



FACULTY OF  
SCIENCE  
Charles University

# Heritage of the extinct Czech cultural landscapes

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IGU 2019 Thematic Conference  
TRANSFORMATION OF TRADITIONAL CULTURAL LANDSCAPES  
September 24<sup>th</sup> to 26<sup>th</sup> 2019

# Heritage of extinct landscapes: identification, reconstruction and presentation

- Project of Czech Ministry of Culture DG18P02OVV008 (2018 – 2022)

Aims: to identify, document, reconstruct and present the heritage of landscapes lost in a period of dynamic change of landscapes and societies in Czechia since the end of the 18<sup>th</sup> century

- using historical sources and modern geoinformation technologies
- document the diversity of cultural heritage and the value of different types of landscapes
- contribute to the preservation and exploitation of cultural heritage in the field of landscape conservation, development and planning

## Outputs

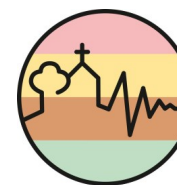
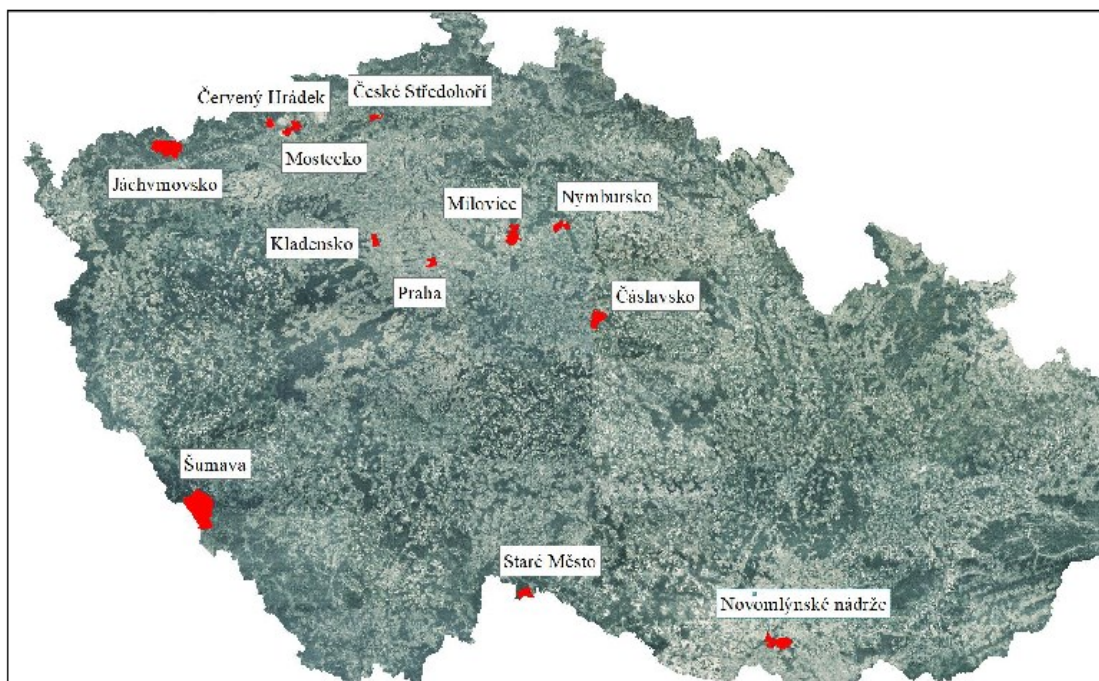
- Web information system (portal) Extinct landscapes (<http://www.zaniklekrajiny.cz/>)
- Freely accessible Digital atlas of extinct landscapes (<http://www.zaniklekrajiny.cz/atlas/>)
- Interactive and mobile software map applications for public
- Map compositions
- Videos
- LUCC Atlas of Extinct Landscapes in Czechia (two issues)
- Two exhibitions, workshops
- Publications (book, articles)



**.... PRESERVATION and SUSSTAINABILITY of NATIONAL LANDSCAPE MEMORY and HERITAGE**



- Model areas of the lost landscapes 2018, 2019
  - A. Post-montane and montane landscapes (Kutna Hora)
  - B. Post-urban and post-industrial landscapes (Rosicko - Oslavansko)
  - C. Flooded cultural landscapes of river valleys (central Vltava river valley)
  - D. Extinct landscapes of former pond systems (lower Podoubraví; Polabí)
  - E. Extinct landscapes of mountain farming (Krkonoše; Šumava; Staré město)
  - F. Military and postmilitary landscapes (Milovice; Boletice)
  - G. Extinct feudal, noble landscapes (Kačina; Červený Hrádek)
  - H. Extinct and Transformed Landscapes of Intensive Agriculture (České středohoří)
  - I. Transformed urban and suburban landscapes (Prague and its peripheries)



