Interreg CENTRAL EUROPE

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ReCo

Historical analyses of former land uses & habitats

Enhancing ecological connectivity through habitat restoration
Online workshop| 21 February 2025

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Historical analysis

- Should help to identify areas with a high potential success for sustainable restoration; premises:
  - past habitats left some traces of their presence in the form of e.g. seedbanks,
  - past habitats formed in the areas with most suitable natural conditions
- Based on topographic maps (at scale 1:25 000) from second half of the 19th century – show preserved landscape structure (without massive human interventions)
- Different topographic maps – 3 major surveys
  - Ińsko region – Prussian military survey – 1877
  - Fichtelgebirge – Königreichs Bayern – 1844
  - Smrčiny, Podyjí, Thayatal, Karavanke, Škocjansky zatok – Austrian military survey – 1869-1887
- Additional sources, e.g. Administrativekarte von Niederösterreich (1867-1882) - Austria, cadastral maps from Habsburg empire – Slovenia (1819-1826)

Historical analyses

- Different legends not only within historical maps but also with present habitat types → only several types of habitats and common land cover classes can be mapped → in order to allow for comparison with present habitat types, 18 historical habitat types and land cover classes were recorded:

- Pasture
- Meadow
- Wet grassland
- Grassland with trees
- Forest

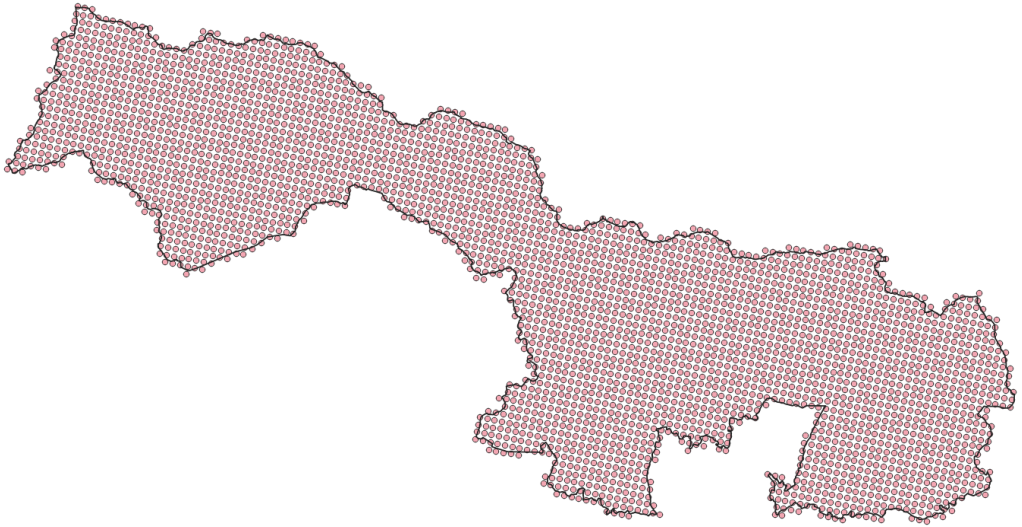
- Wetland
- Water body
- River
- Peatbog
- Salt marsh
- Sea

- Arable land
- Vineyard
- Orchard
- Settlement

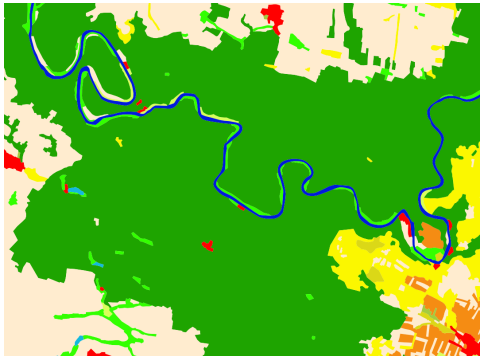
- Rock
- Gravel bar
- Beach

Historical analyses

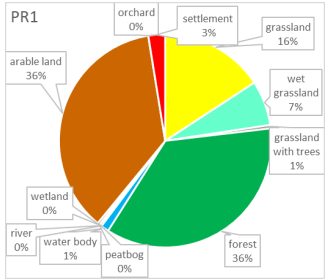
- To capture historical habitat/land cover map, a point grid with the 250 m step was selected and each point was assigned the habitat/land cover type

