

**Theoretical methodological questions regarding the cadastral  
survey of landscape features via the example of the Central-  
Cserhát**

**Theses of PhD dissertation**

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## **I. Introduction**

Landscape features around us form an integral part of the landscapes. They can contribute to the sustainable functioning of landscapes and they are present as imprints of our cultural heritage. Therefore, the way of their survey and protection is still a relevant issue nowadays. Consequently, in my dissertation I examine **theoretical and methodological questions relating to** a special group of landscape values, namely **the unique landscape features, in particular the geoheritage.**

The national legal framework for the protection of natural values and landscape was established by Act. No. LIII. of 1996 on Nature Conservation, which – in a unique way – introduced the notion of *unique landscape feature*. The importance of this is underlined by the fact that nowadays the preservation of values has been brought to the fore worldwide. According to 6.§ 3) of the Act, unique landscape feature means a natural value or natural formation characteristic of a particular landscape or a man-made landscape creating element which has natural, historical, cultural, scientific or aesthetic significance for the society.

Such a theoretical category only makes sense if these unique landscape features will be surveyed. However, the surveying and cadastring raise a number of theoretical and methodological

problems. Therefore, the main goal of the present dissertation is to examine and present the actual methodological issues concerning the survey of unique landscape features, with regard to **the legal practice in European states.**

## **II. Object of the research, brief description of examinations and analysis carried out, methods for the processing of data**

1) In the dissertation I began with an overview of the landscape features related terms, then **I analysed the categories and levels of protection regarding landscapes and landscape features in 14 selected European states** (Austria, Slovakia, Ukraine, Romania, Serbia, Croatia, Slovenia, Bulgaria, Finland, Iceland, Germany, Norway, Sweden, and Switzerland). In my research I reviewed 9 acts on nature conservation and 6 acts on environmental protection, whichever contains rules and categories regarding landscape protection, in particular unique landscape features or categories which have similar name or content. In addition, I examined whether the notion of landscape appears in laws.

2) A large number of proposals have already been drawn up concerning the modification of the official standard on the cadastring of unique landscape features. Prominent among these are works of DOBOS, A. et al. (2001) as well as SZABÓ – SÜTŐ, 2005. Based on their recommendations and the official Hungarian Standards MSZ

20381:1999 and MSZ 20381:2009, **I did the analysis of the typing system of the geoheritage and I made a proposal for the introduction of a new typing system.**

3) In order to identify the methodological issues, **I chose the Central-Cserhát** as pilot area, which is extremely rich in landscape values. **By the help of the datasheet I did the detailed survey of 29 geographical features in 13 settlements' administrative areas.** To ensure that the range of the cadastral geographical features is not narrowed down to just the volcanic formations, I extended the survey to some neighbouring landscapes. During the examinations I tested **the geographical datasheet made in the frame of the dissertation** on the ground, during the survey I examined the practical use and the structure of the datasheet. Therefore, on the basis of the practical experiences I revised and improved the datasheet continuously.

4) The datasheet leans on three previous works. Some parts of the geographical (geological and geomorphological) datasheet is based on the „Geomorphological datasheet” drawn up by PAPP, S. (1995). In addition, it includes a large part of special aspects set out by DOBOS et al. (2001) on the „Supplementary datasheet for geological and geomorphological features” which was specially made for geographical unique landscape features. Last but not least, „Cadastral datasheet of geographical features” by KISS, (2001) can

also be mentioned as a source. **The datasheet, what I set out and improved based on these works, focuses on the geological and geomorphological objects out of the geographical** (geological, geomorphological, hydrological and pedological) **features.** The new datasheet aims at the detailed survey of the features, while it tries to combine the strengths of the previous works and the experiences regarding the solutions of problems raised during the practical use of the previous datasheets.

5) **In order to facilitate the survey of geographical features**– to the best of my knowledge, at the first time regarding this topic – **I prepared a detailed guide possibly including all questions likely to be raised.**

6) In Hungary the survey of the national values, the hungaricums is currently carrying out dynamically under the professional guidance of State Secretariat for Environmental Affairs, Agricultural Development and Hungaricums of the Ministry of Agriculture. Moreover, adequate financial resources are available for the survey of national values. On this basis, it would be appropriate to register the national values and unique landscape features in parallel in the areas participating in the survey of national values. **I prepared a new type of datasheet with a new approach combining the aspects of survey of national values, hungaricums and unique landscape**

**features.** Both types of values can be surveyed at the same time thanks to this new datasheet. **I also prepared a technical guide** for the correct completion of the datasheet, which presents the sheet and its use as well as the most important methodological issues which can be raised during the survey, with illustrative examples.

