Trilateral conference

Geographical aspects of European mountain areas development - a transdisciplinary approach and perspectives
INTERNATIONAL CONFERENCE

GEOGRAPHICAL ASPECTS
OF EUROPEAN MOUNTAIN AREAS DEVELOPMENT
- A TRANSDISCIPLINARY APPROACH AND PERSPECTIVES

2014, SEPTEMBER 1- 4
PRESOV, SLOVAKIA

ISBN 978-80-555-1077-4
Within the trilateral cooperation between: the Blaise Pascal University in Clermont-Ferrand; Center for Education and Research on the Massif Central, in the mountains and protected areas; the Jagiellonian University in Krakow; the Institute of Geography and Spatial Economy and the University of Presov in Presov, Department of Geography and Applied Geoinformatics.

The aim of the conference is the interdisciplinary analysis of geosystems in the context of changing of socio-economic conditions in regions of Europe: Carpathian Mountains and Massif Central


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QUALITY OF LIFE AND UNEMPLOYMENT IN PERIPHERAL AREAS OF EASTERN SLOVAKIA. CASE STUDY OF VILLAGE UBLA

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Key words: Quality of life. Unemployment. Peripheral areas.

In the contribution we deal with objective and subjective dimension of quality of life in peripheral areas of eastern slovakia. We focus on the research of possible correlations between job opportunities (unemployment) in peripheral regions and quality of life. The research was realized in two spatial units, distinguishing spatial research units and dimensions of quality of life. A spatial unit for assessing objective dimensions of quality of life is a district. In this spatial unit we aimed at districts of Prešov and Košice region that are located on the border with Ukraine. In the analysis of objective indicators of quality of life we pay attention to the analysis of the labor market. A municipality is the second spatial units of our research, in which we evaluate the subjective dimension of quality of life. The essential part of our paper is the case study evaluating quality of life of inhabitants in Ubl'a village. In this part of the article we analyze subjective dimensions of quality of life, which we evaluate on the basis of data analysis of questionnaire survey in Ubl'a village. We focus on the comparison of subjective dimensions of quality of life among employed and unemployed residents of the village. In conclusion, we offer a brief comparison of the two dimensions of quality of life.
La lecture est un processus personnel et individuel qui contribue à la construction identitaire du lecteur. Cette construction identitaire trouve un écho dans la recherche du touriste pour les sites, les symboles et les lieux qu’il a découverts en lisant (Robinson, 2003). La lecture forge une représentation des lieux et oriente les attentes d’un touriste qui souhaite par cette expérience vivre ou revivre des émotions qui par essence, lui sont propres. Cette dialectique entre l’œuvre et les lieux marque une spécificité de la littérature par rapport à toute autre forme de tourisme. Le tourisme littéraire constitue une forme de tourisme culturel qui fait référence à la visite de lieux fréquentés par un auteur ou ceux dont il est fait mention dans ses livres. Des routes, parcours ou circuits littéraires peuvent rassembler ces lieux, proposant de les découvrir comme on lit une œuvre, en progressant de manière linéaire dans l’espace et dans le temps.

De multiples acteurs, publics comme privés (collectivités, associations, agences de voyage, éditeurs de guides) se sont impliqués dans le développement de ces routes littéraires. En marketing territorial, la désignation de route touristique permet de différencier une région, de qualifier son image, d’améliorer sa visibilité depuis l’extérieur. Elle est également susceptible de canaliser les fréquentations, d’organiser l’accueil, de mobiliser les acteurs économiques voire de mieux redistribuer les retombées économiques (Beaudet, 2003). Depuis les années 70 où leur existence ne tenait qu’à leur signalétique, ces routes se sont développées autour de patrimoines matériels ou immatériels, sur des thématiques historiques, gastronomiques ou encore littéraires pour quelques dizaines d’entre elles.

Les itinéraires littéraires sont de taille et de forme très variées ; ils peuvent se parcourir à pied, à vélo, en voiture ou même en âne. Hormis la traditionnelle « route », la terminologie pour les désigner est diversifiée, allant de la « balade » ou « promenade » à la « randonnée », en allant « sur les traces de » ou en s’adonnant à des « escapades littéraires ». Une typologie a été proposée à partir de routes littéraires situées dans des pays anglo-saxons (Herbert,
2001, Mac Leod et al, 2009, Saretzki, 2013). Outre la route « générique » visant à promouvoir l’image d’un territoire avec la littérature comme prétexte ou comme terreau, il peut s’agir de parcours biographiques construits autour de lieux chers à l’auteur : c’est alors la connaissance qui constitue le socle d’un parcours pas toujours accessible au visiteur non initié. Enfin, le troisième type de circuit est lui construit autour de paysages littéraires, l’œuvre est évoquée, mise en scène à travers des ambiances et des atmosphères. Laissant libre cours à l’émotion et à l’imagination du visiteur, il n’implique pas nécessairement d’avoir lu l’œuvre mais invite plutôt à une approche sensible des lieux.

Notre approche consiste à confronter et enrichir la typologie existante au regard de cas situés dans des régions de montagne française, en identifiant d’éventuelles spécificités territoriales. Nous nous intéressons plus particulièrement à trois types de parcours de randonnée qui trouvent leur origine dans des œuvres qui ont mis au centre du récit paysages et chemins arpentés par les héros. Ces chemins, recréés grâce à la passion de quelques uns, ont été peu à peu découverts par le public et ils intéressent aujourd’hui une large palette d’acteurs économiques. Quelle appropriation et quels jeux d’acteurs ont vu le jour depuis leur émergence à aujourd’hui ?