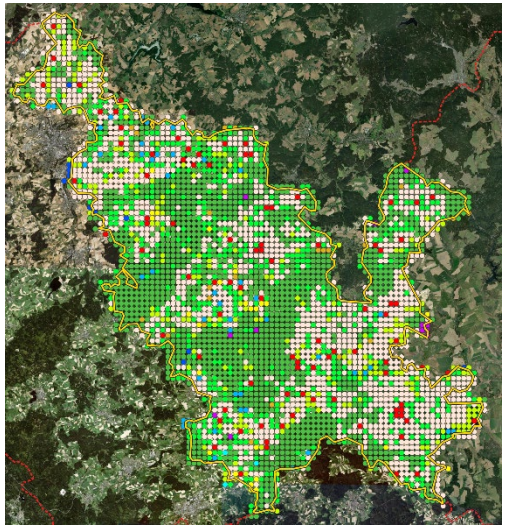


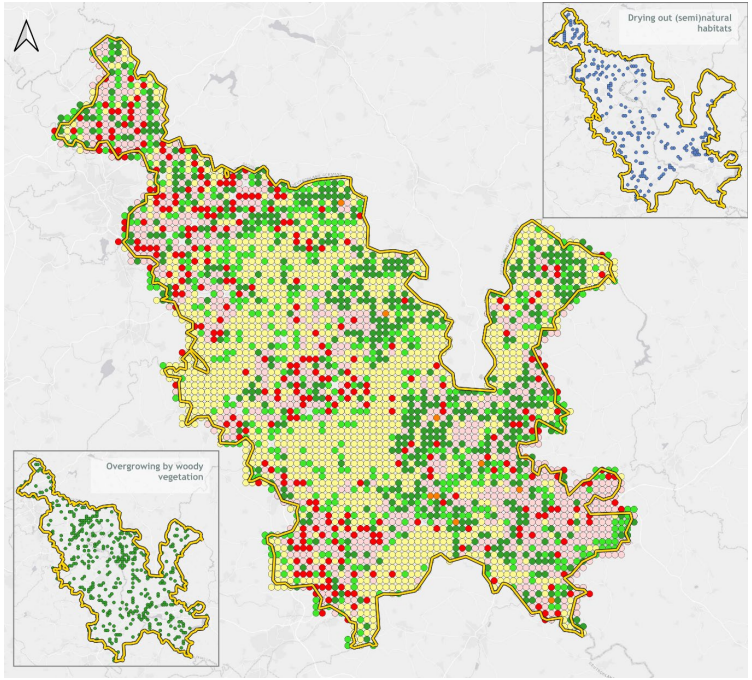
- For selected regions, also polygon layer was created



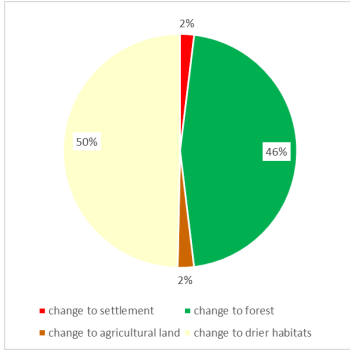
PR1 Fichtelgebirge & Smrčiny

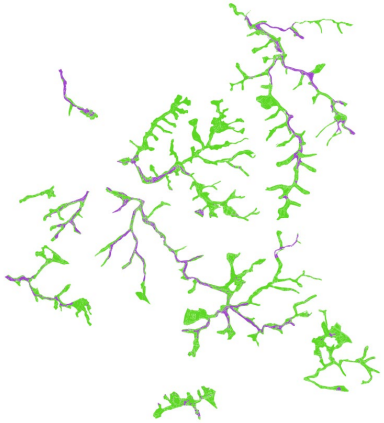






Land cover in 1870: Forest and arable land on same level (36 %), grassland (16 %), wet grassland (7 %)

