

The causes of soil consumption

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The soil is still under threat from urban sprawl. Small municipalities with little planning capacity and more easily accessible conurbations in particular are doing little to counter the issue. Researchers from the National Research Programme "Sustainable Use of Soil as a Resource" (NRP 68) have analysed the reasons for this by surveying Swiss municipalities.

Since the 1950s, urban sprawl in Switzerland has been progressing virtually unchecked. The trend towards greater levels of soil consumption is expected to continue until the middle of this century, albeit at a slower pace. A group of researchers led by Felix Kienast from the Swiss Federal Institute for Forest, Snow and Landscape Research (WSL) has investigated this issue as part of the National Research Programme "Sustainable use of soil as a resource" (NRP 68). The aim was to investigate the causes behind urban sprawl.

Transport links favour urban sprawl

A statistical analysis of various available data sets for soil consumption and socio-economic development showed that urban sprawl and its impact on soil consumption cannot be adequately explained by population growth alone. Other developments have had a much more significant influence, such as the increase in single-occupant households. In particular, a municipality's transport links favour urban sprawl. Multi-decade comparisons have shown that once a certain degree of urbanisation has been reached, the effect of good accessibility is reversed and it encourages consolidation. So at present, it is the relatively

easily accessible, but not yet highly urbanised conurbations that are most affected by urban sprawl.

Almost 70% of Swiss municipalities completed a survey on their [spatial planning](#) activities. As a result, the research team was able to analyse the applied planning instruments by canton, municipality size and type of municipality. This highlighted a strong connection to the size of the municipality.

Support in a planning association

In many small municipalities, Town Chancellors bear the administrative burden of planning activities. Larger municipalities often have an administrative department (for example, the building authority), which also handles planning activities, or they may even have a separate spatial planning department. Such municipalities are much better equipped to employ newer and more sophisticated planning instruments, such as special land use plans with urban planning requirements.

Since they are under significant settlement pressure, urban centres and conurbations enforce stricter planning measures than small and peripheral municipalities, for example, limiting low-density areas (estates with detached houses) or coordinating zoning with public transport provision. The more active of the small communities tend to focus on measures to prevent land grabbing or they apply very low usage figures that are intended to promote a compact residential area and consolidated conurbation development.

The analyses also illustrate that the municipalities should not be considered in isolation. Spatial planning measures and the development of a municipality always have a significant impact on surrounding municipalities. Researchers' recommendations: Implementing instruments to combat [urban sprawl](#) to maximum effect requires a high

level of regional coordination. Small municipalities with little planning capacity need professional support, for example, in the form of a planning association.

More information: Kaiser N. et al.: Raumplanung in den Schweizer Gemeinden: Ergebnisse einer Umfrage, WSL Berichte, Heft 42, 2016, ISSN 2296-3456 (free download) www.wsl.ch/dienstleistungen/publikationen/pdf/15446.pdf

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