

Analysis of Forest Land-Use Change based on historical cadastral communities

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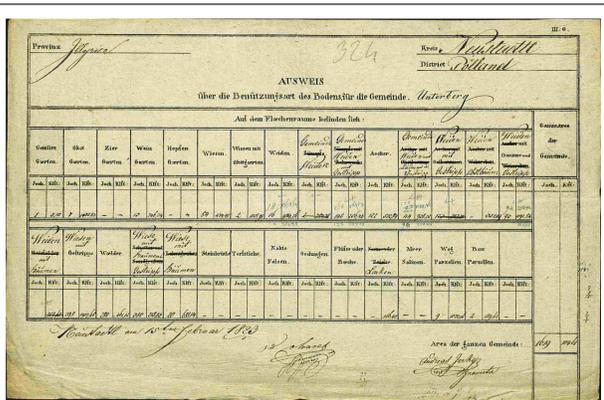
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BACKGROUND

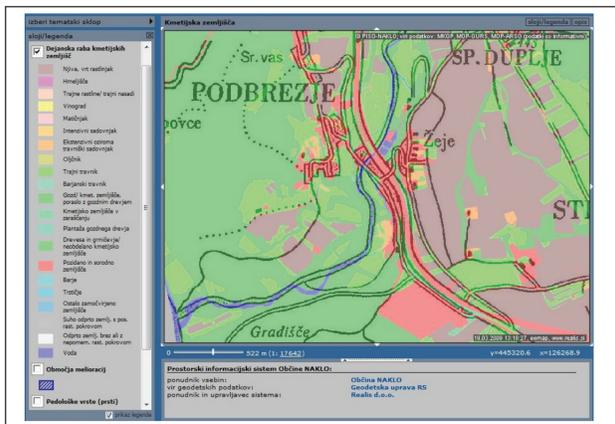
In Slovenia, approx. 58% of territory is covered by forest. The forest cover now is significantly higher than two centuries ago. Stable (Franciszean) cadastre is the most reliable source to study land-use in 19. century. By comparing historical cadastral data and present-day digital land-use data we encounter the problem of territorial units which changed over time.

MAIN AIM

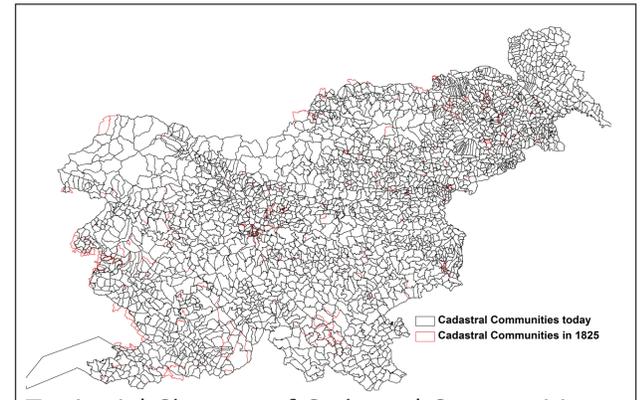
The aim of this study is to develop the method for cartographic representation of the forest land-use change over last two centuries. Data was collected on the bases of cadastral communities. Even though they were the most stable basic territorial units, rather numerous changes have nevertheless occurred in their borders over the two centuries.