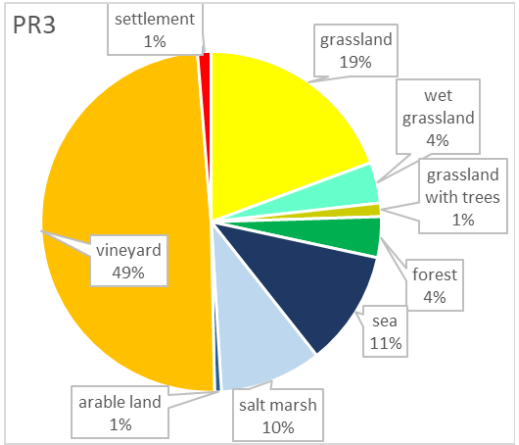


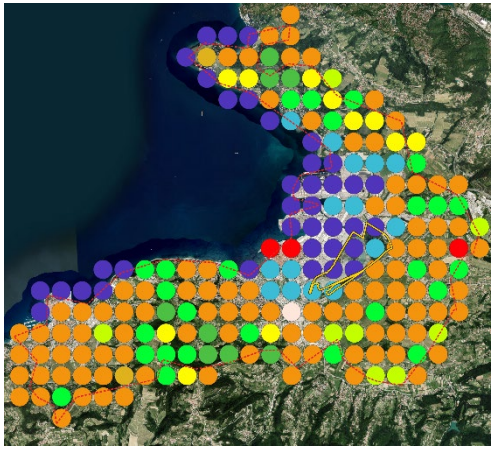


Change analysis:

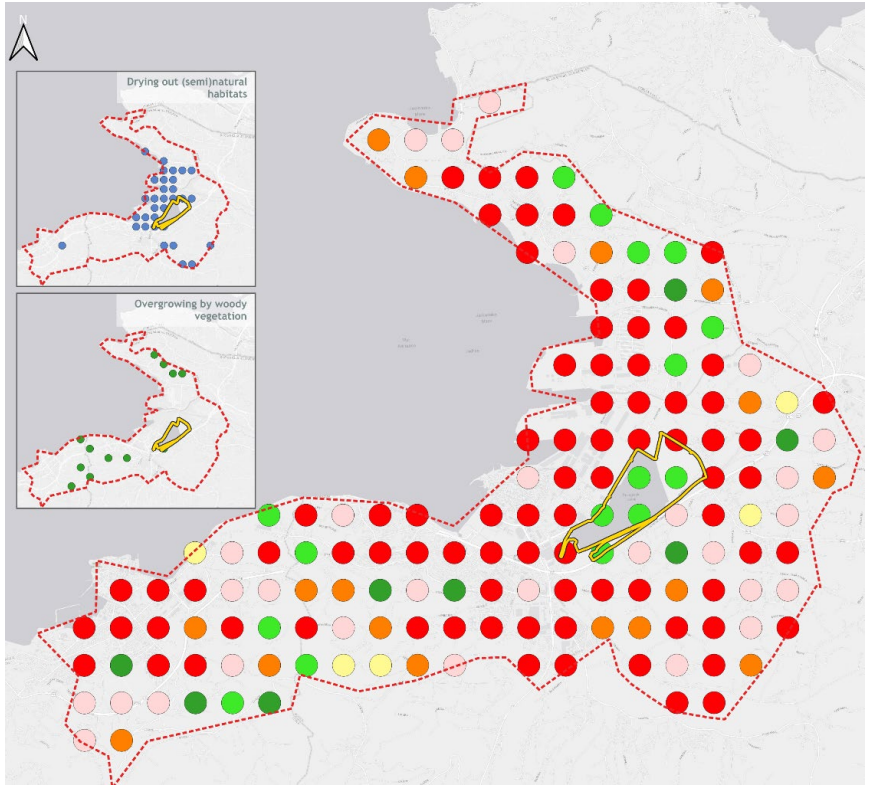
- Massive overgrowing by woody vegetation (12,5%) , substantial drying out of target habitats (7,3%)
- For **Fichtelgebirge** target areas: Drying out 17% of area, namely change to drier habitats & forest

