkeer', 'fietsers, bromfietsers', 'vliegverkeer' and 'voetgangers').

The resulting selection of 1.628.669 records from in total 2.166.363 records, was exported to a new layer named 'wegdeel_hartlijn2015_roadselection'.

Next, a field was added to the attribute table named ‘roadlength’ and the length of each roadsection in meters was calculated using the table function ‘Calculate geometry’ on the field roadlength.

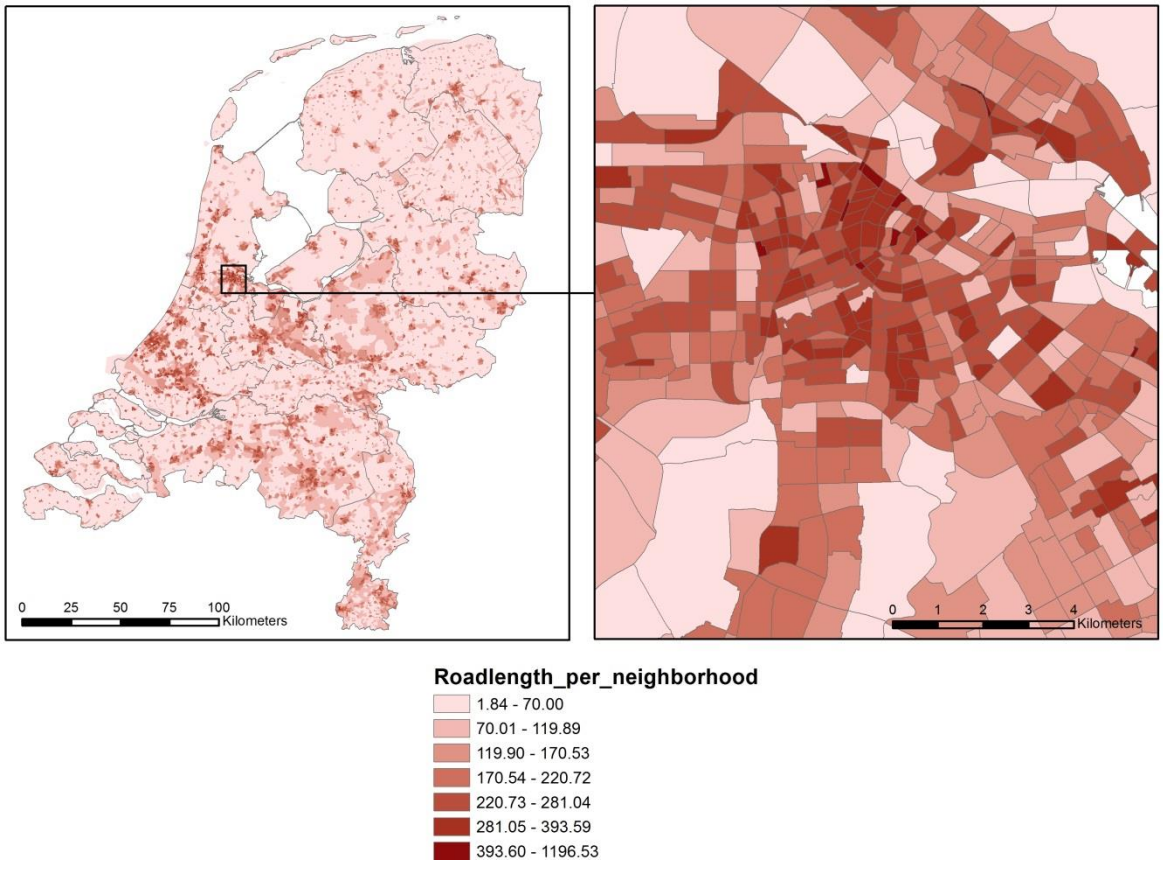
Next, a spatial join operation was carried out using the neighborhood layer ‘buurt_2016’ as the target layer and the layer ‘wegdeel_hartlijn2015_roadselection’ as the ‘join features’ layer. In the field map of Join Features, only the fields BU_CODE, BU_CODE and roadlength were kept and on the latter the Merge Rule ‘Sum’ was applied. This means that for each individual neighborhood this function will sum up all road lengths together. The result of this join operation is named ‘Roadlength2015_per_neighborhood’.
The last step to calculate the road density involved adding an additional attribute field named ‘RoaddensHA’ and using the Field calculator to calculate the road density as follows:

RoaddensHA = [roadlength] / ([Shape_Area]/10000)

The result is the (car) road density in meters per hectare per neighborhood.

Map example (car)Road density per neighborhood in meter per hectare in 2015

..\Geodata\Data_aanvragen\Thao_Lam\Traffic\Metadatasheet_road_density_2015.mxd



Variables

Table 1 provides an overview of variables that are available in this dataset.

Table 1: Overview of attribute data in dataset Roadlength2015_per_neighborhood

Variable name	Description	Original dataset
BU_CODE	Neighborhood code	Roadlength2015_per_neighborhood
BU_NAAM	Neighborhood name	Roadlength2015_per_neighborhood
Roadlength	Summed road length per neighborhood in meters	Roadlength2015_per_neighborhood
Shape_Length	Total length polygon line features per neighborhood in meters	Roadlength2015_per_neighborhood
Shape_Area	Total area polygon features per neighborhood in m2	Roadlength2015_per_neighborhood
RoaddensHA	(car)road density in meters per hectare per neighborhood	Roadlength2015_per_neighborhood

Data provider

The BRT source data (TOP10 NL) is provided by the Kadaster Netherland (see https://zakelijk.kadaster.nl/brt). The most recent versions of the TOP10 NL datasets can be accessed and downloaded via https://mijn.pdok.nl/

Contact information

General

Het Kadaster

Postbus 9046

7300 GH Apeldoorn

Terms and conditions

No terms and conditions have been provided.

Suggested or required way of data referencing

No indications for referencing have been provided.

List of references

Kadaster (2014) Basisregistratie Topografie: Catalogus en Productspecificaties, versie 2.2