GEOTOUR 2018
Book of abstracts

International Conference on Geotourism, Mining Tourism, Sustainable Development, and Environmental Protection

11 – 13 October 2018
Salamandra Resort Hotel
Hodruša-Hámre, Slovakia
CONTENTS

Mining tourism in terms of history, current status and possible development ....................... 8
geotourism regions – delimitation, classification, basic concepts ........................................... 9
Innovative adaptations of mining heritage objects in the world and their impact on the
development of post-mining tourism .......................................................................................... 10
Perspectives of Sustainable Development of Ecotourism in Armenian National Parks ........... 11
Revitalized geotourism mining heritage potentials in the Posavje folds .................................. 12
Model of tourism potential Management of the Hornád River .................................................. 13
Migration, security and tourism ................................................................................................. 14
Mining tourism vs Ecotourism .................................................................................................... 15
The identification of the suitable form of media support for geotourism development .......... 16
The use of brownfields in the sustainable development of tourism in SR .............................. 17
The barriers in the mountainistic tourism development (an example from Colombia) ........ 18
A multimedia guide to geotourism - an effective tool for the mining attractions
promotion in Slovakia .............................................................................................................. 19
Brownfields in tourism in Slovakia – the current state and opportunities for creative
tourism development ............................................................................................................. 20
Comparison of geotourism assessment models: an experiment in Bakony–Balaton
UNESCO Global Geopark, Hungary ...................................................................................... 21
Enhancing Sustainable Tourism Inland: The case of the Portuguese lithium mine C-57 .. 22
Selected issues of geoheritage and geotourism theory and practice ...................................... 23
The influence of therapeutic landscape on tourists: the case study of Swoszowice spa
resort in Poland ....................................................................................................................... 24
Usability testing of selected hiking and sports mobile applications in the area of
Štiavnické Vrchy Mts. .............................................................................................................. 25
Application of knowledge on landscape values for the development of multifunctional
entrepreneurship of Small and Family farms. Case studies from Slovakia .......................... 26
3D model of selected cultural monument based on contemporary historical and
graphical sources ..................................................................................................................... 27
Specification of the field scientific of Environmental History .................................................. 28

Reconstruction of the historical development of the yeoman’s residence in Radoľa and its use in tourism ........................................................................................................................................ 29

Tourism in the Slovak Republic in the shadow of the war 1939 – 1945........................................ 30

Non-ferrous raw materials from the perspective of Matej Bel....................................................... 31

The virtual reconstruction of destroyed mining objects as an effective tool for extending the primary geotourism offer ........................................................................................................... 32

Educational aspects of the river with braided channel, case study Bialka River and Skawa River, Polish Carpathians ................................................................................................................... 33

Periurban hiking trails Evaluation as the part of sustainable tourism infrastructure in Nemi (Italy) .................................................................................................................................................. 34

Analysis of hospitality organization in comparing with other sectors in Slovakian-Polish border .................................................................................................................................................. 35

Partial observation of locally owned tourism businesses’ economic impact: Notes on benefits and limits of open data.................................................................................................................. 36

Impact of cycling infrastructure on tourist destinations development ........................................ 37

ZOO and mining heritage? .................................................................................................................. 38

Mining heritage of the Czech Republic and its entry to the UNESCO World Heritage list (a case study of the Ore Mountains) ........................................................................................................... 39

Development of modern geo-products in Železné hory national geopark ................................... 40

Stationary boards (panels) as standard information elements in mountain tourism .................... 41

Reconstruction of Historical Water Management Systems in Mining Sites of Upper Hungary (Slovakia). Possibilities of Utilization in Favour of the Mining Tourism .................... 42

Mining traditions as part of product base of mining tourism in towns with mining history ................................................................................................................................. 43

Geographic thought and philosophy pathway for recreation and tourism .................................... 44

The impact of tourism development on the local community. Case study (Tushemisht village in Pogradec city) ....................................................................................................................... 45

Thermal springs of Benja-Albania: Possibilities for tourism development ................................... 46

Degraded areas - reclamation and adaptation to recreational functions (examples of
selected objects in Poland: Silesian Park in Chorzów city and Górka Rogowska Park in Łódź city) ........................................................................................................................................... 47

Issues of tourist safety in Ghana: a review of literature ................................................................................................................................. 48

Increasing the attractiveness of the Zádiel Gorge in the area of modern climbing as a tourism development support tool ................................................................. 49

Knowledge of tourists on eco-hotels in the conditions of Slovakia ................................................................. 50

Geotourism for children .................................................................................................................................................. 51

Scuba diving in the old mining facilities of Slovakia ................................................................................................. 52

Management of waste in Slovakian municipalities ................................................................................................................ 53

Education in geosciences as a tool for geotourism development ...................................................................................... 54

Post-mining and post-metallurgic dumps as historic and technical monuments ........................................ 55

Touristic values of waterfalls in Albania ................................................................................................................................. 56

Karst Geoheritage and Geotourism potential in the Pek River Lower Basin (Eastern Serbia) .......................................................................................................................... 57

The management of human resources in health tourism. Case study: a thermal water destination .................................................................................................................. 58

Speleo Tourism in Slovak caves enrolled in UNESCO World Natural Heritage .................................................. 59

Revitalization of degraded green areas in an opportunity to improve activities of citizens, a case study of downtown Łódź city, Poland ......................................................................................... 60
MINING TOURISM IN TERMS OF HISTORY, CURRENT STATUS AND POSSIBLE DEVELOPMENT

Pavol Rybár

Faculty of Mining, Ecology, Process Control and Geotechnologies, Technical University of Košice, Letná 9, 042 00 Košice, Slovakia, pavol.rybar@tuke.sk

ABSTRACT

Mining tourism is a form of tourism predominantly researched and defined within Slovakian Faculty BERG, TU Kosice. Mining tourism is a form of tourism uniquely associated with one of the oldest human activities - mining - in all its prehistoric, historical and contemporary forms. Including a wide range of mining heritage in mining activities, Mining Tourism is becoming an attractive form that combines the presentation of mining technologies and broad-spectrum human activity in the cross-section of history. Some world destinations that fill a simple formula - Mine tourism is a form of tourism coupled with one of the oldest human activities - mining - in all its prehistoric, historical and contemporary forms, they are massively attended. The number of visitors and tourists in these destinations exceeds hundreds of thousands, or even a million visitors a year. Some of these massively visited sites are listed in UNESCO's Natural and Cultural Heritage List. The article also deals with the history of mining tourism and we are looking for its historical origins. We present the results of research in the Habsburg monarchy, where we defined the first (known) tourist mining, the first organized trip of a group visiting mining sites, the first "tourist office" organizing excursions to famous mining sites and the like. All the documented primes here carry the features of modern Minnesota tourism. Because the author has long dealt with the possibility of developing mining tourism in places with scattered relics after mining, including mines, he developed a system of evaluation of proposed projects before investing in them, thereby minimizing economic loss, optimize the amount of proposed investment funds in the proposed project to regions with the potential to become economically significant for the region. The article presents a proposed expert system that will provide investors and project authors with a comparison of the group to which the project could be classified. The categories to which the expert system will include the proposed projects are: a) massively visited sites, b) visited sites with the aspirations of several thousand visitors a year, c) local attractions, which are intended for individuals from the ranks of experts and laymen, respectively, for educational purposes, d) in the present form an economically unrealizable project. Part of the article is a case study, where the three proposed projects are compared with a mass-visited site registered in UNESCO's natural and cultural heritage - Banská Štiavnica and its surroundings.
GEOTOURISM REGIONS – DELIMITATION, CLASSIFICATION, BASIC CONCEPTS

Elżbieta Galka
Department of General Geology and Geotourism,
Faculty of Geology, Geophysics and Environmental Protection,
AGH University of Science and Technology, al. Mickiewicza 30, 30-059 Kraków, Poland
egalka@agh.edu.pl

ABSTRACT
In recent years we have been observing an intensive growth of interest in a relatively new science discipline - geotourism. Geotourism is developing within geoparks, protected areas, cities, borderlands or post-exploitation areas. In this case we can talk about geotourism development within one given, strictly defined region. The term “geotourism region” often occurs in world literature but it is usually understood as an area under investigation, where the evaluation of geotourism potential is carried out. The definition of geotourism regions has not been created in the national and international literature of the subject so far, apart from Żaba and Gaidzik, where, according to the authors, geotourism areas and regions are „geotourism areas and regions with special geotourism values, usually protected”. Lack of this definition, being an important point of reference for theoretical deliberations and practical applications, results in a wrong interpretation and changing application of this term. It seems necessary to set the basic rules of geotourism regions delimitation and their classification according to strictly established criteria which refer, among others, to differentiation of the lithology and the morphology of the terrain, geotourism potential of the given area, range of influence and kind of tourism which could be developed. The main aim of this article is to systematize current knowledge and introduce the classification and the basic concepts connected with geotourism regions to the literature.
INNOVATIVE ADAPTATIONS OF MINING HERITAGE OBJECTS IN THE WORLD AND THEIR IMPACT ON THE DEVELOPMENT OF POST-MINING TOURISM

Malwina Kobylańska

KGHM CUPRUM Ltd. Research and Development Centre, Geological Department
ul. Gen. W1. Sikorskiego 2-8, 53-659 Wrocław Poland
mkobylanska@cuprum.wroc.pl

ABSTRACT
In recent years, the number of post-mining objects and areas has rapidly increased. They have been developed for other purposes, most often related to tourism and recreation. The paper presents the most interesting examples of development the remains of mining operations in the world in terms of ingenuity and innovativeness of their use for further purposes. The main directions and trends in the development of mining heritage objects in the world in recent years have been identified. It was shown that the most innovative adaptations had an impact on the development of geotourism and post-mining tourism. The selected adaptation practices were assessed in terms of the possibilities of their development as part of a long-term investment project and implementation on a larger scale.
PERSPECTIVES OF SUSTAINABLE DEVELOPMENT OF ECOTOURISM IN ARMENIAN NATIONAL PARKS

T. M. Asoyan and Marine A. Nalbandyan

Russian State University of Tourism and Services, Yerevan branch, 0025, 18 Isahakyan st., Yerevan 0001, Armenia
marinen3@yahoo.com

ABSTRACT
The development of tourism in national parks is based on several key principles: selectivity, reliance on regional attractions, specialization and cooperation. The development of tourism in national parks requires a carefully thought-out approach to the use of valuable and vulnerable natural resources. At the same time to develop tourism as a branch of the local economy independently to the national park is unpromising, because the solution of many issues in this area is beyond its competence. The complex solution of the problems connected with the development of tourism in the territory of the national park, and in its protection zone requires the attraction of external resources, as well as building partnerships with local authorities, various commercial/non-profit organizations and local population.

The article presents the features and directions of development of ecotourism in the Arevik National Park. The purpose of the study of this article is to assess the potential of resources of the Arevik National Park and creation of suggestions for the sustainable development of ecotourism on its territory.

The main tasks are:
1) evaluation of tourist and recreational potential of the Park,
2) development of tourism management and tourist infrastructure in the Park,
3) recommendations on the ecologization of tourist activity in the Park.

