

**CRACOW LANDSCAPE CONFERENCE 2016**

**Landscape as impulsion for culture: research,  
perception & protection**

**June 29 - July 1, 2016**

**Cracow, Poland**



# **ABSTRACTS OF PAPERS & POSTERS**

**Institute of Archaeology, Faculty of History  
Jagiellonian University in Kraków**

**Institute of Landscape Architecture  
Faculty of Architecture  
Cracow University of Technology**

**KRAKÓW 2016**



**CRACOW LANDSCAPE CONFERENCE 2016**  
**Landscape as impulsion for culture: research,  
perception & protection**

**Scientific Committee:**

Paweł Valde-Nowak (Jagiellonian University in Kraków, Poland)  
Matthew H. Johnson (Northwestern University, Evanston, USA)  
Mónica Luengo (ICOMOS – ISCCCL, Spain)  
Piotr Krasny (Jagiellonian University in Kraków, Poland)  
Teresa Rodzińska-Chorąży (Jagiellonian University in Kraków, Poland)  
Guido Vannini (University of Florence, Italy)  
Agata Zachariasz (Cracow University of Technology, Poland)  
Stanisław Kołodziejcki (National Heritage Board of Poland)  
Piotr Patoczka (University of Rzeszów, Poland)  
Katarzyna Pałubska (PKN ICOMOS – KOHIKK)

**Conference organized by:**

Institute of Archaeology, Jagiellonian University  
Institute of Landscape Architecture, Cracow University of Technology

**Organisers:**

Beata Kwiatkowska-Kopka  
Piotr Kołodziejczyk

**Honorary Patrons:**

The Ministry of Culture and National Heritage, Republic of Poland  
The Ministry of Environment, Republic of Poland  
The National Fund for Environmental Protection and Water Management, Republic of Poland  
ARCHAEOLOGICA Foundation  
The Malopolska Region, Republic of Poland  
ICOMOS - ICAHM  
IFLA - ICOMOS



JAGIELLONIAN UNIVERSITY  
IN KRAKOW



Politechnika Krakowska  
im. Tadeusza Kościuszki

# ABSTRACTS OF PAPERS AND POSTERS

## SESSION 1 - DEFINITIONS, THEORY & CONTEMPORARY PERCEPTION OF LANDSCAPE

**Agnieszka Szczepańska**

### ***Assessment of Landscape and Landscape in Assessment***

Landscape assets constitute an element of environmental resources. Environmental elements may be subject to evaluation and assessment, whereas environmental economics has worked out a number of assessment methods. One of the applied methods is the hedonic pricing method. This belongs to a group of indirect methods, where an assumption was adopted that there is a relation between the demand for a market good and the supply of an environmental good. Non-market features are assessed on the basis of concluded transactions; with respect to goods of varying degrees of intensification of the environmental feature – the purchasers discover their preferences via decisions on the purchase of a market good. Landscape is an example of an environmental resource, which is an element shaping real estate prices (market good). In the case of these two elements, we are dealing with feedback. Constituent elements of real estate make up landscape, whereas landscape shapes the value of real estate. Therefore, landscape assets may be taken into account during assessment of real estate as a factor influencing its value. In particular, this refers to real estate with residential and recreational functions. Purchasers of real estate show their preferences related to landscape assets via transactions on the real estate market. In this manner, it is possible to determine which part of the variability of the real estate value is made up by the environmental good, i.e. landscape. The article presents analyses of determining the market value of real estate with residential functions, taking into account landscape assets, constituting one of the attributes. Plots with single-family houses, located in the suburban areas of Olsztyn and characterised by wealthy landscape values (water, forests, diversified lie of the land) were subjected to analysis.

**Kees Lokman**

### ***Progressive Pragmatism: The Next Generation of Dutch Landscape Architecture***

In the last several decades, the Netherlands has become an important laboratory for exploring new ideas and spatial possibilities in the realms of architecture, landscape architecture, urbanism and planning. While a number of writers have offered critical analysis and insights on innovative approaches of contemporary Dutch architecture and urbanism (Lootsma 2000, Ibelings 2000 & 2002, Betsky 2004, Sabini 2006), the experimental attitude and intervention-based strategies of a new generation of Dutch landscape architects have remained relatively underexplored. As such, this paper will examine the underlying philosophy and design strategies in contemporary Dutch landscape architecture. Within this context, I will explain how the economic recession of 2009 as well as other pressing social, environmental and political conditions has produced a particular design mentality that combines strategic interventions and pragmatic-oriented solutions with progressive approaches that embrace dynamism, flexibility and indeterminacy.

Dutch design pragmatism is closely tied to the “polder model”. This model is based on cooperation and solidarity while providing a productive space for expressing (political) differences. The model directly developed out of the complex relationship the Dutch have with water. Ever since the Middle Ages, different communities in the same polder have been forced to cooperate and collaborate to maintain the dykes and pumping stations in order to prevent flooding, setting aside differences and

conflicts. At the same time, current challenges related to space limitations, ongoing urbanization, food and energy security, climate change, and economic uncertainty, have informed progressive and innovative design approaches characterized by experimentation, social engagement, resourcefulness, and cross-pollination of ideas. This has produced a design culture that fully embraces innovation, new aesthetics, metabolic relationships, and hybrid social-ecological environments.

In the process of its elaboration, this paper will examine a number of contemporary projects. These are landscapes that not only actively engage natural processes such as nutrient cycling, sediment flows, and atmospheric phenomena but also produce food and energy, and initiate water purification, carbon sequestering, and phytoremediation. Moreover, these case studies explore how site and context are used as a generator to accommodate new spatial, material, ecological, and cultural processes. Ultimately, the paper aims to distil a number of key characteristics and approaches of “progressive pragmatism” that can inform and redefined the discipline of landscape architecture globally.

**Carlo Guareschi**

### **Experiencing Landscapes**

In the history of Continental Philosophy, it is possible to find two main interpretation of the concept of landscape: landscape as a unity produced by the spiritual activity of a subject (Simmel 1913), and Landscape as a product of our detachment from nature (Ritter 1963). Despite these dichotomical interpretations of the concept, it is plausible to re-frame the question of landscape in a non-dualistic perspective.

The aim of my presentation is to show how phenomenology can contribute to re-interpret landscape starting from our bodily experience. Starting from Merleau-Ponty's phenomenology of bodily intentionality (Merleau-Ponty 1945) and from his conception of perception and space as expression (Merleau-Ponty 1945), it is possible to provide an interpretation of landscape in which natural and cultural dimensions are integrated. Merleau-Ponty's concept of bodily intentionality and his stress on the spatial dimension of the body also provides an interesting paradigm to underline the spatial genesis of landscapes. Indeed, concepts such as the flesh and the chiasm allow a genetic interpretation of subject, nature and landscape in which the spatial location assumes a central role.

The first part of the paper will be focused on the discussion of crucial passages in Merleau-Ponty's Phenomenology of Perception in which he considers the centrality of bodily schema and the constitution of the expressive space. In the second part, I underline the relevance of a genetic analysis of natural space in order to stress the relational constitution of landscapes. The purpose of this work is to provide an interpretation of landscape in which its expressive properties have their autonomy but, at the same time, are seen in their genetic constitution with bodily experience. A phenomenological approach could be useful to highlight the complex analysis necessary to the understanding of the multilayered structure of landscapes.

**Dominik Kaim, Marcin Szwagrzyk, Jacek Kozak, Bronwyn Price, Katarzyna Ostapowicz, Natalia Kolecka, Agnieszka Wypych, Dirk Schmatz, Urs Gimmi**

### ***Future landscape of the Polish Carpathians – land use scenarios till 2050***

Land use change is one of the major contributors to global change and has substantial impact on the landscape. Clear understanding of land use changes in future is crucial in terms of effective landscape management and spatial planning. The aim of this paper is to assess the future land use change in the Polish Carpathians till 2050. Projections are based on three scenarios reflecting: 1) the land use change trend extrapolation (since 1970s), 2) biodiversity and landscape conservation oriented sce-

nario, 3) liberalisation and limited role of spatial policy scenario. Future land use maps are derived within Dyna CLUE framework, including biophysical (e.g. climate projections, slope, elevation) and socioeconomic (e.g. population projections, distance to roads, average farm size) variables. All the scenarios are calculated for the whole territory of the Polish Carpathians (20 000 km<sup>2</sup>), with 100m spatial resolution. The results are verified against LiDAR data, indicating first symptoms of the secondary forest succession, which are most likely to become forest areas in the future.

**Natalia Kolecka, Jacek Kozak, Dominik Kaim, Monika Dobosz**

***Forest succession and land abandonment in the Polish Carpathians***

For more than 100 years, Europe has experienced an increase in forest cover due to afforestation and forest expansion on abandoned agricultural land. Forest succession has played a significant role in land cover changes in Europe over the past several decades, particularly in marginal mountain areas, including the Polish Carpathians. The extent of the phenomena is not known, however, as the Polish agricultural census data are not consistent with the ground conditions because they are not updated. In this study, the process of secondary forest succession over the entire region of the Polish Carpathians has been the subject of scientific research. In each commune of the study area one tile of approximately 4 km<sup>2</sup> was sampled, and forest succession on abandoned agricultural land was mapped using the vegetation pattern derived from LiDAR data supported by national topographic vector data. In total 14.3% ± 8.5% of the agricultural land in the Polish Carpathians may currently be experiencing secondary forest succession. For forest succession distribution several topographic and socio-economic factors were found statistically significant, namely: east-west location of the tile, commune forest cover percentage, ratio of agricultural land area to forest area within the tile, distance and difference of altitude between the tile and the commune center, length of the internal forest boundary in the tile, mean slope of the agricultural land in the tile, commune area, average area of a farm in the commune, number of farms per 1000 inhabitants, commune income per capita.

**Katarzyna Ostapowicz, Bronwyn Price, Janine Bolliger, Dominik Kaim, Marcin Szwagrzyk, Agnieszka Wypych, Zbigniew Ustrnul, Urs Gimmi**

***Future landscape in mountain regions: the case study from the Polish Carpathians***

The future change of land use has important implications for future landscape, biodiversity, carbon sequestration, or tourism development. E.g. over the past five decades a shift from decreasing to expanding forest area in Europe has been observed. This shift is most pronounced in marginal areas, such as mountains where landscape has been change significantly. Therefore, the aim of this study is to assess future land use change in one of European mountain region; the Polish Carpathians (whole region, about 20 000 km<sup>2</sup>).

Here, we model the magnitude and location of future land use change between 2015 and 2060 using the Dyna-CLUE allocation framework. We define three scenarios of future land use change trajectories in the Carpathian Mountains: (1) biodiversity and landscape conservation oriented, (2) liberalisation with limited role of different policies like EU policies e.g. CAP or spatial planning, and (3) extrapolation of current land use change. A set of different variables is implemented to models; both biogeographical (e.g. climate change projections, slope, altitude) and socio-economic (e.g. population/demographic projection, distance to settlements and roads, farm size). Information on the importance of socio-economic, biogeographical and climate in the study region is determined from analysis of past land use change. Verification of modelling results is based on outcomes from land abandonment and secondary succession assessment with use of satellite optical data (Landsat im-

agery) and LiDAR data.

