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LANDSCAPE CHANGE IN MENTAL IMAGE OF ITS RESIDENTS

ABSTRACT

Cultural landscape went through many changes during the last seventy years. It is possible to measure this change by many ways, including comparative methods. However, is it really the right activity? While there are number of references and land-use maps, old residents are dying. In that sense there is a last chance to record an origin mental image of the landscape. The Project Landscape Memory as a Rural Heritage – The Changes of Czech Cultural Landscape in The Mental Reflection of its Inhabitants aims to identify a unique local identity and create a theoretical base applicable in territorial planning.

The methodology consists of following steps: to elaborate typology of contemporary landscape, to define landscape values for the next investigation, to select case study areas. Subsequently the field research will be realized, aimed at own evaluation of the landscape values, perception of the cultural landscape and its changes by seniors (65+) and young people. A synthesis will be based on the comparison of “objective” landscape development using statistical data and aerial photographs and “mental” landscape development hidden in the perception of the people.

The two-year project started in January 2014. The aim of this paper is to present a research, which has been carried out till these days. The identified landscape values varied in each of investigated landscape types. Up to now these results confirm how much an individual and a holistic approach is essential.

Key words: landscape change, cultural landscape, mental image, values

INTRODUCTION

Changing cultural landscape is on the political agenda today. It is relatively easy to analyse quantitative and qualitative changes in the (secondary) landscape (land use, land cover). In comparison with it, investigations about social and mental aspect are rare. Nevertheless the mental changes and landscape

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perception are often most determining for a creation of local identity and by such a way for a stabilization of rural settlement.

Inhabitants and their local identity connected with the cultural landscape plays a key role in rural development, especially in marginal rural regions. They have hardly any other possibility than to build their micro-regional strategy on rural heritage. At the present time, the European Landscape Convention manifests the generally respected frame for the investigation and its application in territorial planning (Vavrouchová et al., 2014).

The aim of the project is to identify, analyse and permanently document changes of the Czech cultural landscape in the mental image of its inhabitants. Specifically, it will focus on the disappearance of cultural heritage recorded in the individual mind - a local scale, create a database of qualitative information in relation to the cultural landscape and its development, to describe the transformation of the perception of the values of the cultural landscape in time, to describe the role of changes in the landscape formation of local population identity and determine aspects of its development. It will work on obtaining theoretical and applied methodological basis to improve planning practice, with an emphasis on cultural and spiritual values in the area (especially for the purpose of creating a landscape plan for the definition of landscape). One of the objectives will also confront different age categories (primarily students on one side with the people of retirement age in the other) and contribute to the local level to create a healthy social relationships and cultural environment in the village. Based on results will be prepared generalized recommendations for strategic development of municipalities and regions by the end of the project (a so-called *The Modern Chronicle of the Village*). It will be certificated by Agency for Nature Conservation and Landscape Protection.

MATERIALS AND METHODS

The method consisted of four steps. Firstly, to define the principal historical moments which formed Czech cultural landscape. Secondly, to select representative case study areas (mostly micro-regions) in its countryside. Not long after to define landscape values and finally to compare these values in explored micro-regions.

The case study areas were selected considering the past development of the landscape. Each of them represented a different type of Czech rural landscape.

Following landscapes were represented (Fig.1): suburban landscape in the hinterland of Brno (*Šlapanice* micro region), landscape with intensive agriculture and vine growing (*Podluží*), inner periphery with some mining activities (*Bystřice nad Pernštejnem* area), borderland periphery where the majority of population was exchanged after WWII (*Hrušovany nad Jevišovkou* micro-region) and highland landscape (*Nové Město na Moravě* and *Vysoké Mýto* micro regions).

