Importance of Stabil Cadaster in landscape structure studying

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I. Introduction: Stabil Cadaster and its establishment, division into cadastral operates and data with possibility of use for historical socioeconomic situation and land use construction.

II. Case Study: Stabil Cadaster of the small Moravian town Dolní Kounice, selected socioeconomic aspects and land use/land cover of chosen area in the beginning of the 19th century

III. Discussion
I. Stabil Cadaster

- The main purpose of the Cadaster establishment was **creation of better tax assessment**

- Beginnings of editing Stabil Cadaster date to year 1817, it was based on older Land registry, but the Stabil Cadaster was the first which used detailed cartographic technique (plot survey) - that makes exact maps, which are easily compare to other newer maps.

- Mapping of the Czech Republic was in progress between years 1825 – 1830 and then again between 1833 – 1843 with interruptions. It was mapped all together **12 691 cadastral units** - that is nearly the hole area of the Czech Republic in its contemporary borde rlines.

- **Stabil Cadaster** consists of three separate (but connected) files:
  - **Map operate** - consists of maps in scale 1: 2 880 which was based on precise geometric survey. For landscape sudyng we use coloured Obligatory imperial prints of maps.
  - **Written operate** - consists of two parts: the first is so called **Refistry of Land Parcel** (data about the owner, grown culture, value classes), and the 2nd is so called **Assesment operate** (socioeconomic description of cadastral unite – municipality description, number of inhabitants, mode of subsistence, number of livestock, and information in order to evaluate the land parcel, mainly yield of parcel for tax assessment)
  - **Triangulation operate** – specification of triangulation net

- In Stabil Cadaster the **parcel is defined as visibly limited ground area, which varies from surroundings with its owner or cultivation.** Each parcel has its number, and there are two number sets, one for built-up parcels and one for ground parcles
I. Stabil Cadaster

- Written operate is handwritten and use old German writing system – this makes it problematic for rewriting into Roman alphabet and subsequent understanding of the text.
II. Case study Dolní Kounice

- As a model area I have chosen small Moravian town Dolní Kounice, 20 km southwest from Brno

Fig. 3D relief model of Dolní Kounice cadaster
II. Case study Dolní Kounice

- Map operate has been created in the year 1825 and Written operate in the year 1841 and 1842.

**Try to imagine …**

- 1803 – beginning of industrial coal mining in Oslavany, 11 km northwest from Dolní Kounice
- 1814 – in Brno the first steam engine was installed, just a few years later the steam engines are normally produced there.
- 7.7.1839 – new way of transportation, regular passenger line between Brno and Vienna was opened

- It is a period of fast developing of industrialization with installing steam engines as the main fuel; of changes in agricultural cultivation and consequential social and demographic changes.
II. Case study Dolní Kounice

- The starting point of Stabil Cadaster edditing was definition of cadaster boundaries with sketching the main road net.

Fig. Boundaries of Cadaster Dolní Kounice

Fig. Obligatory imperial prints of Stabil Cadastr of Dolní Kounice
II. Case study Dolní Kounice

Social and economic characteristics from the Written operate

Municipality
• total area of cadaster unit: 895 ha (today 897 ha)
• town consists of 396 houses (today 750)
• wooden bridge with toll assessment
• poorhouse, school, 1 doctor and 2 dentists
II. Case study Dolní Kounice

**Inhabitants**
- Population in 1841: 2792 inhabitants (1295 male, 1497 female)
- Jewish minority, Jewish town with 35 houses and 1 synagogue
- All inhabitants were employed in agriculture, then trades, and services, many worked on construction of railway line, the Jews were businessmen
- Information about social status of inhabitants – the poor ones lived on left bank of the river Jihlava

**Agriculture**
- The main farming products was grain, mostly winter wheat, winter rye, barley, oat, lentils, beans and potatoes – occasionally peas and corn
- Some fields, pastures and vineyards were planted with fruit trees, most common was apple tree, cherry tree, sour cherry tree, plum tree and walnut tree, cultivated varieties were here in bad condition.
- Vineyards was planted with white varieties of vine

**Livestock**
- The largest farm was the Kounice manor with 6 horses, 2 cows, calves and 3 pigs.
- 299 livestock units, 2 livestock unites / 1 hectare of pastures

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<thead>
<tr>
<th>Livestock</th>
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<tbody>
<tr>
<td>Horses</td>
<td>30</td>
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<tr>
<td>Oxen</td>
<td>2</td>
</tr>
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<td>Cows</td>
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<td>Calves</td>
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<tr>
<td>Sheep</td>
<td>900</td>
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<tr>
<td>Pigs</td>
<td>120</td>
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</tbody>
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Tab. Number of Livestock
II. Case study Dolní Kounice

Information about land use/land cover

- Share of arable land reached 52.1% of agricultural land resources
- Total share of agricultural land resources 88.3%
- Share of forest 0.7%
- Share of built-up areas 1.5%
- Share of other areas 10.1%
II. Case study Dolní Kounice
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- river without big stream regulations
III. Conclusions

The role of Stabil Cadaster for landscape studying

- High-quality Map operate, which we can easy compare with recent maps, the data in Written operate are comparable as well.
- Description of situation in the beginning of industrial revolution in the Central Europe.
- Complex analysis of a small area – it gives us a concrete environment model in the beginning of the 19th century
- Land registry depicts land structures in detail - localization and dimensions.

- Stabil Cadaster is useful tool as a basic level for studying long term transformation of land use/land cover.
Thank you for your attention.

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