PR3 Škocjanski zatok



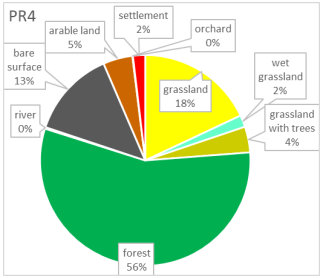


Land cover in 1870:
Dominant agricultural land (49 %), grassland (19 %), salt marshes & wet grasslands (14 %)

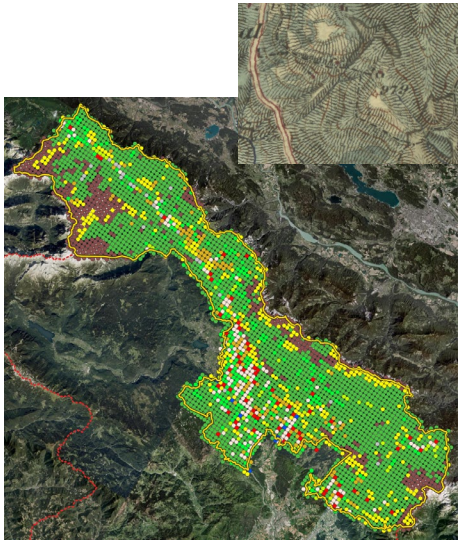


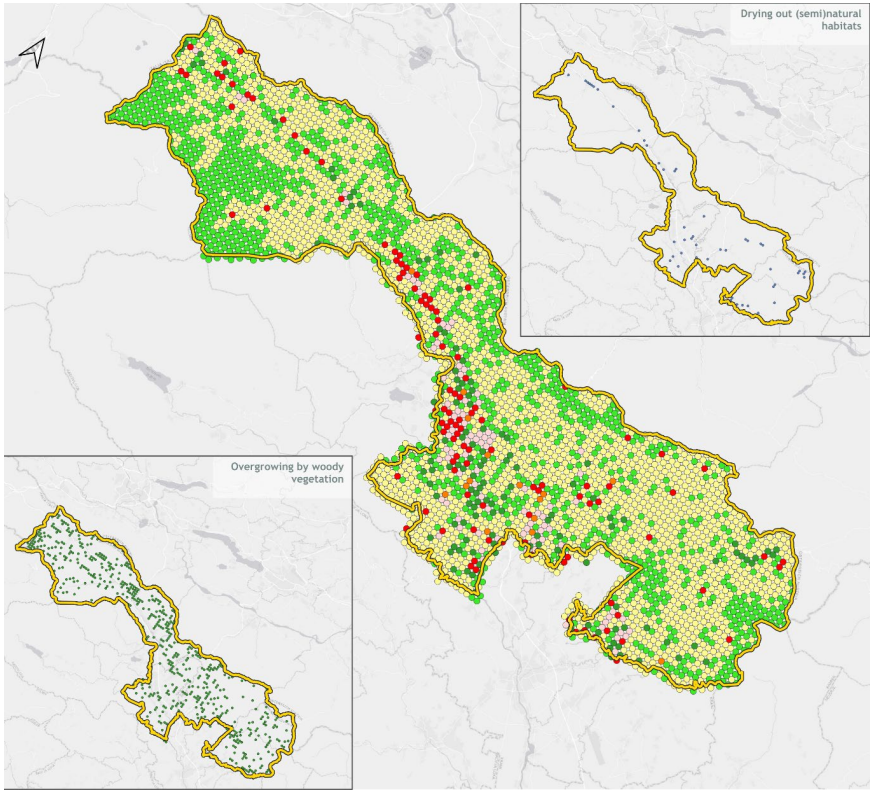
Change analysis:
Massive spread of urban areas over the former bay of Koper with saline habitats