Dědictví  
zaniklých  
krajín

# Methods

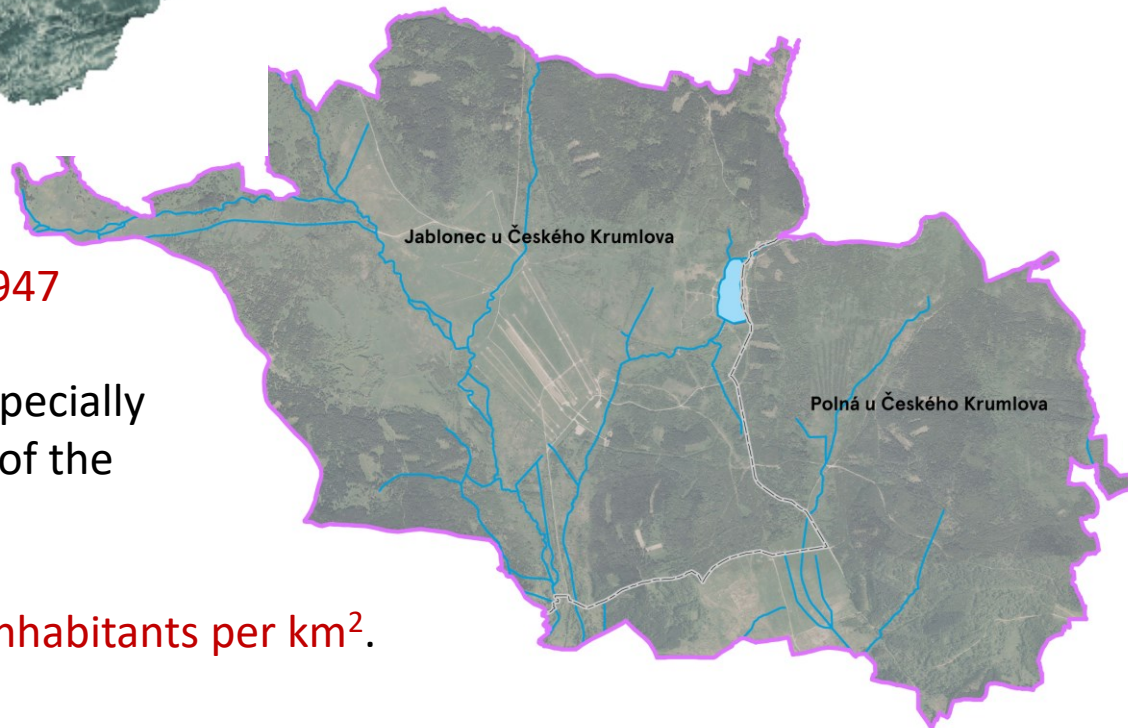
- Interdisciplinary team – 4 working groups
  - A: geoinformatic and cartographic data processing and reconstruction of extinct landscapes
  - B: statistical analysis of socio-economic data and land use
  - C: historical-geography analysis and landscape reconstruction, identity, heritage and memory of the landscape
  - D: physical-geography aspects of extinct lands, change of landscape structure and landscape cover (vegetation cover, forests, soils, water components...)
- Data – old maps, aerial photos, orthophotos, old photographs, LULC Database Czechia, interviews, fieldwork, archives, museums, GIS layers of physical geographical characteristics, etc.
- Methods – land use change analysis, landscape structure change analysis, comparable photography, 3D modeling of landscape, 3D photorealistic modelling, field survey, questionnaires, presentation materials preparation

# Boletice – extinct forest-agricultural landscape in military area



- Area of the Šumava Highlands and the Šumava foothills in the Český Krumlov district
- almost 220 km<sup>2</sup>

- Military Training Area (camp) 1947
- 1950 Boletice military area - a specially designated territory for the needs of the state defense
- population density of only 1.2 inhabitants per km<sup>2</sup>.





Czechs accounted for only 1% of the population before the war displaced after the German occupation of the Czech border areas in 1938.

German ethnic group was displaced after World War II in 1945

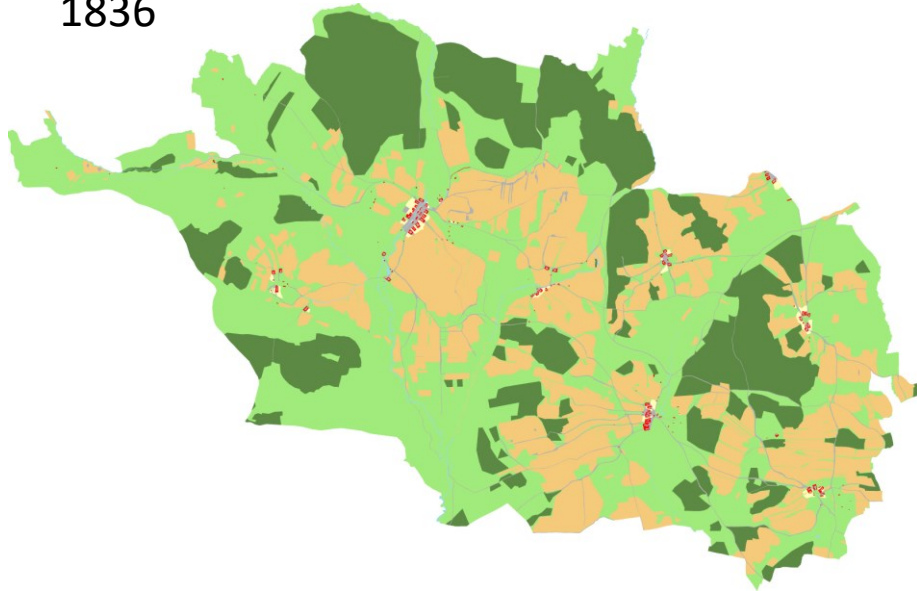
- Most of today's inhabitants were resettled later

managed by the state enterprise Military Forests and Estates of the Czech Republic