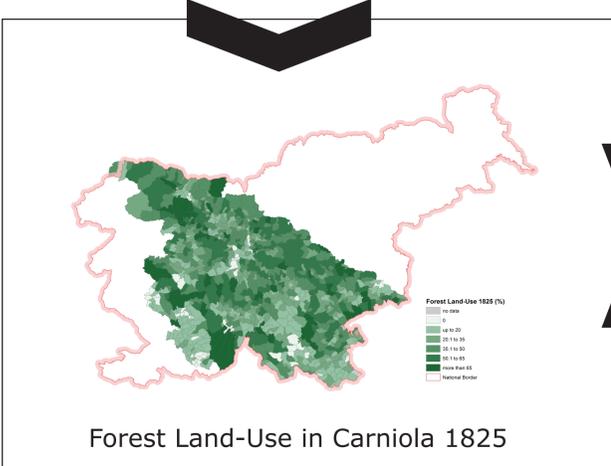
Stable Cadastre Land-Use Form



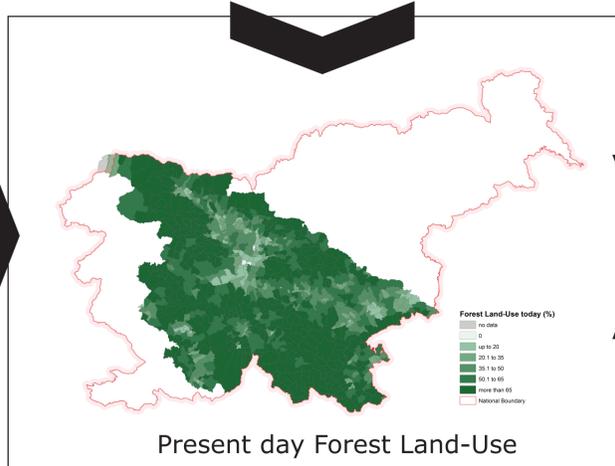
GIS Land-Use Data in 2013



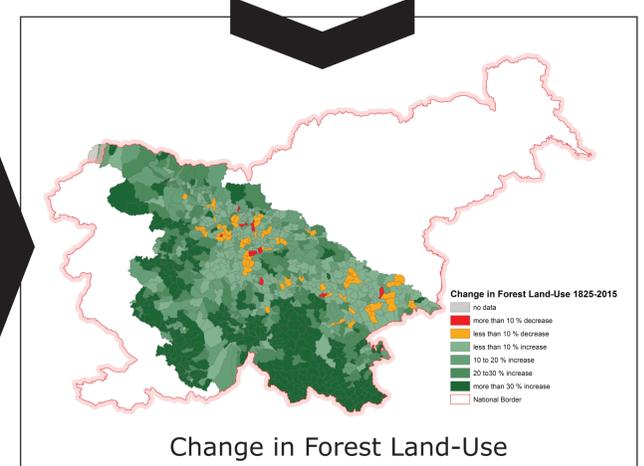
Territorial Changes of Cadastral Communities in Slovenia



