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VSEBINA / *INDICE GENERALE / CONTENTS*

Nela Bagnovskaya: Severia as a Historical-Geographic Concept 425
La Severia come concetto storico-geografico
Severija kot zgodovinsko-geografski koncept

Gaukhar Balgabayeva, Elmira Nauryzbayeva, Utegen Isenov, Aygul Taskuzhina, Aygul Amantayeva & Tolkyn Erisheva: Peculiarities of Conducting Military Affairs in Ancient Tribes of Kazakhstan 433
Peculiarità dell'istituzione del settore militare nei popoli antichi del Kazakistan
Posebnosti v osnovanju vojaštva pri starodavnih plemenih Kazahstana

Kabyl Khalykov, Gulnar Maulenova & Rakhimjan Sadigulov: Trends in the Formation of the Semantic Image of The Capital City (by the Example of Almaty) 441
Tendenze nella formazione dell'immagine semantica di una capitale (sull'esempio di Almaty)
Trendi pri oblikovanju semantične podobe prestolnice (po zgledu Almatyja)

Elena Isaeva, Alexander Sokolov & Nadejda Tarusina: Gender and Civic Engagement in Modern Russia 451
Gender and Civic Engagement in Modern Russia
Spol in državljansko udejstvovanje v sodobni Rusiji

Elena Susimenko & Elena Litvinenko: Socio-Cultural Factors Contributing to the Formation of the Russian Technical University Students' Bilingual Strategies 469
Fattori socioculturali che contribuiscono alla formazione di strategie bilingui negli studenti dell'Università politecnica russa
Družbeno-kulturni dejavniki, ki prispevajo k oblikovanju dvojezičnih strategij pri študentih Ruske tehniške fakultete

Nataliya Vasilievna Aniskina & Larisa Vladimirovna Ukhova: The Axiological World View of a Modern Advertising Consumer 477
La visione assiologica del mondo del consumatore contemporaneo dell'advertising
Aksiološki pogled na svet sodobnega uporabnika oglaševanja

Avgust Lešnik: Razumevanje družbenih sprememb ter družbenega in zgodovinskega razvoja v »predzgodovini« sociologije 485
Comprensione dei cambiamenti sociali, nonché dello sviluppo sociale e storico nella "preistoria" della sociologia
Understanding Social Change, as Well as Social and Historical Development in the "Prehistory" of Sociology

Nenad Jelesijević: Performativne intervencije v estetskem režimu 505
Gli interventi performativi nel regime estetico
Performative Interventions in the Aesthetic Regime

Polona Tratnik: Kreativna ekonomija: mit o ustvarjalnosti, ki prinaša blaginjo in uspeh 517
Economia creativa: il mito della creatività che porta prosperità e successo
Creative Economy: Myth about Creativity, which Assures Prosperity and Success

Daniela Angelina Jelinčić & Feđa Vukić: Creative Industries as Carriers of Urban Identity and Drivers of Development: From Directional towards Participative Branding 527
Le industrie creative come artefici dell'identità urbana e motori dello sviluppo: dal branding direzionale a quello partecipativo
Kreativne industrije kot nosilke urbane identitete in gibalo razvoja: od usmerjevalnega k sodelovalnemu znamčenju

Nina Vodopivec & Alja Adam: Kreativnost kot poetika nastajanja – razmislek o preseganju dualizmov 537
Creazione come poetica della formazione
Creativity as poetics of becoming

Marta Lombardi, Sergio Pratali Maffei, Paolo Rosato & Sonja Ifko: A New Approach to Built Heritage Sustainable Preservation Projects: the Case Study of Vipolže Castle – Goriška Brda, Slovenia 549
Un nuovo approccio al progetto di conservazione sostenibile del patrimonio costruito: Il caso studio del castello di Vipulzano – Collio sloveno
Nov pristop k načrtovanju trajnostne prenove stavbne dediščine: Primer gradu Vipolže v Goriških brdih, Slovenija

Igor Sapač & Juan P. Maschio: Školj Castle and its architectural history 565
Castello Školj e la sua storia architettonica
Grad Školj in njegova arhitekturna zgodovina

Neva Makuc: Thetris Transnational Church Route: Valorisation of Sacral Cultural Heritage for Fostering Development of Rural Areas 585
Thetris transnational church route: valorizzazione del patrimonio culturale religioso per lo sviluppo delle aree rurali
Thetris transnacionalna cerkvena pot: valorizacija kulturne dediščine za razvoj ruralnih območij

Nadja Penko Seidl, Damijana Kastelec & Ana Kučan: Between the Physical and Perceptual: Toponyms in Landscape Typology, Management and Planning 595
Tra il fisico e il percepibile: toponimi nella tipologia paesaggistica, nella gestione e nella progettazione
Med fizičnim in zaznavnim: Toponimi v krajinski tipologiji, upravljanju in planiranju

Ines Unetič: Zgodovina nekdanje plemiške palače in njenih vrtov v Valdoltri. Od benediktinskega samostana in samostanskih vrtov do hotela Convent in hotelskih teras v Ankaranu 609
Storia di un palazzo nobiliare di un tempo e dei suoi giardini a Valdoltra. Dal monastero benedettino e giardini monastici all'hotel Convent e le sue terrazze ad Ancarano
History of the Former Aristocratic Palace and its Gardens at Valdoltra. From the Benedictine Monastery with Monastic Gardens to the Convent Hotel with its Terraces in Ankaran

Metoda Kemperl: Il progetto di Lorenzo Martinuzzi per la chiesa parrocchiale a Gonars. Contributo allo studio dell'architettura tardobarocca nel Friuli–Venezia Giulia 625
Martinuzzi's plan for the parish church in Gonars. A contribution to the study of late baroque architecture in the Friuli
Martinuzzijev načrt za župnijsko cerkev v Gonarsu. Prispevek k preučevanju poznobaročne arhitekture v Furlaniji - Julijski krajini

Boris Dorbić & Elma Temim: Povijesni pregled razvoja vrtlarstva i krajobraznog uređenja Šibenika i okolice u razdoblju 1945.-1985. godine 637
Rassegna storica dello sviluppo del giardinaggio e dell'arte ambientale di Sebenico e dei suoi dintorni durante il periodo 1945-1985
A Historical Overview of the Development of Gardening and Landscaping in Šibenik and Its Outskirts During the Period from 1945 to 1985

Jadranka Brkić-Vejmelka, Ana Pejdo & Ante Blaće: Zadar Islands Growth Prospects – is Tourism Their Driving Force? 651
Prospettiva dello sviluppo delle isole di Zara – può turismo dare la spinta?
Razvojne možnosti zadrskih otokov – ali je turizem njihova gonilna sila

Kazalo k slikam na ovitku 669
Indice delle foto di copertina
Index to pictures on the cover

Navodila avtorjem 670
Istruzioni per gli autori 672
Instructions to authors 674

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BETWEEN THE PHYSICAL AND PERCEPTUAL: TOPONYMS IN LANDSCAPE TYPOLOGY, MANAGEMENT AND PLANNING

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ABSTRACT

The purpose of this article is to search for the connection between the physical environment and the way people understand and perceive that environment. We believe that this relationship could be better understood through the research of toponyms. The research focused on field names, while they provide the most detailed knowledge about cultural landscape. We collected field name data from different sources, prepared filed name maps, overlaid them with spatial data and finally, clustered them into groups of similarities. The results show that areas, described by field names have a unique landscape character and could be used as basic typological units.