To assess the recreational resources, the methods of maps processing were used, on the basis of the land zoning of the territory is carried out from the point of view of its use for recreation. The territory was also evaluated from the psychological, educational, medical, technical and environmental significance. The vegetation cover, the presence of forest zones, level of aesthetic appeal, landscape diversity of mountain ranges and the presence of monuments of nature were evaluated as well.
REVITALIZED GEOTOURISM MINING HERITAGE POTENTIALS IN THE POSAVJE FOLDS

Mateja Golež
Slovenian National Building and Civil Engineering Institute
Dimičeva 12, 1000 Ljubljana, Slovenia
mateja.golez@zag.si

ABSTRACT
The territory of the Posavje folds offers many geotourism potentials, which reflect particularly in the rich mining heritage. For a long time, the local communities have considered them mainly in the context of local problems, but nowadays we can witness individual examples of successful revitalization of cave chambers and mining structures. This all gave rise to fantastic stories about the mining wealth of the underground world and the mining heritage, which are interpreted by modern approaches and new findings. The revitalization process, in addition to managers and heritage owners, also includes scientists and artists, as well as architects and educators, who, each in their own way, contribute to a holistic perspective of the values of the past in the light of contemporary understanding of this type of heritage. As a result, within the last five years this territory has witnessed the revitalization of the medieval lead and silver mine Padež pri Laškem, the former Laško coal mine machine room, which transformed into the Strojnica gallery, the brown coal mine Hrastnik, and the polymineral mine Sitarjevec. All the given examples are cases of abandoned mining activities with a long-lasting mining tradition, which left an imprint in the area, in terms of the diverse social structure of the population and in terms of the development of towns, which also allows us to evaluate, from a distance, the contribution of the construction of the railway between Vienna and Trieste, which placed these towns to the European map of centers with industrial significance in the mid-19th century. The trains, which still connect the Austrian capital with the Adriatic Sea coast may in the future, in the light of sustainable green tourism, attract curious guests to stop and linger here a while, which is the ultimate goal of the attempts of local communities in the revitalization of the mining heritage. Meanwhile, the set goals can only be realized with the help of new and attractive tourist products, which reflect own creativity connected to tradition, ranging from design ideas, music events, art installations, popular science evenings, in short, with the contents suited to all age groups of visitors.
MODEL OF TOURISM POTENTIAL MANAGEMENT OF THE HORNÁD RIVER

Tomáš Bakalár, Henrieta Pavolová, Michal Marcin and Petra Puškárová

Faculty of Mining, Ecology, Process Control and Geotechnologies
Technical University of Košice, Letná 9, 042 00 Košice, Slovakia
tomas.bakalar@tuke.sk, henrieta.pavolova@tuke.sk,
michal.marcin@tuke.sk, petra.puskarova@tuke.sk

ABSTRACT
The current time does not force all people to think about how much water we have, what kind of water we drink, how we care about it, and so on. However, it is explicitly stated that, as we care about our surroundings, so we will continue to live and work. According to the available resources, it is clear that the state of the removal of pollution over the last 20 years shows that, in most cases, the measures taken did not completely remove pollutants from the water bodies and that the sources of pollution, although already partially removed, continue to produce pollution in long-term. Therefore, it is very important to focus first of all on water quality assessment and to take a stand on the prevention of pollution of surface or groundwater. Water bodies and their banks are often attractive as a holiday destination. Clean water bodies, free of pollutants are, therefore, important for water based activities including water sports centres, as well as walking and cycling routes adjacent to water bodies. In the article the water quality of the Hornád River and the surrounding activities connected to the River were studied to create a model of the tourism potential management of the Hornád River. The model includes water quality, water based activities, risks of water quality deterioration affecting the activities in the surroundings and proposes improvement in tourist activities in the surroundings of the Hornád River.
MIGRATION, SECURITY AND TOURISM

Gejza M. Timčák

MicroCad Systems, Košice, Slovakia
spjke@netkosice.sk

ABSTRACT
Migration can be a part of tourism related processes and there are numerous types of migrants and migration processes. The paper investigates the possible connection between tourism related processes and the present wave of migration to EU. Further, it analyzes the impact of the present migration processes on natural, cultural and social environment as well as security. Then the question of impact of migration and of war on a development of new forms of tourism and tourism related services. Finally, using the results of a survey, the impact of migration on the outlook and pre-purchase considerations of potential tourism clients is analyzed.
MINING TOURISM VS ECOTOURISM

Mátio Molokáč¹, Dana Tometzová¹ and Malwina Kobylańska²

¹Faculty of Mining, Ecology, Process Control and Geotechnologies, Technical University of Košice, Letná 9, 042 00 Košice, Slovakia, mario.molokac@tuke.sk, dana.tometzova@tuke.sk

²KGHM CUPRUM Ltd. Research and Development Centre, Geological Department ul. Gen. Wł. Sikorskiego 2-8, 53-659 Wrocław Poland mkobylanska@cuprum.wroc.pl

ABSTRACT
Mining tourism offers tangible and intangible heritage to the visitors through the oldest industry sector in the world. The participants of mining tourism are interested in technical progress, technical monuments and mining works, that have been built in nature as a necessity for the advancement of human civilization. Ecotourism can be defined as a modern form of tourism. Its essence is that humanity is already aware of the consequences of insensitive human intervention in nature and landscape. Ecotourism tries to stimulate and use the public's interest in nature, while limiting the negative environmental footprints of tourism. In the basic definition of these two tourism forms could be seen their different directions and we can say they are opposites of each other. In the paper, however, we would like to present a different point of view on two tourism areas and point to their interconnection and parallel direction. What seems like a big challenge is to set the appropriate target group /a common target audience/ for two “opposite“ tourism forms. The common feature is the relationship with nature and its sustainability for future generations. Linking two different types of territory, such as the untouched landscape and the industrial landscape into one product, will provide to the visitors more and more powerful experience as well as knowledge. The result is to mix two different visitor groups through uniform tourism products. On that basis, it is expected to increase interest of tourists, visitor rate in selected areas, and to change a view on a landscape itself. We would like to deny the widely accepted opinion that industry that represents mining tourism and eco-thinking represented by ecotourism could not go hand in hand. The nature with its protected areas and anthropogenic landscape form one whole unity.
THE IDENTIFICATION OF THE SUITABLE FORM OF MEDIA SUPPORT FOR GEOTURISM DEVELOPMENT

Barbara Hlavňová¹ Gabriela Ižaríková², Dana Tometzová³ and Jana Hlaváčová³

¹Občianske združenie GEOTURIZMUS – SK
Za plaváňou 9, 010 08 Žilina, Slovakia
barbara.hlavnova@gmail.com

²Faculty of Mechanical Engineering
Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia,
henrieta.pavolova@tuke.sk

³Faculty of Mining, Ecology, Process Control and Geotechnologies,
Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia,
henrieta.pavolova@tuke.sk

ABSTRACT
The presented paper deals with the status and the importance of media support for the geotourism development, which belongs to the ever-evolving forms of tourism in the conditions of the Slovak Republic. Identifying an appropriate media for the further development of geotourism currently presents an effective promotional tool to promote the sustainable tourism development not only at the regional but above all supra-regional level. According to the research results of Molokáčová (2011), we can say that the target group for the geotourism development in Slovakia are young people aged 18-25, with lower income (up to 500 euro per month). This target group selects the destination usually three months in advance. They are spending their spare time in the destination with their partner. They are interested in natural and geological attractions with an emphasis on the uniqueness of the destination. For these reasons, the submitted paper is dedicated to statistical outputs on watching TV, listening to the radio stations, readability of print media and average daily time spent on the internet by the target group – high school and university students, as well as the active part of the population interested in geotourism. The statistical results of the questionnaire survey point to the potential of individual media in the area of geotourism development support according to the preferences of the respondents. Using the contingency tables, the article highlights the choice of the most appropriate form of media support for geotourism development with the emphasis on the preferences reassessed by clearly defined target groups of respondents based on age categories. At the same time, it evaluates statistically significant dependencies between clearly defined age groups of respondents and their preferred media means, using the Pearson's Correlation Coefficient, pointing to the selection of the most appropriate form of media support for geotourism in the Slovak Republic.
THE USE OF BROWNFIELDS IN THE SUSTAINABLE DEVELOPMENT OF TOURISM IN SR

Michaela Očenášová, Henrieta Pavolová, Tomáš Bakalár and Zuzana Šimková

Faculty of Mining, Ecology, Process Control and Geotechnologies
Technical University of Košice, , Letná 9, 042 00 Košice, Slovakia,
michaela.ocenasova12@gmail.com, henrieta.pavolova@tuke.sk,
tomas.bakalar@tuke.sk, zuzana.simkova@tuke.sk

ABSTRACT
The article highlights the potential of brownfields for the support of the development of tourism in accordance with the principles of sustainable development in Slovakia. Brownfields are essentially underused or unused territories, buildings, complexes of buildings, areas with or without buildings which can also be an environmental burden. The brownfields whose degree of degradation and environmental load is determined by their type and original use, negatively affect all spheres of sustainable development of tourism, since such locations represent the so-called “brown investments,” i.e. sites from which tourist destination has no efficiency. Based on available information on reclaimed brownfields in the field of tourism, the article summarizes their positive and negative aspects to support the further development of tourism in the sense of the principles of sustainable development. Taking into account the fact that the sustainable development of tourism with the implemented system use of brownfields can be characterized as a strategic, complex and synergic process determining the socio-economic, environmental and institutional aspects of sustainable development, profiling a functional model of anthropogenic society that eliminates threats harmful to or devastating living conditions, adequately exploiting natural resources and protecting cultural and natural heritage, it is possible to mark the browsers themselves as an adequate tool to support the development of tourism. In the light of the above, the article summarizes the system process of integration of brownfields into the area of support for the development of tourism. When presenting brownfields as an explicitly defined tool for supporting the development of tourism, the article presents specific destinations after the revitalization of brownfields, which represent the object of research on the problem solved. On the basis of the collected available information in interaction with the conducted analysis of the use of brownfields, the article presents a suggestion of possible different uses of brownfields in the area of support for the development of tourism with regard to their previous use and localization.
THE BARRIERS IN THE MOUNTANISTIC TOURISM DEVELOPMENT (AN EXAMPLE FROM COLOMBIA)

Vladimíra Šilhánková¹, Michael Pondělíček¹, Jefferson Enrique Arias Goméz², Armando Alfaro Valero² and Diana Carolina Velasco Rojas²

¹Institute of Regional Development, College of Regional Development and Bank Institute – AMBIS, Žalanského 68/54, 168 00 Praha 17 – Řepy, Czech Republic vladimira.silhankova@abmis.cz, mpondelicek@gmail.com

²Faculty of Enterprises Science, University Minuto de Dios (UNIMINUTO), Calle 81B No. 72B – 70.Barrio Minuto de Dios, Bogotá D.C. – Colombia, jarias@uniminuto.edu

