

Visualizing the difference between the geometric and administrative surface area of the Cadastral Map of the Netherlands.

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SUMMARY

The research explored the differences between the cadastral parcels' geometric and administrative surface area in the cadastral map and was done on behalf of the Dutch Cadastre.

The research employed a literature study, different methodologies, and different tests and used feedback from the Dutch Cadastre experts to visualise and analyse the surface area discrepancy of parcels. To better understand the differences between the computed geometrical surface area of parcels and the administrative surface area of the complete Dutch cadastral map.

The research primarily used data from the Basisregistratie Kadaster (BRK) and other open data sources like the Basisregistratie Topografie (TOP-10nl) and the Basisregistratie Adressen and Gebouwen (BAG). The analysis was done using open-source tools like PostGIS, QGIS and GeoDa. These tools were used to visualise the differences at individual parcel levels and aggregated levels like cadastral municipalities and sections. The area differences were visualised in different manners (relative/absolute sizes, acceptable/not acceptable), and the direction of change (smaller, bigger). These area differences are relevant for many organisations apart from the Dutch Cadastre, like owners, municipalities, water boards and provinces, because a change in the area may imply a change in value and taxation.

The current results show a significant preliminary variation in the area differences between parcels in rural and built-up areas in the Netherlands. Furthermore, clusters of parcels with the most

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considerable relative difference can be found in the natural areas of the Netherlands, which exceed the limits set by the Dutch cadastre. Furthermore, new-urban and agricultural areas with consolidated land show a high correlation between the registered and calculated surface area of parcels.

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