Keywords: landscape, field names, landscape characteristics, landscape typology, landscape planning, landscape management

TRA IL FISICO E IL PERCEPIBILE: TOPONIMI NELLA TIPOLOGIA PAESAGGISTICA, NELLA GESTIONE E NELLA PROGETTAZIONE

SINTESI

Lo scopo di quest'articolo è cercare il collegamento tra l'ambiente fisico e il modo in cui le persone intendono e percepiscono quest'ambiente. Presupponiamo che questo rapporto sia più facile da capire attraverso ricerche di toponimi. La nostra ricerca si concentra su nomi di luogo, poiché essi forniscono le informazioni più dettagliate delle caratteristiche del paesaggio culturale. Abbiamo raccolto i nomi di luogo da fonti diverse e così realizzato carte geografiche che abbiamo ricoperto con dati spaziali e infine abbiamo classificato i nomi in gruppi in base alle loro somiglianze. I risultati hanno mostrato che le aree determinate secondo i nomi di luogo hanno un unico carattere paesaggistico e possono essere usate come unità tipologiche di base.

Parole chiave: paesaggio, nomi di luogo, caratteristiche paesaggistiche, tipologia paesaggistica, progetti paesaggistici, gestione di paesaggi

INTRODUCTION

Landscape is an elusive phenomenon. Ingold starts its definition by first telling what landscape is not: *"It is not 'land', it is not 'nature', and it is not 'space'."* Land is quantitative and homogeneous, while landscape is qualitative and heterogeneous; the order of nature is explicate, while the order of landscape is implicate, and, last but not least; with space, meanings are attached to the world, while with the landscape, they are gathered from it (Ingold, 1993, 153-155). When discussing about landscape, we should consider its visible and tangible, but also its perceptual and cognitive aspect. Although landscapes are in the first place characterized by physical features, it is the way people perceive these features that creates landscape. Every landscape is multi-layered from different perspectives: historical, geographical and perceptive. From historical point of view, landscape is a palimpsest, where traces of the past could be observed underneath contemporary structures. From geographical point of view, climate, geology, topography, hydrology and land cover, altogether combined into a unique phenomenon, constitute landscape. And, last but not least, a significant part of every landscape is the way people understand, interpret and use their living environment.

Although at least from human's point of view landscapes seem permanent, they are in continuous process of change and re-creation. *"What we have is what we had before, (admittedly uneven) uncertainty, dynamism and change,"* write Hoggart and Paniagua (2001, 56). Despite that, landscape changes have become an important issue in the last few decades. The main reasons for concern are the pace and the extent of changes. Antrop (2005) emphasizes, that for centuries changes were local, gradual, and thus landscapes were experienced as stable. They had distinct character and identity. Nowadays landscape structures can be wiped away completely, rejecting hundreds or even thousands years of history. Kizos et al. (2010) write about 'space of flows' – global processes and pressures that affect landscapes and often undermine their characteristic structure. As a response to that, the interest for 'space of place' – regional characteristics and local qualities has increased. Mitchell (2013) describes the transition of traditional rural landscape into its consumptive state as 'creative destruction' and introduces the concept of 'creative enhancement' as an alternative - the latest resulting in (contemporary) multi-functional landscape.

The majority of cultural landscapes are a side-product of agriculture and two contemporary trends in agriculture are seen as a threat for what we call 'traditional cultural landscape': intensification on one side and abandonment on the other. The first trend results in landscapes, often described as highly productive, but at the same time monotonous and uniform, with lack of diversity and void of meaning. In the second case, nature is conquering back what man had taken from it centuries ago. Environmental problems, loss of landscape heterogeneity, biodiversity, and, last but not least, loss of *genius loci,* or sense of place, are the main issues that result from the aforementioned trends. As a response to that, calls to control, manage and guide the processes of change have emerged on regional, national, and international levels. European landscape convention – the first document dedicated solely to landscapes, and at the same time to all landscapes, aims towards protection, management and planning of landscapes – not just those that are designated as beautiful and exceptional, but also the ordinary, everyday and even degraded landscapes.

At the beginning of the 21st century a great deal of European landscapes could be described as large-scale and highly-productive, as well as monotonous, lacking character and diversity. The majority of Slovenian landscapes are struggling with the opposite problem. These landscapes are rich in character and biodiversity, with small-scale field division and ownership structure. At the same time they are an anachronism, unable to engage with the needs of contemporary life. The challenge we are focusing is how to introduce changes which would adapt these landscapes to contemporary demands (e.g. farming, infrastructure, housing), but also preserve their character, coherence and their cultural meaning.

According to Angoletti (2014, 67), "landscape is largely a cultural construct and exists in a state conceived of or to a certain extent 'planned' by human beings in consideration of its natural components." We argue that the strongest privilege of traditional cultural landscapes lies in the harmony between natural environment and the way people understand that environment and have adapted it to their everyday needs. And the first step towards its domestication is naming. Through the act of naming space becomes a place, and land becomes a landscape. *"In a fundamental way, names create landscapes,"* writes Tilley (1994, 19) in his book A Phenomenology of Landscape. Toponyms are neither visible nor tangible, but they play an important role in understanding landscapes: their physical structures, processes which continuously shape and reshape them, and also the way how people perceive and use these landscapes. Our research focuses on field names, since among all toponyms, field names are those that express the most detailed knowledge of landscape - especially rural landscape, which has been created as a side-product of agriculture.

RESEARCH HYPOTHESIS

The central hypothesis of this research is that field names reflect landscape characteristics on one side and people's perception and understanding of these landscapes on the other. As such they create an important layer of every landscape, which should not be neglected when we are developing new planning and manage-

ment concepts for future, especially rural landscapes. Considering the fact that the naming of the land(scape) is the result of the interpretation of its *physis*, we argue that named places have distinctive landscape characteristics and could be used as landscape character areas within landscape typology. The first and crucial step in the research was to define the relationship between a field name and an area that it refers to – a term *field name unit* was used to describe each named area. Then we defined landscape character areas on the basis of field name units; and, finally, we discussed the possibilities for the use of these units in management and planning of future (agricultural) landscapes.

THEORETICAL FRAMEWORK: TOPONYM CHARACTERISTICS

Toponyms in general and field names in particular draw attention of researchers in various disciplines: geographers, archaeologists, historians, anthropologists, linguists, and many others. Consequently, the aspects of their studies are quite heterogeneous, from researching the geographical distribution of toponyms, explaining naming motifs and their connection to the areas they refer to, historical events and sights, linguistic structure, etc.