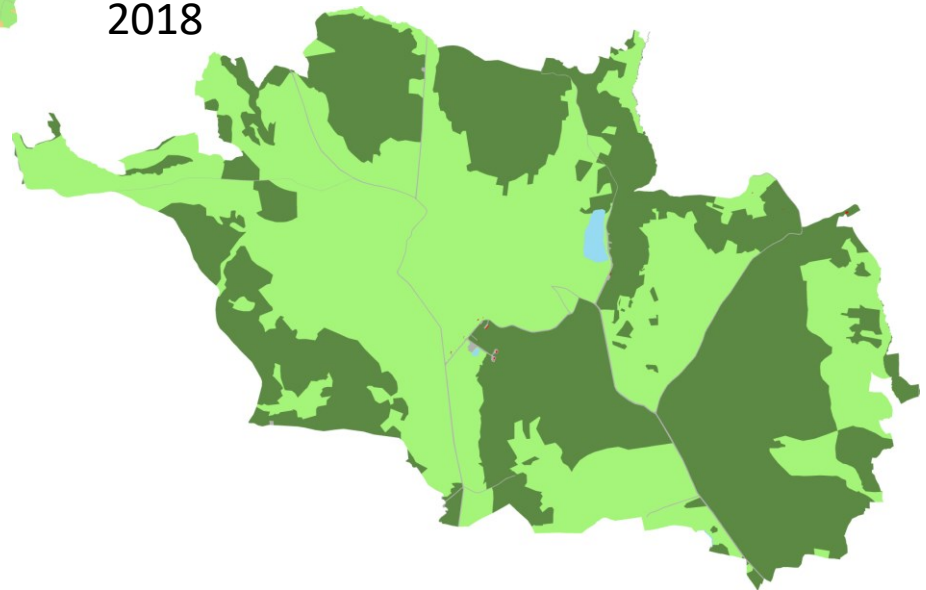
# Boletice - military landscape

1836

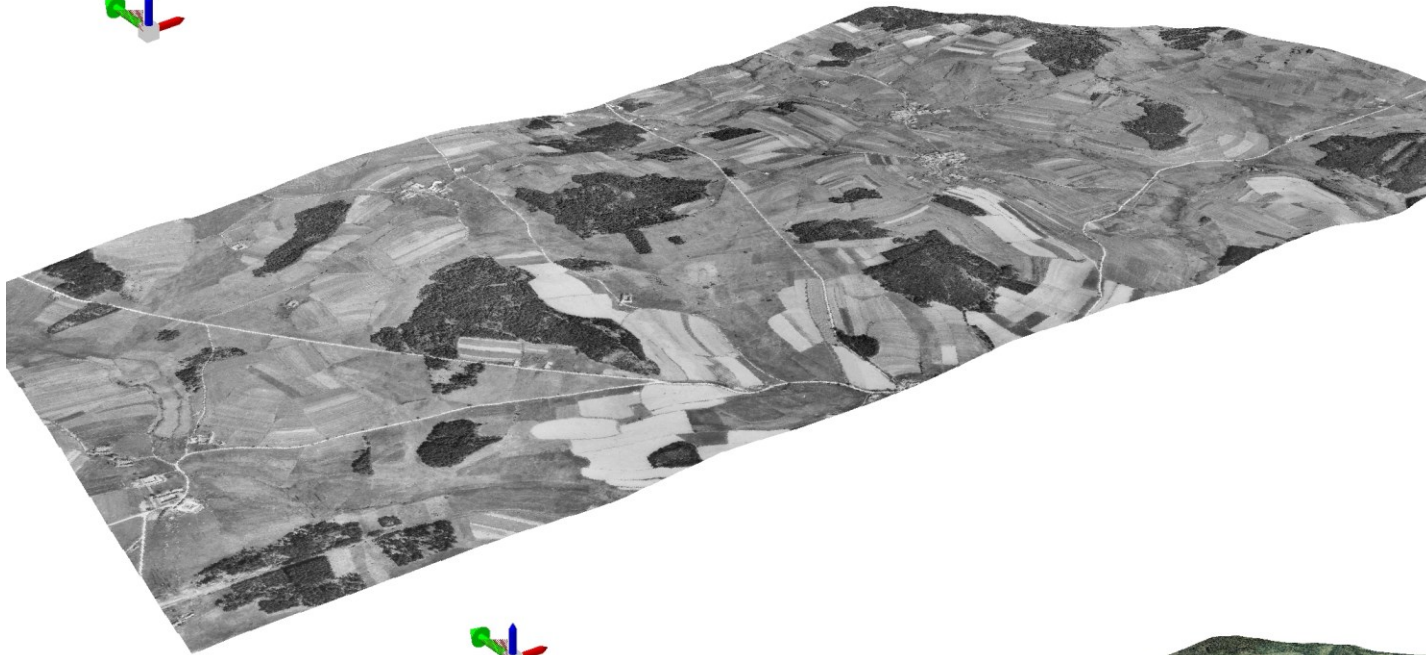


Land use category	Change (% pts.)
Built-up areas	-0.24
Other areas	-0.84
Water areas	0.01
Forest areas	<b>23.74</b>
Arable land	<b>-25.86</b>
Permanent grasslands	3.51
Permanent cultures	-0.31