Based on modelling outcomes, spatial models and maps, implications of possible future land use change directions in the Carpathian Mountains on landscape change are discussed here since our understanding of land use changes in future is fundamental for effective landscape management and spatial planning.

### **Łucja Piekarska-Duraj**

#### ***A space told is a space tamed. "Landscape" as a civilising tool***

In my presentation I am going to argue that „landscape” is a narrative which gets formed and transmitted in response to specific needs and rules of civilisation. As such it may be seen as a part of cultural matrix supporting core civilisational values, for instance human dominance over nature or the value of culture itself. With the notion of Norbert Elias „civilising tool” I want to show how „landscape” strengthens the European idea of culture.

„Landscape” as opposed to „space” is an interpretive category whereas „space” is personally experienced and shaped. But when it comes to representation of spaces, as it happens in museums, spaces get summarised and retold in a way appropriate to exhibition narratives. I would like to present a case study of a museum exhibition where the Saami, half nomadic culture of Northern Europe, is staged and Saami space gets retold and thus semantically tamed with the use of means quite alien to its inhabitants. Landscape is in this context a social construct used for the interpretation and representation of wild space. The idea of emptiness and the civilising attitude towards space will be illustrated with museum exhibits drawn from both Stockholm and Jokkmokk (Sweden) based museums, both telling different stories of Saami and their land, Sapmi.

Finally I would like to demonstrate how „landscape” is present in museum exhibitions and how it shapes the exhibition narrative in general.

### **Matusz Salwa**

#### ***Philosophy of landscape – contemporary perspectives***

It is widely acknowledged that whenever landscapes are discussed by the humanities, they are understood as objective, i.e. as fragments of ‘outer’ reality, as well as subjective in the sense that at the same time they are interpreted, felt, reflected on etc. by people who perceive them in one way or another. This “twofoldness” of landscapes is clearly stated by the European Landscape Convention: “Landscape” means an area, as perceived by people (...). This particular characteristic is one of the topics discussed by contemporary philosophy of landscape (d’Angelo, 2006).

In the past few decades philosophy (aesthetics) has got more and more interested in this issue. As a result it developed a variety of different approaches which go far beyond the classical texts on the aesthetics of landscape written by G. Simmel (1913) and J. Ritter (1963).

There is the „picturesque” tradition (Berque, 1990; Roger, 1997) which treats landscape in terms of visual arts. There is „atmospheric” approach which links landscape to „the atmosphere” understood as a subjective-objective quality (Böhme, 1995), there is theory which links landscape to the concept of dwelling (Bonesio, 2002); there is the theory of landscape of engagement (Berleant, 2012) which treats landscape as a sphere of human sensual engagement, finally there is environmental aesthetics which can be called anti landscape theory as it criticizes the concept of landscape as such (Carlson, 2009).

The aim of the paper will be to present the approaches mentioned above as well as to try to define landscape in philosophical terms. In order to this one has to ask the following questions: what do we

describe whenever we describe a landscape? Is it the experienced world, or is it how we experience the world around us? These questions are not far from everyday considerations as they can be reduced to such questions as “why do we like (or not) a place?”, “how does a place influence us?”, “why is a place important to us?” etc.

My contention is that when answer such questions we describe what can be termed the “landscape experience” and whenever we happen to have this sort of experience, we experience the world around us aesthetically.

**Jinvo Nam**

***Understanding stakeholders and their perceptions of urban landscape management practices: dealing with parks in times of austerity***

Today, there is increasing recognition of the importance of urban green space for health and wellbeing. With a lot of supporting evidence on the benefits of urban green space, place-making has long taken centre stage in urban planning and design, where capital funding is spent on the shaping and making of high-profile places in towns and cities all over the world. However, funding and budgets to manage urban parks are under threat in the UK and subject to significant reductions. Furthermore, most of local authorities expect that funding and budget cut will continue over the next 10 years. On the other hand, these difficulties are being met through innovative practices which include naturalistic planting, income-generation and community food growing, among others. Such practices reflect a shift in responsibility for park management involving multiple stakeholders who share responsibility.

However, we know little about the perceptions of stakeholders being involved in urban parks in relation to this variety of landscape management practices. How acceptable and feasible are such innovative practices in urban parks? What effect will this have on users, other stakeholders and their propensity to spend time in urban parks? These interpretations mentioned above are supported by Place-keeping perspective encompassing dimensions of long-term management – maintenance, partnerships, governance, funding, policy and evaluation.

The aim of this research is to understand stakeholders’ perceptions of current and future landscape management scenarios in six urban parks in Sheffield to explore their acceptability and feasibility from the perspective of different stakeholders. This research explores different landscape management practices by examining stakeholders’ perceptions via interviews (local authority stakeholders, Friends/ community groups, consultants and academics), focus group (park officers and managers) and visualisation-based questionnaires (local residents). The sites are selected according to indicators of deprivation, urban park type and size, involvement of friends/ community groups, and geographical spread across the city. This paper will call on initial findings of the ongoing research to shed light on the acceptability and feasibility of different landscape management practices in urban parks. This will help propose future strategies for urban landscape management which is based on an in-depth understanding of stakeholders’ perceptions.

**Grigorii Isachenko**

***Man and landscape: three models of interaction and cognition***

The diversity of human– landscape interactions can be reduced to three basic models. Historically the first mode of the relationship between man and landscape was development of landscape which might be extensive (hunting etc) or intensive (husbandry etc). Development can be viewed as the cognition of landscape in the broadest sense - as man, initially by trial and error, explored the situa-

bility of different types of landscapes for different uses.

The development of the territory (especially intensive) most closely “ties” people to landscape. On the other hand, the development leads to the most profound changes in landscape, including changes that are irreversible and comparable with the results of natural processes. We can say that any development forms a cultural landscape on the basis of natural landscape. The maximal degree of forming of cultural landscape, reached in some regions, is characterized by discreteness of landscape structure and sharp boundaries between areas with different functional use (industrial and residential zones, agricultural land, nature reserves, etc.). Vice versa, in countries with “excess” square and unfavorable nature conditions remain extensive areas with the minimum degree of human influence. The second way of the relationship between man and landscape is scientific study, which is characterized by deeper penetration into the essence of landscape structure and processes. In the pre-industrial era development of any territory usually preceded its research, but the implementation of most of contemporary development projects accompanied by preliminary scientific investigations. The third model of the man–landscape interaction is perception of landscape. In human history imaginative perception of the nature was associated with sacralization of certain landscapes and the development of art. However, the mass distribution of this way of interaction with landscapes – I mean recreation and tourism – is connected with global industrialization and urbanization processes. “Collecting of images” nothing changes in landscapes by itself, but its realization requires the creation of a developed infrastructure and planning of landscape, where the relevant functional areas should be provided. In societies that have entered the post-industrial stage, the role of “imaginative communication” with the landscapes will increase.

The above considered three basic models of the man-landscape relationship, complementing each other, correspond to the three sides of the landscape cognition - scientific, practical and imaginative. The conclusions of author are based on key areas studies in the North and North-West of the European Russia.

**Vinayak Kale**

***Remote Sensing and GIS in the Geomorphometric analysis of Kadwa river Basin, Nashik District, Maharashtra, India***

Geomorphometric analysis of Kadwa river Basin is done through the analysis and evaluation of various drainage and topographic parameters. The analysis of various linear and areal aspects have revealed that the topographical configuration and geomorphic setting of the basin has assumed a dendritic to sub-dendritic drainage pattern with 6th order drainage. The present paper is to find out geomorphometry of Kadwa basin of Nashik District. The river Kadwa traversed for a distance of 93.14 Km. and basin covers partially two tahasils of Nashik District. With the help of Survey of India toposheets i.e. 46H/10, 46H/11, 46H/15, 46H/16, 46L/4 and satellite thematic maps like base map, drainage map, drainage density, stream frequency have been prepared using ArcGIS 10.1 software. In the basin Geometry form factor, shape factor, elongation ratio, texture ratio, drainage texture, compactness coefficient, drainage density, relief ratio has been calculated.

The Geomorphometric parameters have been derived for the entire Kadwa river basin.

Kadwa river basin has sixth stream order and less elongated in shape. Drainage density of the study area is moderate to high.

Keywords-drainage density, form factor, shape factor, elongation ratio, texture ratio, drainage texture, compactness coefficient

**Margherita Azzari**

***A Landscape Hazard Atlas***

The paper presents the results of a project which aim is to carry out a survey of existing data to carry out a survey of existing data regarding the evolutionary dynamics acting on the territory, also through the historical analysis of its transformation, in order to achieve a more complete integration of knowledge, so as to set up an updated priority calendar for landscape protection and planning.

The problems related to the development of an effective system of monitoring and evaluation of changes in use are linked, firstly, to the definition of an appropriate set of indicators.

The use of GIS is useful in this context, as it allows handling multi-type and historical data as well as highlighting the transformation processes.

In fact, a diachronic approach is fundamental in order to assess intensity and characteristics of the conversion process.

This type of research allows for knowledge of the area that takes into account the dynamics that affected it over time and its historical values – ingrained in its present landscape form – for the activation of local development policies which are truly sustainable and durable.

It will thus be possible to identify areas at risk of harmful land use and urban sprawl – a process that in recent years has been more and more often at the center of planning and land protection policies, especially given its growth in the last few decades in our country.

It will also be possible to identify eventual signs of contraction in areas suitable for agricultural production, loss of biodiversity and landscape quality due to an increase in agricultural production of a more industrial type at the expense of traditional or less intensive crops.

The analysis will be carried out at various scales in order to have the necessary tools to evaluate the national framework, but also to consider the possibility of reusing abandoned industrial areas inside the consolidated urban tissue, expression of obsolete choice of location, that could and should be retrieved to help mitigate the use of new soil

**Margherita Azzari**

***Cultural identity landscape***

The paper presents the results of a project which aim is to develop a landscape analysis methodology for the analysis of cultural landscapes – whose main values are the expressions of identity of local communities in order to define the necessary measures for their protection and for the enhancement of landscape planning activities. It is difficult to delimitate a cultural landscape unless it is taken as relevant for this analysis of the signs that the communities over time have impressed in the territory, the practices of reuse adopted, the new functions assigned in reinterpreting those signs, the evaluation of awareness of these values and dynamics by local communities.

The implementation of the project was carried out through the use of a flexible methodology, which has combined quantitative and qualitative analysis. We have used a geo-historical approach, various modeling and displaying tools, and we have made an extensive use of GIS in the process of creation of the knowledge base and in the production of content.

In particular the software used for the photorealistic 3D rendering (Virtual Geographic Environments) have been the main tools to communicate and disseminate the consequent results, thanks to their communicative efficacy. At the base of the virtual reconstruction is the census of the historical, cultural and environmental wealth (rural buildings, villas, religious buildings, roads, bridges, historic place names) and the research about historical cartography and archive documents.

These tools have been added to those typical of the qualitative analysis for the evaluation of the perception of the transformation processes by local communities and of the persistence of the historical memory of the place.

**Luciene Cristina Risso**

***The concept of landscape in Geography: contributions for heritage debate***

Abstract: The concept of landscape originated conceptually during the 19th century in geography. Nowadays taken by various fields of knowledge, it has different meanings, however, the way I want to track in this article is in order to contribute to the heritage discussion of Cultural Humanistic Geographic, which has the proposal for understanding and evaluating the subjectivity, in other words, the experiences, the perceptions and also material and immaterial values associated with landscapes.

