



Long-term changes of forest cover in the Hungarian-Slovenian transboundary area

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Due to the substantial land cover change that took place during the last century, forest cover now dominates the Hungarian-Slovenian transboundary area. The study area extends over 300 km² of a uniquely hilly landscape called Őrség. Historical land cover information was derived from a series of military maps dating back to the late 18th century. The vector-based, land cover map series allowed for the assessment of proportional and structural forest cover changes on both sides of the present state border. Applying a trajectory analysis (Skokanová 2009), we investigated the dynamics of the changes over a nearly 250-year period and identified those areas where continuous forest cover can be detected.

According to our study, forest cover increased from 31.2% to 65.1% in the whole investigation area. Compared to the former mosaic-like configuration, forest structure became significantly more continuous, especially on the Hungarian side of the border where the increase of forest cover is much more intense (from 32.7% to 70.6%). Results of the trajectory analysis show that continuous forest cover amounts to 19% of the present Hungarian and 15.3% of the present Slovenian forest areas, indicating a higher transformation rate in Slovenian forest areas. The climatic and economic factors specific to Hungary and Slovenia explain the experienced differences in each country. Őrség is one of the most humid parts of Hungary; fallow land transforms into forest within a few years here. Following the political changes in Central-Eastern Europe (1989), arable land with less favourable conditions was abandoned in Hungary; this was one of the main reasons for the high increase rate of forest cover. Forest expansion is more moderate in the Slovenian part of the study area where the gently hilled landscape is among the most suitable land for cultivation in the otherwise mountainous country.

References:

Skokanová, H. 2009: Application of methodological principles for assessment of land use changes trajectories and processes in South-eastern Moravia for the period 1836-2006. Acta Pruhoniana(91). pp. 15-21.