As an overview of several references has shown, despite big differences in the physical characteristics of landscapes, social organization and the relation between the people and the landscape, some common concepts with regard to the naming of places could be recognized all over the world. They are presented in the next few paragraphs.

Identical toponyms appear at different locations, but the fact that they are usually known only to a relatively closed social community prevents misunderstandings in communication, resulting in name repetition. Stewart, Keith and Scottie (2004), who studied Inuit place names in Canada, observed that many place names - like *tahiq* (lake) and *qamaniq* (river-widening), are repeated throughout the Arctic, but they only make sense in relation to knowledge of the homeland. A study of the toponym *Breg* in Slovene linguistic region has shown that the naming basis of *breg* (slope) is evenly distributed in the Slovene linguistic area. It appears more frequently in the Goričko region (the hilly part of NE Slovenia), while it appears more rarely in the Gorenjska region (the alpine part of NW Slovenia) and in high-mountain areas in general (Jež, 1997). Ilešič (1950), in his research of field division systems, and Titl (1998, 1999, 2000, 2004, 2006) who focused on the study of field names and their territorial distribution, both point to the fact that the same field names also appear in different regions – usually all over areas with the same field division system and/or similar landscape characteristics. Titl mentions an example from Istria, where the aforementioned field name *Breg* and its derivatives appear in as many as seventeen cadastral communities – in completely identical form in eight of these communities. Calvo-Iglesias et al. (2012), who studied place names in relation with *Agras* field system in NW Spain, point out that there is significant connection between some terms and agras spatial distribution.

Calvo-Iglesias et al. (2012) have also found out that field names show strong inertia in time, which leads us to the next characteristic of toponyms – their longevity. They are frequently preserved through long periods of time (Jett, 1997, 481), even in the areas where the spoken language shifts (Waterman, 1922, cited from Thornton, 1997; Titl, 2010). Several researchers (Kadmon, 2000; Gelling, 1997; Badjura, 1953) emphasize that toponyms are one of the most conservative elements of every language. A proof of that is the Egyptian documents from 15th century BC, where many names from Near and Middle East are mentioned, and the Bible (The Book of Joshua) with hundreds of Israeli names from 12th century BC. Many of these names are – in slightly different form – still being used today, either to name inhabited places or archaeological sites (Kadmon, 2000). Some toponyms were preserved even when the land had been taken from native inhabitants and names had been literally 'erased' from maps. They survived as strong symbolic connections between people and their homeland (Thornton, 1997). Gelling (1997) denotes toponyms as the 'signposts to the past' and presents several names of pre-Indo-European, Roman, Latin, Celtic, Norman French, and Scandinavian origin in England. Among all toponyms, water names are supposed to be the most persistent (Gelling, 1997, 21). This was stressed also by Bezlaj (1956, 5), who claims that the names of big water streams are even relatively older than the names of places. He substantiates this statement by the fact that colonization had spread along rivers, and that watercourses were also important for spatial orientation. Dapit (2003), on the other hand, notes in the research of toponyms from Val Resia that, as opposed to microtoponyms and oronyms, hydronyms are – at least in the memory of informants – much more instable.

Although the primary role of toponyms is to designate certain spatial phenomena, they often move from one place to another. When Masai in East Africa were forced to move, they took the names of hills, plains and rivers with them, and gave them to new hills, plains, and rivers (Dinesen, 1952, cited by Lynch, 1972, 41). The members of Scottish clans, who left their homeland and settled elsewhere, also used their place- and family names to 'map' their future on new and for them unknown territory (Basu, 2005). Similarly, North America is full of names 'borrowed' from Europe: Oslo, Crete, Marseilles, New Prague, Cambridge, and Berlin are just a few of them.

Last but not least, the relationship between toponyms and named places should be mentioned. Boillat et al. (2013), who investigated the toponyms among two

communities in Bolivian Andes, found out that named places are among indigenous people perceived as living entities, as living beings with their own agency. They suggest that toponymy could be used as a tool in ecosystem management, as on one hand it reveals the characteristics of a named place and, on the other hand, the relation between people and that place.

LANDSCAPE UNITS AND FIELD NAME UNITS

Landscape is often described as a 'physical continuum' (Marušič et al., 1998, 11; Burenhult and Levinson, 2008, 137), where one landscape area blurs into another. The uniqueness of each place is thus created by the interchange of various landscape phenomena. Nevertheless, areas with similar landscape character repeatedly appear throughout the landscape. These areas could be recognized as a sort of 'spatial units' and they could be distinguished from the surrounding spatial units with different landscape character. The latter could be defined as the result of natural and human characteristics of an area – e.g. climate, topography, geology, soil, land cover and land use. Delineation of spatial units is one of the most important issues in landscape typology, while boundaries in the landscape continuum are in most cases hard to define.

On the other hand, at least rural landscapes are filled up with field names which characterize places. The fact that the basic purpose of these names is to define exact locations (usually in accordance to parcel boundaries and ownership) leads us to the presumption that landscape units on the smallest scale could be defined and delineated by the help of field names. The characteristics of names, presented in previous chapter, and the fact that the relationship between the names and the landscape is still rather unknown, led us to research focused on the relationship between names and landscapes. The purpose of the research was to investigate the relationship between names and named areas, to test if these areas could be defined as basic typological units on small scale and to discuss the possibilities for their use in landscape planning and management.

METHODOLOGY

Research area

The research included cadastral communities Parje, Palčje, Jurišče and Zagorje, situated in the plateau area of Zgornja Pivka, South-west Slovenia. This area comprises six villages with pertaining land characterized by traditional parcel structure. The area covers around 50 square kilometres. Forests, meadows and pastures prevail; the entire area is marked by grassing and forestation: fields are changing into meadows; former areas of village commons have been forested in part or are partly being naturally overgrown by forest.

Figure 1: Research area

Methods (Working procedure)

The working method was divided into several steps. First, we collected field names throughout the research area. Four different sources were used for the whole research, two historical (cartographical and textual part of Franciscean Cadastre from 1820's) and two contemporary (Basic Topographic plan and local informants). For the purpose of this paper, only one source was considered – local informants. We used only this source, because it had proven to be the most complete among all four sources; it actually contains the field names, which are being used today and it enabled us to prepare maps with delineated field name units, which was crucial for our research.

307 toponyms, the majority of which are field names, were registered. At this point it should be emphasized that besides these 307 names local inhabitants also know and use other names. We focused on collecting the names of field groups within the field division system, and not the names on lower hierarchical levels – e.g. names of individual parcels.