ABSTRACT
Czech people, given the relatively high performance of our economy, have become a significant group of tourists over time who traditionally discover distant exotic destinations, too. The decision which destination to visit and which to avoid on the contrary is subject to a wide range of variables and the choice of a tourist destination is increasingly under scrutiny of its security situation and economic availability. The aim of the work and the article written therefrom is to find a simple and a generally applicable method for identifying security perceptions of a tourist destination concerned and validate it on the example of Colombia (South America). The Republic of Colombia has been selected for the research case study as it is a newly opening and very interesting destination with a strong aspect of security. Colombia is generally unknown to Czechs and is still far from being considered a tourist destination. The reason was the long-standing conflict inside the country where vast territories were dominated by the neo-communist guerrilla (FARC). In 2016, a ceasefire agreement was signed with the country government within a peace process, thus opening the way for the settlement of the lives of citizens in different areas. Therefore, in order for tourism to develop in the country, it is necessary to address not only the security situation in the country but also to identify the perception of security for potential tourists. To assess the perception of security situation of Colombia as a tourist destination, the DELPHI method of joint expert estimates was selected from the methods used for risk analysis, complemented with specific territorial and destination security features. Potential tourists have been assigned to the role of experts. For the data collection, a separate questionnaire was developed with the selection of standardized threats processed according to Antušák (2009). A pilot phase of the assessment was carried out in spring 2018 and the methodology for data collection was fixed. The research continued with data collection for a wider sample of respondents (about 200 people) to create a sufficient information base for Colombia’s perception of security. Individual responses and opinions of the interviewed potential tourists will be analyzed using the statistical method of component analysis or cluster analysis. The research will be complemented with an analysis of real threats to tourists so that a proposal to eliminate potential and real threats can be made, as well as the basis for a communication campaign presenting Colombia as a safe tourist destination. The results of the research will be socialized to different organisms of national, departmental and municipal character to be used as input in the reflection of public policies.
A MULTIMEDIA GUIDE TO GEOTOURISM - AN EFFECTIVE TOOL FOR THE MINING ATTRACTIONS PROMOTION IN SLOVAKIA

Karol Weis¹, Daniel Kubinský² and Lenka Gubová³

¹Faculty of Natural Sciences, Matej Bel University, Tajovského 40, 974 01 Banská Bystrica, Slovakia karol.weis@umb.sk

²Slovak Environmental Agency Tajovského 28, 975 90 Banská Bystrica, Slovakia daniel.kubinsky@sazp.sk, lenka.gubova@sazp.sk

ABSTRACT
Numerous preserved historical mining works, technical objects and other monuments related to the history of mining in Slovakia, as in other European countries, are increasingly becoming the subject of thematically motivated tourists' exploratory and educational roads. Mining tourism along with geotourism are no longer new and slow-growing types of tourism. Their rapid development in recent decades requires not only better geosites management but also new forms of promotion, marketing and advertising. The ability to provide comprehensive services, extensive and quality information depends on the level of knowledge as well as on the ability to present and use progressive forms of information sharing.

The article presents an analysis of the basis and possibilities of different ways of sharing geotouristically oriented information in the conditions of Slovakia. On specific examples of selected mining sites, the possibilities and functionality of the proposed multimedia-oriented guidebook for mining tourism are presented. It is a web-based application designed and continuously filled with information so that it is available at anytime, anywhere and to any one, in the form of an online portal available online. The application combines a wide range of diverse information and data (texts, pictures, photographs, animations, audio, virtual 3D models, etc.) in standardized formats. Based on its functionality, it enables various forms of spatial search and attribute sorting. It provides basic informations on the presence, availability and density of mining tourism attractions (primary and secondary offer of geotourism). The ability to search and filter information is based on the principle of multi-level analysis of datasets, allowing geosites to be filtered by location, by assigning an object to a thematic group, by any text string (by incomplete string too), or by displaying all objects in any of the selected browser windows. The article analyzes the pros and cons of the chosen way of presenting the monuments based on the evaluation of the author's web-map portal after the first years of its existence.
BROWNFIELDS IN TOURISM IN SLOVAKIA – THE CURRENT STATE AND OPPORTUNITIES FOR CREATIVE TOURISM DEVELOPMENT

Palenčíková Zuzana¹, Baniariová Viera² and Vozárová Kamila³

Faculty of Central European Studies
Constantine the Philosopher University, Dražovská 4 St., 949 74 Nitra, Slovakia
zpalcikova@ukf.sk, vierkabaniariova@gmail.com kvozarova@centrum.sk

ABSTRACT
The paper deals with exploration of brownfields and the possibilities of their regeneration in relation to the development of creative tourism in Slovakia. The potential of re-using brownfields can vary, depending on the technical condition and the type of the brownfield. From the point of view of tourism, an important aspect of brownfield regeneration is its future use for leisure and recreation, with an emphasis on the preservation of cultural heritage features. The aim of the paper is to contribute to the discussion about this issue through results of primary research on the current state of re-using brownfields in Slovakia. The perspectives of using brownfields in creative tourism development were examined from the point of view of territorial self-government. The survey was carried out in the first quarter of 2017, involving all self-governing regions and municipalities in Slovakia. The research findings shed light on the weak awareness of the local self-government representatives of brownfields that are located in their territory, as well as of the potential of using brownfield for leisure and recreation, including creative tourism development. The wider use of brownfields in tourism in Slovakia is only possible provided that all the key actors (representatives of local self-government, potential investors) are educated and informed about the given issue and the support of their revitalization is ensured by the state.
COMPARISON OF GEOTOURISM ASSESSMENT MODELS:  
AN EXPERIMENT IN BAKONY–BALATON UNESCO GLOBAL GEOPARK, HUNGARY  

Márton Pál and Gáspár Albert  

Department of Cartography and Geoinformatics,  
Eötvös Loránd University, Egyetem tér 1-3, Budapest, Hungary  
marchello@map.elte.hu, albert@ludens.elte.hu  

ABSTRACT  
Geological and scenic values of locations are the non-living curiosities that can be preserved and popularized a lot easier using the institutional background of geotourism, such as geoparks. UNESCO Global Geoparks Network is responsible for protecting and fostering natural, scenic and cultural values and especially geosites that are the exciting visible physical elements. The positive economic and nature conserving consequences of geotourism are revealed on many geoparks, so identifying geosites and creating assessment of a region from the aspect of geotourism is now more important than ever.  
Our goal was to quantify the geotourism potential around Csopak, a scenic village in the Balaton Uplands giving home for the headquarter of the Bakony-Balaton UNESCO Global Geopark. There is a large importance of this work because quantitative assessment methods were not used here before. After designating 216 potential geosites using topographic and geological maps, we applied two assessment models: the Geosite Assessment Model (GAM) and the Modified Geosite Assessment Model (M-GAM). GAM has been applied with good results in Hungary on different areas, but M-GAM has not been used before. As M-GAM involves tourists into the process counting with their opinion, it may give a more realistic view of the geosites. The assessment work aimed to objectively identify the educational-scientific (main values, MV) and infrastructural values (additional values, AV) of each geosites, and consisted of GIS work, fieldwork and office work.  
The two methods produced different but comparable final values of geotourism potential counted from the MV and AV scores. We discovered that the proportion of the difference of these values carries major information. The ratio of $\Delta AV/\Delta MV$ used as linear functions and depicted on diagrams can derive which values are more important for the visitors. From this result we can draw conclusions about the future development trends: scientific or infrastructural values should be more effectively fostered.  
Local communities and the Bakony-Balaton UNESCO Global Geopark also work on maintaining and developing natural attractions. Using our results, geosites can be handled and developed as visitors expect it.
ENHANCING SUSTAINABLE TOURISM INLAND: THE CASE OF THE PORTUGUESE LITHIUM MINE C-57

Ana Machado¹, Adriano Costa², Ana Antão² and Alexandra Carolino³

¹Instituto Politécnico de Tomar,
Av. Dr. Aurélio Ribeiro 3, Tomar, Portugal
anamachado@ipt.pt

²Instituto Politécnico da Guarda
Av. Dr. Francisco Sá Carneiro 50, 6300-035 Guarda, Portugal
acosta@ipg.pt, anantao@ipg.pt

³Pegmatítica, Lda,
R. Direita 160, 3530-301, Portugal
geologia.carolino@gmail.com

ABSTRACT
Tourism in Portugal closed the year of 2017 to hit new highs, having surpassed for the first time the barrier of 20 million guests, which corresponds to an increase of 8.9% over the year of 2016. However, it should be noted that some factors contributed to the success of this growth, such as: the higher disposable income of families in global terms; the greatest desire for people to travel; changes in labor relations, notably in terms of raising the retirement age, but at the same time allowing for more flexibility in working hours, which makes possible more frequent leisure periods; the strengthening of migratory movements; lower costs of transport and telecommunications, which means that prices can be lower and lower. Moreover, in the specific case of Portugal there were some conjunctural and structural conditions that led tourism to be considered one of the most important sectors of the Portuguese economy, and with growth that a decade ago were unthinkable, namely: the instability experienced in the north Africa, Persian Gulf, Turkey and Greece; the security felt in Portugal; the mild climate; the diversity of natural and cultural heritage in such a small territory. Since tourism is a social and economic phenomenon, characterized by several segments of demand, it can be an element of development of municipalities and regions that need other sources of income or even revitalize the local economy. Existing in the region of Guarda (Portugal), in the area of Gonçalo, a lithium mine, which provides an important source of income for the region, can at the same time become a "sanctuary" for those in love with the study of the lithium phenomenon in the world. The privileged location of the Guarda area, in relation to the mining explorations in the region of the uranusiferous province of Portugal and in the Tungsten-Tin metallogenic province of the NW of the Iberian Peninsula, will potentiate the development of routes. Thus, this work has as main objective the presentation of a proposed route, which we will call the ROUTE OF LITHIUM GEOLOGICAL KNOWLEDGE. With the development of this route, a differentiating tourism product is sought. Visiting the mining heritage, abandoned or in exploitation, associating all the potential of oral and collective memory of Men, is intended to create true Museums in the open that allow at the same time a register of traditions and culture, but also knowledge and development of these depressed regions.
SELECTED ISSUES OF GEOHERITAGE AND GEOTOURISM
THEORY AND PRACTICE

Ľubomír Štrba

Faculty of Mining, Ecology, Process Control and Geotechnologies,
Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia
lubomir.strba@tuke.sk

ABSTRACT
In last decades, since its first official definition in 1995, geotourism has become popular tourism form worldwide. Recently, geotourism, primarily based on geo(morpho)logical heritage – geoheritage, is well defined tourism and practiced in various areas, especially in geoparks. Many authors from different fields have discussed specific features of geoheritage and/or geotourism in both theory and practice. However, there are some issues, especially when considering the most influencing geotourism related publications and real status in the field, that should be considered. This paper discusses selected issues of geoheritage and geotourism, including the knowledge and understanding of geoheritage (both in theory and practice), theoretical approaches to geotourism, e.g., definitions, principles, and theories, compared to specific geotourism experiences in practice.
THE INFLUENCE OF THERAPEUTIC LANDSCAPE ON TOURISTS: THE CASE STUDY OF SWOSZOWICE SPA RESORT IN POLAND

Diana Dryglas\textsuperscript{1} and Oskar Sękowski\textsuperscript{2}

\textsuperscript{1}Department of General Geology and Geotourism, Faculty of Geology, Geophysics and Environmental Protection, AGH University of Science and Technology, al. Mickiewicza 30, 30-059 Kraków, Poland ddryglas@agh.edu.pl

\textsuperscript{2}Department of Climatology Jagiellonian University, Gołębia 24, 31-007 Kraków, Poland oskar.sekowski@gmail.com

