

Mapping of urban sprawl using remote sensing data

Abstract

Mapping of urban sprawl has been an often discussed topic recently. This work compares remote sensing methods and socio-geographic methods used for tracing urban area changes over a certain period of time, and for mapping of these changes.

First the potential of socio-geographic methods for tracing urban area changes is examined, and advantages and disadvantages of these methods are evaluated. Then, in a similar way, remote sensing data and methods which can be used in this field are studied.

Based on the example of Praha-západ district is illustrated how CORINE database data can be used for mapping of urban sprawl on the national and regional levels. On the example of Zličín and Hostivice cadastral areas it is shown how to classify high-resolution satellite images and how to interpret aerial images in order to create maps of urban area changes on a local scale.

The outcomes of both methods were compared using RSO register data. This work aims to evaluate how suitable remote sensing data and methods are for monitoring and mapping of urban area changes, especially in areas of suburbanization.

Keywords: remote sensing, urban areas changes, suburbanization, urban sprawl