At the same time, we prepared a field name map. An area described with a field name was delineated by the help of local informants. Digital cadastral plan was used as a basis, and in most cases boundaries between areas, named with a single field name, follow the parcel boundaries. In most cases, the field name units are field groups within the field division system. Division into so-called 'particles' is characteristic for that area. Although the division nowadays seems too detailed and often confused, it is the result of understanding the natural conditions and the adaptation of these conditions to human needs and agricultural technologies, available at the time when field division was made. Each field group is supposed to have similar natural conditions for farming, and, originally, each farmer had one parcel within each field group. The division is more regular on flat

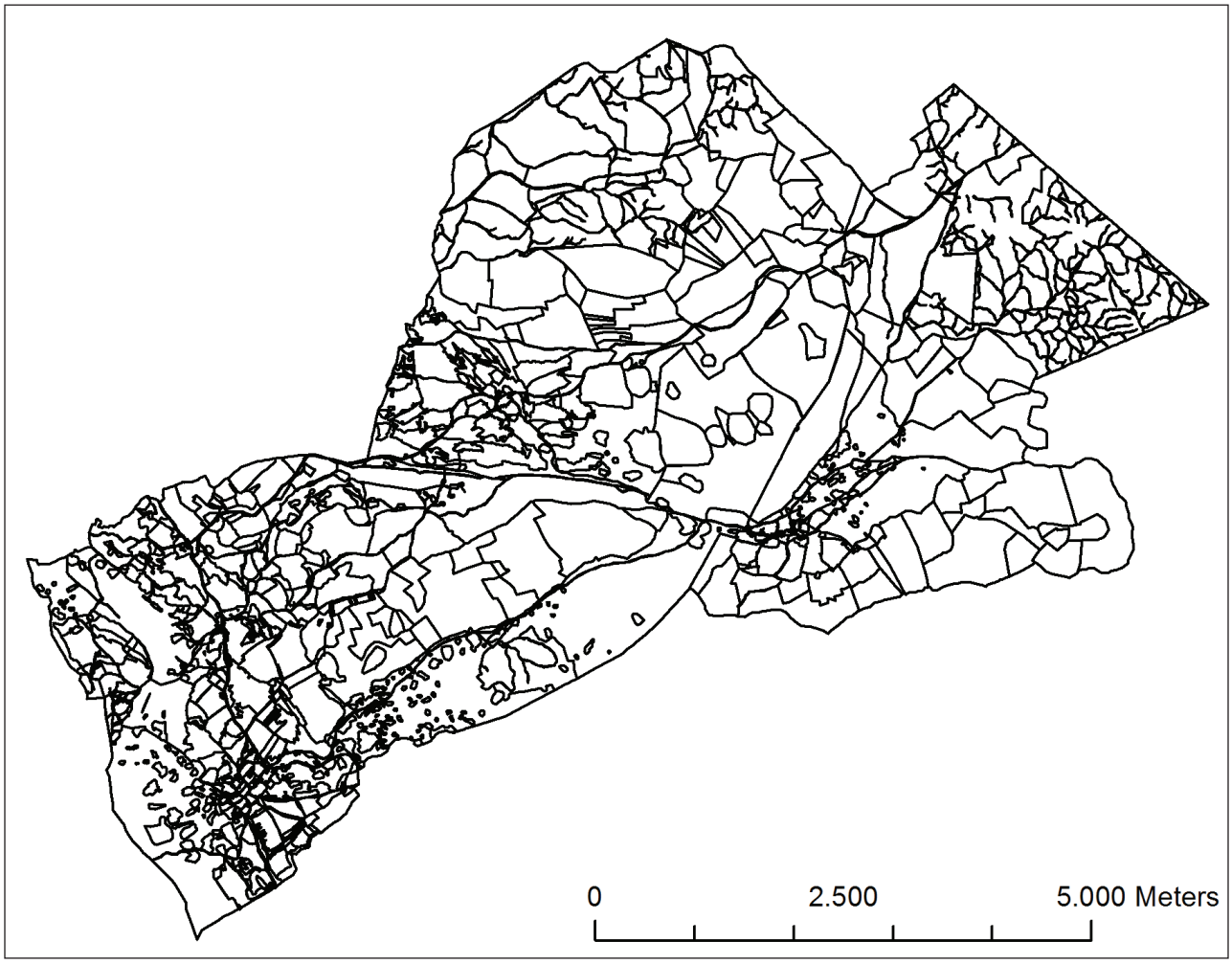


Figure 2: Field name units, as defined and delineated by the help of local informants

terrain and irregular on undulating karst hills, so the boundaries were sometimes hard to define.

Next we overlaid field names maps over spatial data that characterize landscape, in the first place: height above the sea level, slope, aspect and land use. Climate conditions were omitted because the research area is rather small and we presupposed that the effect of climate on the landscape character is negligible. Arc GIS - Arc Map 10.0 was used for the first two steps. Since all the spatial characteristics used to recognize and distinguish field name units cannot be described with the aforementioned spatial data, additional criteria, which helped us to define each unit's landscape character, were used. These criteria are expressed as binary variables and presented in Table 1 jointly with the aforementioned numeric variables.

The next step in the research was cluster analysis. Its main purpose was to test the hypothesis that field name units group into larger areas, which could be described as 'landscape character areas'.

Because of different types of data (numeric, nominal, symmetric and asymmetric binary variables) Gower's coefficient of similarity s_{ij} was used in cluster analysis (Gower, 1971; Kaufman, Rousseeuw, 1989) to measure the similarity between units:

$$s_{ij}(x_{ik} - x_{jk}) = \frac{\sum_{k=1}^{p} \delta_{ijk} s_{ijk}}{\sum_{k=1}^{p} \delta_{ijk}}$$

and Gower's distance d_{ij} to measure dissimilarity between units:

$$d_{ij}(x_{ik} - x_{jk}) = 1 - \frac{\sum_{k=1}^{p} \delta_{ijk} s_{ijk}}{\sum_{k=1}^{p} \delta_{ijk}}$$

x_{ik} is value of k –th variable for i-th unit; p is the number of variables included in the cluster analysis. Coefficient δ_{ijk} is equal to 1 when both measurements

Table 1: Variables used in cluster analysis

Type of variable	Criterion	Variable
Numeric variables	Slope	Percentage of flat terrain within unit
		Average slope within unit
	Land use	Percentage of meadows within unit
		Percentage of uncultivated agricultural land within unit
		Percentage of overgrown and afforested agricultural land within unit
		Percentage of forest within unit
		Percentage of build-up areas within unit
	Height above sea level	Minimal height above sea level in unit
		Difference between minimal and maximal height in unit
	Aspect	Average aspect of unit
Symmetric binary variables[1]	The appearance of outer boundaries	Clearly visible outer boundaries
		Not clearly visible inner boundaries
	The appearance of inner/ parcel boundaries	Clearly visible inner boundaries
		Not clearly visible boundaries
	The shape of parcels	Regular shape of parcels
		Irregular shape of parcels
Asymmetric binary variables[2]	Micro relief	Sinkholes
		Dry-walls
		Surface rocks
	The appearance of trees and shrubs	Single tree/shrub
		Hedgerow
		Group of trees/shrubs
		Forest
	The position of trees and shrubs	Trees and shrubs on the outer boundary of the unit
		Trees and shrubs on the inner/parcel boundaries
		Trees and shrubs within parcels

[1] Similarity or distance measure does not depend on the way we code the two levels as 0 and 1.
[2] In most cases this are variables measuring presence or absence: if two units share the presence of some attribute we can consider them similar, but if they share the absence of an attribute, we do not know whether they can be considered similar.