\textbf{ABSTRACT}

The aim of the paper is to describe how therapeutic landscape affects tourists. Survey data were collected from 200 tourists to Swoszowice spa resort in Poland with the use of a self-administered questionnaire. The results indicated that the way therapeutic landscape affects tourists differs with respect to socio-demographic, behavioural, weather and environmental factors. The conclusions have important implications for scholars, allowing them to understand the importance of therapeutic landscape and its determinants for tourists. Knowing how tourists assess landscape aesthetics, which constitute value added for them, is important for local government entities and managers of therapeutic treatment enterprises in order to develop and manage a spa resort product that meets the needs of their customers. The present paper fills the gap in the subject literature which lacks studies measuring the influence of therapeutic landscape on tourists visiting spa resorts.
USABILITY TESTING OF SELECTED HIKING AND SPORTS MOBILE APPLICATIONS IN THE AREA OF ŠTIAVNIČKÉ B VRCHY MTS

Dana Tometzová¹, Barbara Hlavňová², Mário Molokáč¹ and Jana Hlaváčová¹

¹Faculty of Mining, Ecology, Process Control and Geotechnologies, Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia
dana.tometzova@tuke.sk, mario.molokac@tuke.sk, jana.hlavacova@tuke.sk

²Občianske združenie GEOTURIZMUS – SK
Za plavárňou 9, 010 08 Žilina, Slovakia
barbara.hlavnova@gmail.com

ABSTRACT
The main aim of the submitted paper is to objectively rate selected most downloaded mobile applications in Slovakia from „Health and Fitness“ category available for iOS devices. 4 mostly hiking and running mobile applications have been chosen on the basis of statistical data from the portal Annie App. To fulfill the main objective is essential to carry out the detailed analysis of selected sports mobile applications. Tested were following mobile apps: Runtastic GPS Running App, Endomondo, Strava: Run, Ride or Swim and Sports Tracker for All Sports. Different parameters like distance, duration of the track, average steps, maximum steps, burned calories, average pace, maximum pace, average speed, maximum speed, step length, elevation gain, elevation loss, minimum altitude, maximum altitude, total ascent, total descent, dehydration were monitored. Subsequently, comparison of these parameters was made for mobile applications usability evaluation. The rating scale of 49 selected features, which are important for hiking mobile apps users, was elaborated. In the paper are evaluated also 4 categories - engagement, functionality, aesthetics and information quality, which were created according to Mobile App Rating Scale (MARS). Within these 4 categories were monitored also subcategories like: fun, interactivity, customization, targeting specific audience, app functioning, ease of use, navigation, graphic design, overall visual appeal, stylistic consistency, quality and quantity of information, credibility or evidence base of the app. Sports mobile applications testing and the field survey was carried out in the terrain of popular Slovak geotourist location Sitno – the highest peak of Štiavnické Vrchy Mts.
APPLICATION OF KNOWLEDGE ON LANDSCAPE VALUES FOR THE DEVELOPMENT OF MULTIFUNCTIONAL ENTERPRENEURSHIP OF SMALL AND FAMILY FARMS. CASE STUDIES FROM SLOVAKIA

Martina Slámová

Faculty of Ecology and Environmental Sciences
Technical University in Zvolen, T. G. Masaryka 24, 960 53 Zvolen, Slovakia,
martina.slamova@tuzvo.sk

ABSTRACT
Agricultural production depends on many natural conditions, and the sale of agricultural products from farms is not easy. Therefore, farmers should be considered as multi-optional entrepreneurs with a corresponding education. The FEAL project no. 2016-1-SK01-KA202-022502 offers an open access online training system based on case studies, e-atlas of European agricultural landscapes and training modules. From the investigated 5 farms, 4 represented case studies from mountainous farmlands in Slovakia. In case of 2 farms wood-processing and mining activities slightly mirrored in the current landscape character. Nevertheless, industrial heritage could be revived through multifunctional farms, particularly in landscapes exhibiting low production potential of agricultural soils. On the other side, knowledge on landscape values could strengthen multifunctionality of farms and open new horizons for spreading their entrepreneurship. The goal of this article is the evaluation of opportunities for development of a tourism based entrepreneurship emanating from the SWOT analysis and a multicriteria analysis. Criteria included services and facilities provided by farms, existing local and regional tourism and recreational infrastructure, and last but not least historical, cultural and natural heritage associated with a given landscape type were evaluated. Data for the SWOT analysis and tourism services were provided by farms during interviews (October 2017); infrastructure was extracted from municipalities web sites and hiking web portals; landscape types datasets with current and traditional land uses were available from web map servers of the Slovak Environmental Agency, Banská Bystrica and visual landscapes were documented through photos (October, 2017). Raising awareness of farmers and stakeholders on landscape values is linked to adequate landscape maintenance. The results supported our proposals for optimizing the current spatial and functional land use that is needed to revive the declining economic and social live in the countryside. Inspirational ideas about landscape values could be applied in farming practices and further they could be disseminated and become a part of local or regional product trademarks, last but not least allowing them to be embedded into the tourist information system. Thus, farms would become hotspots of the touristic infrastructure.
3D MODEL OF SELECTED CULTURAL MONUMENT BASED ON CONTEMPORARY HISTORICAL AND GRAPHICAL SOURCES

Ladislav Župčán¹, Pavel Hronček² and Michal Durčo

¹Faculty of Arts
University of Ss. Cyril and Methodius in Trnava, Nám. J. Herdu 2, 917 01 Trnava, Slovakia
ladislav.zupcan@ucm.sk

²Faculty of Mining, Ecology, Process Control and Geotechnologies,
 Technical University of Košice, Letná 9, 042 00 Košice, Slovakia
phroncek@gmail.com

³Institute of History
Slovak Academy of Sciences, P. O. Box 198, Klemensova 19, 814 99 Bratislava, Slovakia
histmidu@savba.sk

ABSTRACT
Various alternatives to the virtual environment have opened new application possibilities for both cultural and educational institutions. At present, it is not appropriate to talk only about monuments, artifacts and digitization, visual model reconstructions, multimedia guides, podcasts. It is also necessary to point to practical examples in defined areas and to create the necessary visions of cyberculture in the Slovak environment in terms of virtual collections and cyber artifacts. The presented study reflects the current state of the virtual world on the example of a selected 3D monument from the last phase of the Hungarian environment. The aim of the study is to design a conceptual vision of the creation of digital - virtual artefacts in the cyber - museum world for the needs of museums and universities in order to promote their activities and attract the interests of percipients.
SPECIFICATION OF THE FIELD SCIENTIFIC OF ENVIRONMENTAL HISTORY

Pavel Hronček\textsuperscript{1} and Peter Chrastina\textsuperscript{2}

\textsuperscript{1}Faculty of Mining, Ecology, Process Control and Geotechnologies, Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia
phroncek@gmail.com

\textsuperscript{2}Faculty of Arts
University of Ss. Cyril and Methodius in Trnava, Nám. J. Herdu 2, 917 01 Trnava, Slovakia
Research Centre of Historical Geography
Institute of History of the Czech Academy of Sciences, Prosecká 809/76, 190 00 Praha 9, Czech Republic
peter.chrastina@ucm.sk

\textbf{ABSTRACT}
Environmental history started to be formed as an autonomous discipline in the 1960s in the United States of America (Prof. Donald Worster). With regard to understanding environmental history, it is necessary to emphasise that this history is no longer a history of man damaging the environment (landscape), but, on the contrary, its role is to study the dynamics of the relationship between man and the environment throughout the historical development. Nowadays, the environmental history of the world has been developing as one of the key methodological and conceptual innovations of history.

On Slovakia miss the conceptualisation of individual terms in environmental history, but also of the entire discipline; we lack experts who would pay deeper and more systematic attention to the research.

The study represents a probe into the issue of conceptualisation of environmental history in Slovakia based on a research of Slovak and foreign literature. Chronological aspect emphasizes the period of the end of the Middle Ages and the Modern Period. An overview of the process of formation and development of the environmental history is complemented with the characteristics of the discipline from the most significant representatives in the field. The study also deals with the meta-theoretical and theoretical-methodological aspects of the study of the relations between man and the environment in the past.
RECONSTRUCTION OF THE HISTORICAL DEVELOPMENT OF THE YEOMAN’S RESIDENCE IN RADOĽA AND ITS USE IN TOURISM

Miloš Jesenský¹, Pavel Hronček², Karol Weis³ and Vladimír Čech⁴

¹Kysuce Museum Čadca
Moyzesova 50, 022 01 Čadca, Slovakia
jesensky@kysuckemuzeum.sk

²Faculty of Mining, Ecology, Process Control and Geotechnologies,
Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia
phroncek@gmail.com

³Faculty of Natural Sciences, Matej Bel University,
Tajovského 40, 974 01 Banská Bystrica, Slovakia
karol.weis@umb.sk

⁴Faculty of Humanities and Natural Sciences,
University of Prešov in Prešov, Ul. 17. novembra 15, 080 01 Prešov, Slovakia
cech@unipo.sk

Abstract
The study deals with the reconstruction of the development of the originally renaissance yeoman’s residence in Radoľa. It stands on the confluence of the Vadičovský stream (originally the Radoľský brook) and the Kysuce river in northwest Slovakia in the Kysuce region. The oldest part was built in the third quarter of the 16th century as a storeyed, probably fortified tower structure - fortified house. In the second quarter of the 17th century, it was enlarged and extended to the longitudinal block character of the storeyed structure without corner towers. This basic character has remained after many reconstructions even today. In connection with the historical reconstruction of the building, the study deals with computer visualizations through 3D models of the individual developmental construction stages of the historical building. At the end of the article, the possibilities of using 3D models of tangible objects in tourism are presented, not only for clients of the Kysuce Museum, which currently manages the exposures in the given object.
ABSTRACT (in Slovak)
NON-FERROUS RAW MATERIALS FROM THE PERSPECTIVE OF MATEJ BEL

Peter Chrastina

Faculty of Arts
University of Ss. Cyril and Methodius in Trnava, Nám. J. Herdu 2, 917 01 Trnava, Slovakia
Research Centre of Historical Geography
Institute of History of the Czech Academy of Sciences,
Prosecká 809/76, 190 00 Praha 9, Czech Republic
peter.chrastina@ucm.sk

Matej Bel in his work Notitia Hungariae Novae historico-geographica offered co-temporary overview on state, importance, public acceptance and specific realia of Hungarian Kingdom regions within the Habsburg monarchy. The aim of this paper is to interpret Bel's description of raw-materials deposits and their use in the area of the Nitra region in the first half of 18th century. This topic is summarized in § XII. of the Natural Paragraph (Membrum Primum Physicum) of general part of the Nitra Region Knowledge ("Vedomosti Nitrianskej stolice") from 1742. The "insight" into Bel's characteristics has been realized via critical commentary of historical text with supplementation of information gained by study of geological maps. Findings were compared to the results of the field research.
THE VIRTUAL RECONSTRUCTION OF DESTROYED MINING OBJECTS AS AN EFFECTIVE TOOL FOR EXTENDING THE PRIMARY GEOTOURISM OFFER

Karol Weis, Matej Masný and Dominika Vonšáková

Faculty of Natural Sciences,
Matej Bel University, Tajovského 40, 974 01 Banská Bystrica, Slovakia
karol.weis@umb.sk, matej.masny@umb.sk, d.vonsakova@gmail.com

ABSTRACT

Due to the specific geological conditions of the formation of individual geomorphological units, the Slovak Republic has a relatively large number of different deposits of precious metals, ore- and non-ferrous raw materials. A special position in this sense have the deposits of precious metals and polymetallic ores, which were already in the Middle Ages subject to the interest of developed mining companies, prospering from the mining of gold, silver, copper, iron, lead, zinc, etc. The famous and rich history of several regions today reminds only abandoned mining works, reliefs influenced by mining activities, dump sites (waste banks), and many preserved technical facilities, mining operations plants or mining water management systems. These are all ideal prerequisites for the development of a new type of tourism - mining tourism (montanistics), tourism focused solely on locating the sites, usually only with abolished mining activity, with many mining, metallurgical and processing facilities and with many well-preserved artifacts reminiscent their history.