The boundary of this theoretical current is linked to the publication of Tuan in 1976 from Humanist Geography article. This geographic current contributed considerably to the theoretical and methodological debate of landscape as the heritage in the sense to increase in value the landscapes, by the experiences and both individual and collective perceptions, as well as the landscape praxis with the participation of people in their management process.

Moreover, it can be applied in studies of landscapes with live cultures or "traditional", which by the way are poorly represented on the UNESCO World Heritage List.

In the case of Brazil, the indigenous and traditional cultures are underrepresented and urgently require recognition of these cultural landscapes, with the formulation of public policies aimed at local development and the enhancement of memory.

**Paulina Tobiasz-Lis**

***The image of the countryside. Theoretical and methodological approach***

The paper discusses the problem of social perception and images of the countryside, which seems to be marginalized in contemporary geographical research. The scientific interest in the spatial experience and perceptions is focused mainly on urban areas. Therefore, the title of the article intentionally refers to the work by Kevin Lynch.

In the first place, theoretical basis of the research on rural imagery and their associations with "the cultural turn" in social sciences and a multi-dimensional understanding of "rural" and "rurality", will be introduced. Then two different methods: (1) the "classical" analysis and classification of freehand sketches and (2) "innovative" photographic essays which can be used in studies of the subjective image of the countryside will be presented. In the last part, the paper will discuss examples of sketches and photographic essays of selected villages in Poland showing both designative and appraisive aspects of rural imagery and their cognitive and practical goals in studies of relations between people and their life space.

Presented research is a part of National Science Centre funding scheme, "Spatial representations of rural settlements in Poland" conducted by the Department of Regional and Human Geography, University of Lodz since the spring of 2015.

**Gülçinay Başdoğan, Arzu Çiğ**

***Study on artificial water features in line with design principles within the context of spatial perception and environmental psychology: Yıldız Technical University - Yıldız campus example***

Through historical process, water features in many civilizations have been effective along with satisfying different needs and actions, in increasing the quality of the places by primarily visually and secondly aurally giving a meaning in line with the symbolic values it hosts and perceptually has. Water features displaying variety in terms of functionality and aesthetics in different eras, play an important role naturally and artificially in interaction of cultural-historical-social structure and in urban identity in urban areas. Under the concept of design principles, water features trigger a psychological perception by giving meaning and movement to the place.

In this study, the reasons of use, forms, environmental impacts of artificial water features and design principles within spatial perception and environmental psychology theories have been analysed; and the comfort of the place, where it is located, and impact in utilization density in accordance with the visual, aural and psychological affects of the water features on users have been assessed within the framework of existing water features in Yıldız Technical University Yıldız Campus.

**Gülçinay Başdoğan**

***Building modernization in republican era planning in Turkey: example of Ankara and İstanbul***

Arise of the republican regime, creating a new nation state in Turkey, led the modernization project to start to be implemented directly by the state within the borders of the country. Modernizing policy of the republic comprised transport and landscape works in large scale planning on the improvement of rural areas; and state centred modernist urban planning implementation in urban scale.

Modernization project, which aimed to be operated efficiently within this framework, was implemented with creation and transformation of public areas and urban open spaces within the scope of urban planning. A new urban image tried to be established with Kemalist ideas based on the belief that the urban areas play an important role in creation of a new state order.

Within this context, this study aims to establish the understanding of planning of the era through assessing the Ankara Lorcher-Jansen Plan and Güven Park-Güven Monument from Ankara and İstanbul Prost Plan from İstanbul, among the urban planning examples with an efficient role in Republican Era, within the framework of the conducted modernization projects.

**Fatih Çiğ, Murat Erman, Ramazan Çakmakç**

***The role of beneficial microorganisms in the protection of plants growing in natural landscape areas***

The protection of natural landscape environments and the provision of their sustainability are important subjects. It is necessary that the vegetation covers that are grown in the natural landscape environments or that naturally exist sustain their vitalities in the same liveliness and health. The chemical practices carried out on the vegetable materials, especially on monumental trees, endemic plants and on the protection of the plants that are in the danger of extinction bring along many inconveniences in respect of plants and environment. For this reason, the utilization of the beneficial microorganisms such as the mycorrhiza that have the potential of naturally protecting the plants, and the bacteria, cyanobacteria, protozoans and algae that incite the growth of plants gain vital importance. The beneficial microorganisms generate a defensive mechanism on plants against many biotic and abiotic stress factors including excessive temperatures, high degree light, floods, the existence of organic pollutants and toxic metals, radiation, injuries, harms of insects, high degree salinity,

viruses, bacteria and fungi, and against various alimentation problems; and contribute to the plants to maintain their lives healthfully.

In this study, it is mentioned of the contributions of beneficial microorganisms to the plants growing especially in natural landscape environments; of the biotic and abiotic stress factors that the plants are exposed to due to adverse environmental conditions, and the defensive mechanisms that they have developed against these factors; and consequently, the roles that they play in the name of the protection of natural landscape environments and their sustainability.

**Krishna Prasad Acharya**

***Landscape Conservation Initiatives in Nepal***

Nepal, relatively small in geographical area, is one of the richest countries in the world in terms of its biodiversity and culture. In the recent years, Nepal has been proactively adopting the emerging concept of landscape approach evolving through protected area management, buffer zone concept to landscape level conservation and developmental practices. The multidisciplinary landscape approach started in Tarai Arc Landscape since 2004 has evolved and made progressive learning through Sacred Himalayan Landscape, Chitwan Annapurna Landscape including transboundary initiatives in Kailash Sacred Landscape Conservation and Development Initiative and Kangchenjunga Landscape Conservation and Development Initiative. These initiatives have created a unique opportunity for Nepal to showcase and learn from socio-ecological, cultural and environmental transformations and move closer to understanding the distance that humanity have covered for the thousands years of its development.

This presentation is based on the development, planning and implementation experiences of landscape approach in Nepal. It presents evolution of conservation landscapes and explains scaling up landscape level conservation initiative. It highlights specific learning and success landscape planning components, how landscape approaches evolved over the time, what has been achieved and where are the gaps.

Key achievements includes increase in populations of mega-wildlife species, restoration of fragmented habitats, strengthening of protected areas network, expansion of biodiversity conservation outside protected areas, increase in community awareness, creation of conservation activists and volunteers, ownerships and diversification of livelihoods options including employment and income, strengthening of community mobilization/institutions increased in conservation investment and enhancement of trans-boundary cooperation. The assessment has identified gaps in areas of institutionalization, collaboration and partnerships, and found that not all ecosystems received equal priority.

The paper concludes with key recommendations for developing strategy and action plan for future. The elements for consideration include ecological integrity, conservation friendly economic development, climatic risk reduction, resilience building, partnership and institutional strengthening.

**Nataliia Korzhunova**

***An approach to the ecological and economic assessment of landscapes***

The landscapes have an important role in the cultural, economic and social spheres. Today, the increasing of anthropogenic load, irrational placement of man-made objects, easing the environmental culture of the population there is degradation of natural ecosystems. The lack of market prices for ecosystem services and biodiversity lead to the fact that the benefits that are derived from them are usually not taken into account or are underestimated. This in turn leads to the actions which are not

only detrimental to biological diversity, but also affect the well-being of the people. Understatement price of natural goods and ecosystem services or even their zero evaluation lead to a loss of competitiveness in the fight for the right to existence and preservation. Hence the ecological and economic assessment of the landscape is urgent.

Ecological and economic assessment of landscapes is a challenge the solution of which requires accurate selection and careful use of valuation techniques depending on the conditions and needs in this situation. Some methods of assessment cannot reveal the dynamics of the natural sites development, environmental condition and relation between the natural component and man-made complex. Before making such an assessment it is necessary to examine in detail the scope and nature of the use of the landscape, identify the ecosystem services it provides, to identify the range of environmental benefits consumers. All the resources are not important equally. Environmental resources in some landscaping and social contexts will have a relatively high value, while in other landscapes same resources have a relatively low value. Depending on the type of value (use-or uncommon, direct or indirect) the appropriate methods of economic evaluation are used.

The most comprehensive approach is based on the total economic value. It takes into account both the direct functions of the nature and the assimilatory functions of natural services.

It is necessary to form new landscapes assessment guidelines. It is consider the estimation problem not only from the perspective of the socio-productive relations, but of the system approach. Under these conditions, evaluation is focused not only and not so much on the market value or on the additional cost of obtaining future benefits from resource use, but on the value of the resource as a unique unit of the natural system. The main purpose of assessment should be disclosure of strategic benefits from the conservation of ecosystems.

## **SESSION 2 – LANDSCAPE IN THE PAST & FORGOTTEN LANDSCAPES**

**Thomas Knopf**

### ***Landscape, Cityscape, Skyscape, Anyscape? Remarks on Landscape Archaeology***

It seems to be trendy in English-speaking archaeology to create new words based on 'landscape' by replacing the word 'land' with other terms according to the focus of research. But are there clear concepts behind the new labels? In German the word *Landschaft* does not lend itself to be modified into similar constructs. But combined terms like *Rituallandschaft* (ritual landscape), or *Depotlandschaft* (hoard or deposition landscape) are getting more and more common.

In general, the last decades have seen the rise of landscape-research in archaeology. From the fact that a number of clear definitions of landscape exist, one would logically expect rather clear concepts of what landscape-archaeology is all about. But it is quite obvious that a lot of landscape-related field-work is being practised and published without any explicit idea as far as the key concept 'landscape' is concerned. Nevertheless, here as well tacit definitions of landscape and environment are transported or, to put it differently, present by implication. Often landscape is considered simply as nature or natural conditions and is thus perceived as a kind of 'container', in which human actions take place. Natural-scientific work concerning environmental parameters going beyond single settlements as well as traditional archaeological fieldwork are currently sailing under the label of landscape archaeology.

With regard to the objectives of this kind of research, one major aim is certainly related to changes in the use of resources and related transformation of landscapes. Another aim is to get an idea con-

cerning the make-up of specific forms of landscapes as mirrored in the archaeological record. They are, for example, represented by burial mounds, hoards, and so forth. Unfortunately, however, although the terms 'landscape' and 'doing landscape archaeology' are evidently very common, clear-cut concepts and concomitant objectives are rare.

There is no doubt that landscape archaeology is fashionable. Indeed, one could even speak of a 'landscape turn' in archaeology. As we all know, in the humanities but also in the sciences fashionable developments have a kind of inbuilt capacity to generate funding. Landscape archaeology also often emphasizes the input and support of the sciences. However, it does not need to be stressed that the sciences are part and parcel of archaeology since quite some time. This is certainly true for all decent landscape archaeology as well. Nevertheless, thinking about landscape as a concept of socially constructed space, as nature used and transformed as well as visualized by people still remains first and foremost the field of the humanities. No scientist, say, an archaeobotanist, is ever being asked to think up a social approach to landscape. What he can deliver in contrast to the archaeologist, however, are hard archaeobotanical data, which are necessary to get an idea of the ancient landscape and man's role in it.