Le premier, « le chemin de Stevenson », un itinéraire de Grande Randonnée (GR 70) de 252 kms entre Le Puy-en-Velay et Alès permet à plus de 6000 randonneurs de parcourir chaque année le trajet qu’a emprunté l’écrivain en 1879, relaté dans *Voyage avec un âne dans les Cévennes*. Le deuxième, plus confidentiel, concerne l’œuvre d’Henri Pourrat, « Gaspard des montagnes » (1931) qui a connu un immense succès durant plusieurs décennies ; l’initiative de valorisation a été conduite par le Parc Naturel Régional du Livradois-Forez. Trois balades littéraires ont ainsi vu le jour sous forme de e-guides de poche, l’une mettant en scène les paysages d’une œuvre aujourd’hui peu lue, et son emblématique héros Gaspard. L’audio-guide devient le media entre l’œuvre et les lieux. Cette étude pourra être complétée par un troisième exemple constitué par l’ensemble des 25 balades littéraires « à la rencontre de Jean Giono », des boucles de petites randonnées (PR) dispersées de Manosque à Sisteron, notamment dans la montagne de Lure, qui proposent de faire découvrir les paysages de la haute Provence qui ont inspiré Jean Giono.
ANTHROPOGENIC TRANSFORMATION OF GEOSYSTEMS
IMPACTS OF MINING AND INDUSTRIAL ACTIVITY IN THE
LOADED REGION OF CENTRAL SPIŠ, SLOVAKIA

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Key words: Middle Spiš. Antropogenic forms of relief. Pollution. Heavy metals.

Historico-geographical Spiš region in eastern Slovakia has rich natural, cultural and historical value, but is also known long tradition of mining and industrial production. The anthropogenic influence has left its marks especially in the southern part of the region, many of which are still noticeable. Landscape of the environmentally loaded-polluted area of the Middle Spiš (also known as Rudnianska-Gelnická loaded area) has undergone significant changes all natural components of that geosystem. This region has an area of 357 km² and a population of about 52 000 inhabitants. Mining and industrial activities caused the emergence of new forms of anthropogenic relief, there was also a tremendous burden and deterioration of air, soil, water and biota, in particular by heavy metals. In this former mining and ore processing (Cu, Hg, Fe, and others) produced significant quantity of emissions with serious impacts on human health and the landscape. Even after the conclusion of most of these production in the last 30 years of the last century, the landscape has not enough revived. The aim of this paper is to analyze the major anthropogenic conditional changes in the geosystem of the landscape in terms of their spatial extent in particular in the relief, to a lesser extent in other components of the natural geosystem.
LA VILLE À LA MONTAGNE. QUELLES STRATÉGIES TERRITORIALES POUR LES VILLES PETITES ET MOYENNES DE MONTAGNES FRANÇAISES ?

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Les travaux sur les villes petites et moyennes (comprises entre 5 000 et 200 000 habitants dans le contexte français) se prêtent bien à des questionnements sur la construction des modèles territoriaux. Souvent décrits comme des « villes à taille humaine », les petits organismes urbains cherchent à valoriser leurs atouts dans un contexte de compétition territoriale, à attirer (ou au moins à retenir) population et activités économiques. Les villes petites et moyennes de montagne, souvent villes de vallée, sont confrontées par ailleurs à des enjeux de reconversion (industrielle, thermale, etc.) et de développement touristique et résidentiel. Comment, les acteurs de ces territoires mobilisent-ils leur environnement montagnard (souvent associés à des valeurs positives et dynamiques, en particulier dans les régions touristiques) dans la mise en place de stratégies de développement local ?

Cette présentation s’appuie sur l’analyse des outils de communication des villes petites et moyennes de montagnes françaises (notamment les sites Internet des communes et communautés de communes). Elle permet de prendre en compte des logiques de différenciation liées au positionnement géographique (types de montagnes, situation géographiques d’enclavement ou de carrefour, position transfrontalière, etc.), à la taille des villes, à leurs caractéristiques économiques (traditions industrielles) et démographiques. Au-delà des différences, la montagne semble être une vraie ressource territoriale mobilisée par les acteurs des villes petites et moyennes.
WOODEN SACRED OBJECTS NORTHEASTERN SLOVAKIA - EXCEPTIONAL LANDSCAPING PHENOMENA CARPATHIAN MOUNTAIN AREA

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Key words: Wooden sacral architecture. Ruthenians. Karpaty. Churches.