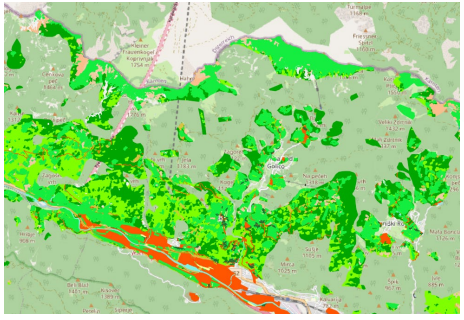
PR4 Karavanki

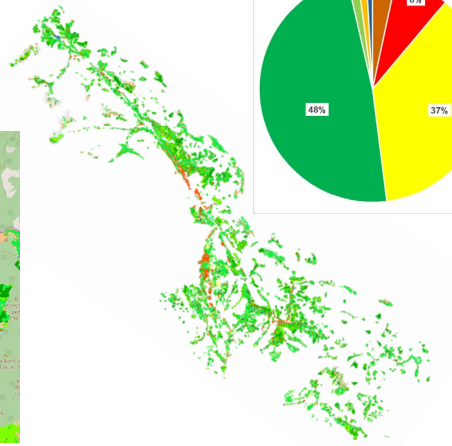


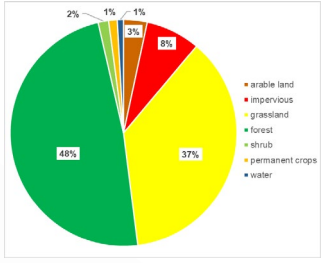
Land cover in 1870: Dominant forest (56 %), grassland (18 %), bare surfaces (13 %)







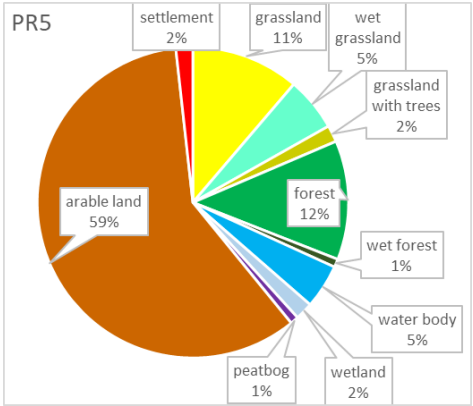


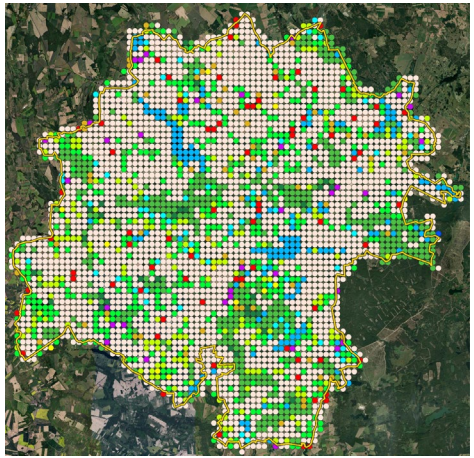


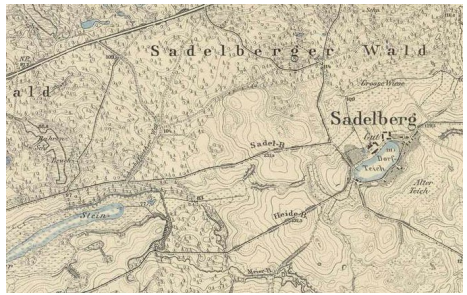
Change analysis:

- Massive overgrowing by woody vegetation (17,7 %)
- For grasslands: 48 % by forest, 37 % still grasslands, 8 % impervious surface