While the sciences and, by implication, those which are devoting their efforts and resources to times past, can largely draw on standard procedures of generating and evaluating their data, archaeology is in a less comfortable position. As part of the humanities or, more specifically, of culture history, it depends on observing of how man is and was perceiving and interacting with and within his natural universe in times present and past. Unfortunately, there is no simple way of getting at information like that. I argue for a contextual approach which on the one hand aims at traditionally merging analyses of features and finds with scientific results. On the other hand, however, this approach needs historically based and contemporaneous case studies which are tailored in terms of our archaeological research. As a comparative reservoir these case studies are supposed to form the analogical base for the archaeological record in its totality.

As far as sociocultural explanations of the use, perception and social or religious construction of landscapes is concerned, I will try to present some examples in my talk which might have the potential to further our understanding.

**Marcin Maciejewski**

***Metal - Border - Ritual. Hoards in Late Bronze Age and Early Iron Age Landscape***

Hoards make one of the most mysterious categories of archaeological finds known from the bronze age and the early iron age. Doubts concerning their function should encourage researchers to use as wide information range as possible for understanding this phenomenon. However, there are still few scientific works considering their relationships with the settlement network or the cultural landscape. The presented text focuses on grasping regularities in location of spots of collecting articles made of bronze and iron, based on the results of studies over metal deposits from the late (Lusatian) bronze age and the early iron age from the South Baltic Coastland and Lake Districts.

**Piotr Wroniecki**

***Hidden cultural landscapes of the Western Lesser Poland Upland***

The basis of the project is an attempt to study the determinants of structures and changes of prehistoric settlements. The aim of the project is to study the cultural landscape of prehistoric settlement communities of the Western Lesser Poland Loess Uplands based on the acquisition of new data collected as a result of multifaceted use non-destructive methods of archaeological prospection. These

activities include remote sensing, geophysics, analytical surface surveys, in relation to the existing data along with analysis of archival data and those discovered during the project's implementation using spatial information systems (GIS) and geostatistics. An important aspect is to assess research possibilities of the methods in order to develop procedures and methodology of integrated cultural landscape research.

The use of the proposed methods allows for the analysis and interpretation of various aspects of the prehistoric communities in a regional dimension, beyond the interpretation from the "micro" perspective of the single archaeological site, which is limited to viewing past settlement as a series of points in space unconnected with each other. The challenge of a diagnosis of such an extensive area and the determining of past settlement patterns might only be possible via the use of a variety of modern research methods (remote sensing, geophysical prospection, geospatial, analytical surface artefact collection), which still have not sufficiently been established in Poland. Their use can be crucial in overcoming a certain visible analytical-interpretational stagnation in national cultural landscape and settlement research. Extensive use of non-destructive methods of prospecting is also important from the perspective of contemporary doctrines relating to the protection of cultural heritage as it allows the procuring of new archaeological data without the unfortunate side effect of destroying those sources at the same time.

The proposed study area spatially encompasses a compact and distinctive stretch of Southern Poland loess zones, located approximately in the centre of the Lesser Poland Upland. The central part of the study area includes the Nida River Valley and reaches the Miechów Upland and Proszowice Plateau. These mesoregions are closed from the South by the Vistula Valley, and from the west by Dłubnia River Valley, encompassing the surface of approx. 2500 km square.

This is an area of rich and diverse settlements from different sections of prehistory, as well as possessing a long history of archaeological research, being relatively well recognized and being the subject of many scientific works including settlement studies. Through the selection of such a location of the research area, it will be possible to estimate the cognitive capabilities of the proposed prospecting methods, as well as the enrichment of the existing knowledge through the discovery of new settlement structures, whose identification so far was not possible.

### **Archana Shukla**

#### ***Urbanisation of Doon Valley: A Case Study of Disappearing Canals***

The valley of Doon is located in the lap of the great Himalayas in the North and the Shiwaliks in the South, having an area of 1875 square kms. Dehradun, the most prominent city located in this valley, was originally established in 1675 by a Sikh Guru named Guru Ram Rai. Eventually, the British occupied the valley in 1815.

The popularity of the valley kept increasing with the passage of time. George Everest, the surveyor in whose honour the highest mountain above the ground is named, resided in the valley for several years. For it was here that the measurement of the mainland of India and the arc of the earth was calculated in 1840s. When the British fought the Afghan wars in 1840 and 1880, the Amirs were given shelter in Doon. Moreover, it was the Afghans who introduced the cultivation of the world famous Basmati rice in the valley. Even the Dalai Lama has spent the first year of his exile in Mussoorie, a hill station near Dehradun. Consequently, numerous Tibetans followed their religious leader to the city and eventually settled here. The peaceful atmosphere, the presence of prestigious educational institutions and the favourable weather has led to an influx of population in this area. The population of the city was 28,100 in 1901 and it has since increased manifold, (estimates suggest that the city is

nearly 15 times as populous as it had been then) in the next hundred years. In 2011, the census of India declared the population of Doon to be 578,420.

The valley is blessed in having the natural resources required to meet their water requirements, which includes seasonal rivers and the ravines running on either side of them. Therefore, water coming from the various Himalayan stream was channelised to fulfill the demand for water. The first canal was built more than three hundred years ago, by the local rulers, to bring the water of the river Rispana to Guru Ram Rai Durbar. When the British occupied the area, Lt. De Bude was asked to conduct a canal survey in 1823. A few years later, Capt. Poseby Cautley was placed in charge of the canals. He is often compared to the French engineer, Ferdinand de Lesseps who built the Suez Canal, because of Cautley's canal projects on the river Ganga. As a result of his efforts, in 1900 the length of canals in the valley stretched over 125 kilometers. The water from these canals was used for consumption as well as for irrigational purposes.

With the radical urbanization that has occurred since 1990, the canal system with which the Doon valley identified itself has been encroached upon. Various factors have been identified for the recent disappearance of the canal system. The increased construction of buildings, the callous behavior of citizens and the reprehensive attitude of the government authorities towards the entire issue can be cited as reasons for the deteriorating landscape.

The proposed paper seeks to trace the history of the canal system in Doon and its contribution towards the ecological balance and cultural landscape of the valley. The paper also aims to suggest recommendations for the preservation of this heritage, which is integral to tracing the connection between the past and the present residents of the valley.

**Jan J. Ahlrichs, Jessica Henkner, Thomas Scholten, Peter Kühn, Thomas Knopf**

***Archaeological and Archaeopedological Approaches to the Development of Low Mountain Ranges in Prehistory***

The study of migrations and the development of landscapes has a long history in archaeological research. However, this applies only to those landscapes with fertile soils and favoured climate conditions, often called 'Altsiedellandschaften' ("old-settled landscapes"). This is in contrast to low mountain ranges, which are often described as marginal areas because of their less fertile soils, high amounts of rainfall and steep slopes. These unfavoured areas have been neglected by archaeologists for decades since it was assumed that they were only visited sporadically in prehistory and a continuous settlement did not start before the 12th century AD when monasteries organized clearances of the forest. Furthermore, the archaeological visibility is often limited due to the poor preservation of the material remains and erosion caused superposition or removal of archaeological sites.

To overcome the lack of systematic field work and to develop new theoretical models for the prehistoric settlement of low mountain ranges, interdisciplinary approaches are necessary. Questions concerning the definition, perception and development of these landscapes are currently investigated with archaeological, archaeopedological and archaeobotanical methods within the framework of the research project "Favour – Disfavour? Development of resources in marginal areas" (CRC 1070 "ResourceCultures"). The study area is located in SW-Germany.

An archaeological database was set up to investigate the settlement-history of this area in 2014. It contains ca. 2000 sites dating from the early Holocene to 1200 AD. The archaeological data as well as the spatial information from the sites will be compared with archaeopedological investigations of similar regions and colluvial deposits from several locations in the study area. The distribution and layering of these deposits provides valuable information on the intensity and duration of land use,

which is often not adequately preserved in the archaeological record. Colluvial deposits also serve as archives for the local climate history. In addition pollen analysis is carried out in the study area. This complementary approach, which brings together the methods of archaeological research and natural sciences, offers new insights in the study of cultural processes and human behaviours. In our talk we would like to discuss how the correlation of these different data sets changes the knowledge of the prehistoric development of low mountain ranges.

**Roksana Chowanec**

***Greek and Roman impact on the environment. Case study: Akrai/Acrae in south-eastern Sicily***

Sicily has always been a perfect place for human relocation, owing to its excellent position and an abundance of fertile lands. This island, which is the largest in the Mediterranean, remained for a long time a dream destination for people in search of a new place to live, new markets for buying and selling goods, and additional 'breathing space'. As a consequence of those the different colonizations of new territories begun. First by the Fenicians, later by the Greeks, who conquered and dominated the Sicels, thus obtaining access to fertile lands for many centuries. When in 241 BC the greater part of Sicily became a possession of the Romans, they had no particular vision of how to subdue and cultivate the island. Organizing the first province proved difficult. But very fast Romans managed to organize the life and landscape to work for them. All these people had impact on the environment and changed also the landscape. I will discuss the individual area of the island as case studies of human impact on the habitat. In this paper the focus will be on the colony of Akrai (modern Palazzolo Acreide) in the southeastern part of the island, which history begun in 7 century BC and was inhabited through almost 1500 years.

**Mariya Avramova**

***Healing nature. Some Observations Regarding The Role of Landscape as a Setting for Healing Spas in Roman Thrace***

Ancient medicine recognized the importance of nature for maintaining and restoring health. The effect of nature on human health was a subject often undertaken by doctors in medical treatises, the earliest and most famous of which, *On Airs, Waters, and Places*, is part of the Hippocratic corpus and was probably written by Hippocrates, the father of medicine, himself.

Healing spas were an important part of treatment of diseases in ancient Greece and Rome. The Greek establishments were usually very much related to the cult of the healing deities like Asclepius, Hygeia, etc., whilst Roman spas, though they also included a sanctuary of the gods, were focused on the natural resources, e.g. mineral water. The beautiful setting was amongst primary conditions for the foundation of such healing establishments both in Greece and Rome. There were multiple requirements regarding the landscape surrounding spas. They were required to be airy, surrounded if possible by hills or mountains. Vitruvius notes that it is good if there is water in view – lake, river or sea.

In Antiquity the region of Thrace, thanks to its location in the Southeastern Balkan peninsula, was a subject of various cultural and religious influences, both from the East and the West. The Greeks were amongst the neighbors, whose contribution to Thracian culture is particularly visible. Later with the arrival of the Romans and the subsequent creation of the Roman province of Thrace in 46 AD a unique culture was formed. Amongst other Roman introductions were a number of healing establishments founded in multiple locations around the new province. In my paper I would like to explore the landscape surrounding selected spas in Roman Thrace. Thus, I would like to establish to what

extent does the setting of spas in the said province reflect the conventional views regarding “healthy” landscape and whether this mix of cultures is in any way reflected in the choice of spa locations.

### **Stavros Dimakopoulos**

#### ***The Classical and Hellenistic agricultural landscape of Attica***

The main goal of this paper is to present the characteristic elements which formed the agricultural landscape of Attica during the Classical and Hellenistic periods, as well as to contribute to an understanding of the interaction between human society and the landscape.