The territory of northeastern Slovakia territorially located at the intersection of Polish, Slovak and Ruthenian - Ukrainian cultural area was in the distant past, a place to meet and overlapping of Western (Latin) and Eastern (Byzantine) civilization. This process determines the origination of valuable architectural monuments belonging to the treasury of Slovak and World Heritage. Among the most valuable gems are wooden sacral buildings, many of which are protected as national monuments. From the initial volume of about 300 objects in Slovakia them been preserved in our area about 50. Specific on a national perspective, it is precisely the region of north-eastern Slovakia with a mixed Slovak and Ruthenian-Ukrainian population, which is also the unique natural conditions also rich in artifacts of folk architecture. The symbol of this region's architecture and as such is a phenomenon called the term wooden church. The faithful Roman Catholics refer to their temples and churches of the term rite church (the church). Greek Catholic and Orthodox believers use the name of religion temple (temple of God). The original and most widespread among people name to denote sacral buildings in the region is cerkva (tserkwa). Wooden churches are exceptional for its originality, technical and artistic approaches. Profusion of wooden churches in the East Carpathian region was mostly due to historical, cultural, social and natural conditions of life of the local population.
LE CHEMIN DE SAINT-JACQUES (GR 65) DU PUY-EN-VELAY À CONQUES. UNE RESSOURCE TERRITORIALE POUR DES MONTAGNES FRAGILES

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Cette communication se propose de montrer l’impact de la valorisation d’un itinéraire culturel sur les territoires qu’il traverse dans les moyennes montagnes du Massif Central (Velay, Margeride, Aubrac), espaces de faibles densités à l’économie très fragile, et précisément de montrer comment le GR 65 participe à un développement à la fois endogène et durable.

Sur les premiers 200 km de la via Podiensis (Le Puy-en-Velay / Conques), rebaptisée localement « l’autoroute de Saint-Jacques » en raison de l’importance de sa fréquentation (18000 marcheurs comptabilisés à Saugues en 2011 ; 25% d’étrangers) 3 hypothèses ont été testées à partir d’enquêtes de terrain (auprès des responsables de structures d’hébergements, commerçants, élus locaux et pèlerins) :

1- la capacité d’initiatives des sociétés locales ; c’est en effet au rôle précurseur de certaines associations altiligériennes que l’on doit la renaissance de cet itinéraire jacquaire à partir des années 70 (redécouverte des sentiers historiques, balisage, topo-guides) ; c’est encore grâce à la dynamique des acteurs endogènes (municipalités et acteurs privés) qu’a été mis en place le dense réseau (1 gîte d’étapes /5 km) des structures avant que le caractère massif de la fréquentation n’incite maintenant de nouveaux arrivants à en ouvrir d’autres.

2- le GR 65 comme levier de développement durable :
- au plan économique le GR 65 est devenu une source de revenus pour les populations et les collectivités riveraines ; les structures d’accueil bénéficient d’une saison touristique élargie (6 mois d’avril à octobre) ; les commerçants locaux se sont aussi adaptés à la demande des pèlerins (restauration, chaussures, pharmacies, librairies, pressing…), ce qui permet leur maintien dans ces territoires démographiquement anémié ; de nouveaux services sont proposés (port des bagages) ;
- au plan environnemental, la voie jacquaire a permis la mise en valeur des patrimoines naturels et bâtis des régions traversées ; les paysages sont entretenus, les édifices réhabilités.
3- le GR 65 comme créateur d’identité ; les riverains sont maintenant fiers d’avancer qu’ils habitent sur le chemin ; les prestataires d’hébergement se connaissent le long du linéaire ; s’est ainsi développée une forme d’attachement à l’itinéraire de Saint-Jacques. Ainsi la via Podiensis constitue-elle un élément majeur de la recomposition en cours de ces espaces montagnards. Elle permet l’affirmation de territoires singuliers sur ce linéaire.
GEOPOLITICAL ANALYSIS OF NATIONAL REGIONAL DIFFERENTIATION. SELECTED ASPECTS OF INNER GEOPOLITICS OF RUSSIA

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Key words: Geopolitics. Inner Geopolitics. Russia. State.

Growth of importance of national actors, especially sub-national regions is reflected in the increased interest of geopolitical analysis of states, focuses on their internal stability. This is particularly concerning the states with a high level of regional disparities. Geopolitical thinking has reacted on this development by forming its new direction – inner geopolitics. This direction is considered as a part of innovation geopolitical school, which is called the new geopolitics.

Inner geopolitics emphasizes on the analysis of internal spatial-political state structure and related issues. Broad understanding of inner geopolitics allows a large variety of geopolitical analysis, based on the appreciation on various factors affecting the internal stability of the state.

Inner geopolitics concerns analysis of the following issues, such as:
- formation and operation spatial-political organization of the state (especially in terms of territorial organization of the state, especially territorial and administrative division);
- spatial division of political forces within the state;
- regional planning and regional policy in relation to regional differentiation of state;
- national interregional relations (e.g. relations between the core and periphery).

Currently, stresses the importance of inner geopolitics in the intellectual considerations relating to the stability of Russia and its future development. Those analysis emerge on the soil of the Russian geopolitics and abroad.

In this context, the Russian geopolitics aims to assess the current situation and the search for alternatives to achieve internal stability of Russia as the primary conditions for restoration of its power position. This issue have several inspiring aspects, while the contribution focuses only on the selected ones.
USING GIS AND MULTIDIMENSIONAL STATISTICAL METHODS IN THE ANALYSIS OF SPATIAL PROPERTIES OF THE LANDSCAPE (CASE STUDY OF EASTERN SLOVAKIA)

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Key words: Land cover. Multivariate statistical methods. GIS. Cluster methods.