for x_{ik} and x_{jk} are non-missing; otherwise it is zero. It is also zero for binary variables in case when $x_{ik} = 0$ and $x_{jk} = 0$. Gower's distance uses different similarity/distance measures, which were chosen considering the characteristics of the type of variables. All quantitative variables are considered as their scale is interval. The similarity measure is given by

$$s_{ijk} = 1 - \frac{|x_{ik} - x_{jk}|}{VR_k}$$

where VR_k is the range of variable k. This similarity measure is actually based on "Manhattan" or "City block" distance calculated on standardized variables (divided by the range). Similarity measure for qualitative variables (also for symmetric binary variables) is proportion of matches among all possible matches:

$$s_{ijk} = \begin{cases} 1 & if \ \ x_{ik} \text{ and } x_{jk} \text{ agree with variable } k \\ 0 & \text{otherwise} \end{cases}$$

For the asymmetric binary variables, Gower defines similarity and weight according to the table:

i	+	+	-	-
j	+	-	+	-
s_{ijk}	1	0	0	0
δ_{ijk}	1	1	1	0

where '+' denotes that the attribute of variable is 'present' and '-' denotes that the attribute of variable is 'absent'. Thus $s_{ijk} = 1$, if cases i and j both have attribute s_{ijk} 'present', or 0 otherwise, and weight δ_{ijk} causes negative matches to be ignored. If all variables are binary, then Gower's similarity coefficient is equivalent to Jaccard's similarity coefficient.

We used function *daisy* from the *cluster* package in programme R (R Core Team 2013) to calculate Gower's dissimilarity matrix. Ward's method was used for clustering. The results of cluster analysis are presented in Figure 4.

RESULTS AND DISCUSSION

Overlaying map of field names with the maps of height above sea level, slopes, aspect and land use show that the majority of field name units are not internally homogenous in terms of the aforementioned criteria. Exceptions are units within serried forest, but only in relation to the land use. The result is not surprising, since the research area is heterogeneous in terms of topography and land use. Nevertheless, the majority of units can be described as internally homogenous according to their landscape character and recognized as spatial units within a landscape. Some exceptions occur – in most cases these are units in the forest and in overgrown areas, where boundaries between units are almost impossible to distinguish.

The results of cluster analysis show the division of field name units into two natural groups, in the first place: forest and agricultural areas. But since our purpose was to prepare a basis for detailed landscape typology on a small scale and search for the differences among agricultural areas, we will present and discuss the division of units into four groups (Figures 3 and 4).

Four groups of field name units can be described as:

(1) Units classified into the first group are fields and meadows. They are mostly situated on flat terrain, either on the valley floor or also on higher altitudes. Outer and inner boundaries of each unit are not clearly visible, and trees and shrubs are very rare. Undulating lakes, which are characteristic for this area, also classify into this group.

(2) The second group of units is karst meadows on undulating terrain with sinkholes. Inner and outer boundaries are often marked by dry walls and/or hedges.

(3) The third group is to be found on steeper and undulating terrain, with typical karst phenomena, like sinkholes and surface stones. Since these units are mostly commons, parcels are large and boundaries are not clearly visible. The area is overgrown with trees and shrubs. Some clearings in the forest also belong to this group.

(4) The last group is mostly serried forest, which covers hilly slopes.