The aim of the article is to present the results of surveys focused on mapping, modeling and visualization of terrain relics after any form of mining activity. By backward transforming the image of old mining works from historical mining maps into digital 3D models, it is also possible for the lay public to better understand the complexity of mining works, their geometry, complex internal construction and organization. Many surface forms of the mining relief have long been reshaped by erosion and further anthropogenic activity, water reservoirs have been destroyed, waste dumps and water channels after completion of their task in time and space almost disappeared. Virtual reconstruction of these objects is a unique opportunity to imagine them in the original state and to obtain new information using scientific methods to derive and model their original geometric characteristics such as size, volume, depth, capacity, etc.

The long-forgotten information on the shape and function of the often important or unique technical objects are, after adding actual photographic documentation and archival information as the ideal source for creating of local attractions of mining tourism or geotourism in general. The right choice of presentation of these sites and their appropriate visualization with the help of modern digital cartography tools enables their further broad application in the education and creation of more complex products of mining tourism and geotourism. Digital processing materials and their virtual 3D presentation have the ability to engage the young generation as well. Models are gradually becoming part of permanent exhibitions in museums and exposures that present attractions of a similar focus, and secondarily helps to develop of thematically oriented types of tourism.
EDUCATIONAL ASPECTS OF THE RIVER WITH BRAIDED CHANNEL, CASE STUDY BIAŁKA RIVER AND SKAWA RIVER, POLISH CARPATHIANS

Anna Chrobak, Karol Witkowski and Jacek Szmańda

Institute of Geography
Pedagogical University of Cracow, Podhorążych St.2, 30-084 Kraków, Poland
anna.chrobak@up.krakow.pl, karol.witkowski@up.krakow.pl, jacek.szmanda@up.krakow.pl

ABSTRACT
The Bialka and the Skawa rivers are draining the Carpathian Mountains. The Bialka river flow through the Inner Carpathians, draining the High Tatras and the eastern part of the Podtatrze Region. The Bialka river flows into the Czorsztyn Reservoir, on the Dunajec river. The length of Bialka is 41 km, and the catchment area is 230 km². The Skawa river is draining the Outer Carpathians - the Western Beskids and the Carpathian Foothills. Skawa flows into the Vistula. The length of Skawa is 96 km, and the catchment area is 1160 km². Bialka is a braided river that transports mainly granite alluvial material. Bialka is slightly transformed by people. Skawa, on the other hand, was an anabranching river until the beginning of the 20th century and now is a regulated river. In the era of development of geotourism, as an element of qualified tourism and more and more frequent promotion of geosites related to relief elements, it is worth paying attention to the in-channel forms of morphology. Examples of this forms with high educational values in the Bialka river bed are: Bialka Gorge through the Pieniny Klippen Belt and a fragment of a braided channel, which is the best visible from the bridge on Bialka between villages Nowa Biala and Krempachy. In the Skawa riverbed, it is worth to see a fragment of the rocky and braided channel below the bridge between Makow Podhalanski and Grzechynia and a fragment of the river channel in Jaroszowice, located below the Swinna Porgeta reservoir. The geosites in the Bialka riverbed are well known and protected as the Bialka Gorge Nature Reserve. These places have been described in numerous publications, also geotouristic. However, Skawa until now has been the subject of scientific research only. The presented geosites in Skawa, despite their high educational values, are used only for recreation by local residents.
PERIURBAN HIKING TRAILS EVALUATION AS THE PART OF SUSTAINABLE TOURISM INFRASTRUCTURE IN NEMI (ITALY)

Igor Gallay, Zuzana Gallayová and Magdaléna Pichlerová

Faculty of Ecology and Environmental Sciences,
Technical University in Zvolen, T.G.Masaryka 24, 960 53 Zvolen, Slovakia
igor.gallay@tuzvo.sk, zgallayova@gmail.com, magdalena.pichlerova@tuzvo.sk

ABSTRACT
In different parts of Europe places are found that have played an important social, historical or economic role in the past and nowadays they face problems of high unemployment rate, resettlement, aging, etc. Based on their historical value, the natural uniqueness of the surroundings as well as the demand of pro-environmentally oriented tourists, these places can often benefit from introducing green tourism or sustainable tourism activities. One such of a places is Nemi, little city located 30 km southeast of Rome with its crater lake of the same name, belonging to the volcanic complex Colli Albani and also being the part of the Parco Regionale dei Castelli Romani. Different forms of tourism with properly secured infrastructure can encourage the arrival of tourists to the region together with an economic benefit. An important role here plays the accessibility of the site and its facilities and amenities. Based on the field survey, selected periurban hiking trails of the Nemi area were evaluated. The method used provides detailed description of trail profiles, their intensity of use according to heat maps and selected environmental variables description. We focused on (a) assessment of the trails surface condition according to the degree of destruction (e.g. securing of eroded parts, design of elements increasing the trail safety, necessary management measures to ensure trails accessibility); (b) trails amenities (e.g. benches, trash bins, picnic spots); and (c) trails attractiveness (e.g. views, rock tunnels, etc.). By identifying the potential erosion of the studied area, the risk areas of the trails were identified with proposition of stabilization measures. The outputs are the map of the current state of the hiking trails surface and their facilities and the map of proposals for improving the condition and amenities of trails with focus on hikers and cyclist target groups.
ANALYSIS OF HOSPITALITY ORGANIZATION IN COMPARING WITH OTHER SECTORS IN SLOVAKIAN-POLISH BORDER

Katarína Čulková, Henrieta Pavolová, Šuriška Igor and Zuzana Šimková

Faculty of Mining, Ecology, Process Control and Geotechnologies, Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia
katarina.culkova@tuke.sk, henrieta.pavolova@tuke.sk, igor.duriska@tuke.sk, zuzana.simkova@tuke.sk

ABSTRACT
Conditions, prevailing at the job market, are closely connected with economic, demographical and social situation of the individual counties. They are results of influence of various factors, determining offer of job and demand on job. Mutual quantitative and structural relations between offer and demand on job market determine on the other hand total situation at the job market and its individual segments, which can be expressed by balance, surplus of job offer, or deficit of working power. Presented contribution analyses chosen indexes from area of hospitality with emphasize to employment in the sector in chosen counties from Slovakian-polish border. Analysis proved that in last period sector of hospitality was dynamic, which is confirmed by positive percentage changes.
PARTIAL OBSERVATION OF LOCALLY OWNED TOURISM BUSINESSES’ ECONOMIC IMPACT: NOTES ON BENEFITS AND LIMITS OF OPEN DATA

Csaba Sidor, Branislav Kršák, Ľubomír Štrba and Ján Gajdoš

Faculty of Mining, Ecology, Process Control and Geotechnologies, Technical University of Košice, Letná 9, 042 00 Košice, Slovakia

csaba.sidor@gmail.com, branislav.krsak@tuke.sk
lubomir.strba@tuke.sk, jan.gajdos@t-systems.sk

ABSTRACT
One of the main aims of tourism is the support of local destinations’ economies’ sustainable growth and their positive social impact on employment. For this, economic growth and employment are one of core indicators for tourism impacts’ measurement. In Slovakia, publicly available aggregated data may be obtained at regional and district level. Since local tourism and geotourism destinations do not copy regional or district boundaries by rule, currently available data creates in many cases a distorted picture within local econometrics. The manuscript discusses the potential benefits of open tax returns’ aggregated data for partial observation of locally owned tourism’s economic development in a spatial timeline. The discussed outcomes were obtained by a self-tailored reusable semi-automatic extraction script in order with European Union’s Statistical classification of economic activities, and implemented on the Registry of Financial Statements’ open Application Programming Interface. The developed script in Python was tested within the upcoming Zemplín geopark’s (Slovakia)administrational boundaries. Even though in terms of total coverage and exactness of declared NACE codes, the results indicate several limitations, altogether they bring a more clear view of tourism’s structure and economic impact on an annual base that may be used for calculations of minimum impact’s change. The resulted data may be further exported into third party Structured Query Language databases and used for spatial notation. Ultimately, the tested extraction and sorting method may be used as gateway for other industries using European Union’s standard for economic classification or United Nations’ International Standard Industrial Classification of all Economic Activities.

Acknowledgement:
This work was supported by the Slovak Research and Development Agency under the contract no. APVV-14-0797.
IMPACT OF CYCLING INFRASTRUCTURE ON TOURIST DESTINATIONS DEVELOPMENT

Adriana Šebešová and Branislav Kršák

Faculty of Mining, Ecology, Process Control and Geotechnologies,
Technical University of Košice, Letná 9, 042 00 Košice, Slovakia
adriana.sebesova@vucke.sk, branislav.krsak@tuke.sk

ABSTRACT
There has been a large support given to building of cycling routes in Slovakia for last few years at all levels and many aspects. Not just legislative, strategic and technical point of view but also financial support from EU programmes, state and self-governments is necessary to take in account. This article deals with analysis of cycling infrastructure impact on destination performance.
ZOO AND MINING HERITAGE?

Lukáš Nekolný

Faculty of Science
Charles University, Albertov 6, 128 43 Praha 2, Czech Republic
lukas.nekolny@natur.cuni.cz

ABSTRACT
The most important current zoos are not only about collections and displays of living animals, which have been in the last decades often presented in naturalistic habitat enclosures. The supplementary thematic spread of topics inside zoos goes hand in hand with these new trends and forms of animal presentation. This can have many different connections, meanings and purposes including education. Therefore e.g. the geologic and mining attractions, points of interest or even heritage of this kind can be presented to visitors, too. The basic question is where they are located and why. Among other new basic issues in the zoo area belong e.g. the culture of selected region/country or the culture associated with specific species, its history and development as well as own area and landscape with some unique elements. Just thanks to these new trends, topics and opportunities, in more than one third of Czech traditional zoos, that were founded and opened before 1989, the mining (or other subsurface) elements and activities are shown. There are three distinct approaches to this point. In the first case we can find relatively authentic places of heritage (Pilsen Zoo, Prague Zoo). The second approach of small exhibit is located in towns with the mining tradition (Chomutov Zoo, Jihlava Zoo, Ostrava Zoo). Safari Park in Dvůr Králové with a focus on Africa presents some South African animals in a “small village with the sample of mining tunnel” referenced to the topic of South African mining of gold. Because a clear majority of these exhibitions were built during last years, it is possible to talk about a very new and topical trend of zoo issues extension.
MINING HERITAGE OF THE CZECH REPUBLIC AND ITS ENTRY TO THE UNESCO WORLD HERITAGE LIST (A CASE STUDY OF THE ORE MOUNTAINS)

Jakub Jelen

Faculty of Science
Charles University, Albertov 6, 128 43 Praha 2, Czech Republic
jakub.jelen@natur.cuni.cz