The accumulated archaeological evidence from both surface surveys and systematic excavations, combined with the rich corpus of epigraphical and literary sources permit a thorough examination of aspects of the agricultural landscape and identification of its main characteristics through three different axes. The first axis concerns the farmsteads as architectural units which leave their footprint on various locations throughout the landscape of Attica. A variety of prominent architectural elements, as for example the courts and the towers, have been examined in order to compose a basic typology for the farmhouses of these periods. The second axis has to do with the installations which once surrounded the farmhouses: threshing floors, agricultural terraces and also terrace and boundary walls. These installations, constructed around the rural houses, can be considered as particular elements of the ancient topography, which redefined the landscape. The third axis focuses on the settlement pattern of the farmsteads throughout the territory of Attica, taking into account their distribution across the landscape. As it is known, the farmhouses can be found in Attica not only as isolated buildings, but also grouped together in small clusters.

The analysis of the aforementioned elements allows the second and most crucial topic of this study to be discussed efficiently, namely the relations between the rural human society and the landscape itself through their bidirectional impact. On the one hand, human activity leaves its mark on the landscape and upgrades it through human craftsmanship by adding – in many cases – the dimension of height (building, for instance, farmhouses with towers) or by forming the slopes with terraces in order to make them suitable for cultivation. On the other hand, the landscape, far from being a passive formation fulfilling the needs of the community, was in many cases the decisive factor which indicated where a cluster of farmhouses should be built or what kind of agricultural production can be exploited by the human community. In this way, it is anticipated that the main aspects of the reciprocal impact between the landscape and the rural communities can be traced and interpreted.

### **Ran Kamiyama**

#### ***A preservation method of Japanese borrowed scenery gardens -What we see and how we see mountains in Kyoto***

Kyoto has been famous for the old capital in Japan and remaining many shrines and temples since 794 A.D. The capital place, where is a plain surrounded by mountains on the north, east, west and opened to the south, has been selected according to Feng Shui principle and the city was arranged into a grid pattern. The imperial palace was placed at the center and noble family residences were planned to construct in the surrounded area. However, many of nobles prefer to build their villa or estate outside of the city limit where provides aesthetic pleasure from nature. Japanese people found beauty from nature, such as mountain, river, grass, tree, flower, bird, wind, and moon. Among all natural elements, attitude toward mountain is rather special. In fact, most of Japanese old cities locate the plain surrounded by mountains and the views to and from the mountains has been con-

siderably respected. Kyoto is no exception that the many of famous shrines, temples, and garden distribute to the mountain side rather than in the city limit. Especially the famous gardens are distinctively located near the mountain and have a great view to the mountain. This strong aesthetic attitude to a mountain was sophisticated and formed a unique garden composition known as “shakkei” in Japanese, “borrowed scenery” in English and this unique visual structure make Japanese garden famous in nationwide in modern times. It may say that borrowed view gardens represent a sense of Japanese aestheticism now. In spite of the popularity, the view structure is less analyzed and the preservation method is not established enough. As a result some garden owners confront the difficulty to preserve the view to the mountain under the current low and some gardens have been already lost their view such as Tojiin Temple in Kyoto. To prevent the destruction of our historical landscape, we have to find the way to preserve the scenery to the mountain.

One reason why we could not preserve such a particular view is the lack of understanding of physical structure and spatial composition of the gardens. And another reason is that the present governors and planners overestimate the contemporary perception and attitude to a mountain and underestimate the past to evaluate the value of scenery.

Therefore, the purpose of this research is to review the historical and cultural background of borrowed scenery through famous Japanese gardens in Kyoto and to reveal the structure and spatial composition of those gardens. To accomplish the purpose the research focuses on the followings.

- 1) To illustrate how attitude toward mountain can be changed through time
- 2) What certain aspect of mountain people desired to view
- 3) How people respond to mountains

**Timo Bremer**

***Landscape, Power and Settlement dynamics – Notes on Archaeological Methods on the Basis of Examples from the Lower Rhineland, Germany***

Since the beginning of the new millenium, there has been a lively debate about the symbolic and communicative dimensions of landscape in a semiotic sense. In the German speaking areas this discussion is mainly influenced by the discourse in the historical and geographical sciences, especially the so-called „spatial turn“. In contrast to other regions, the New Archaeology has only been of minor importance and there is a broad consensus that the meaning of landscape elements is highly depending on the context of human actions. The programmatic concepts of this new landscape-archaeology however are seldom implemented in “practical” archaeological research in Germany because methods to interpret or even detect the symbolic meaning of certain parts of the landscape are rarely developed yet.

Possible solutions to this problem will be discussed using the example of rural space in the lower Rhineland. The most promising approach is to regard long term changes of the settlement behaviour of certain social groups. Therefore the focus lies on the period from the Late Antique to early modern times and on the strategies of local elites to maintain their power.

Is it possible to identify parts of the landscape which had the symbolic meaning of legitimatizing leadership? To which extend did such places influence settlement continuity or discontinuity? How did the meaning change with the upcoming of new elites, new religious beliefs or in times of crisis? Which symbols were persistent and which were only of temporary relevance? Two categories of archaeological sites are of particular significance: firstly rural settlements and the formation of large villages in the middle ages and secondly noble castles. Such places were particularly persistent and often outlasted social transformations when they also had religious meaning. Therefore, it is neces-

sary to draw special attention to the relation of power and religion.

The examination of the symbolic dimensions of landscape offer new explanations for settlement processes in the rural space. This approach complements studies of the physical landscape, of economic and social conditions and leads to a more comprehensive understanding of human site selection in ancient landscapes.

**Markéta Šantrůčková**

***Assessing long-term spatial changes of natural habitats using old maps and archival sources in the rural landscape.***

Landscapes intensively farmed over a long time period represent a threat for natural habitats and high levels of biodiversity. Information on the historical land use and spatial changes of natural habitats can help to explain the causes of a number of contemporary phenomena, which are important for the development of effective conservation and ecosystem management. This case study from the Czech Republic shows that archival written sources describing landscape quality, including vegetation cover, allow the reclassification of old maps to the level of natural habitat categories (*sensu Natura 2000*), with the aim of analyzing historic changes in land cover. Significant natural habitat decreases began by the middle of the 19th century. Over the course of 250 years, this area of formerly widespread natural wet meadows has declined by 99 %. An area of water vegetation was reduced by 95 %, willow carrs by 98 %, and a mosaic of willow carrs, wet *Cirsium* meadow, and alder carrs has decreased by 100 %. These decreases were caused by the conversion of meadows, pastures, and ponds into arable lands. Areas of oak-hornbeam forest, acidophilous oak forest, and thermophilous oak forest were primarily converted into monocultures of coniferous trees. Similarly, the areas with alluvial forests decreased. We conclude that old maps and other archive materials, despite their coarse accuracy, can serve as useful tools for disclosing natural habitat changes and their causes, providing a foundation for formulating biodiversity conservation strategies.

**Radosław Palonka, Anna Słupianek, Jakub Nawrot, Zi Xu, Brianna Gooch, Claire Moriarty**  
***Landscape in Pueblo culture architecture, iconography and beliefs: Results from Polish Project in Colorado, USA***

Sand Canyon-Castle Rock Community Archaeological Project is conducted since 2011. The research project is realized in three canyons within the protected area of Canyons of the Ancients National Monument, in southwestern part of Colorado. These canyons contain the remains of forty small Pueblo culture sites, including habitations as well as limited activity sites and one large community center – Castle Rock Pueblo, all dated to the 13<sup>th</sup> century A.D. These sites might have created a community of allied sites, so-called, Castle Rock Community.

The boundary of the Castle Rock Community was probably marked by four shrines (stone circles). The shrines are located roughly to the north, west, east, and south of Castle Rock Pueblo, and each is situated in a significant location to the surrounding landscape and prominent topographic features on the horizon, like the highest mountain in the area, Sleeping Ute Mountain. Three of these shrines or stone circles have entrances facing Castle Rock Pueblo and one opens toward Sleeping Ute Mountain. These shrines may be considered to have ritual and spiritual functions and are also known from the ethnographic analogies of different historic Pueblo societies such as the Hopi, Zuni, Keres, and Tewa in the time of contact with Europeans, mostly Spaniards.

In the 13<sup>th</sup> century A.D. most habitations in the area were settlements located on canyon rims and on talus slopes below the rims (canyon-head settlements), as well as in cliff alcoves (cliff dwellings) and other places very difficult to access. Another settlement pattern was aggregation, the settlements became larger from fifty to seven hundred rooms more populated, and some were well-planned in terms of layout and architecture. Most of the sites face south or southeast, directly to the highest peak in the area, Sleeping Ute Mountain. There are also several preserved murals and rock art (paintings and petroglyphs) that most probably depicts some topographic features within the landscape, like surrounding mountains.

This paper summarizes the initial results of the research of the Polish project with focusing on remaining stone architecture, site location within the landscape and the rock art from the area where we can observe the manifestation of the ancient beliefs connected with the landscape.

**Halina Dobrzańska, Tomasz Kalicki**

***Iron Age landscape in Kraków region (southern Poland)***

The authors present results of the research on the interdisciplinary project focuses on interrelations between man and his natural environment in the Pre-Roman and Roman periods (3<sup>rd</sup> century BC-4<sup>th</sup> century AD) in the Vistula valley, about 30 km eastward of Kraków. This area has a specific place on archaeological map of Poland, due to intensive and diverse settlement, especially from the periods of our interest. In recent years, as a result of wide-scale excavations related to highway construction, a number of new finds has been discovered on the loess terrace, where prehistoric settlement was concentrated, but also on the floodplain of the river, so-far very poorly recognized by archaeologists. Today, both environments look very different than in the Pre-Roman and Roman periods. In both, the settlement was based on agriculture, complemented in various degrees by non-agrar activities. In the project apart from archaeological research there have been utilized results of geophysical, dendrochronological, radiocarbon, palynological, archaeobotanical, palaeozoological, ceramological analyses, as well as radiocarbon testing. An attempt has been made to answer the question how people, who lived there in the periods of our interest, created landscape and used the environment around them.

**Andrea Vanni-Desideri, Guido Vannini**

***Light archaeology and historical landscape. For the global history of the site of Al-Wu'ayra (Petra) in Transjordan***

The paper is based on the methodological experience of the Chair of Medieval Archaeology of the University of Florence in the field of landscape archaeology ('from light archaeology to public archaeology') during the mission "Medieval Petra. Archaeology of the Crusader-Ayyubid settlements in Transjordan". The authors present the most recent results achieved at the site of the Crusader castle of al-Wu'ayra where the research, started in 1986 and still in progress, is pointing out its wide chronology (Nabataean to Late Islamic) and the radical changes of its landscape.

Beside the identification of the various phase of the settlement, the mission also developed a series of chrono-typological instruments, forming the typical methodological equipment of Light Archaeology. On such basis, an experimental season of research started in 2011 at al-Wu'ayra trying to combine the maximum preservation of the site with the very high archaeological productivity. The perspective of the research somehow changed, aiming at reconstructing on a global chronological scale the artificial modifications of the landscape, as the result of the changing needs of the inhabitants and their different interpretations of the site. Such new study shows very clearly how extensive and

non destructive archaeological methods are particularly appropriate to the difficult surface condition of the site, its fragility and the very precarious equilibrium of its poorly preserved buildings.

A wide Nabataean necropolis/sanctuary area has been identified, extended to the whole surface of the Crusader castle and including a quantity of different types of rock cut tombs arranged in small groups possibly reflecting their familiar scale.

