

OPEN SPACE CUT INTO PIECES: MEASURING FRAGMENTATION OF OPEN SPACE IN FLANDERS

THOMAS VERBEEK¹ / KIRSTEN BOMANS² / BARBARA TEMPELS¹ / ANN PISMAN^{1,3} /
HUBERT GULINCK² / GEORGES ALLAERT¹

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Abstract

The open space in Flanders, the northern part of Belgium, can hardly be seen as really open. From the Middle Ages onward this area has been known for its spread out development pattern, which has even strengthened in recent decades. Especially the residential ribbon developments and the widespread infrastructure are widely recognized. These developments have led to an intense fragmentation of Flemish open space. In the Policy Centre on Spatial Planning and Housing, several GIS methods have been developed to analyze and quantify this fragmentation of open space in increasingly smaller pieces. Each method has a different scope, but all result in a fragmentation indicator. The first method calculates the density of man-made structures – roads and buildings – in rural areas. The second method defines open space fragments enclosed by ribbon developments. A third method considers main roads, railroads, waterways and built development as a complex of open space barriers. Based on this principle a map of patches is developed and the area of these patches is used as an indicator of fragmentation. By only including the built development as a barrier, the fourth indicator is developed, addressing the ‘inclusion of open space’.

The four different methods are compared and tested in some case study areas. This will lead to an in-depth evaluation that will give insight in the usefulness of each method, depending on the aim of the analysis.

The four developed methods are of high relevance for Flemish spatial planning policy. They can indicate where urgent actions are needed to safeguard open space against further urbanization tendencies. Furthermore, they can support a differentiated spatial policy and add to the scientific basis of the debate on another interpretation of Flemish open space.

¹ GHENT UNIVERSITY – CENTRE FOR MOBILITY AND SPATIAL PLANNING –
thomas.verbeek@ugent.be, barbara.tempels@ugent.be, ann.pisman@ugent.be, georges.allaert@ugent.be

² KU LEUVEN – DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES –
kirsten.bomans@ees.kuleuven.be, hubert.gulinck@ees.kuleuven.be

³ ARTESIS UNIVERSITY COLLEGE ANTWERP – DEPARTMENT OF DESIGN SCIENCES – a.pisman@ha.be