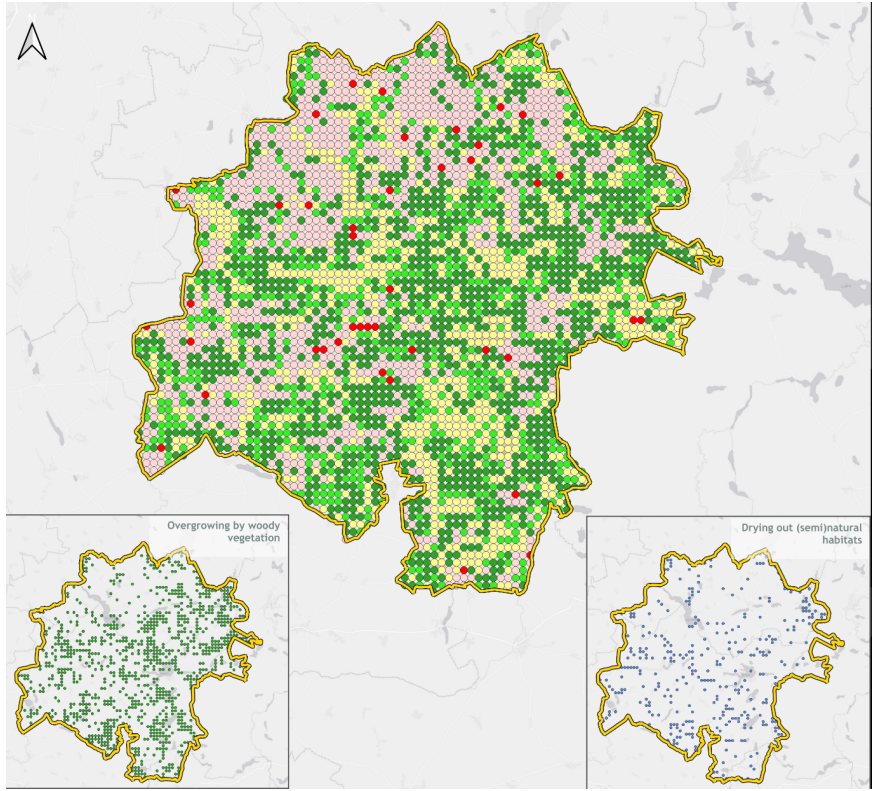
PR5 Ińsko Lakeland







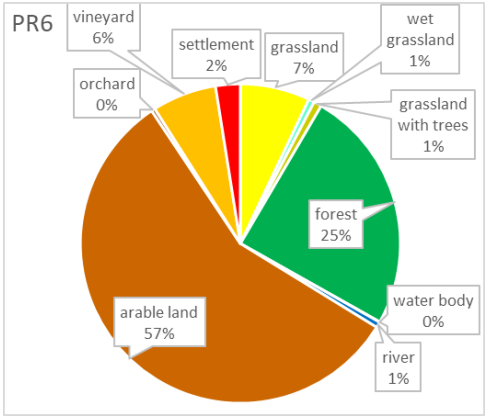
Land cover in 1870: Dominant agricultural land (59 %), grassland (11 %), forest (12 %), wet grassland (5 %), water body (5 %)