2018



1950



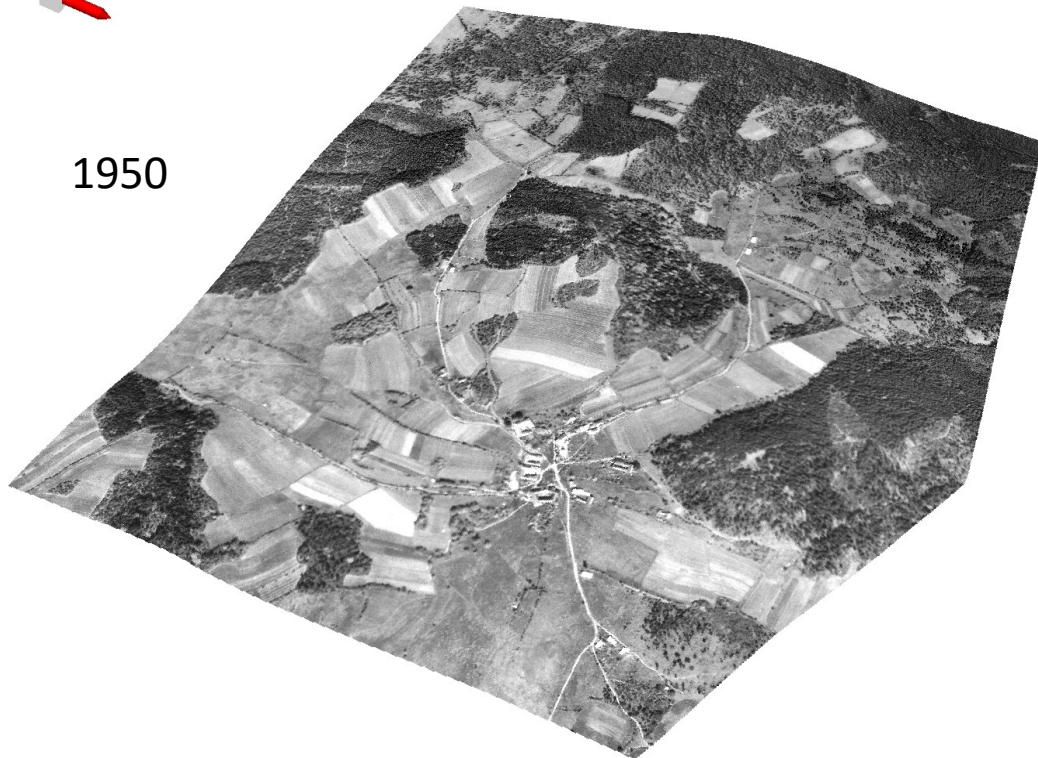
2018





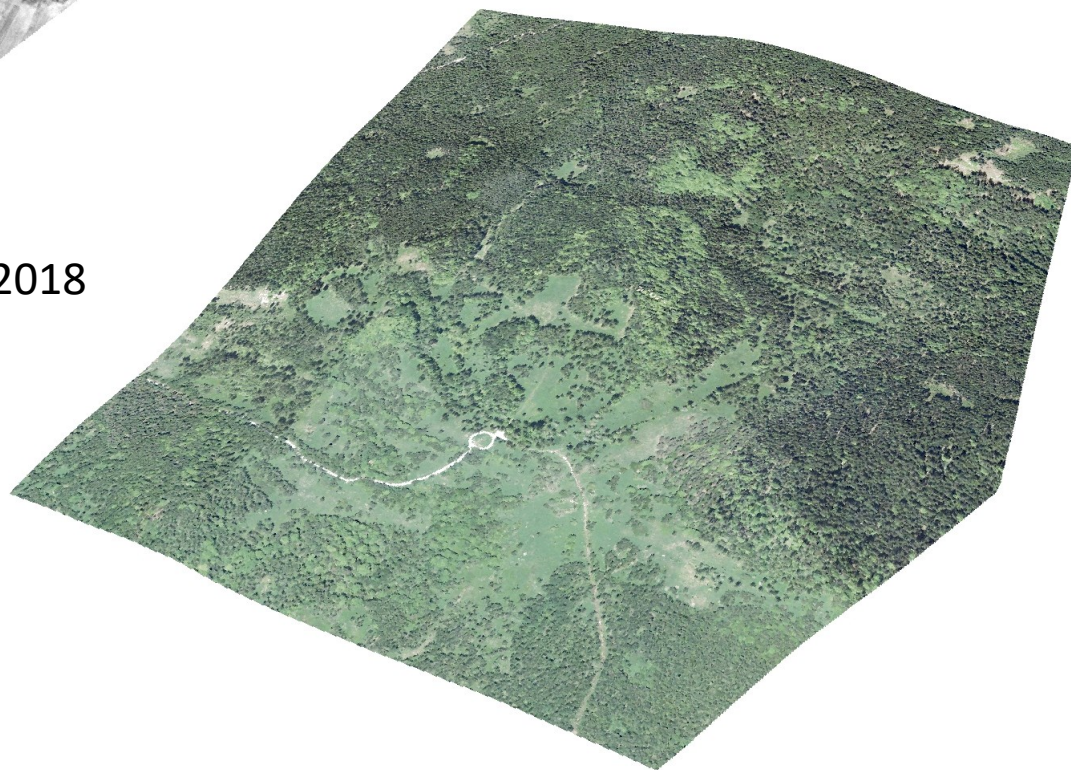


1950



Extinct village Veselí

2018





- The original landscape with the predominance of forests and mountain farming has changed into the **current landscape, whose structure is subordinate to training ground forces in shooting and tactical training**
- A significant phenomenon of the area is the **forest-free habitats** on areas that were previously used for agricultural purposes.
- Now the forest-free areas are maintained at various degrees of **secondary succession** by military activity, which is manifested by **mechanical disturbance** of vegetation and soil surface.
- Thus, a relatively **varied mosaic** of areas ranging from wetland habitats to wet thistle meadows and mesophilic habitats to forest steppe xerotherm habitats was created at the training grounds and shooting ranges.
- The **high natural value** of this area has led to the proclamation of a large European site of Boletice and Boletice **bird area**. Both areas are included in the network of protected areas of European importance **NATURA 2000**.



tank shooting range

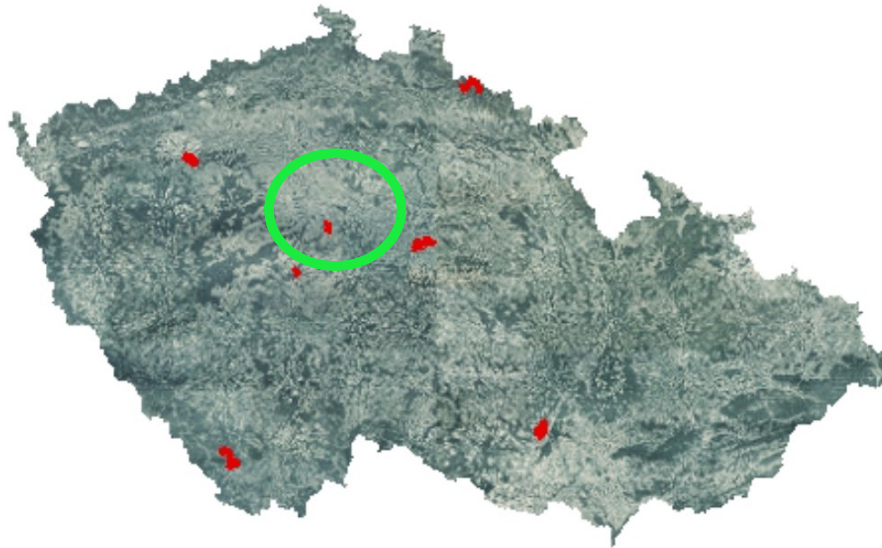




# Extinct village Jablonec in Boletice – photorealistic 3D model



# Post-mining landscape of Kutnohorsko



- Landscape dominated by **intensive silver ore mining** for centuries from second half of the 13<sup>th</sup> century
- Mining has permanently affected mainly the relief - **mining shapes** (massive bands of heaps of excavated tailings and slags, mining pits, pinky, depressions and abandoned quarries)
- The most intensive mining ended centuries ago
- To a lesser extent the underground mining of **polymetallic ores** concentrated in Kaňkovské hills continued **until the 1980s**.
- Even **under socialism** in the second half of the 20<sup>th</sup> century a **large mining pond** was established under **Kaňkovsky hill**, whose body was later repeatedly reclaimed and afforested.