During a phase still to be more precisely dated, but most probably during the Late Antique period, the function of the site radically changed as it was transformed for the first time in his history into a permanent settlement, with military purposes. Many technical arrangements of its building yard emerged from the research such the traces of an hydraulic counterweight machine (crane?) and a second device (winch?) both used on the building yard. In the same period, some Nabatean sacred complexes were transformed into utilitarian structures meant at collecting water, later on reused by the Crusaders.

This Late-Antique fortification - for the first time identified at al-Wu'ayra and later on also at ash-Shawbak - was then reinterpreted during the short Crusader period by rearranging the whole installation. The Late Islamic occupation of the site developed through at least three phases starting with the simple use of the surviving structures of the castle by the local population, soon transformed into a quarry for building material employed for the building up of a new village inhabited until the late 19<sup>th</sup> century.

The site of al-Wu'ayra is an important archive of data concerning the whole history of the landscape of the area of Petra but also an extremely fragile site and a specific project is currently under way combining protection and educational activity for local population and for tourists, also in consideration of the increasing danger for the preservation of the site, in accordance with the more updated public archaeology methods.

**Anna Swieder**

***How mining changes mountain. Medieval and early modern landscapes in the Harz Mountain's forests***

The Harz Mountains in Central Germany are one of the metal rich mountain ranges in Europe. Extensive ore mining in medieval and early modern times lead to the formation of an early industrial landscape. After mining in the Harz Mountains almost came to a standstill around 1350 AD, it experienced a rapid upswing at the beginning of the 16<sup>th</sup> century AD, and then had its biggest bloom in the first half of the 18<sup>th</sup> century AD.

Up to 65 % of the eastern Harz Mountains are now covered by forests. In these large forests thousands of archaeological structures lie hidden under woodland canopies – many of them hitherto unknown and undocumented. Because of their enormous number, a site-based documentation is impossible. Due to the forest vegetation, for example, aerial archaeology or geophysical prospection has only very limited significance. LiDAR (Light Detection and Ranging), however, offers the possibility to generate a DTM (Digital Terrain Model) which can be used to document archaeological and historical sites in a highly precise and effective way.

The sites include for example hillforts, defensive dikes and ramparts, water reservoirs, deserted villages, ridge and furrow, as well as burial mounds. Moreover, mining pits and waste heaps as well as probably thousands of charcoal kilns characterise this protoindustrial landscape as do numerous, often impressive sunken roads and lanes. These criss-cross the mountains and for centuries were used to transport ore and charcoal to the valleys where enough hydropower was available for further ore processing.

Thus, these archaeological monuments form a complex, interlinked historical cultural landscape. Particularly, the emerging network of medieval settlement and economic structures (especially mining) seems to open a very promising field of research.

In addition to the morphological evaluation the future analyses of further data from other disciplines promises to provide additional information. Thus, it will be possible to reconstruct the different economic and historic processes that changed this region as well as the spatial relations of settlement, mining, etc. for the first time. Recording, analysing, and interpreting this hidden cultural landscape will help to develop a protection programme for these monuments – especially with regard to the increasing use of huge harvesters in forestry management that causes intensive destruction of archaeological sites.

### **Igor Isychenko**

#### ***Old ruins, changing landscapes: trying to understand immaterial elements of cultural landscapes***

Material artifacts and structures representing past forms of human material culture today tend to be embedded into landscapes in a rather formal way, often staying beyond any substantial contact with present-day sociocultural environment. Since one of the main concepts in archaeology is that of ruin, we can discern between traditionally understood ruins – material remains of human buildings and activities, and metaphorical ruins, the latter being no less important. It is from our ability to deal with this second type of ruins that the integration of the past and its landscapes into the realm of modern life depends.

Hence it is possible to argue that, while being a part of visual environment, visible landscape, the ruins, i.e., of Olbia, Nikonion, Tyras and other ancient Greek cities, located within what is now a territory of Ukraine, are not fully included into another landscape, that of culture and history. Being manifested in this latter to a very small extent, they do not participate in quotidian life, longings and hopes of modern-day Ukrainians. Moreover, as a typical target for various tourist undertakings they are systematically excluded from locals' experience as objects, existing mainly for profit-making, whereas within Ukrainian society in general they are perceived, besides their tourist image, as a part of long ago period of history with no direct links to nowadays' processes.

To change the existing situation, a shift should occur in our understanding of the process of scientific cognition, leading to cooperation of disciplines within a framework of interdisciplinary research. Archaeology, i.e., is mostly viewed as a discipline dealing with material objects. Such an approach cannot be any longer considered sufficient. Additional challenge for archaeology could be, therefore, to understand, how the abovementioned state of ruin, fragment, something marginal can be overcome. In pursuing this goal we can rely only on interdisciplinary approach: complex understanding of how does the sociocultural environment integrates the past and its traces into its present state can be obtained with the help of methods introduced into this research from landscape studies, human geography, architecture etc. The following step could be a construction of a new view on landscape, where the latter will be no longer a passive recipient and retainer of once achieved forms and qualities, but a subject, an actor and thus a driving force behind mankind's longing for the common good.

### **Katarina Botić**

#### ***Landscape and human interaction throughout millennia – a case study of archaeological sites in the Našice region, Croatia***

In the Našice region, situated on one of the main routes connecting central Carpathian basin with the northern Balkan region, over 200 archaeological sites from prehistoric and historic times were identi-

fied by field survey and archaeological excavations. Supported by the Croatian Science Foundation project "Strategic use of landscape" (IP-11-2013-3700) analysis of site locations for different periods was made. Information thus obtained was combined with information about natural resources (such as water springs, woods, arable land, pedological and geological base etc.) in the observed region and, when possible, with wider regional cultural impact. This provided insight into the role of landscape in the settlement strategies, use of natural resources and communication routes and their change over time. The results show change of position of strategic points over time but they also show that the pattern of their distribution in certain periods was a constant. The information collected by this project can be used in modern time strategies of settlement, agriculture, industry, water management etc.

### **Margherita Azzi Visentini**

#### ***Venetian villas and the first modern planned landscape of western civilization***

Venetian villas are a quite peculiar phenomenon, due to their number (about 4000 are the still existing items); their extremely high artistic quality (the best architects, painters and sculptures collaborated to their construction, from Palladio to Giannantonio Selva, from Paolo Veronese to Giambattista Tiepolo, from Alessandro Vittoria to the Marinali brothers); the long lasting period the villas responded to the reasons for which they had been built, it is to say mainly as functional centers of agricultural activities (at least from 1450' to 1797, but also later); and for the extended geographic area they occupy (north-south from the Alps to the Po river, east-west from Isonzo to Mincio rivers). The villas landscape was accurately planned by the Venetian government and the best hydraulic engineers, geographers and agricultural experts of the time participated to its realization, that interested economic, social and political aspects. The villas were adapted to a changing landscape, and the rescued landscape was adapted to the villas, in an extremely interesting interchange mixing rationality and poetry, geometry and pastoralism, responding to the double mission of the villas as places of otium and negotium according to ancient roman models. The villas landscape is today at risk: how to adapt the villas to 21st century needs? Private property and agriculture seem to be the best way to give life to this unique cultural landscape: some observations on conservation will close the paper.

### **Rachel Byrne**

#### ***Title: A legacy of trees: reconstructing the landscape of the tenant class in Ireland during the late historic period in Ireland***

This paper centres on the legacy imparted upon the land by tenants engaged in state sponsored tree planting in late eighteenth and nineteenth century Ireland. The study seeks to ascertain the relationship of the tenant and agrarian landholder to the planting of trees, through one of the first European state-incentivised tree planting schemes in the eighteenth and nineteenth centuries. For the tenant population the state initially espoused a coercive approach to induce tree planting from 1698. A more benevolent tree planting scheme evolved and was implemented in 1765. This brought about a registry of trees for tenants, which is the principal source reviewed here. This register contains a wealth of material on the tenant population, tree species, number of trees planted, location and the landlord involved. Drawing on work by the woodland historian Eileen McCracken and geographers Smyth and Tomlinson, the research seeks to extend the focus of their work to elucidate the cultural significance of this documentary evidence.

Non state agencies such as the Dublin Society are also examined within this paper as a comparative

tool. The Dublin Society, who from 1740 to the fall of the Irish parliament in 1801 were engaged in an awards scheme to increase tree cover in Ireland. Recipients of the premiums were mainly within the land-owning and large land holder classes. Records from this documentary source give a perspective on non-state engagement in the modernisation of woodland management in Ireland.

This paper examines how landscape reconstruction from empirical data can enrich our understanding of the ordinary: enclosed field, hedgerow, plantation and shelter-belt but also of the intersection of state and local actors in the reshaping of rural landscapes through modernisation.

**Joanna Dębowska-Ludwin and Karolina Rosińska-Balik**

***Landscape vs. Cultural Patterns - Early Bronze Age Levantine Settlements and their Topographical Diversity***

The period of Early Bronze witnessed the first fortification systems of the Southern Levant. Sites like Tel Erani, Tell es-Sakan, Bet Yerah or Megiddo preserved monumental walls built in two major techniques: mud bricks and stones. One could expect that the material preference was forced by locally available sources, but taking a closer look at their localization the case seems to be more complex. Fortified settlements of the Early Bronze Age Levant were founded in various landscapes: the Coastal Plain, the edge of the Negev or the Sea of Galilee, which offer different material background. However, their ancient builders first chose materials were not necessarily the easiest to acquire. Since - in terms of the building materials application - the crucial factor was not directly related to a settlement's natural environment, what formed the key element? We are used to explain these kind of issues by defensive arguments, but why settlements located at the top of steepy hills needed protective walls constructed of mud bricks in a landscape full of stones? Why people from lowlands spent so much of their energy to produce mud bricks instead of collecting locally available stones? Did it reflect cultural inspirations possible thanks to their contacts with the Egyptians? An excellent example of such a combination is the site of Tel Erani, where a massive 8-meter-wide wall was constructed in an irrationally time and labour-consuming mud brick technique instead of local stone sources.

Landscape analyses corroborated by a series of field trips revealed that naturally defensive localizations with high-range visibility were as strong wall protected as those devoid of the features. Thus, the question arises, how deeply did the landscape influence settlement patterns of the Early Bronze Age Levant and to what extent did the people affect the landscape?

**Miłosz Giersz, Patrycja Prządka-Giersz, Wiesław Więckowski, Julia Chyla, Roberto Pimentel**

***Between Man and Landscape: social and environmental interactions during the pre-Hispanic times in Huarmey province in the north coast of Peru***

Huarmey valley, at the southern edge of Peruvian North Coast, was inhabited for millennia. It is very reach, multi-chronological area, where almost all types of archaeological sites are represented. The discovery of an imperial mausoleum of Wari pre-Columbian civilization in Castillo de Huarmey in 2012/13 is one of the examples how little we know about this area. The significance of this stunning discovery is based on the fact that it was the first unlooted imperial tomb of Wari culture, predating Inca Empire. The mausoleum was located on the northern border of the Huarmey river valley, at the entrance to small dry canyon, at the top of elongated rocky spur that protrudes into the valley. The analysis of finds which belong to noble women buried in mausoleum, as well as of their remains and the distribution of architectural monuments around rise a lot of questions about the site's role in social-landscape of Wari people inhabiting the area during the Middle Horizon versus the geograph-

ical, "original" landscape of the region. Was the site a centre of a newly established political and social power? Was that fact stressed by the localization and landscape change?