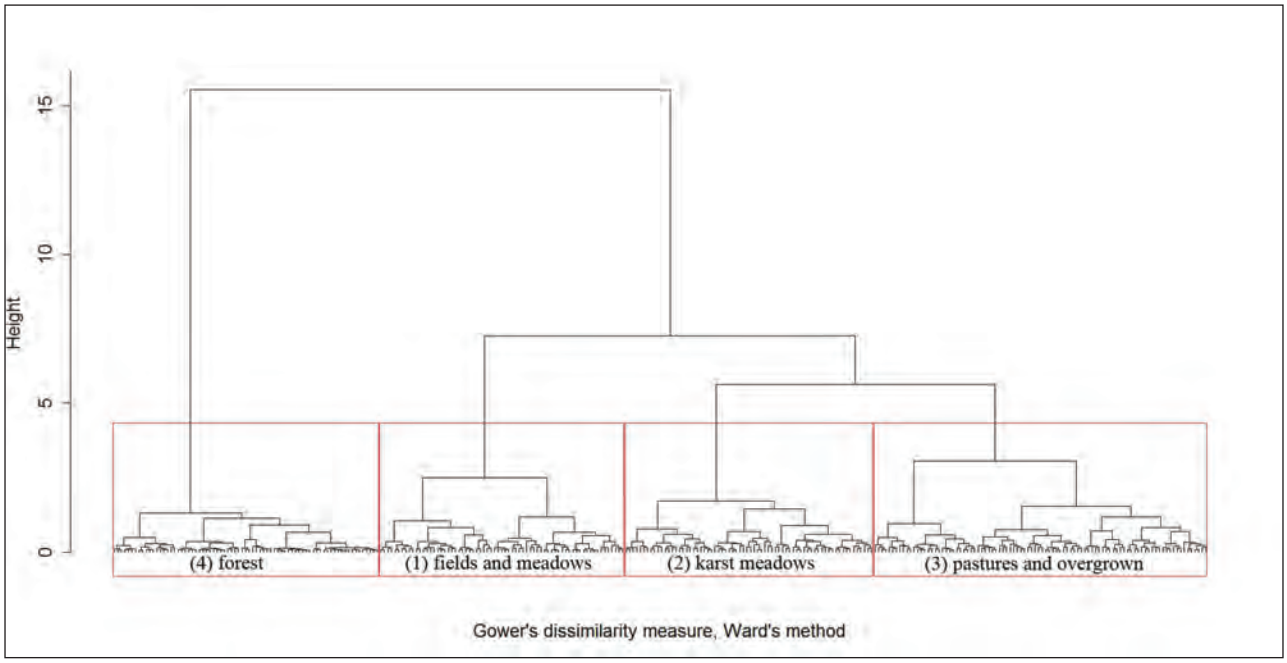


Figure 3: Dendrogram showing the clustering of field name units into groups

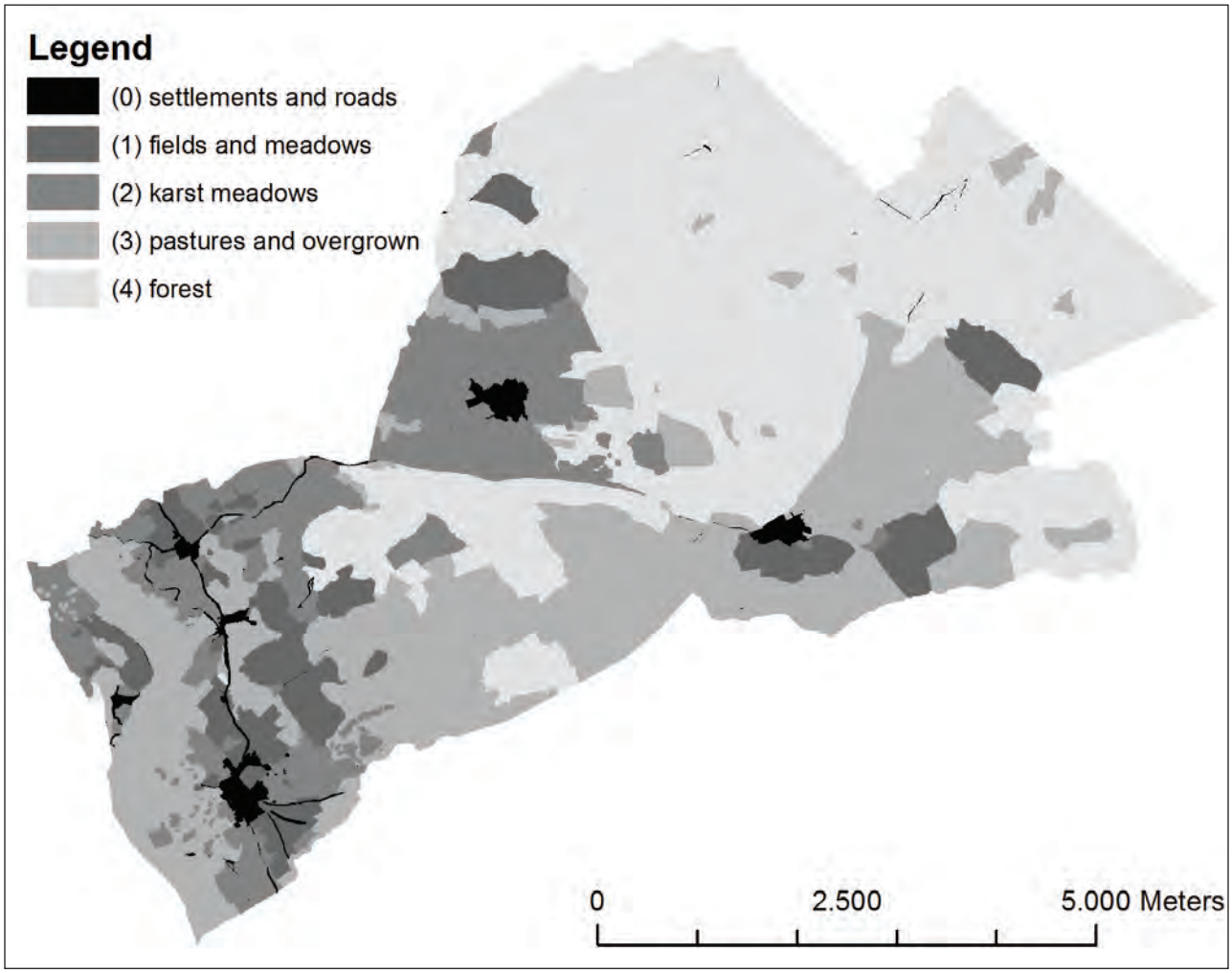


Figure 4: Field name units clustered into four groups

We cut the dendrogram once more to see how the four groups divide further, but the comparison of the characteristics between the newly created subgroups showed that almost no difference can be observed between the subgroups. We concluded that for the purpose of our research the most appropriate is the division into four groups, which will be discussed further.

Each group of field name units has rather specific landscape characteristics which define their character and distinguish them from each other. As Figure 4 shows, the first three groups of field name units are very intertwined, while the fourth group – forest, spreads more or less continuously on the eastern, hilly part of the area, and partly on the lower slopes on the west. Some exceptions could be found, appearing mostly as clearances in the forest. The main reason for that are most probably diverse natural conditions, changing very often on a rather small area.

The majority of field name units are not internally homogenous according to individual landscape characteristics, and also borders among groups of units could sometimes be only vaguely defined. An interesting fact which should be mentioned is that also the criteria, described with numeric variables defining each group also change continuously, increasing or decreasing from group (1) to group (4). Some of them are presented in Figure 6.

As box-plots in Figure 6 show, minimal height above sea level, average slope and percentage of forest are the lowest within group (1) and increase towards group (4), while the percentage of fields and flat terrain is the highest within group (1) and decreases towards group (4). If we summarize, steep slopes with high percentage of forest are characteristic for group (4), while more or less flat terrain with almost no forest cover is characteristic for group (1).

An overview of binary variables also shows some interesting results. They are given in Table 2.

Group (2) could be defined as 'hedgerow landscape', although hedgerows appear in all groups. Trees and shrubs, sinkholes and drywalls are also characteristic for