# Post-mining landscape of Kutnohorsko

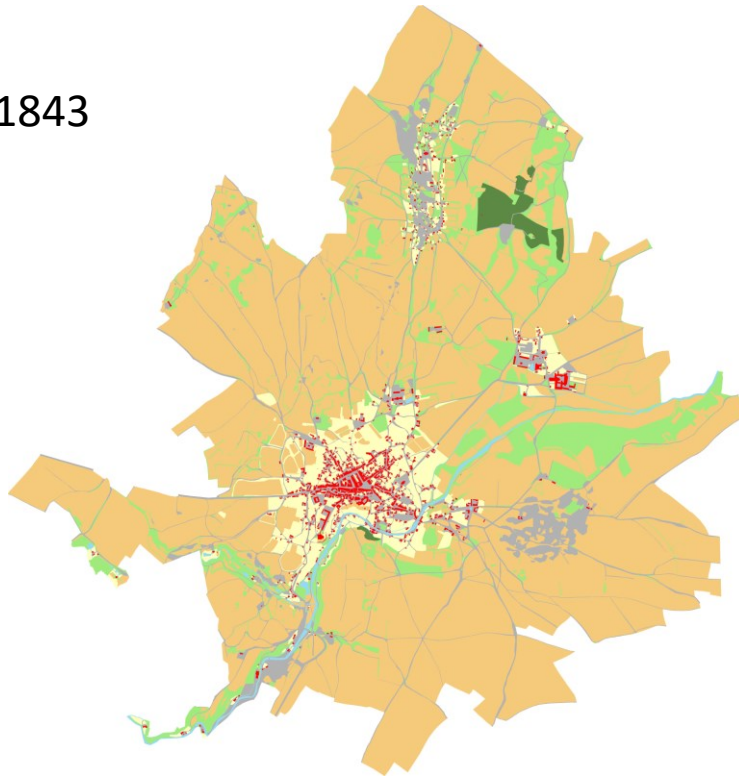
- Deforested and partly built-up mining landscape has been used mainly for agriculture in the past centuries.
- From the mid-19<sup>th</sup> century to this days gradual afforestation of infertile areas at Kaňkovské hills in places most affected by mining.
- Instead of fields in the 20<sup>th</sup> century fruit orchards expanded and also urban areas.
- After 1990, most of these orchards were abandoned and disappeared
- 50 hectares - new vineyards
- New wilderness expanded significantly





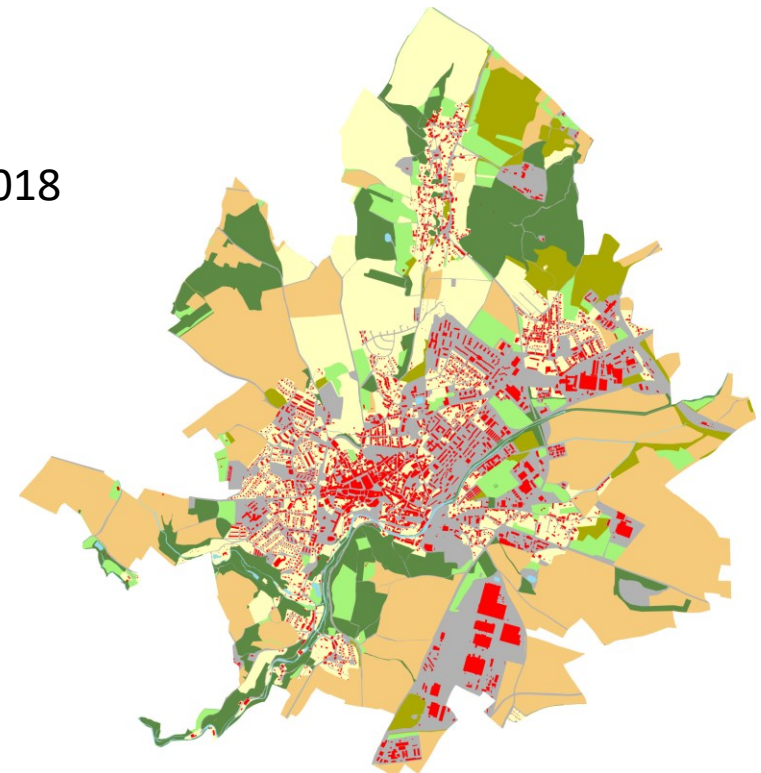
# Post-mining landscape of Kutnohorsko

1843



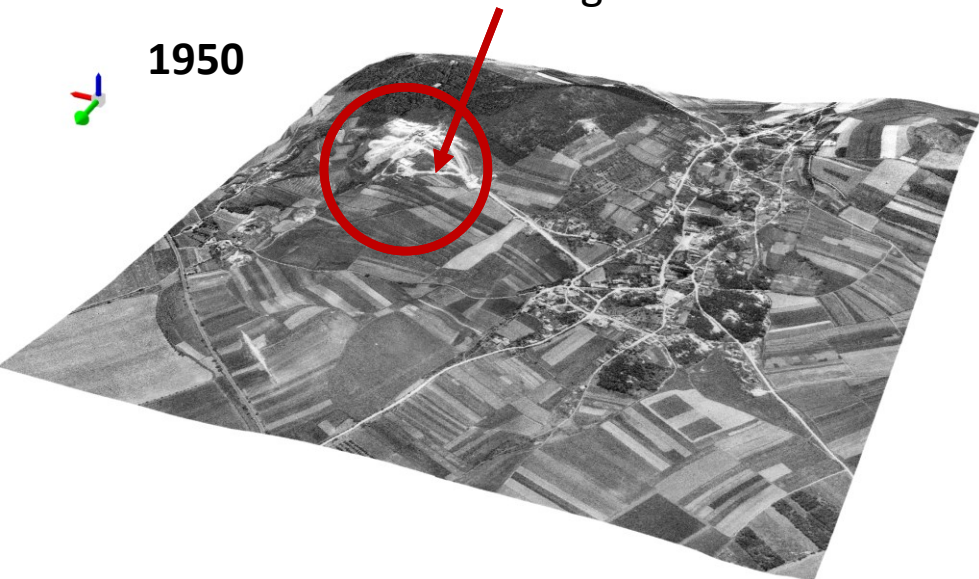
Land use category	Change (% pts.)
Built-up areas	5.36
Other areas	10.26
Water areas	-0.20
Forest areas	11.92
Arable land	-41.69
Permanent grasslands	-5.05
Permanent cultures	14.60
Abandoned land	4.81