7) The unique landscape feature module of the Nature Conservation Information System (TIR) was established in order to register the unique landscape features uniformly. The evaluation of the currently available materials of the surveys is essential in order to explore the methodological problems regarding unique landscape features. Therefore we carried out a **professional assessment related to the landscape feature module of the TIR** in 2012. The results of the evaluation were published in a study (TÓTH–KISS–SZIJÁRTÓ, 2012). During the assessment **we analysed the distribution of the landscape features between the national park directorates, the average number of the features per settlements, the changes in the average number of the features according to the population as well as the distribution of the features between main types and types.** Nevertheless, the condition, the degree of endangerment, the exploration and analysis of endangering factors are also objectives of the examination. **Based on my evaluation**

**related to TIR, I gave recommendations regarding the development opportunities of the register.**

8) On the basis of the legislation currently in force, it is considered that the protection of unique landscape features has not been ensured yet. Their protection would be ensured – in accordance with the rules established by the Act on Nature Conservation – if the resettlement plans would contain the list of unique landscape features. However, in practice the unique landscape features do not appear in resettlement plans in most cases. **In order to justify this statement, I also examined the resettlement plans** (regulation plans, local building codes) **regarding the pilot area. I studied basically whether the plans contain the notion of unique landscape features** or other type of values which can be declared unique landscape feature later, during the cadastral survey. In addition, I analysed the distribution of the type of the features and their location, namely that they are situated in the outskirts or within the inner areas of the settlements. Moreover, **I examined the descriptions regarding the landscape features as well as I looked at that which part of the plans contains these features.**

Based on the analysis of the resettlement plans, it can be considered that local building codes and regulation plans are adopted in form of regulation by the local governments, while structural

plans are adopted in form of normative decision by the local governments, and the latter does not bring with it any obligations. **According to the relevant legal framework and practices, I stated that the providing in the regulation plans and local building codes, or the publication in form of local regulation on protection of values are what can be effective regarding the appearance of the unique landscape features in the resettlement plans and the integration of these features.**

9) Based on the evaluation of the already existing cadastres and the cadastres prepared by myself as well as according to the results of the examination of the plans, **I made a proposal regarding the protection and utilization of the geographical features in Central-Cserhát.** Among others, I pointed out that the essential precondition is the overall expert survey of the values and the implementation of such an electronic register of the geographical features the data content of which can be queried in accordance with the professional aspects. It is also important to make local people aware of the geographical feature and of their preciousness as well as to develop the options of legal protection etc.

### **III. Summary of the results and conclusions of the research**

- summary and analysis of the methodological issues related to the unique landscape features and geographical (geological and geomorphological) values;

- proposal in order to introduce a new typing system regarding geographical features;

- datasheet and guide for the survey of the geographical features;

- datasheet and guide for the survey of the hungaricums, the national values and the unique landscape features in parallel;

- recommendations regarding the development of the unique landscape feature module of the Nature Conservation Information System (TIR);

- evaluation and analysis of the cadastre of unique landscape features in Central-Cserhát;

- examination of the resettlement plans in Central-Cserhát, proposal in order to integrate unique landscape features into resettlement plans.

In my dissertation – in accordance with the objectives set out – I made the evaluation of the **typing system regarding the geographical features**. Based on this evaluation, I made a proposal to introduce a new typing system.

I did surveys in the Central-Cserhát and I prepared the review and the completion of the already existing materials of previous surveys.

**The results of the evaluation of the materials** showed that the predominance of cultural-historical features can be observed in the pilot area as well as more than half of the unique landscape features are endangered. The most frequent endangerment factor is the lack of the maintenance and care.

In the frame of the dissertation I examined the methodological issues relating to geographical features. On the whole, although the geographical values are often situated in the immediate vicinity of the inner areas of the settlements, they do not play a role in the daily lives of local people. Because of their obscurity and unexploration, methodological and systematic surveys are required and it is remedied by compilation of a relevant datasheet for the cadastral survey. Difficulties arise because there is not a standard set of criteria which can support the survey of the features. Unfortunately, it is difficult to elaborate such a system. The problem is on the one hand the differences between the structure and construction of the objects to be surveyed, on the other hand the different character of their circumstances. In the frame of the thesis, I prepared **a datasheet and a guide** which are methodologically suitable for **the cadastral survey of geographical features**. These documents endeavour to solve the above mentioned difficulties.

The unique landscape feature module of the Nature Conservation Information System (TIR) provides a register of the unique landscape features. The improvement of this module can be reasonable. I made a proposal regarding the development of the system with KISS, G. and SZIJÁRTÓ, Á. joint authors, in our study on **the professional evaluation of the unique landscape feature module of the TIR**.

In general, nowadays **the resettlement plans** do not ensure the sufficient protection of the unique landscape features. None of the examined documents contained the notion of the unique landscape feature or the list of them. Chapters on the protection of values, on the landscape and the nature conservation of the local building codes dealt with the landscape values. Most of the cases, the cultural-historical features appeared in the plans, followed by natural and scenic features. There is a clear predominance of the built values, which belong to the inner areas of the settlement, almost without exception. Only a limited number of natural and scenic features situated in the outskirts of the settlements could be found in the plans. In some cases, brief descriptions linked to the cultural-historical features, e.g. in the local building code of Buják.

On the whole, general rules apply for the landscape features, while special regulations tailored to several values can be found in

the plans rarely. In addition, the most of the named features are protected (e.g. national monument), however, the explicit aim of the landscape protection and within it the protection of unique landscape features would be to provide protection for values which have not protected status.

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