The paper deals with the analysis of the spatial structure of patches based on land cover. Model region is located on the contact zone of the Vihorlat Mountains and the Eastern Slovak Lowland situated in the eastern part of the Slovak Republic. The subject of evaluation was the land cover layers in the years 1956 and 2009, showing the studied area before and after the construction of Zemplínska šírava water dam. The map layers created in ArcMap ArcGIS were subjected to spatial analysis through the additional software Patch Analyst. The calculation was focused on selected indicators of spatial structure of patches (number of patches, mean patch size, median patch size, patch size standard deviation, total edge, edge density, mean patch edge, mean patch fractal dimension, area weighted mean patch fractal dimension, patch density), which were subsequently embedded into the program STATISTICA. The main objective was to determine the degree of similarity between the above mentioned indicators through hierarchical and non-hierarchical cluster methods. Cluster methods were supplemented by exploratory analysis showing the overall structure of the data, the existence of outliers objects.
This paper presents methods for the examination of cyberspace using physical localization of visited pages' IP addresses. To preserve geographic perspective, we believe it was necessary to take into account not only the intangible part of cyberspace, but also physical infrastructure of technologies that run cyberspace. We have built theoretical basis of this methodology on the concept of D. Harvey, in which the author argues that each space must be viewed from three perspectives: as an absolute one (physical infrastructure), as a relative one (design of space depends on the observer) and as a relational one (no point in the space can exist without relationships with surrounding points). IP localization was used for the mapping of physical part of cyberspace and it allowed us to compare it to the intangible space. We examined the relative nature of cyberspace using data from multiple Internet users. In accordance with Harvey's concept thus every Internet user sees another kind of cyberspace. Relational nature of cyberspace was investigated using Internet user's movement in this space between its individual points (nodes). Data collection was conducted using a web browser extension that located the position of visited websites. Thanks to these data, we were able to construct cartographic outputs and statistical reports on visited websites due to their physical geographic location.
FOREIGN TOURISM IN THE REGIONS OF SLOVAKIA WITH A FOCUS ON POLISH VISITORS

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Key words: Tourism. The number of visitors. The average number of overnight stays. Foreign visitors. Poland.

The paper is dedicated to foreign tourism in the regions of Slovakia with a focus on Polish visitors. In the first part of the paper we deal with the structure of the traffic of foreign visitors and the number of nights spent in individual regions (NUTS 3) of Slovakia in 2012, with the emphasis on the Polish enclave of visitors representing the second largest group of visitors (163,754 visitors - 10.7 %) after the Czech visitors (491,136 visitors - 32.2 %). The evaluated situation is the result of long-term processes that were analyzed in the time frame of 2001 - 2012. In the second part of the paper, due to the border position with Poland, and the highest number of Polish visitors, we focus on Žilina and Prešov self-governing regions (together visited by 94 515 Polish visitors, i.e. 57.7 % share within the Slovak Republic). For more detailed analysis of temporal and spatial interdependencies in the examined self-governing regions, the assessment of the given issue was shifted to the district levels (NUTS IV) namely to 11 districts of the Žilina region and 13 districts of the Prešov region. At the end of the article we discuss the causes of the observed trends (such as Slovakia and Poland accession to the EU, the introduction of the Euro currency in Slovakia, tourism policy in both countries, etc.) and we indicate future possibilities in the given issue.
EFFECTS OF SOIL MANAGEMENT IN AGRICULTURAL LAND FOR THE DEVELOPMENT OF SOC STOCKS

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Key words: Agriculture land. Soil organic carbon. RothC model. Pedoecological regions. Ondava Highlands.

Soil organic carbon (SOC) is included with all minimum set of indicators, a comprehensive evaluation of soil quality based on soil functions. At present, human activity (soil management) largely affects of the carbon cycle. Modelling of SOC stock changes is one of method how to detect human affects on this phenomenon. Modelling by the RothC model in agriculture soils within whole Slovakia showed significant differences in SOC stock changes between various regions. More detailed detection of changes in SOC stocks at regional level is thus necessary. Contribution presents modelling of changes in SOC in adapted pedoecological region Ondava Highlands from 1970 to 2020. Modelling was performed for soil depth 30 cm within regular rectangle grid with size 1x1km. Significant changes in agricultural land use were in this hilly region during the period. It suggests a comparison of the available data about land use of agricultural land in 1970 and 2004. Changes in the soil management in agricultural land between these two time slots are very striking. It's required exact identify period of change in land use within simulation unit for correct modelling of SOC stock changes. Since at present we don't know when there were changes in land use, we developed several possible scenarios. The scenarios assume one land use change of agricultural land (from arable land to grassland respectively from grassland to arable land) in individual decades (in 1971, 1980, 1990 and 2000). The results of various scenarios show substantial differences in in the of SOC stock development depending in time of soil management change. Soil management of agricultural land, i.e., human impact on SOC is as important as natural factors.
CONTEMPORARY TRANSFORMATION OF CARPATHIAN RIVERS UNDER THE INFLUENCE OF ANTHROPOGENIC IMPACT

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Key words: Polish Carpathians rivers. Riverbeds regulation. Erosion.