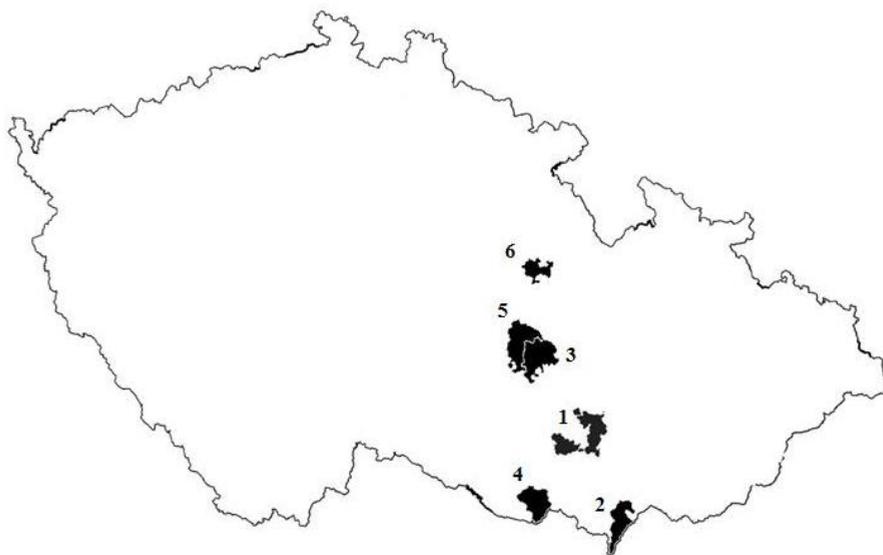


Figure 1. Localization of case study areas:

1 *Šlapanice* micro region; 2 *Podluží* micro region; 3 *Bystřice nad Pernštejnem* area; 4 *Hrušovany nad Jevišovkou* micro region; 5 *Nové Město na Moravě* micro region; 6 *Vysoké Mýto* micro region.

Following landscape values were evaluated: cultural, social, recreational, functional, natural. Cultural values of the landscape were seen in spiritual and religious values, intangible values (like personalities, events, fairy tales), recognized cultural values (protected monuments of different ranks) and informal values like landscape composition, urban structure, etc.

Social values were represented mostly by landscape suitable for meetings of people. Recreational values consisted in recreational zones, geo-parks, medicinal values etc. Among functional values of the landscape anti-erosional, anti-flood measurements, landscaping could be named. Natural values were represented by landscape and nature protection of various scales.

The investigation was aimed at discovery, description, localization and if possible quantification of the values for the purpose of their reflection in human perception.

The data used in our study were from these sources: ČUZK (The Czech Office for Surveying, Mapping and Cadastre), ČSÚ (The Czech Statistical Office), CENIA (Czech Environmental Information Agency) and department database.

The two-year project started in January 2014. The aim of this paper is to present a research, which has been carried out till these days. Initially, the article discusses the main factors of the landscape - forming process in Czech Republic during last 70 years. It is focused on rural landscape and hinterlands of cities, as a contrary to urban area, which is nowadays becoming more and more popular

issue. Subsequently, the terms *rural landscape* and *values* are defined and illustrated by individual case studies. Finally, the contribution compares representative values with each other and discusses potential of unique values in resident perception.

RESULTS AND DISCUSSION

Czech cultural landscape was on the threshold of big changes in a beginning of the second half 20th century. Long period of economic stability and strong national identity was replaced by era filled up with anonymity and uncertainty. After Second World War countryside had to suddenly deal with transition in societal and political life.

Table 1. The main phases of landscape changing process in Czechia during last 70 years

Innovation phases and periods		Comments and effects upon the landscape
1945 - 1948	The transfer of German population from the border	Forming of secondary natural landscape in abandoned mountains village
1948 - 1961	Takeover of political power by the Communists The 2 nd land reform Collectivization of agriculture	Intensively used fertile lowlands The biggest changes in land use (particularly in arable land)
1961 - 1970	Economic depression Attempts at agricultural intensification deepening Completion of collectivization	Large plots of intensively used arable land Strong erosion Fertilizers and related field pollution
1970 - 1990	Joining of small cooperatives and state farms The Agricultural Land Protection Act approved in 1976	Lowered biodiversity
1990 - 2000	Re-introduction of the market economy Restitution of private property and land Capital transition of cooperatives (cooperatives of owners) and privatization of state farms Increase of small-scale farming Competition between Czech and better subsidized agricultural products from abroad.	Reorganization of arable land (from large plots to smaller one) Increasing the proportion of diffuse vegetation Agricultural brownfields in countryside
2000 -2004	Preparation and realization of accession to the EU	
2004 - nowadays	Competition between Czech and the better subsidised agriculture of the older EU Members States Schengen accession	The biofuel landscape