2018



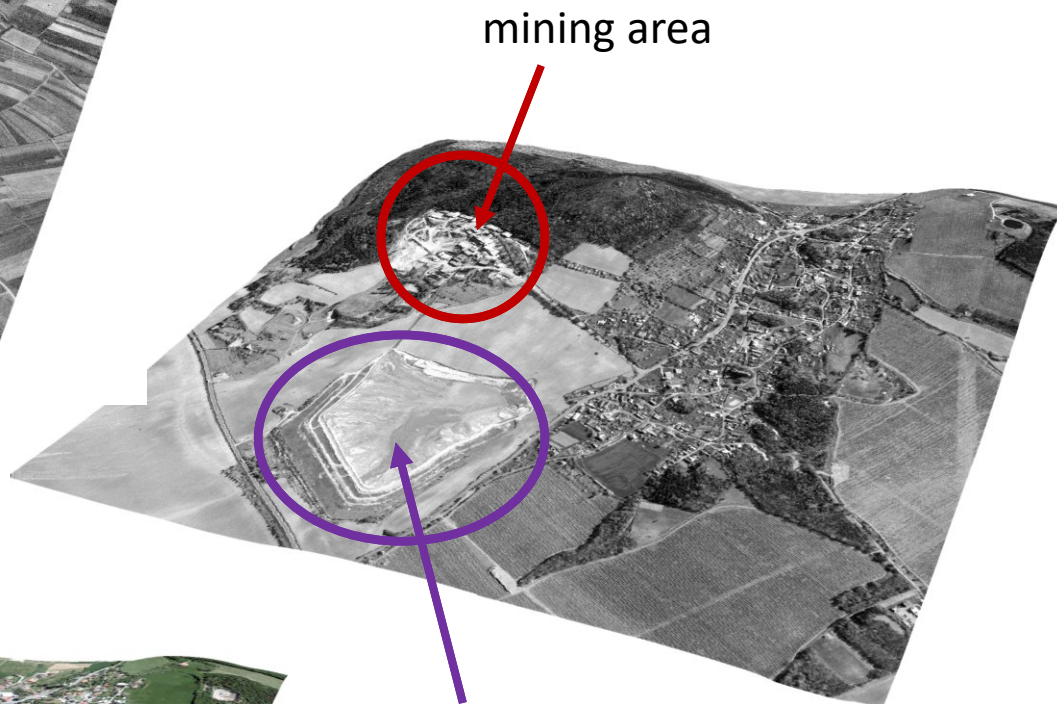
# Kaňkovské hills

1950



mining area

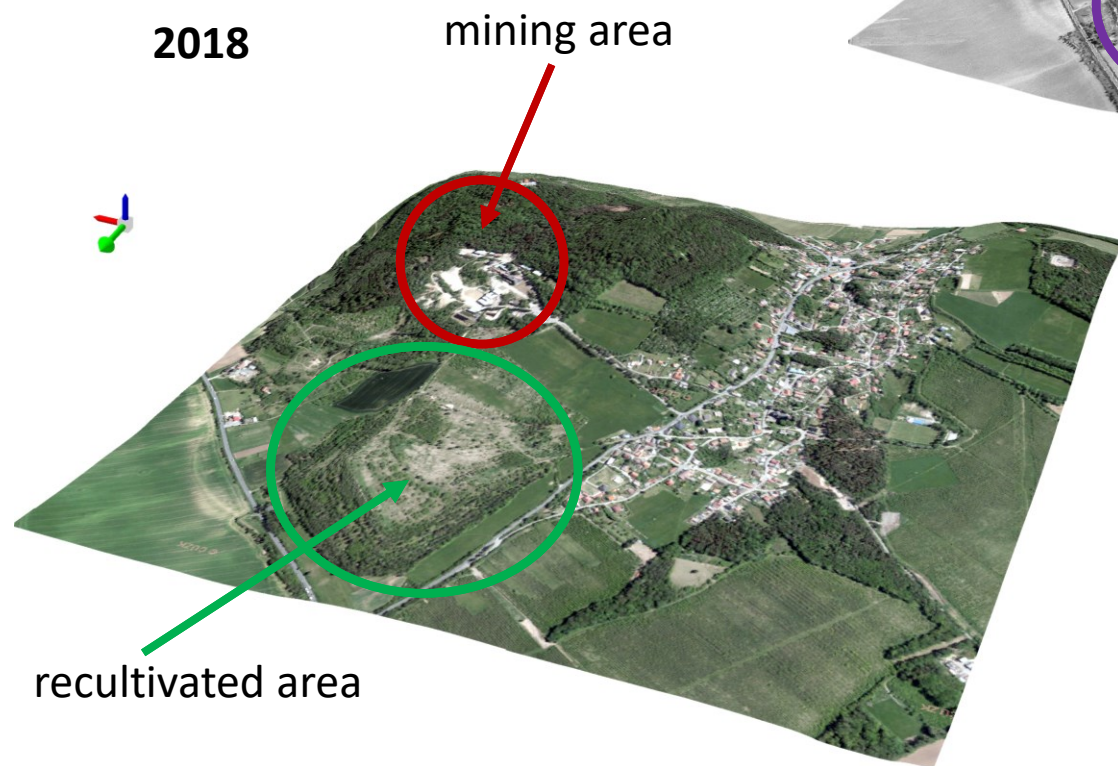
1990



mining area

mine dump

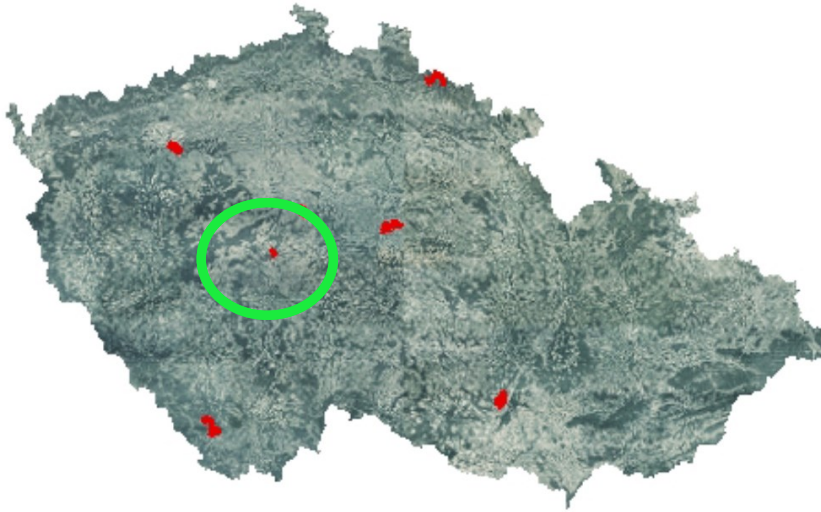
2018



mining area

recultivated area

# Extinct landscape of the deep river Vltava valley



- The Central Povltaví in the long part of the Vltava River approximately from Týn nad Vltavou to Slapy represents in the conditions of the Czech Republic and the whole of Central Europe a **unique phenomenon of a narrow cut-out valley** of a relatively large river
- Not only **unique river landscape valley disappeared but also the economic activity** and life of the people with the river for centuries such as raftsmen, millers, fishermen, rafting pubs, etc.
- After the construction of **water works** on the Vltava River (Vltava dam cascades) during the **period of the building of socialism in the 1950s and 1960s (Slapy in 1954)**
- A new **water management type of landscape** was created with a different use