ABSTRACT
Mining has a very long tradition in Czechia. A large number of areas have developed thanks to the extraction of minerals or energy resources. However, mining processes have been dampened in recent decades. Mining areas are transformed, former industrial plants are either disposed of or new uses are sought for them. However, the complete disposal or transformation of mining remains would mean the destruction of the very important development phase of the society. Therefore, it is important to preserve and perceive selected remains and elements that document the development, tradition, or fame of mining as a heritage. This mining heritage includes values and meanings of today's society, and therefore should not be forgotten. Mining heritage as a part of the (post)industrial heritage is not recently perceived only as unsightly remains of mining activities which are left to dissolve. Increasingly, it is understood as being a part of the protected cultural heritage and presented to the public. It is a complex of material and immaterial heritage that demonstrates a high level of proficiency of our ancestors.
Particularly after 1989, there was formed many expositions or mining museums in the Czechia, and mining objects are declared as monuments. One of the most famous regions of Czechia mining heritage is the Ore Mountains (Krušnohori/Erzgebirge). This complex of heritage contains evidence of a very long history of minerals mining and interprets, preserves and passes it to visitors and future generations through a large number of preserved monuments. Local heritage values are also nominated for UNESCO World Heritage list. The paper will present the history, development and current state of the Ore Mountains mining heritage. It will also focus on its specifics, which make it a UNESCO nominee, and present listeners information about the process of listing, with a view to the future if the Ore Mountains were to join the list.
DEVELOPMENT OF MODERN GEO-PRODUCTS IN ŽELEZNÉ HORY NATIONAL GEOPARK

Jan Doucek, Daniel Smutek and Barbora Nová

Vodní zdroje Chrudim, spol. s r. o. (Železné hory National Geopark),
U Vodárny 137, 53701 Chrudim, Czech Republic
doucek@vz.cz, smutek@vz.cz, nova@vz.cz

ABSTRACT
The Železné hory National Geopark has been in existence for more than six years during which several dozens of geo-products of different nature have been realized. Six years is a very long time in the terms of technology development and access to innovation of geo-products. So it is clear that the shape of individual geo-products must be adapted to this time horizon. Another aspect in the creation of geo-products is the constantly accelerating time and the lesser will of listeners and visitors to perceive a great deal of information. The Management of the National Geopark is trying to adapt these new and not always positive trends. Newly created geo-products are aimed at a modern visitor who is not trying to educate but entertain. And during the fun, non-conducting education takes place. New products include, for example, theme-based playgrounds tailored to a particular location, additional animation and augmented reality use in the field, and the use of non-traditional materials, methods and procedures for presenting selected locations. Visitors’ responses show that this approach leads to a higher interest in the geo-product and thus to a more rapid propagation of the ideas of geopark and sustainable geotourism.
STATIONARY BOARDS (PANELS) AS STANDARD INFORMATION ELEMENTS IN MOUNTAIN TOURISM

Miloš Jesenský¹, Pavel Hronček², Lucia Domaracká², Karol Weis³ and Pavol Rybár²

¹Kysuce Museum Čadca
Moyzesova 50, 022 01 Čadca, Slovakia
jesensky@kysuckemuzeum.sk

²Faculty of Mining, Ecology, Process Control and Geotechnologies,
Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia
phroncek@gmail.com, lucia.domaracka@tuke.sk, pavol.rybar@tuke.sk

³Faculty of Natural Sciences,
Matej Bel University, Tajovského 40, 974 01 Banská Bystrica, Slovakia
karol.weis@umb.sk

ABSTRACT
The aim of the study is to point out the irreplaceable possibilities of stationary boards in mountain tourism in today’s society, where computer technologies, digitization or social networks are used and preferred in all spheres of life. The first part of the study analyzes the theoretical-methodical aspects and procedures for the creation of stationary boards, their content classification and appropriate in-situ use. Methodically correctly constructed stationary text and picture boards are an appropriate and often irreplaceable visualization tool for old mining sites or mining trails. The second part of the paper presents an example study of the processing, construction and putting into practice of stationary text and picture boards on the example of the mining walkway in Vyhne (Central Slovakia), which was installed under the title “In the footsteps of mining activities in Vyhne in the Year 2016”. Stationary boards on the pavement are functional and actively used in mountain tourism.
RECONSTRUCTION OF HISTORICAL WATER MANAGEMENT SYSTEMS IN MINING SITES OF UPPER HUNGARY (SLOVAKIA). POSSIBILITIES OF UTILIZATION IN FAVOUR OF THE MINING TOURISM

Marián Lukáč, Pavel Hronček and Ladislav Hvizdák

Faculty of Mining, Ecology, Process Control and Geotechnologies, Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia
marian.lukac@tuke.sk, phroncek@gmail.com, ladislav.hvizdak@tuke.sk

ABSTRACT
The energetic exploitation of water in mining or related industries in Upper Hungary (today Slovakia) is starting to develop on a large scale during the Middle Ages. Since then, the water has been a major and affordable source of energy for several centuries. In order to be able to use hydroelectric energy in the end-of-pipe equipment, waterworks had to be built for this purpose, which has ensured water collection, accumulation, and supply to the machinery and its return to the watercourses. Typically, the whole system was based on a gravity principle, but various pumping devices were often built also.

Due to the global importance of mining, and a large number of mining sites in the studied area, in the Middle Ages and the Early Modern Age here were also many energy water management systems. The best-known and most sought-after by tourists is the Banská Štiavnica water management system, which is part of the UNESCO World Heritage.

Of the tens of such systems in Slovakia, only a few have been preserved to date, except for the Banská Štiavnica, partly of Kremnica, Nová Baňa, Gelnica or Smolník. Other (such as Špania Dolina, Ľubietová, Jasenie, Sp. Nova Ves, Dobšíná, Rožňava, Čučma, Nižná Slaná, Vlachovo, Slovinky, Rudňany, Žakarovce, Nálepkovo, Zlatá Ida, and others) have been preserved only in the form of bigger or smaller relics.

For the possibility to exploit these relics of unique technical monuments in Mining Tourism, they must be historically documented, identified in the terrain and, in particular, appropriately visualized. The presented study deals with the research of historical water management systems using examples of mining sites Ľubietová, Smolník and Novoveská huta. The aim was not only to process them from point of view of History but also to identify it in terrain and create their computer models. Computer visualization will allow mining tourists not only their virtual tour but also easier orientation in the environment when visiting their remnants in situ.
MINING TRADITIONS AS PART OF PRODUCT BASE OF MINING TOURISM IN TOWNS WITH MINING HISTORY

Miloš Petráš and Ladislav Mixtaj

Faculty of Mining, Ecology, Process Control and Geotechnologies,
Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia
ladislav.mixtaj@tuke.sk

ABSTRACT
The contribution is focused on the chances of complementing the range of products on the primary offer in mining tourism with new attractions which by their nature have the potential of enriching the product diversity in tourism thereby enabling and an all-round experience for the visitors. It means familiarization with the traditions of mining so typical for the region. Unlike the technical works and facilities, in this case it involves attractions of immaterial kind, something that is determined by being emerged into the complex range of mountain tourism products. Thanks to the famous mining traditions, the region of Rožňava abounds not only in rich customs and traditions of the community of miners and their families. Among the issues raising intensive debates are those related to the strategies and their implementations in the tourism of the region. During the recent period, several walkways linked to the mining traditions have been set up in the region, however, this sort of product does not have the potential for keeping mining tourists for a period longer than a day. The article is indicating some of the possibilities as solutions to the issue forming part of short and medium-term plans as bases for a long-term strategy of the development in mountain tourism in the Upper Gemer region.
GEOGRAPHIC THOUGHT AND PHILOSOPHY: PATHWAY FOR RECREATION AND TOURISM

Yina Donald Orga
Department of Leisure & Tourism Mgt.
The Federal Polytechnic, Idah, Nigeria
yinaorga@yahoo.com

ABSTRACT
The paper examines the evolution of geography in the ancient world, middle age and renaissance, modern world, and schools of geography and how it’s contributed to recreation and tourism growth, development and activities. The evolution of geography over the years provides systematic geographical ideas and knowledge that accumulated into scientific geography we have today. Geographic thought and philosophy provides the systematic approaches in the analysis of the physical world and examines relations between places in order to throw light on the pattern and nature of human society. This provided impetus in understanding and resolving of physical and human issues. It is the evolution of geography over the years that provides the smooth pathway for recreation, tourism growth, development and dynamics of activities such as sightseeing, tours, hiking in the parks, bird watching, cycling in the countryside, climbing of mountains, trekking in the primary forest, Visiting Family and Friends (VFR), etc.
THE IMPACT OF TOURISM DEVELOPMENT ON THE LOCAL COMMUNITY CASE STUDY
(TUSHEMISHT VILLAGE IN POGRADEC CITY)

Alma Zhilla¹ and Ermiona Braholli²

¹Economic Faculty
“Fan S. Noli” University, Bulevardi Rilindasit 11, Korca, Albania
almapulaha@hotmail.com

²Faculty of Education and Philology
“Fan S. Noli” University, Bulevardi Rilindasit 11, Korca, Korca Albania
ermiona.braholli@yahoo.com

ABSTRACT
Tourism, as a social event, brings a transformation in the society, due to long guest-host association but many times, tourist destinations remain as image unique cultural identity. This paper assesses the wide range of impacts that tourism has on the livelihoods of rural residents in parts of Albania. It aims to serve two purposes. First, it illustrates that a focus on livelihoods offers a useful perspective on tourism for enhancing local benefits. It contrasts with conventional tourism perspectives which tend to focus exclusively on either economic, commercial or environmental impacts. It also contrasts with narrow assessment of local benefits focusing only on job creation and cash income. Taking a livelihoods perspective helps identify the wide range of impacts – direct and indirect, positive and negative – that matter to local people. Second, the paper aims to show how tourism’s contribution to livelihoods can be enhanced by adjusting decisions on what is developed and how, in ways that reflect people’s livelihood priorities. The approach outlined here also provides an example of how livelihood analysis can be applied to a sector. In this case the focus is tourism in rural areas like Tushemisht in Albania. The principles of recognising that a range of livelihood concerns are important, and supporting systems that enable local people’s priorities to be incorporated into tourism decisions, can be generally applied, tourism industry, visitors and the environment. Albania is one of the upcoming tourist destinations in the Balkans and also in Europe. Our country should maximize the potential of the sector in developing tourism in such a way as to be sustainable over time by social, environmental and cultural.
THERMAL SPRINGS OF BËNJA-ALBANIA: POSSIBILITIES FOR TOURISM DEVELOPMENT

Edlira Menkshi\textsuperscript{1} and Eleina Qirici\textsuperscript{2}

\textsuperscript{1}Faculty of Education and Philology
“Fan S. Noli” University, Bulevardi Rilindasit 11, Korca, Korca Albania
eda_ndreko@yahoo.com

\textsuperscript{2}Economic Faculty
“Fan S. Noli” University, Bulevardi Rilindasit 11, Korca, Korca Albania
qirici.elena@yahoo.com

ABSTRACT

Thermal springs are recognized as an significant natural resource in health, wellness and recreational tourism development. A number of natural hot springs with important health and wellness values are located in Albania. The paper analyses the natural values of thermal springs of Bënja, located in the south part of country and the possibilities for tourism development. The physical and chemical characteristic of springs water are used from locals to treat many diseases such as rheumatism, nerve pains, skin disease, stomach etc. The combination of the curative powers of thermal waters with natural environment (National Park) and culture monuments make the area very attractive for visitors. Recently the number of visitors both domestic and international is increased in this area.

