

THE SPECIFIC ENVIRONMENTAL CONSEQUENCES OF THE SPRAWL OF RURAL CENTERS IN HUNGARY

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The urban sprawl of rural centers poses significant challenges in post-socialist Central and Eastern European countries (CEE), where rapid sprawl complicates spatial planning and development. This research aims to prove empirically that the significance of the process is much greater than it seemed based on the research, because certain characteristics hide the process in both statistics and GIS databases. The existing databases (HCSO census, Urban Atlas) were compared with the results of field sampling in the case of 4 Hungarian cities (Kecskemét, Győr, Szeged & Zalaegerszeg). Between 1990 and 2022, significant land use conversions occurred in selected cities, with notable increases in built-up areas driven by commercial, industrial, and residential projects. These transformations result in spatial differentiation, fragmented land use patterns, habitat degradation, and environmental concerns such as waste incineration and air pollution. Partly due to the fragmented nature, since opposite processes take place in the individual areas, and the pattern of land use is so complex that the size of the unified land use areas is smaller than the minimum polygon size of the GIS databases. Overall, understanding these dynamics is crucial for sustainable urban development in post-socialist rural centers. Issues like urban heat islands and conflicts in water management further compound residents' concerns. Ad-hoc development exacerbates territorial injustices and social inequality, making it challenging for local communities to function effectively.