In the Polish Carpathians and the surrounding area occurs the large process of riverbeds and streams transforming. At the turn of the XIX and XX centuries, in the Carpathian riverbeds undertaken extensive engineering work in order to riverbeds regulation. The impetus for this work was the threat of flooding towns and villages in the area. The impulse to these projects was the danger of flooding towns and villages in this region. One of the effects of these anthropogenic activities in the beds of Polish Carpathians rivers was the launch of excessive subsurface erosion. The most characteristic feature of the contemporary structure of many riverbeds is a significant unify of the river bed geometry and consistently its morphodynamic functions. This phenomenon is especially evident in the example of the Dunajec, Mszanka, Porębianka river channels. The anthropogenic pressures causes the large changes in the channel systems structure manifested by the erosion modeling. These processes lead to unfavorable changes in the natural environment, particularly excessive desiccation of many areas of the region.
THE ROLE OF THE POLISH-SLOVAK CROSS-BORDER PARTNERSHIPS IN THE DEVELOPMENT AND PROMOTION OF THE QUALITIES OF MOUNTAIN REGIONS

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Key words: Cross-border cooperation. Polish-Slovak projects. EU.

A significant barrier to a development of many attractive cross-border regions, that are geographically distinctive, with a natural and social cohesion and unique with qualities, is the administrative and territorial division, resulting from belonging to two separate states. Although the dynamic integration processes in Europe have brought together the neighbouring countries, it is still difficult to discern the level of universal mechanisms of international cooperation conducive to integrated programming and implementation of the development of cross-border regions. At the same time the European Union's socio-economic cohesion policy rewards cross-border areas, as a peripheral ones, allocating for their development distinct resources from the European Regional Development Fund. An obligatory condition of these grants is to build a partnership aimed at achieving the development objectives and at joint problem solving. European Union funds have become in recent years, an important instrument of support, inter alia, for the development and promotion of cross-border mountain regions. An example of good practice in this field can be a cooperation between Liptov Cluster in Liptovsky Mikuláš and the Coalition of Mountain Region Brands in Żywiec. Therese two organizations formed the cross-border partnership to jointly reach for EU subsidies, intended to promote the qualities of mountain regions and other common development activities, including tourism. The paper provides a case study outlining implemented cross-border projects of these two organizations, as well as an assessment of these activities, and presents recommendations on the conditions of development of Polish-Slovak border partnerships for the development and promotion of qualities of mountain regions in the next, 2014-2020, EU perspective.
THE POPULATION DEVELOPMENT IN THE LEVOČA MOUNTAINS (SLOVAKIA)

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Key words: Levoča Mountains. Population. Demographical development. Military District Javorina. People living in the mountains.

The article is dedicated to the analysis of the main characteristics of the demographical development in the Levoča Mountains in Slovakia. The Levoča Mountains with an area of about 620 square kilometres are the 17th highest mountain range in Slovakia, with elevation ranging from 480 to 1289 meters. There are over fifty municipalities, whose territory extend at least partially on the mountains area. Before analysing demographical development, we develop an approach to determining how many people live in the geomorphological mesoregion Levoča Mountains, what is the key point of the work, since many municipalities lies on the mountains border. This model approach can be also applied for other areas. We consider municipalities cadastral areas, their areal shifts and hence the both, municipalities formation and also termination. The latter was in the Levoča mountains notable linked with the establishment of the Military District Javorina, which is already over, however, for a few years, and thus implying further changes within the municipalities areas.
LA SLOVAQUIE DE L’EST, LABORATOIRE DE LA CHORÉMATIQUE

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OSTURŇA DOLINA (THE HIGH TATRAS): DIFFERENTIATED DEVELOPMENTS OF A SLOVAK MOUNTAIN RANGE

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For the analysis of the post-socialist changes, French geographers have focused on two scales: firstly, the national scale, by analyzing the political tendencies and the juridical stipulations, secondly, the local scale, by considering the transformation of the firms and the changes of the social relations. This research, which is generally based on the analysis of typical examples, has attached great importance to the role of the geographical context in these changes, but the mountain has never been considered as being a part of this context. We will analyze Osturňa dolina, a high valley from the Tatras which offers a perfect example of the diversity of the modernization of a mountain territory and its integration in the modern society. This example also enables to consider the role of the mountain environment in the post-communist transformation. In this valley from the north side of the Spišská Magura, the structure of the settlement and the housing (ribbon villages, wooden and stone buildings…), the demographical features (Greek-Catholic minority …), the important part of the agriculture and the isolation of this border valley are quite typical for some Slovak mountains. This area has not experienced the major socialist development plans. It was situated at the north of the big ski resorts from the Tatras (Ždiar…) and on the fringe of the development programs of light industries from the Eastern Slovakia. In fact, it was considered peripheral at the time of the agricultural collectivization in the late 1950s and was little affected by the modernization of the 1960s. The study of this forgotten valley allows to consider the effects of the geographical context and the history in the transformation of the mountain areas. The field investigations reveal indeed a large complexity of the recent modernization. Osturňa, whose population has emigrated in large numbers in the 1970s and 1980s, experiences a strong development of secondary residences. Vel’ká Franková, in the center of the valley, has adopted the collectivization only around 1980 and Malá Franková remained apart from the economic modernization. The valley remains far from the dynamism of the urban area of Poprad / Kežmarok.
PAST, PRESENT AND PERSPECTIVES OF GLASSWORK IN SLOVAKIA

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Key words: Glass-work. Tradition. Slovakia. Wood.