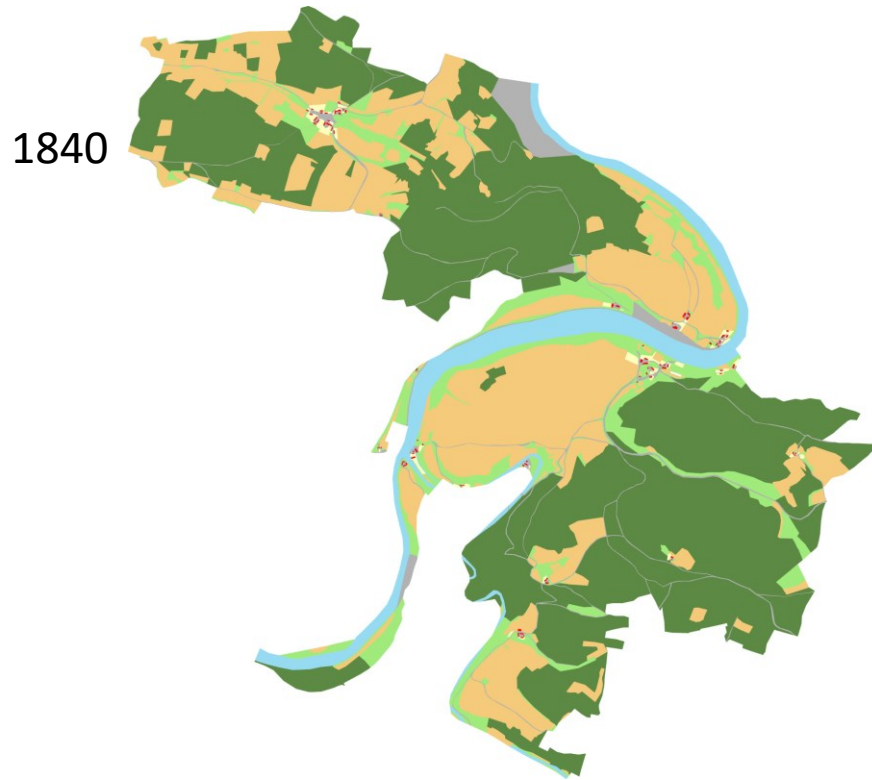
# Extinct landscape of the deep river Vltava valley

- The river landscape lost its original function and landscape character, but gained a **new attractiveness associated with the recreational use of large water bodies**
- Recreation areas, the largest in Živohošť, were gradually built in the core area of the Slapy dam, and the landscape gained a significant new recreational function.
- The **wider model area** on both banks of the middle Vltava bears **some features of the inland periphery of Central Bohemia, although it is not too far from Prague.**



- This is especially true for the **Neveklov area**, which was affected already after the occupation of the Czech lands in **1939, when the German occupation army established an extensive military training ground** here, which was connected with the **expulsion of the population.**

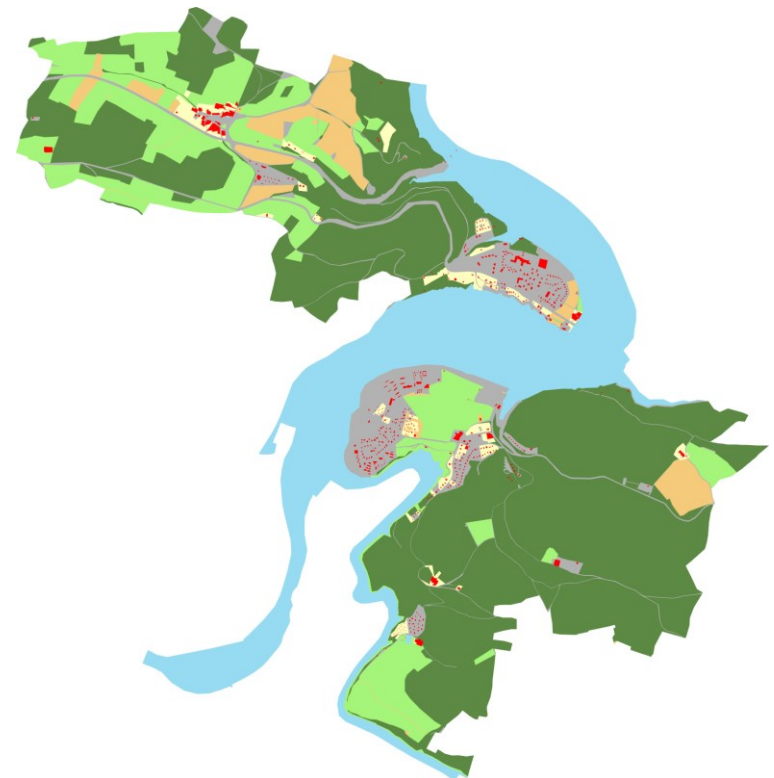
# Extinct landscape of the deep river Vltava valley



Land use category	Change (% pts.)
Built-up areas	0.65
Other areas	5.26
Water areas	<b>17.21</b>
Forest areas	<b>-5.44</b>
Arable land	<b>-23.91</b>
Permanent grasslands	5.00
Permanent cultures	1.23