Purpose the significant values the thermal springs are less developed and promoted. Unfortunately, the lack of touristic facilities and health resorts is evident. Bathing programs and other treatment activities in the different thermal pools are not carried by trained and qualified people. Based on the results of the research it is evident the interest of the visitors about the development of wellness and recreational tourism in this destination as it is also necessary the development of the facilities available for the medical and tourist purposes.
DEGRADED AREAS - RECLAMATION AND ADAPTATION TO RECREATIONAL FUNCTIONS
(EXamples of selected objects in poland: Silesian Park in Chorzów city and Górka Rogowska Park in Łódź city)

Andrzej Długoński¹, Beata Fortuna-Antoszkiewicz² and Jan Łukaszkiewicz²

¹Faculty of Biology and Environmental Sciences
Cardinal Stefan Wyszynski University in Warsaw, Poland
aa.dlugonski@uksw.edu.pl

²Faculty of Horticulture, Biotechnology and Landscape Architecture
Warsaw University of Life Sciences, Poland
bbeata_fortuna@sggw.pl, cjan_lukaszkiewicz@sggw.pl

ABSTRACT
The article concerns the issue of land reclamation of two degraded urban areas: Silesian Park (Chorzów city, Southern Poland) and Górka Rogowska Park (Łódź city, Central Poland). The research raises the subject of vegetation condition, plant succession, and the usage of a given area in terms of recreational functions. The first example of Silesian Park (case study 1) indicates successful nature and landscape reclamation. The intention of park’ designers was to make it permanent and self-regulating natural system in accordance with the principle: the longer it is maintaining in a given place, the more it is maintaining ecologically sustainable and the stronger it affects its surroundings. The second example of Górka Rogowska Park (case study 2) shows that despite numerous sensible design ideas for satisfactory development, the area has not been properly recultivated. In this site the conducted works have lowered landscape values and recreational opportunities. However, the research showed that this park is an area with a high natural potential, and thanks to appropriate design decisions and contribution of city’ authorities might be common year-round and multi-functional public space serving various range of recreational activities similar to the Silesian Park (case study 1). The research led to conclusion that it is necessary to constantly monitor and counteract the negative effects of anthropopressure through appropriate care (plant control, elimination of invasive plants) and design (rational development of leisure activities of a given place) decisions on reclaimed urban areas.
ISSUES OF TOURIST SAFETY IN GHANA: A REVIEW OF LITERATURE

Nicholas Imbeah

Enyedi Gyorgy Doctoral School for Regional Sciences, Szent Istvan University, Pater Karoly, u.1. H-2100 Godollo, Hungary
nicholas.imbeah@tpoly.edu.gh

ABSTRACT
In Ghana, the tourism sector contributes immensely to economic growth and development. The tourist attractions that attract the most tourists are Kakum National Park, Cape Coast/Elmina Castles, Kwame Nkrumah Memorial Park, Kumasi Zoo, Wli Waterfalls and Manhyia Palace Museum. The extent to which lose safety practices and their challenges impact on development of tourism at the above mentioned tourist facilities is still evasive in tourism research in Ghana. Among the National Development Planning Commission (NDPC) guidelines for the preparation of the District’s Medium Term Development Plans, Ghana Tourism Authority (GTA) should have an office at the Metropolitan, Municipal and District Assemblies (MMDAs) to help press home the need for MMDAs’ tourism issues but the absence of such tourism office and officials make tourism planning and tourist safety issues to be coordinated at a distance from the regional GTA which breeds weak linkages and neglect of tourist safety and security at the MMDAs. Admittedly, it is only generally believed that the already known public security services like Ghana Police Service are in charge of tourist safety, which always leads to weak tourist safety linkages at destinations. Though a kind of tourism planning exists, there is no functional tourism policy for Ghana. This situation makes analysis of tourist’ safety in Ghana an imperative research work.
INCREASING THE ATTRACTIVENESS OF THE ZÁDIEL GORGE IN THE AREA OF MODERN CLIMBING AS A TOURISM DEVELOPMENT SUPPORT TOOL

Jana Selepovalá

Faculty of Mining, Ecology, Process Control and Geotechnologies,
Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia
jana.selepova@tuke.sk

ABSTRACT
Zádiel Gorge belongs to the most beautiful and from a natural science perspective to the most interesting landscape formations of the Slovak Karst. The area represents the National Nature Reserve in the National Park and is part the European Network of Protected Areas NATURA 2000. The site has a huge climbing potential that is comparable in terms of natural conditions, especially geomorphological, with the other most popular climbing sites. However, the possibility of climbing is not sufficient. There are other factors that affect the attractiveness of the site. Therefore, our goal was to create a proposal that will increase the attractiveness of the Zádiel Gorge, that can motivate the visitor to choose this climbing place and which will have a decisive importance to the local economy. This paper presents suggestions of attractiveness that respect the development of tourism in accordance with nature and landscape conservation.

The basis for the proposals was theoretical knowledge, thorough analysis of the area and own experience with the issue. Recommendations from other climbing places and identification of problems between climbing and nature, have been key for us in making appropriate proposals. The increasing interest in adventure tourism, including climbing, is a global trend in tourism and therefore it is necessary to pay close attention to this issue.
KNOWLEDGE OF TOURISTS ON ECO-HOTELS IN THE CONDITIONS OF SLOVAKIA

Henrieta Pavolová, Michaela Očenášová, Tomáš Bakalár and Martina Vasilková Kmecová

Faculty of Mining, Ecology, Process Control and Geotechnologies, Technical University of Košice, Letná 9, 042 00 Košice, Slovakia henrieta.pavolova@tuke.sk, michaela.ocenasova12@gmail.com, tomas.bakalar@tuke.sk, martina.vasilkova.kmecova@tuke.sk

ABSTRACT
Environmental quality is influenced by all sectors of the economy, including tourism, which currently has a significant socio-economic role in the national economy of each country, as foreign travel revenue in European Union countries has become a key source of gross domestic product. In recent decades, the tourism business has been continually integrating the principles of sustainable environmental development that require the implementation of pro-environmental management. This is reflected in the granting of the eco-label “The Flower” to tourist accommodations since 2003 in the sense of EU Decision No. 2017/175 establishing the EU Ecolabel criteria for tourist accommodations. The award of the eco-label can be considered as a key marketing tool in the dynamically developing tourism sector to increase the competitiveness of individual touristical subjects. The eco-label “The Flower” is in constantly increasing environmental awareness of tourists, guaranteeing the environmental behaviour of accommodation facilities that use the latest technical and technological measures to protect the environment in providing comprehensive tourism services. For these reasons, the article points to the level of knowledge of Slovak tourists about eco-hotels, since in Slovakia there are currently only two eco-hotels, namely the eco-friendly hotel Dália located in Košice and Bojnice House Hotel located in Bojnice. Based on a statistic survey of 511 respondents, the article presents visitors’ awareness of eco-hotels as well as their preferences in choosing a possible accommodation facility or willingness to procure such a type of tourism service. It further specifies the dependence between age, education and the knowledge of the existence of eco-hotels and the principles of eco-hotels and preferences in choosing the accommodation facility. At the end, the article points to the preferred expected eco-hotel location from travel visitors according to predefined age categories.
GEOTOURISM FOR CHILDREN

Barbara Hlavňová¹, Dana Tometzová² and Jana Hlaváčová²

¹ Občianske združenie GEOTURIZMUS – SK
Za plavárňou 9, 010 08 Žilina, Slovakia
barbara.hlavnova@gmail.com

² Faculty of Mining, Ecology, Process Control and Geotechnologies,
Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia,
dana.tometzova@tuke.sk, jana.hlavacova@tuke.sk

ABSTRACT
The submitted paper, based on several definitions of geotourism, presents the potential of geotourism as one of the new emerging types of tourism in Slovakia, with an emphasis on raising awareness of its geological heritage, education of individual target groups in geotourism and sustainable development of specific geotourist areas.

Many authors describe the potential of geotourism in Slovakia. Geotourist objects, which are the basis for the creation of new geoparks in Slovakia, are mapped and identified in the works of several authors as well. The development of geoparks is closely related to the issue of their target groups and the need for their education in the above-mentioned areas. Considering the geotourist potential in Slovakia and based on the study of Molokáč et al. (2017) educational activities need to be tailored to individual target groups. The study defines individual target groups, such as the local community, business sector, self-government, regional organizations, general public, children and students. The authors of the presented paper dedicate their attention to the educational activities development for the last mentioned target group - children and students.

The authors define positive and negative perceptions of learning activities by different age groups within the target group of children and students. The pros and cons are based on 15-year experience of the authors with organization of educational and sports activities for children aged 5 to 15 years and 5-year experience in preparing educational and sports activities in the field of geotourism in Slovakia. In the paper is target group divided to three categories according to age of children: children aged 6-10 years, children aged 11-15 years (adolescence) and children over the age of 15 to their adulthood (young adulthood). The paper contains examples of implemented educational programs with a commitment to the presented claims. Research results show that it is important to engage existing national parks, geoparks, primary schools, secondary schools, general offices as well as leisure centres and children sports clubs, in the development of educational programs in the monitored area. In the conclusion, the authors point to the risks associated with the organization of educational programs focused on the geotourism development.
SCUBA DIVING IN THE OLD MINING FACILITIES OF SLOVAKIA

Ladislav Mixtaj, Michal Starec and Miloš Petráš

Faculty of Mining, Ecology, Process Control and Geotechnologies, Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia
adislav.mixtaj@tuke.sk

ABSTRACT
The contribution is dealing with the issue of using old mining facilities for scuba diving as a non-traditional attraction of mountain-tourism on the territory of the Slovak republic. Thanks to its famous mining tradition, in this country there is and abundance of old and deserted mining facilities. Making use of them in tourism has become a topic of debates over a longer period both in professional and public circles. These objects can be regarded as a product-basis for mountain tourism. The real issue consists in the creative search for facilities suitable for underground diving, as well as flooded fractures in Slovakia. They are subjected to research from various aspects also suggesting a simple model of making old mining facilities accessible for scuba diving.
MANAGEMENT OF WASTE IN SLOVAKIAN MUNICIPALITIES

Eva Mihaliková¹, Katarína Čulková², Marcela Taušová² and Tomáš Pavlík²

¹Faculty of Public Administration
Pavol Jozef Šafárik University in Košice, Šrobárova 2, 041 80 Košice, Slovakia
eva.mihalikova1@upjs.sk

²Faculty of Mining, Ecology, Process Control and Geotechnologies
Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia
katarina.culkova@tuke.sk, marcela.tausova@tuke.sk, tomas.pavlik@tuke.sk

ABSTRACT
Modern society, orientated to the sustainable development, must regard healthy living environment as its basic factor. This situation, together with current effects of rapid development, high population density in large residential areas and pressures on organizations to protect living environment, demands creation of waste management, especially in large modern cities. Waste management must be orientated to the avoiding and limitation of waste and decreasing of negative impacts of waste to the living environment. Slovakia gives intensive attention to the protection of living environment, mainly from the view of legislation and economic measurements. Every year vast volume of financial means are invested to the protection of living environment and it is supported by creation of database and system for monitoring of living environment situation. Presented contribution is orientated to the waste management in Slovakian municipalities. The goal of the contribution is to analyze development of fees, paid for communal waste, since it presents part of tax incomes in individual municipalities. The other aim of contribution is to show to development in relation to produced waste volume. The research of development demanded first of all considering the waste law, as well as local taxes and fees in area of communal waste. Analysis is realized according data, obtained from Ministry of Economy in Slovakia. Results show that local fees of communal waste present part of further tax incomes in municipalities, namely taxes of goods and services. Also there is recorded presently increasing of environmental awareness of public, resulting in decreasing of mixed communal waste production and increasing of separated waste volume. Such situation could support circular system of economy in the Slovakia.
EDUCATION IN GEOSCIENCES AS A TOOL FOR GEOTOURISM DEVELOPMENT