The aim of this paper is to give the most comprehensive conception of the historical location, the development and the present state of glass-work and glass industry in Slovakia. The issue is presented in the context of its production potential to maintain traditions and socio-economic “privilege” in terms of the principles of the sustainable development, especially of the outlying mountain and foothill regions. The glass with its various forms has a broad social utilization. For over 700 years, the glass-work has had its tradition all over Slovakia. In the context of the Slovak economy, it played an important role, due to favourable local factors. Greatly specific glass production required the sufficiency of glass raw material, traditional qualification development from the handcraft stage of development, effective customer-supplier relationships and product quality. Slovakia glass industry was typically deployed in mountainous regions with sufficiency of wood destined for glass-works. It also provided job opportunity above all for male working population. By developing the modern glass factory after the Second World War, the number of female working population has raised too. The great deal of the most difficult operating processes was replaced by the mechanization and automation and the production acquired more varied line character. The advantageous development of the glass-work requested the support of creating and improving the specialized educational base of vocational education and wholesale and retail infrastructure. Glass-work was one of the industry sectors supporting the development of the areas which were not suitable for the others industry sectors. The fall of the glass-work after the 1989 expressed by the systematic decay of glass companies contributed (besides other factors) to the economic stagnation, respectively to its liquidation in the peripheral regions in Slovakia (e.g. Gemer). In this paper, we are considering the possibilities of glass-work revitalization as an impulse of economic development and innovation of traditional genius loci in these regions.
SELECTED ASPECTS OF THE ROMA POPULATION
SPATIAL DIFFERENTIATION IN SLOVAKIA

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The issue of the Roma minority in Slovakia has been one of the vividly discussed issues during the recent years. What is more, the nature of this issue is often charged with highly negative emotions. The prejudices against Roma, which were growing over several decades, cause that many public statements and affirmations are not rational, though primarily based on clichés and surmises. Such reality is, however, also supported by lack of relevant data and information, particularly statistical data.

For this reason, in 2013, it was conducted a nationwide research of Roma communities. In terms of the scope and nature of the data collected, this research is considered a unique not only in Slovakia, but also in the European context. The result of a year-long (September 2012-September 2013) data collection, preceded by the several years long preparations, is the "Atlas of Roma communities in Slovakia 2013” (hereinafter Atlas 2013). A key data collection method is based on the so-called attributed ethnicity, i.e., qualified estimate of the number of people who are perceived as Roma. The main argument for the choice of this method is a quite common dubiousness of the principle of self-identification of each individual, which is fundamental to the official ethnic statistics prepared based on the regular censuses by the Slovak Statistical Office. Another argument is the application possibilities of the Atlas for the practical use.

Due to the large scope of the obtained information and limited paper length, we focus just on the selected aspects of spatial differentiation of the Roma population in Slovakia. The analysis considers the number and spatial distribution of the Roma in Slovakia. Selected data are presented in terms of
different indicators and at various levels of administrative territorial units (regions, districts, and local municipalities) in Slovakia. Consequently, we also pay attention to the following variables that were examined: a) Estimated share of Roma living in settlements on the edge of the municipality, b) Estimated share of Roma living in settlements within the municipality, c) Estimated share of Roma living in segregated settlements, d) Estimated share of the Valachian Roma and Sinti, e) The estimated share of Roma university students or graduates, f) The estimated share of Roma entrepreneurs and business owners, g) Estimated number of Roma settlements in the studied municipalities, h) Availability of Gynecology clinic in terms of the study villages, i) Availability of Pediatric clinic in terms of the study villages j) Availability of general practitioner in terms of the study villages, k) Local pastors working with the Roma community, l) Commission established to address Roma issues and Roma self-governments, m) Roma folklore ensembles, n) Sanitary centres o) Community and low-threshold centres, p) Municipal guards and police stations, r) Municipal guards - number of Roma, s) Sports Clubs, t) Roma members of the municipal councils (in the past and present), u) NGOs and other Civil societies v) Estimated share of dwellings (in municipalities with Roma population), which use solid fuel for heating and other heat sources.

Note: The paper is part of the Slovak-Romanian research project APVV no. SK-RO-0025-12: "Multicultural regions, national heritage and contemporary challenges in Romanian and Slovakian society" (2013-2014)
The structure of cultural landscape is a result of long-lasting process of interaction between of humans and nature in the historical development. In the Slovakia the most intensive changes of the landscape structure were realized over the 40 - 50 years. A new wave of changes in the structure of cultural landscape was originated mainly over the last two decades, predominantly in foothill landscape. These changes are considered as positive from the aspect of ecological stability of landscape. Ecological stability has increased in the last two decade in relation to the stoppage of excessive use of chemical fertilizers, pesticides, herbicides and heavy mechanisms at tillage. Biodiversity and retentive ability of the landscape have increased and erosion of soil has decreased. The negative consequences were reflected into the visual form as abandonment of landscape the man. The aim of this paper is research changes of land cover and functional structure of the landscape in the rural settlement Jakubany in time horizon 1822 – 2012.
OPEN SOURCE AND GEOGRAPHIC INFORMATION SYSTEM. OPPORTUNITIES AND PERSPECTIVES. CASE STUDY OF GIS.LAB

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Key words: Open source, Geographic information system, Technology transfer, GIS.lab, Education

In our paper we will dedicate to term of open source GIS technology transfer, which we understand as the process of transferring skills, knowledge, technologies and their methods to ensure that scientific and technological developments are accessible to a wider range of users who can then further develop and exploit the technology into new products, processes, applications, materials or services. Further we see the term as cooperation of university, private sector and government towards the concept of triple helix. The first part of article tries to conceptualize the main theoretical principles of GIS, open source and related technology transfer in context of triple helix. Second part of paper relates to case study of GIS.lab project, both ways of cooperation between corresponding actors and also particular technological solution. The last part is dedicated to a discussion about opportunities for implementation of designed solution for wide spectrum of users with focus on the development and education in academic environment.
INTERNATIONAL TOURISM IN THE POLISH CARPATHIANS - OPPORTUNITIES AND BARRIERS OF DEVELOPMENT

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Key words: Polish Carpathians. Tourism development. SWOT analysis.