However in the area of Huarmey valley not only Wari sites are present. There are sites of all chronologies alongside of the edges of the valley. It would be interesting to see if the pattern of their localization reflects somehow the use and changes of the landscape or the development of the region (agriculture, changing borders of cultivated fields, etc.), if there was any kind of pattern visible in choosing places for such sites like storage buildings, cemeteries or settlements. It is important to trace relation between the aforementioned types of sites in order to interpret them correctly and to answer two main research questions - how did the ancient inhabitants of the region change the landscape or how did they use it for their own purposes; and - how Wari people acknowledged (if at all) existing social and geographical landscape patterns establishing their own religious and political centre in the region?

**Klara Bursic-Matijasic, Robert Matijasic**

***Istria, Croatia: ancient settlements in landscape***

The Mediterranean setting of a Karstic region in the Northern Adriatic has deeply influenced the settlement of the territory. The Istrian peninsula has been inhabited since the Paleolithic, but Bronze / Iron Age hilltop settlements have had a great impact on the landscape. More than 400 sites have been identified, and it is not difficult to establish a relationship between the geomorphology of the land and the anthropized/anthropic landscape. A complex network of hilltop settlements, based on the natural features of the relief, is clearly recognizable in some areas. Due to natural erosion, many possible conclusions are outside our reach, but the surviving elements are enough to establish a principle on interpretation.

A radical change occurred in the landscape with the roman conquest and romanization: hilltops were abandoned and new settlements appeared. Urban settlements were organized for the first time, while the countryside was dotted with farms (*villae rusticae*) as the economy changed from prehistoric pastoral subsistence to intensive production for a wider market. The number of sites remained roughly the same, but their distribution and position is quite different. The Roman Age villas were positioned mainly along the western coast (and within a few kilometers from it), and almost all on flat land suitable for mediterranean agriculture. The agricultural economy based on exports depended on good connections for transport, and the sea routes were extensively exploited.

During the transition to the Middle Ages, interesting processes occurred: the gradual abandonment of some of the open sites, a nucleization of others with the formation of villages, the resettlement of hilltops as fortified settlements. These trends had an important impact on the formation of the modern istrian landscape.

**Renata Zych**

***The relationship between human communities and landscape of the Neolithic period – phenomenology of landscape***

Basic category which can be used by an archaeologist is landscape. Considering phenomenology, the landscape is treated as a sphere of human activity, creation, influence. Phenomenological reflection is a denial of the abstract treatment of a man, the world and is a constructive proposal to rebuild the relationship between a subject and object. A phenomenological method allows us to understand the "living world". An archaeologist is trying to get to the meanings of the social world that used to be for human being in the prehistory and notice what cultural patterns used to guide their actions.

Speaking of archaeology, the studies of the landscape were most commonly associated with the so-called settlement archaeology and considerations took into account those aspects of human life which were associated with the sphere of "profanum" thus, dwellings, settlements and the relationship between settlements or social structures. The aim of this study is to examine the meaning of landscape regarding the Neolithic cemeteries of the Funnel Beaker culture. So it is a matter concerning the sphere of "sacrum" aspect of the symbolism derived from sepulchral rituals. The range of sources includes cemeteries of megalithic graves, so-called Kujavian long barrows.

**Beata Makowska**

***The interaction between landscape and art***

The paper presents selected parks and gardens associated with natural landscape which surrounds them, the history of places and people living there (i.a. parks of memory, parks designed close to the museums). Such parks constitute a kind of sculpture gallery in the open air. They unite open and built space, emphasizing landscape and local cultural values. Owing to places for recreation and cultural events they became attractive public space for residents and tourists. An example of this category is the park des Personnalités in Honfleur (France) created in area of estuary of Seine. It is devoted to memory of the outstanding persons associated with local history (artists, writers and outstanding persons), whose busts located in separately designed parts of the park are commemorating them. Another example is the Livsglede park in Bryne (Norway) designed in the form of walkway along the river with sculptures of the local artist Fritz Røed. The elements inspired by natural Norwegian landscape were used there (waterfall, lake, hytte).

The paper also presents gardens located in the neighbourhood of museums in Paris (the Musée du Quai Branly, the Museum of Middle Ages) and on Capri Island (Axel Munthe Museum). These gardens are integrally connected with museum collections, serving an important role in their promotion. The integration of gardens and museums appeals new visitors to them, it has educational values as well. It creates cultural models and increases attractiveness of public spaces in a crowded cities. The garden at villa San Michele on the Capri Island is an extraordinary example. The beauty of landscape inspired the Swedish doctor, writer and art collector Axel Munthe to build a house here, including the sculpture loggia, as well as the garden contained unique flora and the vantage point. Advantages of landscape were exploited as the background for the works of art and plants. Munthe popularized the protection of endangered species of animals and plants, thanks to this unique specimens preserved here. During holidays villa offers a lively cultural programme of music and art. This place is one of most important tourist attractions of the island.

The interaction between landscape and art influence a protection of regional identity and traditional elements of the environment. They are developing awareness of the existing values, shaping perception of space and increasing sensitivity for art (i.a. land-art). They are also considerably contributing to formation of cultural models and mechanisms.

**Renata Mikielwicz**

***The Unknown Landscape. Public Perception of Unfamiliar Heritage***

Abstract: Our own personal spatial space extends from individual spatial requirements to the social space which builds spatial delimitation. Built space is something experienced. Its impact is not always perceived but unconsciously felt. Such unconscious perception allows to appreciate the form and its completeness, the usage of space and its climate, but only in its momentarily state. Without the knowledge of the past the meaning of the cultural heritage 'closed in stones' remains outside the

perceived world. Only the surface remains, the hidden heritage remains unfamiliar.

We do not use much time in our work or leisure at home to discover the past of the places we live in. We perceive them through everyday actions and necessities. It is our living space where such kind of knowledge about it is not the most necessary – not the past heritage rules the use of space but the present, eventually its immediate future.

The way of making the heritage visible in the used space is sometimes a very difficult undertaking. Because the past is gone in many ways – different people use not always the same space for the same purposes. Postindustrial cities are challenged through the complete change of the workable space and the tradition of the use of the buildings. And confronted with the memory of the living citizens – that it was their working place, not worth, or not imagined to be worth to be used differently. Also in the changing world the values are changing. We are confronted from one side with the commercial globalization and its effects. Otherwise the more and more stronger environmental awareness shows us quite a different approach toward space and its use.

The article concentrates on the issues of the perception of the heritage in present space which are unfamiliar for its today's users. Mostly because of the history and its implications. The case of the city of Lodz, Poland, confronted with some European and world examples shows a struggle to identify the heritage in the space and the minds of its citizens. The specific history of the industrial city robbed of its identity, first by the Second World War and then by the complete collapse of the textile industry shows the difficulties in bringing back to everyday perception the values of the past. Urban structure, architectural heritage could be seen as an impediment of the growth even as the past is completely unfamiliar and therefore unfelt.

**Tomasz Dziurdzik**

***Gračine – central place in the territory of ancient Narona? Preliminary results of cultural landscape project in Ljubuški općina, Western Herzegovina***

Abstract: The aim of this paper is to present the preliminary results of a project reconstructing the cultural landscape during the Roman and Late Antique periods on part of the territory of ancient Narona, a large city within the province Dalmatia that acted as a regional centre. The area in question, the valley of small river Trebižat, is today located in Ljubuški općina in Western Herzegovina. Archaeologists from University of Warsaw in co-operation with Mirko Rašić (University of Mostar) aim to reconstruct the local settlement patterns and their relations with the landscape during a non-invasive survey in Autumn 2015. Historical and epigraphic sources inform us about the existence of several settlements and elements of military and administrative infrastructure (Bigeste, pagus Scunasticum) in the microregion, but their identification with archaeological sites remains unclear. Our non-invasive survey aims also on verifying and supplementing the data from old, Yugoslav-era research, which suggests an extremely high volume of settlement activities in the area both in Roman and Late Antique periods. A GIS database combining satellite images, ortophotos, aerial photographs made using drones, geodetic data on surviving architectural remains, reported archaeological sites and especially findspots of inscriptions (giving further information on the localisation of villages, buildings, graveyards, roads) with archaeological data will be prepared. Hopefully it will prove our early assumptions about the existence of a well developed settlement network, closely connected with highly organised communication system.

Special attention is drawn to the site Gračine, which due to its position within the landscape appears to be a natural central place within the microregion of the river valley. The site is located on a relatively flat and high plateau overlooking a convenient river crossing, where in Roman times a bridge

was probably located. The extraordinary role of this site is proved by the extremely rich archaeological finds. Among them, numerous elements of military equipment suggest that the spot was crucial for Roman control over the river valley during the early occupation of Dalmatia. It remains to be answered what was the precise role of this site both within the local settlement system, that is whether the site was civilian or military in character, and its position in the broader area, that is within the territory of Naronia and the whole province Dalmatia.

### **Krzysztof Ostafin**

#### ***Small water bodies and water-powered devices in the Polish Carpathians landscape since the end of the 18th century***

Small water bodies (especially fish ponds, garden ponds) and water-powered devices (e.g. mills and sawmills) were and are very important in the Polish Carpathian landscape. They have great economic significance and support many important hydrological and biological processes such as small retention and as wetland habitats. Our goal is to determine of changes in small water bodies and water-powered devices distribution in the Polish Carpathians and we would like to show causes of this changes. The analysis was based on the comparison of topographical maps and statistical data. We used public registers (Metryka Józefińska) and Austrian First Military Survey maps in scale 1:28,800 from the end of the 18 century, then Austrian Second Military Survey Map from the 1860s. (1:28,800), Polish Military Maps from the 1930s. (1:100,000), and Head Office of Geodesy and Cartography Maps from the 1970s. or 1980s (1:25,000). The actual state has been determined using BDOT 10k and ortophotomaps.

### **Tatiana Isachenko**

#### ***The impact of the country estate landscape on the modern cottage complexes in Russia***

The landscape determines the life of society and at the same time it changes under the influence of economic and domestic activities. On a large scale the landscape transformation correlates to the specific community's idea about the perfect landscape. The analysis of landscape preference is mostly based on the analysis of human dwelling and the places where people take rest and spend their free time. Residential-recreational complexes in Russia have passed a long way from elite country estates of XVIII-XIX centuries to mass summer cottages and gardening of XIX-XX centuries and, finally, to the elite cottage complexes that appeared at the end of XX- beginning of XXI century.

The landscape conditions are very important for the placement and structure of country estates. Country estate not only serves to be economic, residential and recreational place but it is also the dream of an earthly paradise and the reflection of Russian genetic memory. Traditional central Russian landscape is a combination of cultivated fields and wild forests, an ideal space for Russian people should be neither too closed nor too open: the forest with Nightingale the Robber is dangerous, but the steppe with nomads is very dangerous too.

Country estate is the model of the traditional landscape that combines open and closed places: the house and household building, park and fragments of woodland, cropland and meadows. At the beginning of the XXI century country estates in the European territory of Russia were replaced by the cottage complexes. They essentially inherited the idea of the perfect landscape. On the one hand, their location, structure and buildings architecture reflected the tastes, needs and opportunities of modern man, but on the other hand, cottage complexes accumulated cultural memory of country estate.