Gabriela Alexandrová1, Barbara Hlavňová2 and Mário Molokáč3

1Rectorate - Department of Science and Research
Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia
gabriela.alexandrova@tuke.sk

2Občianske združenie GEOTURIZMUS – SK
Za plavárihou 9, 010 08 Žilina, Slovakia
barbara.hlavnova@gmail.com

3Faculty of Mining, Ecology, Process Control and Geotechnologies
Technical University of Kosice, Letná 9, 042 00 Košice, Slovakia
mario.molokac@tuke.sk

ABSTRACT
Recent trends in education mainly focus on IT sphere and economic sciences education. Other areas of sciences, such as geosciences, are getting into a haze, resulting in decreased interest in geological heritage. In general, the natural environment is considered to be a less dynamic element, compared to other scientific disciplines. This fact leads to young people’s disinterest in raw materials and the environment. People do not know what terms like geosciences or geoparks include. However, geosciences are currently key disciplines for understanding the functioning of the entire complex of our planet and are needed for sustainable development on Earth. The present condition of teaching the geosciences at schools points to significant shortfalls in geodiversity knowledge of our own region and our picturesque Slovakia. The paper deals with a critical view of the current state of geoscience education as well as the impact on geotourism. The authors see a solution to the problem of disinterest in modern forms of education about Earth. New educational methods can re-acquire the relationship to nature, the relationship to the environment, and to tourism. Such learning processes help not only in gaining knowledge but also in building the interest in geological heritage. In the future, it may cause an increase in the visitor rate in the field of geotourism. It is important to inform not only the general public but also young people in the school process about the use of raw materials while minimizing negative environmental impacts. Improving the awareness of younger generations in particular and the improved access to education in geosciences can contribute to the tourism and geotourism development in the country and to the identification of the current risks arising from the conflict of human activities and natural processes.
POST-MINING AND POST-METALLURGIC DUMPS AS HISTORIC AND TECHNICAL MONUMENTS

Łukasz Gawor

Department of Applied Geology
Silesian University of Technology, ul. Akademicka 2, 44-100 Gliwice, Poland
lukasz.gawor@polsl.pl

ABSTRACT
Coal mining and post-metallurgic waste dumps have accompanied industrial landscape for ages. The oldest objects are connected with the beginning of mining exploitation and they may be considered as technical monuments. The genesis of waste dumps is linked with technology and a way of disposing of wastes on the ground surface. The oldest dumps are called `conical` and they are present in the Silesian landscape till now. Nowadays there are discussed projects of dismantling of the dumps, but the inhabitants, who live in the neighbourhood of dumps want to preserve these objects, which constitute a kind of symbols of old industrial activity. In spite of conical dumps, there are numerous tabular dumps in the Upper Silesia region, which have being built and the waste material has been compacted (what has prevented fire hazards on the dump surface). The most rare (and particularly the youngest) are landscape dumps, which, fully reclaimed, represent harmonic objects, suited well to the landscape and which are usually managed in the direction of park and recreation areas. The dumps, considering their shape and genesis may be connected though with particular periods of exploitation activity, which was also linked with the level of development of preparation technology. In the paper there are presented three generations of waste dumps, there are described chosen objects and there is showed a place of the dumps in the history, literature, culture and art.
TOURISTIC VALUES OF WATERFALLS IN ALBANIA

Ermiona Braholli¹ and Alma Zhilla²

¹Faculty of Education and Philology
“Fan S. Noli” University, Bulevardi Rilindasit 11, Korca, Korca Albania
ermiona.braholli@yahoo.com

²Economic Faculty
“Fan S. Noli” University, Bulevardi Rilindasit 11, Korca, Albania
almapulaha@hotmail.com

ABSTRACT
Albania is a place with huge hydrologic assets, such as: seas, rivers, lakes, springs, waterfalls etc. They offer special natural views, in what have made them, in late years, tourist attractions. Adventure tourists, ecotourists and geotourists are more and more preferring waterfalls. They are the newest tourists’ attractions in our country. Some of them are part of the areas protected and have the status of hydro monuments, based on IUCN. The way the water flows, the height of the flow, the form of the watershed of the waterfall are their attractive elements. The combination with the colour, form of the cliff, colour of the soil and type of vegetation make the view more attractive. Journeys toward waterfalls are part of the ecotourism and make the tourist attraction even more diverse. Waterfalls are found in all the territory of Albania. They are usually found above the 500m water sea level, and in 100km distance from main urban areas in our country. The distance, difficulty of the terrain and the lack of appropriate infrastructure makes the selection of the kind of tourist. The study will present Albanian waterfalls, their characteristics, distribution and their touristic values.
KARST GEOHERITAGE AND GEOTOURISM POTENTIAL IN THE PEK RIVER LOWER BASIN (EASTERN SERBIA)

Nemanja Tomić, Aleksandar Antić and Tijana Đorđević

Faculty of Sciences
University of Novi Sad, Trg Dositeja Obradovića 3, 21000 Novi Sad, Serbia
airtomic@gmail.com

ABSTRACT
Karst areas, as areas with attractive geological and geomorphological features that represent karst processes, are an important and integral part of geoheritage. They possess huge tourism potential and can be used for the development of geotourism. Typical karst features such as caves, springs and karst pits are widely present throughout entire Eastern Serbia. Besides the fact that this territory has plenty of water resources (rivers, streams, springs), it also has very attractive karst features which possess excellent potential for geotourism development. The Pek River basin, located in Eastern Serbia, is a highly dominant karst terrain with numerous geological and geomorphological features, especially caves. However, the geotourism potential of these geosites still remains fully unrevealed. In this paper, we analyzed several karst geosites with significant geotourism potential. These geosites include Ceremošnja Cave, Ravništarka Cave, Rajkova Cave, Dubočka Cave, Ševička Cave, Zviška Spring, Šumeća Spring, Valja Prerast (a natural stone bridge) and Beli Izvorac (a travertine waterfall). The analyzed geosites represent significant karst geoheritage formations and as such they can be the backbone of future geotourism development in this area. The aim of this paper is to emphasize the geotourism potential of the geosites in the Pek River lower basin and to determine the current state and geotourism potential of these geosites by applying the modified geosite assessment model (M-GAM). The results indicate that further speleotourism development should primarily be focused towards Rajkova Cave which has the highest main values. The results also emphasize the importance of additional (tourist) values which are currently at a low level among all analyzed geosites. This especially refers to tour guide service, interpretive panels and promotional activities which proved to be key elements at these types of destinations.
THE MANAGEMENT OF HUMAN RESOURCES IN HEALTH TOURISM. CASE STUDY: A THERMAL WATER DESTINATION

Eleina Qirici\textsuperscript{1} and Edlira Menkshi\textsuperscript{2}

\textsuperscript{1}Economic Faculty
“Fan S. Noli” University, Bulevardi Rilindasit 11, Korca, Korca Albania
qirici.elena@yahoo.com

\textsuperscript{2}Faculty of Education and Philology
“Fan S. Noli” University, Bulevardi Rilindasit 11, Korca, Korca Albania
eda_ndreko@yahoo.com

ABSTRACT
Tourism development remains a priority of the economy in developing countries. In Albania, tourism development is seen in many dimensions, including the development of health tourism, although it is in its early stages. Albania is well known for its thermal and mineral resources, which are very important attractions for the development of health tourism. But these thermal destinations are more oriented towards healing diseases and less to tourism. The development of health tourism today requires human resource management as the key to the success of such tourism businesses. The aim of this paper is to present a clear overview of the opportunities of the health tourism development in Albania in thermal destinations. In order to identify the main problems that these tourist business are being faced, we conducted a survey that consisted on questionnaires distributed to managers of thermal business; employees; and tourists (clients). Based on the study of literature are formulated questions about the performance evaluation of human resources in such business. This study also addresses to a greater extent different steps that should be followed in order to improve the hospitality of tourists and to achieved the tourist orientation of thermal destinations. The analysis shows the ability of development of health tourism through the improvement of management of human resources.
SPELEO TOURISM IN SLOVAK CAVES ENROLLED IN UNESCO WORLD NATURAL HERITAGE

Vladimír Čech and Miroslav Kudla

Faculty of Humanities and Natural Sciences, University of Prešov in Prešov, Ul. 17. novembra 15, 080 01 Prešov, Slovakia
cech@unipo.sk

ABSTRACT
Slovak caves as a part of the List of Unesco World Heritage represent rare and unique geosystems. Six of them are open for public: Dobšinská Ice Cave, Domica, Gombasecká Cave, Jasovská Cave, Ochtinská aragonite Cave and Krásnohorská Cave. The paper deals with various aspects of geotourism (speleotourism) in these caves. It analyzes their visiting, access to them, compares their outdoor and indoor equipment, deals with the analysis of other objects of geotourism in their vicinity. Based on a public opinion poll among the visitors of the cave, we evaluate the perception of the different attributes of these caves. On the basis of the results, we evaluate the negative and positive aspects of individual caves and look for possibilities of further development of these sites in terms of speleotourism.
REVITALIZATION OF DEGRADED GREEN AREAS IN AN OPPORTUNITY TO IMPROVE ACTIVITIES OF CITIZENS, A CASE STUDY OF DOWNTOWN ŁÓDŹ CITY, POLAND

Andrzej Długoński¹, Beata Fortuna-Antoszkiewicz², Jan Łukaszkiewicz³ and Piotr Wiśniewski

¹Faculty of Biology and Environmental Sciences
Cardinal Stefan Wyszynski University in Warsaw, Dewajtis 5, 01-815 Warsaw, Poland
aa.dlugonski@uksw.edu.pl

²Faculty of Horticulture, Biotechnology and Landscape Architecture
Warsaw University of Life Sciences, Nowoursynowska 166, 02-787 Warsaw, Poland
bbeata_fortuna@sggw.pl, cjan_lukaszkiewicz@sggw.pl

ABSTRACT
Degraded green areas, located in the downtown of Łódź - a 19th century post-industrial city (case study) in central Poland, are mainly recreational parks (historical parks and factory palaces) and ornamental pocket parks. Recently (ie from 2015) most of them, destroyed and neglected, are beginning to gain a new glamour by revitalizing the city center. The studied green areas (Zródliska I Park, Reymont Park, Sienkiewicz Park, and Poniatowski Park) were included in the Commune Revitalization Program Lodz 2026+, which was prepared on the basis of the act on revitalization (October 9, 2015). This act treats revitalization not only as an urban but also a social process. Hence, it is assumed that revitalization of green areas may improve the recreation and health of the city residents.
GEOTOUR 2018
Book of Abstracts

Publisher: Technical University of Košice
Editor: Lubomír Štrba
First Edition
Number of pages: 62
Number of copies: 100
ISBN 978-80-553-2763-1