Forest Land-Use in Carniola 1825

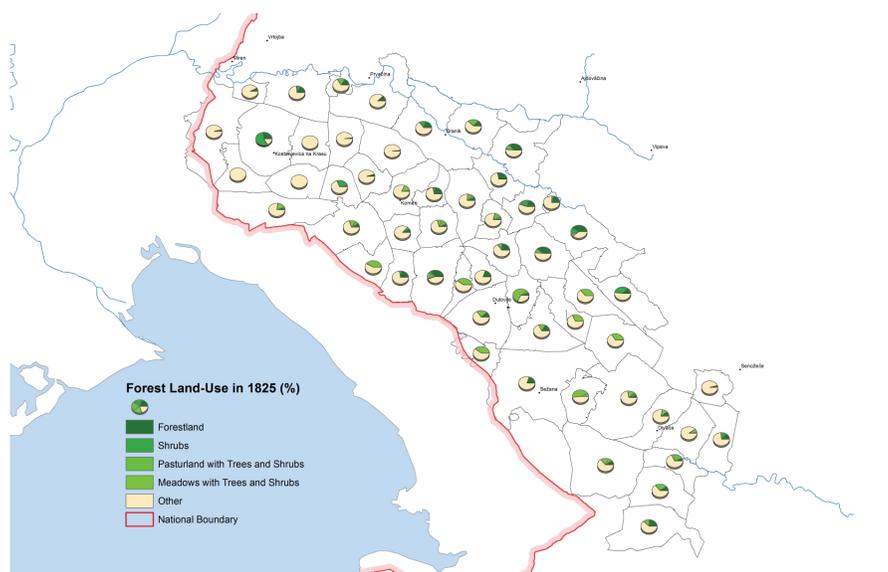


Present day Forest Land-Use



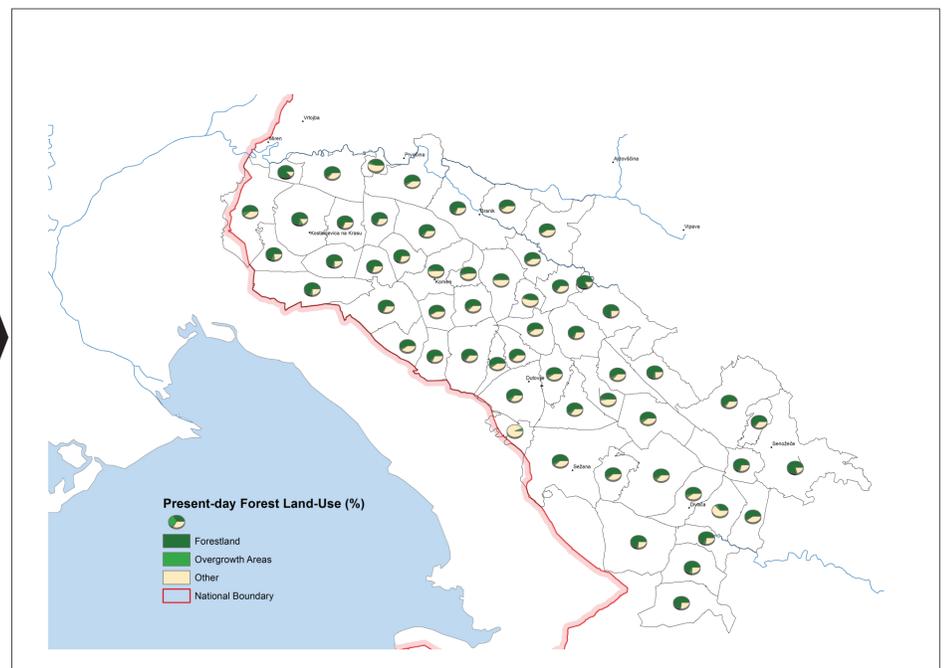
Change in Forest Land-Use

CASE STUDY



Forest Land-Use in 1825 (%)

- Forestland
- Shrubs
- Pasturland with Trees and Shrubs
- Meadows with Trees and Shrubs
- Other
- National Boundary



Present-day Forest Land-Use (%)

- Forestland
- Overgrowth Areas
- Other
- National Boundary

Forest and Associate Land-Use in Kras region 1825-2013

CONCLUSION

- During the last two centuries areas of Cadastral Communities changed significantly; they were either enlarged, contracted, merged, divided or eliminated in cases where the boundary of the national territory has changed. We employed the historical cartographic data of cadastral communities from the early 19th century. Their former borders needed to be digitalized in order to use it for further analysis of land-use change.

- Forest Cover in Kras region, which was used to compare the data, has changed significantly. However, associated land-use data from the corresponding units in 1825 shows that this assumption might not be entirely correct because pastures and meadows with shrubs and trees has not been considered in previous studies.

REFERENCES

- (1) Kladnik, D., 1985. Problematika zemljiške strukture v Sloveniji. Elaborat, 192 strani. Inštitut za geografijo Univerze Edvarda Kardelja v Ljubljani. (2) Gabrovec, M., Petek, F., Kladnik, D., 2010. Land use changes in the 20th century in Slovenia. In: HIMIYAMA, Y. (Ed.). Land use, cover changes in selected regions in the world, (IGU-LUCC Research Reports), pp. 41-52. (3) Stable Cadastre, 1825. Archives of the Republic of Slovenia. Ljubljana. (4) Graphic Land-Use Data for Slovenia, 2015. Ljubljana, MKO. URL: <http://rkg.gov.si/GERK/>