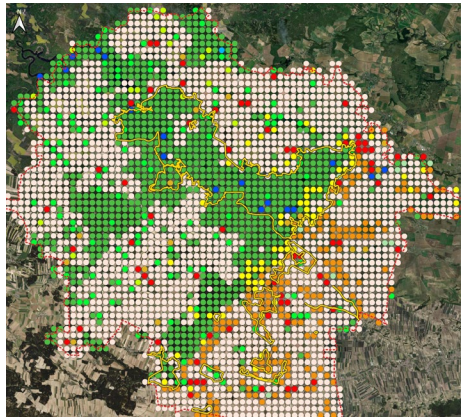


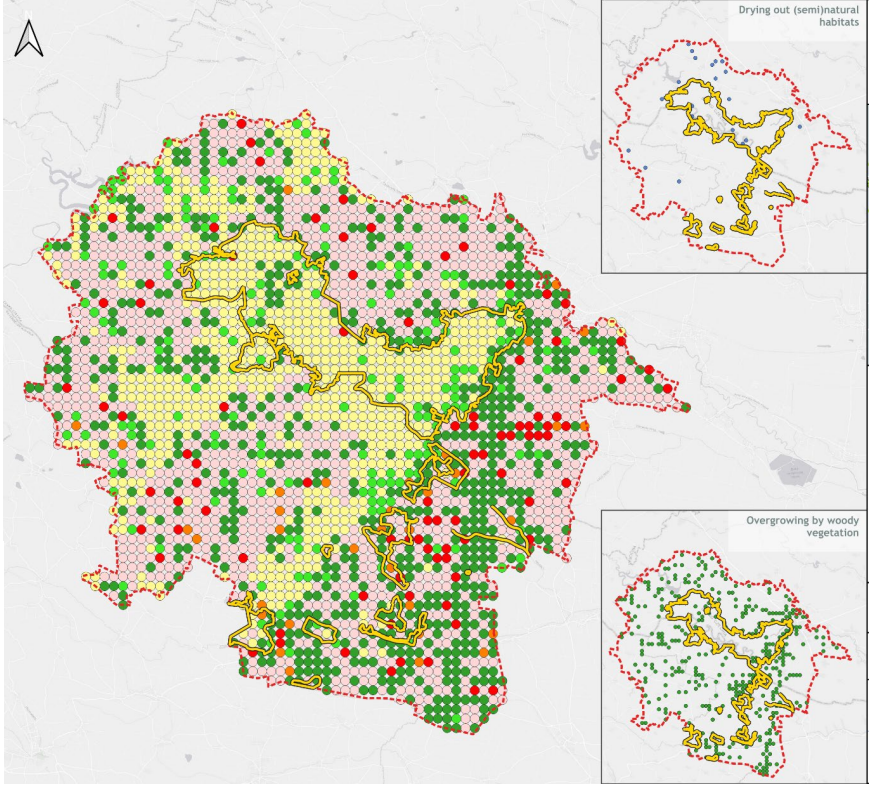
Change analysis:

- Spread of (semi)natural habitats - overgrowing by woody vegetation (29 %), grassing over (12 %), drying out 10 %

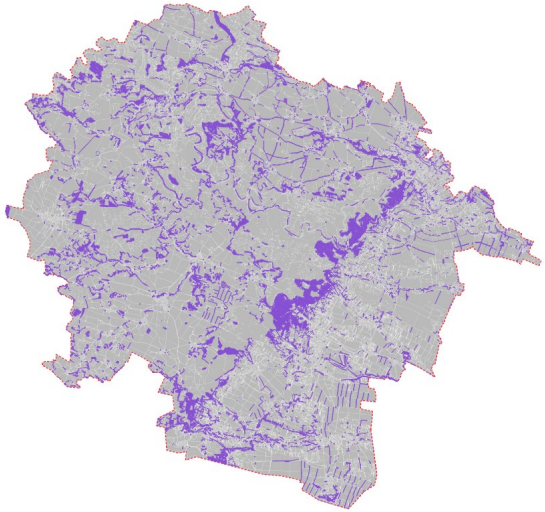
PR6 Thayatal & Podyjí NP







Land cover in 1870: Dominant agricultural land (63%), forest (25%), grassland (7%)



Change analysis:

- Spread of (semi)natural habitats - overgrowing by woody vegetation (15 %), grassing over (9%)
- In case of polygons, overal overgrowing by woody vegetation is 7 %

Summary

- All PR experienced overgrowing by woody vegetation from 8% in Škocjanski zatok to 29% in Ińsko lakeland
- There was also extensive drying out of natural habitats, especially in Škocjanski zatok with the spread of the town of Koper
- Majority of changes (with the exception of Škocjanski zatok) occurred between (semi)natural habitats or to (semi)natural habitats
- Quite a lot of the pilot regions did not change (62% in PR6, 59% in PR4, 58% in PR1, 47 % in PR5)
- Positive changes for targeted species and/or habitats can be tentatively said for PR5 and for PR6 – spread of forests and woody elements used by wild cat and European bison

- The change analysis based on points can somewhat muddy changes in connectivity, which is very crucial for the movement of organisms, especially flag species like wild cat and European bison

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