The Carpathians are the largest and most important mountain region in Poland. It has a high tourist potential, enabling the development of many forms of tourism, not only recreational and qualified, but also cognitive. The origins of Polish tourism development of the Carpathians fall on the 19th century; from the second half of the 20th century, this region is intensively managed for tourist purposes. Today, the Polish Carpathians concentrate over 20% of total tourist traffic in the country. Still, this region is not so popular among foreign visitors. Only 5% of foreign tourists visiting Poland gets there. The aim of this paper is to present the current state of development of foreign tourists traffic in the Carpathians, indicating the concentration of foreign tourism, the main forms of tourism and development trends. The study will present, also as a SWOT analysis, the opportunities and barriers of tourist activation of the Polish Carpathians on the international arena. For achieving the goal of this study will be used: tourism development strategies at national, regional and local level, statistical data, including data from the Central Statistical Office (in Polish: GUS) and the results of previous research on tourism in the Polish Carpathians.
HYDRO-GEOMORPHOLOGICAL PROCESSES IN THE HEADWATER CHANNELS IN THE WESTERN TATRA MTS.

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Key words: Hydro-geomorphological processes. Western Tatra Mountains.

Headwater channels are transitional segments of drainage network between hillslope and fluvial domains. Strong links between hydrological, geomorphological and biological processes occur in these channels. In mountain regions mass movements, subsurface flow and overland flow are processes that supply sediments and organic matter to erosional cuts in headwater areas and downstream to channel system. Headwater channels are vulnerable segments and hydrological response for meteorological events might be quite rapid. Thus the aim of the paper is to recognize the magnitude and frequency of hydro-geomorphological processes in headwater channels in the Western Tatra Mts. The study area is the Western Tatra Mountains within the Tatra National Park in Poland. There are three geoeocological zones in the study area – forest zone (to 1500 m a.s.l), subalpine zone (1500-1800 m a.s.l) and alpine zone (over 1800 ma.s.l). There is morphogenetic processes differentiation within these zones, especially above and below the timberline. The high-mountain areas are characterized by variable weather conditions. The annual precipitation is up to 2000 mm. The study was carried out in two chosen valleys in the Western Tatra Mountains using field experiment with marked debris. Stream water levels and precipitation were monitored as well. The study sites were installed in channels of different order, different structure and different hydrodynamics. Water discharge and displacement of marked bedload were measured every month from May to October. Morphologically effective floods were rare in headwater channels. They occurred once a year in uppermost segments of channels to three times a year in lower segments. Bedload displacement was usually small – up to 60 m in lower segments of channels. More significant channel transformations and bedload supply from tributary to the main channel take place during debris flows and torrential flows. However these processes are even less frequent – once every few years. The occurrence of mineral and woody debris in channels is very important. They build traps for moving debris and reduce its removal from the catchment.
Suite aux travaux anciens de l’anglais A. Marshall (1890), certains chercheurs, économistes mais aussi géographes, ont progressivement travaillé sur l’émergence et les caractéristiques de districts industriels. Ces derniers, appelés aussi clusters (en Grande-Bretagne), ou Systèmes Productifs Localisés représentent une organisation particulière des systèmes de production au sein d’un territoire, généralement de petite taille. On trouve là des entreprises ayant des activités similaires ou complémentaires, qui s’appuient sur un capital humain (des savoir faire, une main d’œuvre qualifiée et efficace…) et qui ont tissé des relations particulières, un réseau d’interdépendance. Au final, cette spécialisation locale et ces formes de collaborations sont présentées comme positives et sont décrites par les chercheurs comme un facteur de compétitivité, de création de richesse et de développement local. Le district industriel est donc un atout pour les territoires concernés. Leur efficacité a été largement mise en valeur en Italie, mais ces districts industriels existent aussi ailleurs en Europe et dans le monde et ils sont souvent performants. On retrouve de telles dynamiques en Slovaquie du Nord, notamment autour du travail du textile dans les Kysucke, ou de la valorisation du bois vers Žilina et Rajec (maisons en bois, chalupa…). Nous nous intéresserons ici à la région de Zazriva qui offre une configuration similaire autour de la valorisation du lait par une spécialité fromagère traditionnelle : les korbačiky. Cette activité s’est fortement développée depuis la fin du régime communiste, elle anime plusieurs entreprises et emploie plusieurs dizaines de personnes dans un village qui montre de nos jours des signes de renouveau évidents. La communication s’efforcera de réfléchir à l’intégration réelle de cette dynamique productive de la région de Zazriva dans une logique de district industriel. Les questions principales seront au nombre de trois et porteront sur les points suivants.
- Le caractère industriel ou artisanal de cette démarche.
- L’intensité des relations entre les entreprises et des démarches collectives. Ces relations et ces démarches semblent assez limitées, même si l’on a développé ici depuis quelques années un projet d’Indication Géographique Protégée (IGP) pour les korbačiky.
- La valorisation ou non de la ressource locale. En effet, les entreprises valorisent peu le lait de brebis produit sur place et préfèrent s’approvisionner en hrudkovy syr à l’extérieur de la vallée, dans des laiteries artisanales ou industrielles qui utilisent du lait de brebis et de vache.
EMPLOYABILITY OF GRADUATES IN THE LABOR MARKET IN THE REGION OF EASTERN SLOVAKIA

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Key words: Job market. Graduates. The coefficient of applicability. Unemployment.