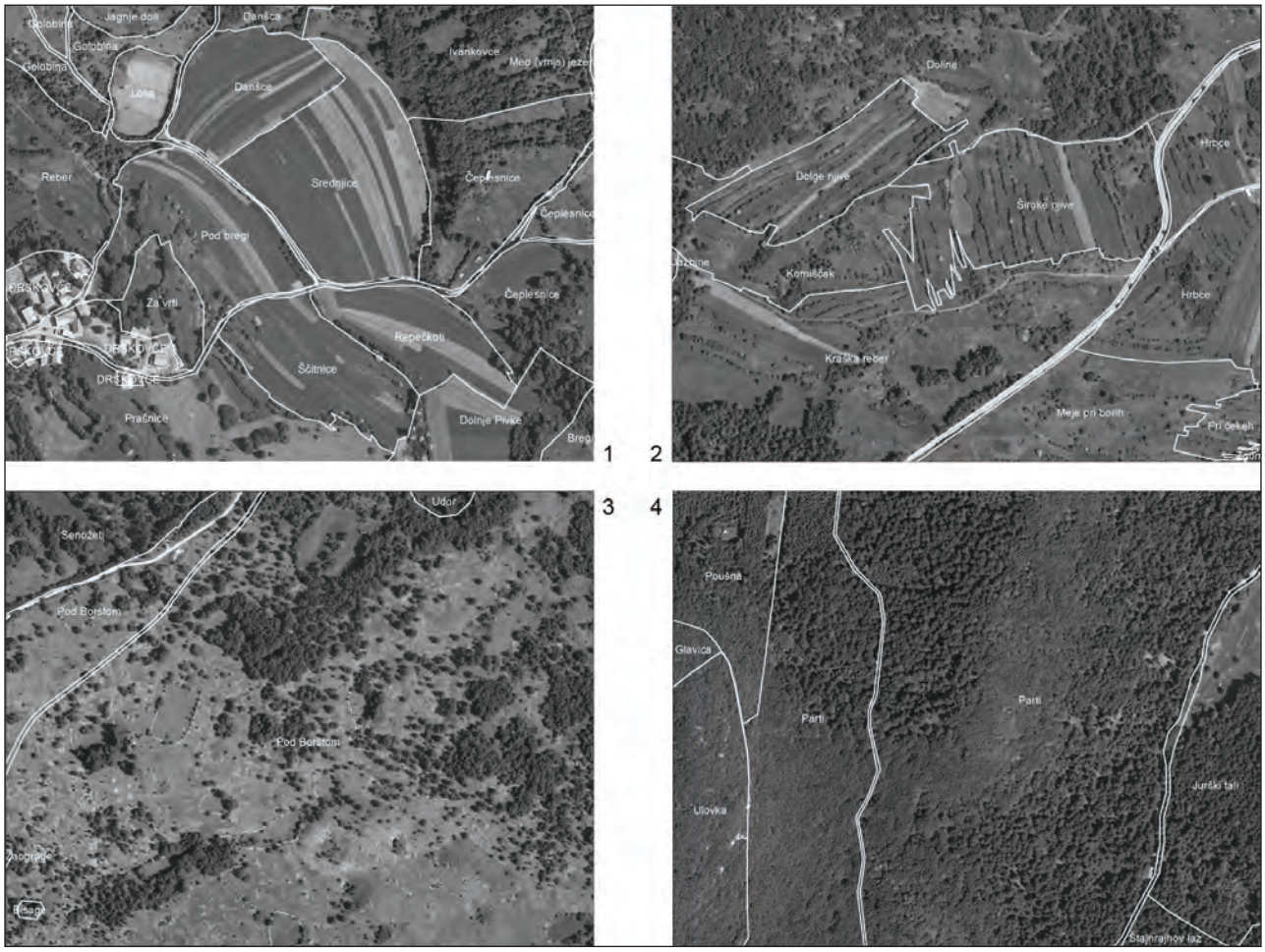


Figure 5: Four groups of field name units: (1) fields and meadows – top left, (2) karst meadows – top right, (3) pastures and overgrown – bottom left, (4) forest – bottom right

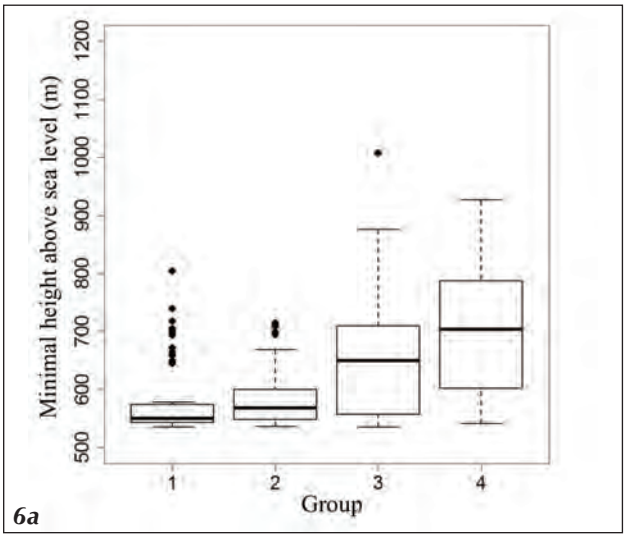
that group, while group (3) could be characterized as 'transitional' area between groups (2) and (4) with characteristics of both. Karst phenomena – e.g. sinkholes, surface stones, drywalls, make machine cultivation difficult, if not impossible. For that reason these areas are often abandoned and consequently overgrown. Field division system and ownership structure, which have remained more or less unchanged at least for the last 200 years, make farming even more unprofitable also within areas with good natural conditions. Contemporary equipment would enable farmers to overcome the latter, but this could only be done jointly with the merging of parcels. The question which was set at the beginning of this paper was: Is it possible to adapt these landscapes to the demands of contemporary life, but at the same time preserve the coherence and identity, which are characteristic for traditional cultural landscapes?

Considering all the aforementioned characteristics of field name units, we suggest to use these units in planning future rural landscapes as basic units:

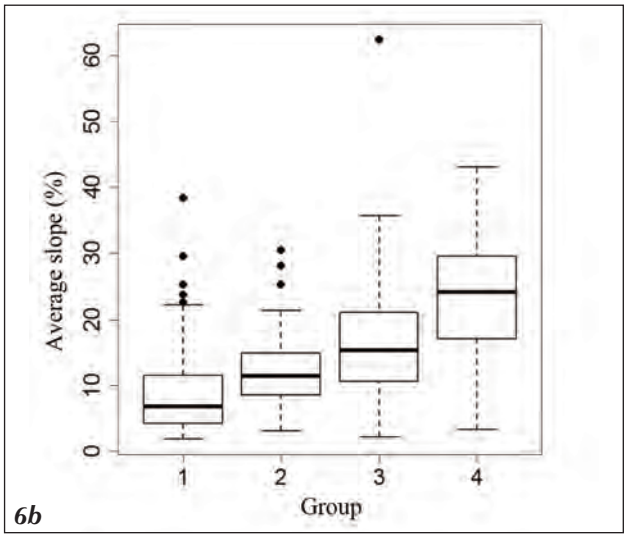
(1) They are the result of the way people read and understand the natural conditions and of their adaption to the (mostly utilitarian) needs. As such they present a kind of interconnection between the physical and the perceptual aspect of the landscape.

(2) By being recognized as the subject worth naming, they gained a cultural value and became an important part of the cultural landscape. Although they are neither visible nor tangible, many toponyms have been preserved through centuries in the landscape, where everything else seems to have changed: language, states and political systems, land use, and – last but not least, the way people perceive their environment and the way they depend upon it.

(3) In most cases they can be delineated according to parcel boundaries, and they can be recognized as areas with a unified landscape character. On physical level they are entities within the landscape's spatial continuum – areas, which could be delineated, mapped and, because of their unified landscape character, managed



6a



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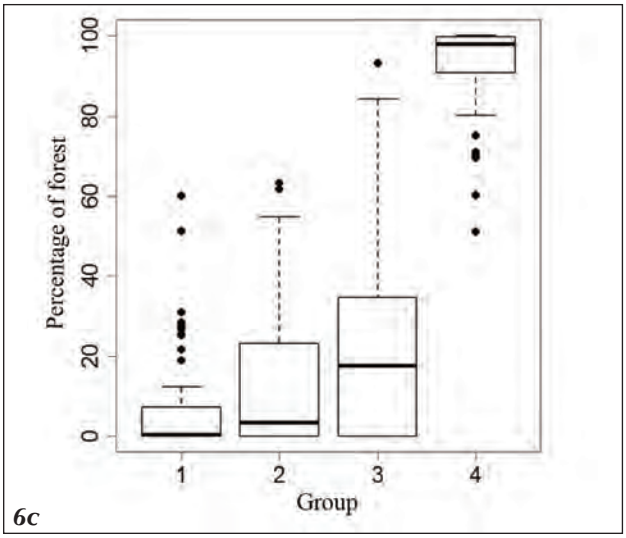