Source: Adapted from Bičík and Jeleček, 2009.

As we can see in table above, rural landscape varied in changes according to its location. We can observe the difference between periphery regions and urban hinterlands.

Remote countryside has changed to better outcome during last 70 years. Borderland and highland regions were affected by decreasing extensive agricultural production. Preceding arable land was replaced by woodland and permanent grassland. In many areas, agriculture has been restructured. Nevertheless many of these areas remained on the edge of interest.

In spite of that, changes in urban hinterlands, inner peripheries and fertile lowlands led to lowered ecosystem stability. Percentage of built-up area grew up in consequence with proceeding urbanization. Moreover the rising intensity of agricultural land use (soils) in lowlands became an economically more effective way to increase the level of production. Heterogeneous farmland was substituted by large plots of intensively exploited arable land (Bičík, 2007). The socialistic government expropriated these former private parcels for cooperatives and state farms. The loss of ownership caused loss of identity.

The collapse of the communist regime in 1989 ended the era of the “socialist” economy. The Czech landscape has been coping with many issues, since then. At first, impacts of privatisation and massive large-scale restitution of land property. There are 3.5 million land owners, but less than 1 % of them have begun to farm again. Nevertheless the land consolidation is the strongest instrument in the landscape planning, political and societal forces slow it down and complicate the process of restoration. Secondly, rural landscape is affected by consequences of an unconsidered spatial planning. Although urban sprawl, shopping malls, brownfields, etc. are becoming more and more discussed issue, its right solution is very scare. Last but not least countryside was (and still is) influenced by a grant policy in large scale. So called “the biofuel landscape” seems to be not as ecological as it used to be proclaimed.

These changes should be controlled and managed, particularly in rural area. However the delimitation between rural and urban is very difficult task concerning many aspects such a city size, population density, accessibility levels, etc. Categorisation differs not only in local scale, but between countries as well.

Czech landscape is characterized by its diversity and high settlement density (HAMPL and Müller, 1998). According to Perlín et al. (2010) a rural space in *Czechia* is defined as the territory of rural municipalities of up to 100 inhabitants per km². In order to determine *rural landscape* it is spoken about area which consists of rural settlements and surrounding countryside. Through these *landscape values* could be considered as a complex of heterogeneous attributes, which seem to have nothing in common.

In the case study areas primary (natural), secondary (land use, land cover) and tertiary (landscape protection, socio-economic sphere etc.) landscape structures were analysed. These findings were interpreted and evaluated as following landscape values: cultural, social, recreational, functional and natural.

Land use was one of the most comparable attributes. It just goes to show (Fig. 2) that arable field is still the most frequent land use type and occurs in any geographical localization. In addition to urban land and land not otherwise specified it is also the most important factor, which decreases ecological stability. On the contrary permanent grassland is the most variable attribute. The figure varies in consequence of geomorphology. Significant values are found in areas with higher relative elevation (*Bystřice nad Pernštejnem*, *Nové Město* and *Vysoké Mýto* micro regions) which consequently led to higher ecological values. In conclusion *Hrušovany nad Jevišovkou* micro region is an area with the lowest ecological values.