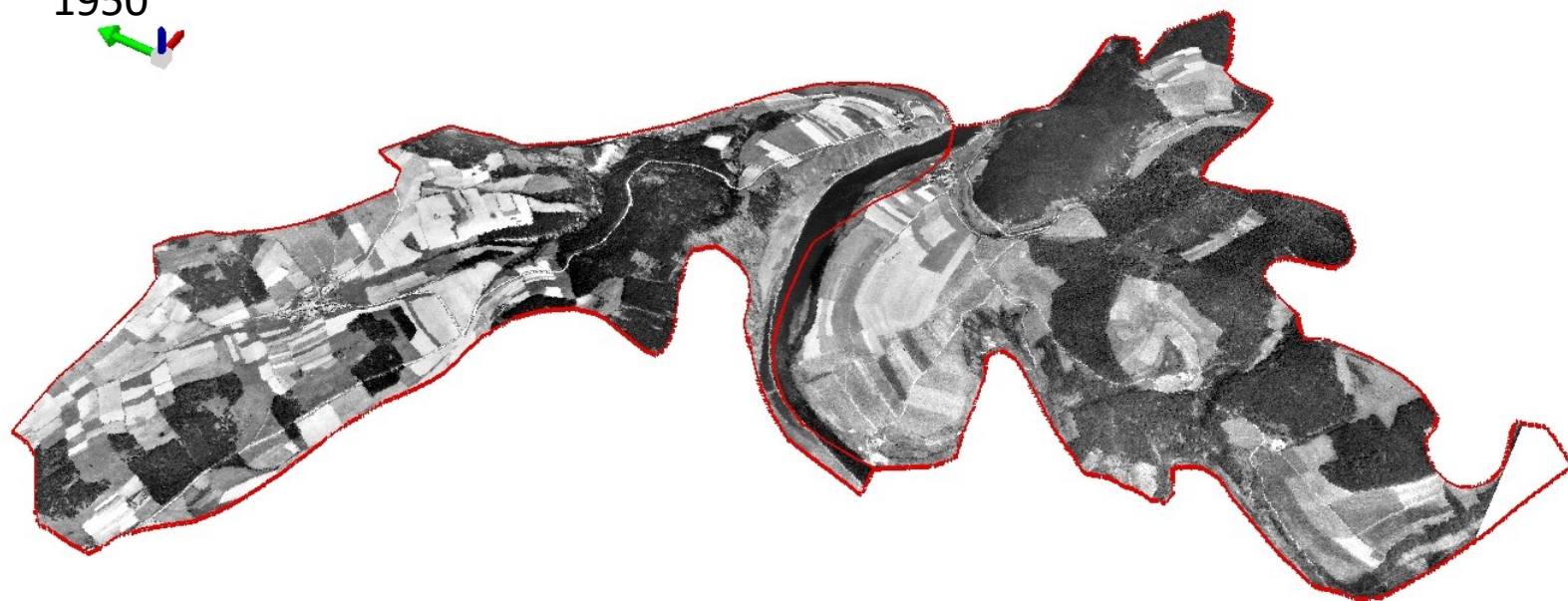


2018

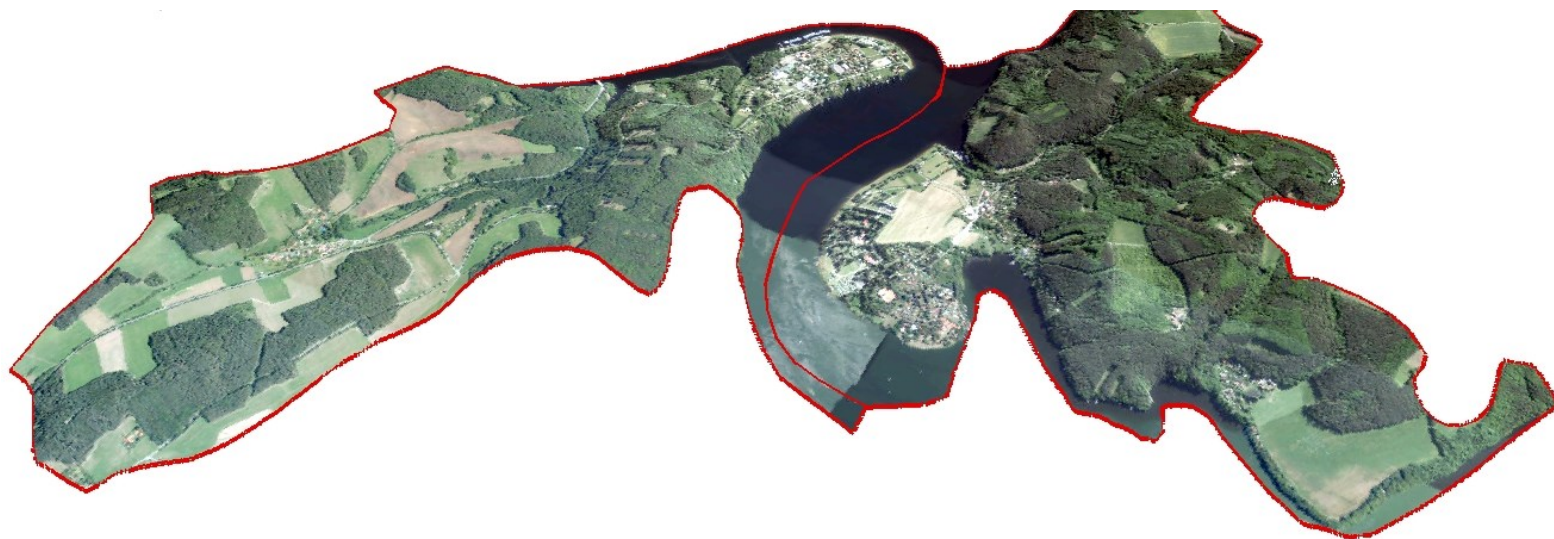




1950



2018





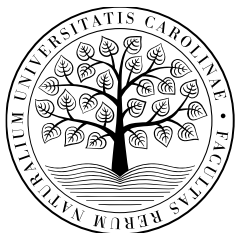
# Heritage of the extinct landscapes

- Further work – 12 areas of extinct landscapes 2019, 10 areas 2020, 10 areas 2021
- LULC Atlas of selected regions in the World (Hokkaido University + Charles university)
  - 2019 and 2021
- Important to preserve all the documents, knowledge, pictures... **to preserve and sustain „the national landscape memory and heritage“** for the future generation...
- Web portal: [www.zaniklekrajiny.cz](http://www.zaniklekrajiny.cz)



# Thank you for your attention!

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