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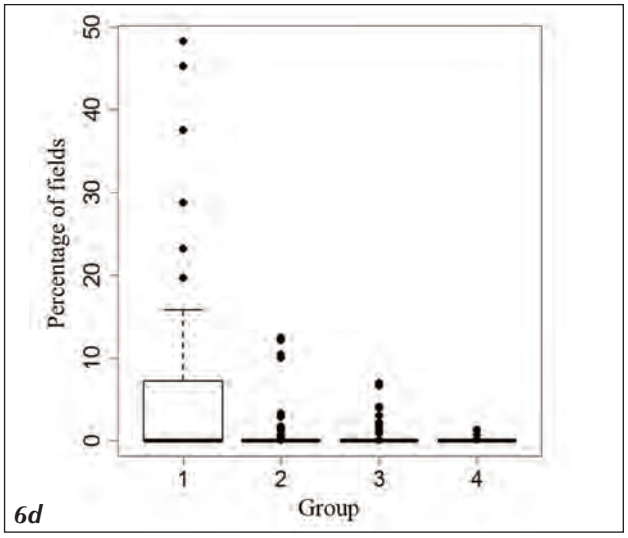

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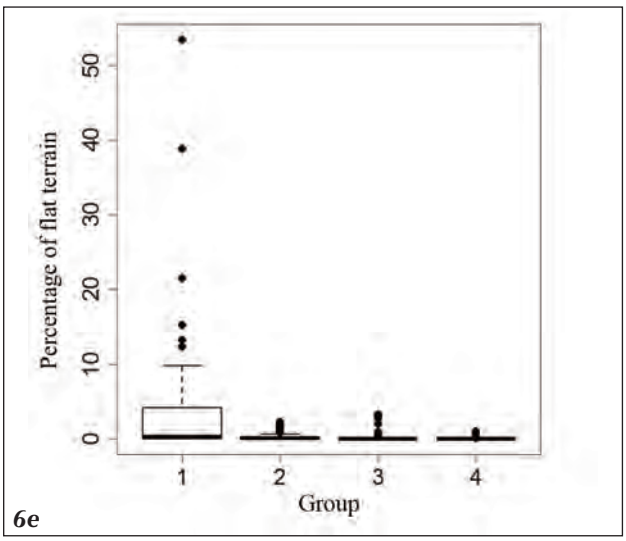

6e

Figure 6a-6e: Box-plots showing the distribution of field name units within each group according to the selected criteria

Table 2: Differences among groups according to selected criteria (binary variables)

	outer unit boundaries		**inner/ parcel boundaries**		**shape of parcels**		**micro relief**			**appearance of trees/ shrubs**				**location of trees/ shrubs**			
group	clearly visible	not clearly visible	clearly visible	not clearly visible	regular	irregular	sinkholes	drywalls - visible	surface rocks	trees and shrubs	hedgerows	groups of trees	serried forest	the unit boundary	on the parcel boundary	inside parcels	no. of units within group
1	54	49	0	**69**	**69**	12	4	0	8	38	27	35	4	28	8	50	**69**
2	52	55	60	52	28	60	32	24	29	58	**70**	30	16	59	**68**	48	**70**
3	56	71	4	**94**	12	**90**	38	23	52	73	35	52	30	52	10	83	**94**
4	6	**75**	0	**75**	22	66	24	0	65	21	1	3	72	2	0	**75**	**75**

using unified practices. On perceptual level, named places often overlay vertically and horizontally. As it was stressed by Boillat et al. (2012), they are not always limited to geographical polygons and can influence areas that go way beyond their physical boundaries. As such, they support the concept of 'land' (which could be delineated and mapped) on physical and the concept of 'landscape' (whose existence depends upon perception and attachment of meanings) on perceptual level.

Using the field name units in the planning and management of contemporary agricultural landscapes would mean an adaption to the demands of contemporary practices, and, at the same time, preservation of values, which define traditional landscapes.

When discussing the possibilities to use field name units for typological classification of landscapes, we can conclude that there are some reasons for it, as well as some reasons against it. Their strongest attributes were already mentioned in the previous paragraph, and with the help of cluster analysis we were able to define wider areas, which can be recognized as the landscape character areas. These areas have a unified landscape character by which they can be distinguished from their surroundings. The main problem emerges in the areas where groups of field name units with different landscape character intertwine and landscape character areas cannot be determined only in relation to the results of the cluster analysis. Additional criteria should be taken into consideration. Another issue we should emphasize at this point is that the research was performed within a rather small area. Some new test areas with different landscape characteristics should be included to confirm or reject the results. At the end it should be mentioned that the whole process of gathering field names and preparing maps is rather time consuming and for that reason less suitable for the wider areas (e.g. the landscape typology on a national or regional level). On the other hand, it could be used on the local level, especially within areas, where traditional cultural landscape is still preserved, its value recognized and at the same time threatened.

CONCLUSION

Land naming is the process of its domestication; it is the process of the creation of the landscape out of sheer physical environment. Landscape is becoming commonly recognized as our heritage, but also as our present-day living environment, and our tomorrow's investment. The fact that the landscape's character and its diversity are vanishing is resulting in increasing concern for landscape. Consequently, new methodologies for planning, management and conservation are being sought.

The idea of using field names and the division they create in the landscape for the purpose of planning and management of (mostly rural) landscapes offers an alternative view on the problems related to the adjustment of traditional cultural landscapes to the needs of contemporary society. Although it has some flaws, as emphasized in previous chapter, we believe that it offers some new ideas on how to incorporate traditional knowledge into the processes of planning and management of contemporary landscapes.

Figure 7a-7b: Landscape - the continuous adjustment of nature.

MED FIZIČNIM IN ZAZNAVNIM: TOPONIMI V KRAJINSKI TIPOLOGIJI, UPRAVLJANJU IN PLANIRANJU

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POVZETEK

V iskanju pravega koncepta za planiranje in upravljanje kulturnih krajin se osredotočamo na dve vprašanji: kako te krajine prilagoditi zahtevam sodobnega življenja ter kako ob tem ohraniti njihovo skladnost in identiteto. V članku trdimo, da najmočnejša prednost tradicionalnih kulturnih krajin leži v harmoniji med fizično realnostjo krajine in načinom, kako so ljudje dojeli to realnost in jo prilagodili svojim vsakdanjim potrebam. Prvi korak k vzpostavljanju odnosa med fizičnim in zaznavnim pa je prav poimenovanje. Raziskava, ki se osredotoča na ledinska imena je pokazala, da so imena neposredno povezana s fizičnimi lastnostmi krajine – za opis območja, poimenovanega z enim ledinskim imenom je bil uporabljen termin ledinska enota. Naše osnovne predpostavke so bile, da imajo ledinske enote edinstven krajinski značaj in da lahko območja, opredeljena na osnovi ledinskih enot uporabimo za namene tipološke klasifikacije, planiranja in upravljanja – še posebej kmetijskih – krajin. V raziskavi smo zbrali in skartirali ledinska imena znotraj štirih katastrskih občin v JZ Sloveniji ter analizirali njihove prostorske lastnosti. Analiza razvrščanja v skupine je pokazala, da se posamezne ledinske enote združujejo v širša območja z enotnim krajinskim značajem, ki se razlikujejo od sosednjih območjih. Kot taka so uporabna kot osnovne tipološke enote. Na koncu je podana še diskusija o uporabnosti teh enot v upravljavskem in načrtovalskem procesu.

Ključne besede: krajina, ledinska imena, krajinske značilnosti, krajinska tipologija, krajinsko planiranje, upravljanje krajin

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