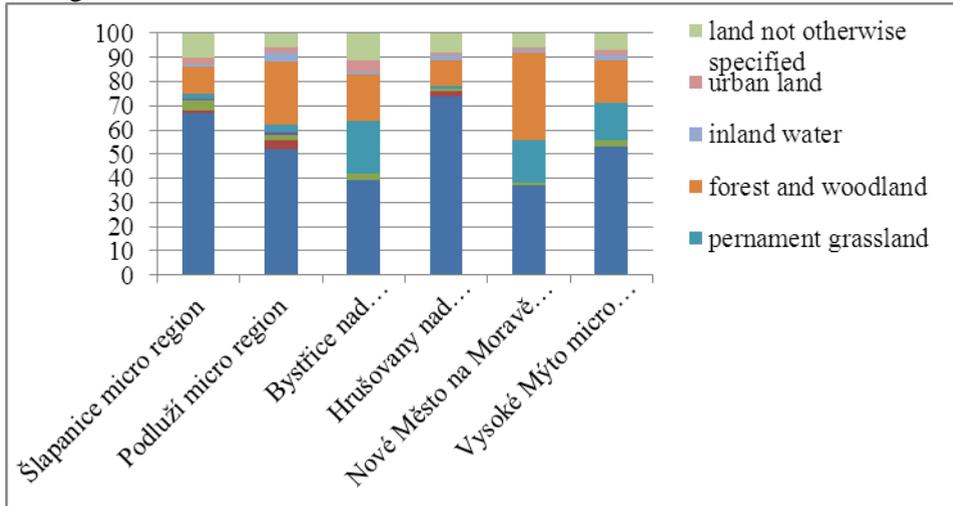


Figure 2. Land use in case study areas. (Lincová, 2009)

Population growth was the second-most representative characteristic in study (Fig. 3). The historical factor influenced a demographic transition the most, therefore population growth rates vary greatly among micro regions.

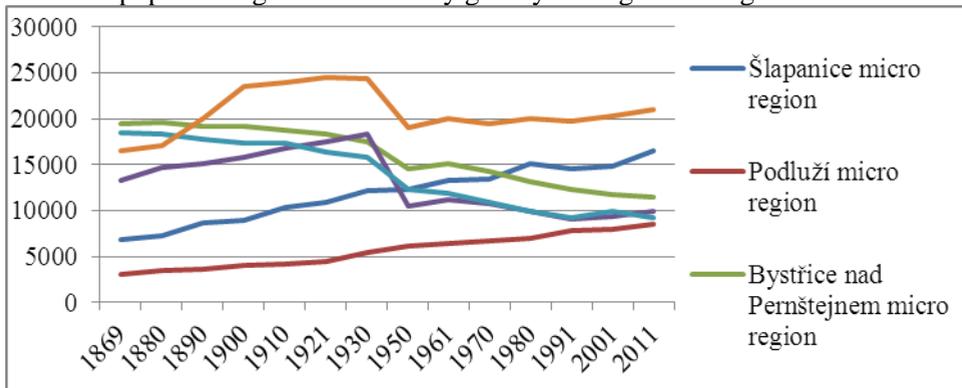


Figure 3. Population growth on case study areas. (Lincová, 2009)

Four of six case studies (except for *Podluží* and *Šlapanice* micro region) have a corresponding graph course. These areas recorded the biggest population decline after WW2. Population growth rate has been slowly increasing since then; nevertheless none of them reached values before 1939. In spite of that *Podluží* and *Šlapanice* micro regions are on the population increase. In fact it is because of changes after 1989. *Šlapanice* area has become a suburban landscape of the city of Brno since then. Free labour market supported slowly population growth in a border region such as *Podluží*.

CONCLUSION

Up to now varied results show how much an individual and a holistic approach is essential. In the case of *The Modern Chronicle of the Village*, there is no chance to create a unique methodology for all types of cultural landscape. Therefore it is necessary to involve not only experts but also any responsible person, seniors (65+) and young people, as well. The evaluation of the rural landscape has to be a synthesis. The synthesis will be based on the comparison of “objective” landscape development using statistical data and “mental” landscape development hiding in the perception of the people. Only after respecting an earlier condition will a cultural rural landscape stay alive.

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