Unemployment appeared in the Slovak Republic after 1989 and is closely related to the transition of the Slovak Republic to the market economy. Unemployment is a socio-economic phenomenon associated with the existence of a labour market, unemployment is a consequence and also manifestation of the imbalances in the labour market. The paper deals with the analysis of unemployment of graduates in the region of Eastern Slovakia, particularly of university graduates. The most load by unemployment in the region are graduates of secondary vocational schools with graduation and secondary vocational schools without graduation. Least risk groups are university graduates and grammar. Nevertheless, it recorded a negative trend in the employment of the least risky categories of graduates, especially from 2008 after the onset of economic recession. Despite the relatively small proportion of unemployed university graduates compared to other groups, their share of unemployment is rising gradually. Problems of employment of university graduates can be viewed in two ways. One is their application in the region they come from. In this case, the disadvantaged graduates ended study at regional universities, which is the case of eastern Slovakia. The second problem is employability in the field or a related field which graduate studied. Negative phenomenon is also the fact that there is a tendency of grow of the time duration of unemployment among graduates not included in the labor market. This work aims to highlight the problems, possible causes and context of employment and the applicability of graduates in the labour market in the region of Eastern Slovakia.
SYMBOLICAL CEMENTERIES AS AN IMPULSE OF TOURISM DEVELOPMENT IN MOUNTAINOUS AREAS OF SLOVAKIA

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The primary aim of this article is to present symbolical cemeteries situated in Slovak mountain areas with an emphasis on the evaluation of their potential for tourism development and alternative form of tourism development – dark tourism. The specific intent is to highlight the social meaning of symbolical cemeteries, perhaps even commemorative sites as a mement, in reflection of current trends in tourism and sociological patterns of modern society behaviour, from the position of demand carrier for tourism and its alternative forms. The benefit of this study is the spatial data analysis in the geographic information system application, namely through the obtaining, processing and evaluation of the available data that are spatially tied to the research area. The article suggests the possibilities of applying geographic information system as a tool for spatial data managing and as a tool for creating conditions for physical - geographic assessment of geosystems in mountainous areas of Slovakia. An expected outcome of mentioned activities is digital, spatial georeferenced model of surveyed sites, which will be developed by vector-base in GIS 10 application software that is utilized for both the processing of heterogeneous geographical data in a Geoinformatics environment and the knowledge of geographic information system.
THE INFLUENCE OF JOHN PAUL II HERITAGE ON THE DEVELOPMENT OF TOURISM IN POLISH CARPATHIANS

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Key words: John Paul II. Heritage. Tourism. Polish Carpathians

The growing cult of John Paul II takes on a special dimension in Poland. There is probably no city without this great Pole preserved in its collective memory. Places especially loved by the Pope include Krakow, Wadowice - his home town - and Polish Carpathian Mountains. Therefore, they should play prominent role in the development of religious tourism. This article aims to show "the papal legacy" and related initiatives in the Carpathian area, resulting in tourist activation of this region. The most important among them are "papal trails" running mostly along the existing mountain trails, where the pope wandered at different stages of his life, mainly before being chosen for the papacy. Their symbolic opening took place in 2003. There are currently 13 papal trails in the Carpathian region in various mountain ranges. The legacy of John Paul II, however, is much richer and materially takes the form of a number of memorial rooms and new sanctuaries devoted to his person. There are also different kinds of religious or cultural events related to the pope. All this makes the legacy of John Paul II a significant potential enabling the activation of multiple forms of tourism in the region.
THE DENDRO-GEOMORPHOLOGICAL METHOD - EXAMPLES OF APPLICATION IN THE STUDY OF GEOMORPHOLOGICAL PROCESSES IN MOUNTAINOUS AREAS

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Key words: Dendro-geomorphological method. Mountainous area.

The analysis of changes in the structure of annual growth of trees are considered as one of the useful tools in geomorphology. The dendro-geomorphological method has found its application in the analysis of rock falls, avalanches and erosion processes, for example. But it was only several years that the wood cells anatomy changes caused by exposure to changing thermal conditions and humidity are used as a useful method in geo-morphological research. The studies on anatomical changes in the wood of roots based on natural ability of the tree to adapt to changing environmental conditions.

The researches based on the dendro-geomorphological method create great opportunities in terms of contemporary morphogenetic processes analysis. The proposed paper will present three examples of the dendro-geomorphological method application in morphogenetic processes analysis. The research was carried out in the mountainous area of Gorce and Pogórze Wiśnickie.
PROCEEDINGS OF ABSTRACTS FROM TRILATERAL CONFERENCE:

GEOGRAPHICAL ASPECTS
OF EUROPEAN MOUNTAIN AREAS DEVELOPMENT
- A TRANSDISCIPLINARY APPROACH AND PERSPECTIVES

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Publisher
Prešovská univerzita v Prešove

ISBN 978-80-555-1077-4