The space memory. Country estates used to be situated in picturesque, often frontier sites: shores of

lakes and rivers, ancient valleys, Glint, morainic hills and ridges. Today cottage complexes inherit these locations. Material and mental symbolic elements form "associative" image of the country estate and increase their attractiveness. Remains of the country estate are used in the cottage complex as a symbol of the calm, traditional, constant world. There are lots of toponymical associations, including the use of the estate's name or its owner's name as the name of a cottage complex. Country estate toponymy is widely used for names of certain landscape elements inside and around the cottage settlements: palatine hill, lords forest, manor meadow.

The cultural memory. As for cottage complexes located far from the estate place, cultural associative memory allows using the names of the old estates as brands names for them.

Modern cultural landscape of the cottage settlements receive an impression of historical and cultural holdover, that in large part determines its perception, development and image.

### **Marta Raczyńska**

#### ***In the landscape of barbarian borderland. The case of the Gustow group in the early Roman Period***

Abstract: This presentation will discuss the anthropological category of landscape in studies of cultural and settlement changes in the Western Pomerania and north-eastern part of Mecklemburg in the early Roman Period. According to R. Wołagiewicz (1981), at the crossroads of Wielbark Culture and the Elbe cultural circle with participation of scandinavian components had originated so-called Gustow group – one of heterogenic archaeological formations distinguished in the Oder region in the late antiquity (beside e.g. Lebus and Debczyno groups or the Luboszyce culture). The key to understand these relations is interpretation of significance and role of landscape in cultural processes dynamics. Specificity of the Oder estuary and near-by Baltic's islands region was undoubtedly important factor shaping the way of integration between different elements of culture that inhabitants presumably adopted and manifested as their own. Some religious and social phenomenons (such as isolated rich graves and small cemeteries, but also settlements rules and form of economic activity) was inseparably connected with symbolic potential of geographical and – in consequence – cultural landscape which had been forming by certain development mechanism. Moreover, this category establishes new ways of description and analysis of the Gustow group referring to the latest researches, e.g. a view that people associated with this formation had belonged to tribal conglomerate known as the Wielbark Culture. In other words, because basis for taxonomic classification of the Gustow group is discredited recently, the idea of „the cultural landscape of the borderland” appears to be essential and particularly helpful for studying this question (especially that it seems to be beyond the issue of rigid taxonomic division of Barbaricum). For that reason the author of this presentation will bring up two elementary issues in the light of cultural anthropology: (1) significance of the lower Oder Valley as the cultural border sharing (or connecting?) the symbolic universe of western and eastern barbarians, as well as (2) possible role of the Oder river and the southern Baltic coast in communication between Scandinavia and the middle-eastern Barbaricum during the 1st and 2nd centuries AD.

### **Hrvoje Kalafatić, Bartul Šiljeg**

#### ***Everything fears time, but time fears the circles: 7 thousand years old prehistoric enclosures in landscape of southern Carpathian Basin***

From the Late Neolithic in the 6th millennium BC in Carpathian Basin developed circular fortified settlements, some of which in long term eventually grow into settlement mounds, tells. Our modern perception, which is developed from some of extraordinary examples of settlement mounds domi-

nating the landscape, is inaccurate since only some tells reached a significant height, and they are usually part of the complex settlement structure which surrounds them. Much more stays hidden in landscape and this presentation aims to investigate changing perceptions on Neolithic landscapes in eastern Croatia and to reconsider the dynamics of human-environment interactions. It will also explore possibilities of landscape reconstructions by mapping the specific Neolithic settlements through aerial remote sensing approaches. Detailed analysis of all available old and modern maps, satellite imagery and aerial photography will provide data of strategic use of landscape during Sopot culture of the late Neolithic on enclosures which are situated in Slavonia region of eastern Croatia. The enclosures are approximately 150-200 meters in diameter and, sometimes found in pair, and in new research shows rarely combination of three or even four enclosures. The presentation will focus on results of the analysis of satellite imagery and aerial photography, also showing achieved results during the low altitude aerial survey. The satellite imagery and aerial photography data were analyzed to examine any kind of correlation between environmental, archaeological and satellite aerial images data and the results were compared with the results of the field survey that was conducted on Neolithic enclosures.

**Nick Krekelbergh**

***Paleolandscape in the sandy loam area of Flanders (Belgium). Geoarcheological rescue excavation in Roeselare-Vloedstraat***

In the spring and summer of 2015, the “Bureau voor Archeologie, Architectuurhistorie en Cultuurhistorie” (BAAC) performed an archaeological excavation in the municipality of Roeselare (province of West Flanders, Belgium). Prospective research by means of trenches had revealed the presence of traces from prehistoric, Roman and medieval times. The research focused on the archaeological traces of the settlements which were located on the sandy loam of the higher areas. East of these occupation sites, however, was the paleovalley of the “Krommebeek”, a small obsequent river that flows from the steep front of the cuesta of Tielt. In the northern part of Belgium (Flanders), the course of river beds has often been altered in modern and premodern times in order to fit the functions of the landscape. Archaeological research gives the opportunity to shed a light on the natural and traditional landscape, and man’s interaction with it. During the excavation, large profiles were dug and registered in order to reconstruct the original course of the Krommebeek in historical and prehistoric times. It showed that several Holocene channels had flown through the broad channel of a Late Glacial braided river system, before they were filled up with peat and alluvial clay sediments. The finds of hazelnuts, prehistoric pottery and flint tools indicate that they were already visited and exploited during the Mesolithic/Neolithic. Dumps of anthropogenic wooden finds indicate that there was also interaction with the occupation sites nearby in later times.

Large scale excavations are common in the Low Countries. In the fast changing landscape of Flanders and the Netherlands, large parts of the rural areas are being transformed into urbanized and suburbanized landscapes. During this process the traditional landscape is irreversibly transformed, something which is not without impact on the present ecological values and buried cultural heritage that lies underneath. But not only the archaeological traces are sometimes lost, also the geological conditions of the area that is under development are often severely altered. Following the Treaty of Malta, which came into effect in Flanders in 2015, archaeological research is mandatory when there are reasons to assume that cultural heritage will be destroyed during the building activities at the construction site. This offers not only a chance to record traces from past occupation, but also to gather

geological, pedological and paleoecological data that make it possible to reconstruct the old landscapes in which these people lived, and their interactions with it.

#### **Elisa Pruno**

##### ***Modifying landscape: quarries and infrastructures in the Middle Age Mediterranean area***

The quarries for the extraction of building stone are an important key to highlight diachronic changes in the landscape strictly connected with settlements and social and economic activity. Infrastructures linked to quarries are mainly represented by the road network. In this presentation we wish to present some case-studies, highlighting the different intensity of the landscape changes connected to different types of quarries (11th- 14th). The case-studies are related to the Apennines and the Monte Amiata quarries (Italy) and the quarries in the Shawbak region (Jordan). The case-studies in Italy put in light different forms of environmental exploitation in the same period (different types of quarry, for size and form, in Monte Amiata, for example; and different infrastructures, like fluvial or terrestrial roads, in Appennino emiliano) and the case-study in Jordan shows a different exploitation of the same area during the time, strictly linked to different Lordships. The main goal of the paper will be analyze these different cases-studies to propose a possible interpretative model of the quarries like a base system for social activities.

#### **Maciej Waclawik**

##### ***Between heaven and earth – monasteries in the Negev Desert***

In the Jewish culture desert was a very symbolic space. Because of its primeval and crude character, as well as national history, for ancient Jews it was a symbol of the beginning – place, where everything has started. It was related to times of Moses and Jewish Passover from Egypt. Many prophets have also called the Chosen Nation to come back in their relation with God to the very beginning. On the other hand, desert for ancient Jews was also an evil place, where demons were living. These symbolical meanings of desert have been later accepted also by Christian culture. That is the reason why some followers of Jesus of Nazareth have decided to change their lives and go into wilderness. They have wanted to begin their relationship with God and desert, the place of beginning, was perfect for that. On the other hand, they also wanted to conquer evil like their Saviour – inside them and in the world. And once again, desert was perfect to that purpose. Erecting monasteries on the deserts they symbolically defeated demons by organising their area for humans living. By planting seeds and caring them grown they also conquer death and have back to the biblical period of garden of Eden.

What is interesting, in the Negev Desert monks did not focus on their lives and spiritual purposes by praying and working in gardens, but they have also been a part of local society by helping with children education and as local authorities. Monks have shown that their work has no sense if they are only focused on themselves because in Christianity no one can attain salvation alone.

#### **Sergiu Musteata**

##### ***Rock-cut monasteries – original landscape for a specific religious environment. A case of the Republic of Moldova***

The caves are known as safest natural shelters for human communities. In the context of evolution of Christianity, numerous caves became religious spaces, linked especially with monastic activities. The first manifestations of the Christian monasticism were in the eastern Roman provinces. Egypt was a theatre of the asceticism and Anthony (late 3rd c.) was the best known among the so-called Fathers

of the Desert. In 4th c. the archbishop of Caesarea, Basil, founded monastic communities in Cappadocia, which became one of the well-known rock-cut monastic centres in the World. In Europe, monasticism spread later on, inevitably influenced by the Eastern precedents.

At the beginning of monasticism, natural caves were used, but these have gradually been developed by digging into the cliffs of numerous cells and churches. The caves became not merely a hermitage place for hermits, but developed gradually in spiritual centers, where the monks lived and did many religious duties. The phenomenon of religious rock-cut architecture development is widely attested in the Balkans, the Caucasus and the Carpathian regions. Thus, we find its evolution of this type of human settlements, particularly in areas with specific Landscape.

Among rock-cut monasteries in Southeast Europe, the religious complexes are attested in limestone banks of the Dniester and Raut rivers too. The sites from Saharna, Țipova and Old Orhei are the largest and most famous cave complexes in Moldova. The building time of these complexes is not clearly established, but their existence certainly can be framed with medieval state of Moldova. In my presentation I will discuss the rock-cut medieval monasteries from the Republic of Moldova – the role of landscape in developing these communities, infrastructures, social and economic activities. Another debated aspect, will be the public access and the problems of preservation.

### **Julian Rennie**

#### ***Squelch verses Snap, Crackle and Pop: A case study of how different surroundings shaped the work of two New Zealand born artists***

Rosalie Gascoigne (1917 – 1999) and Colin McCahon (1919 – 1987) were both artists and both born in New Zealand. Gascoigne moved to Canberra, Australia in 1943, and gathered flotsam and jetsam of her adopted landscape and used it to shape her response to that countryside. Whilst McCahon stayed in NZ., where, according to his children whilst out on picnics, he was sometimes ‘stopped in his tracks’ by a particular landscape; which he then later transcribed largely via abstract dabs of paint and painted text onto canvas as a record of his cathartic experiences. Author William Least-Heat Moon has talked about how his forefathers experienced landscape through the ‘soles of their feet;’ and in contrast: Edmund Burke developed his written 1757 treatise about The Sublime largely in relation to his observations of light within the landscape. The intent is to unpack the contrasting two milieu of these two New Zealand artists and explore how each has shaped their inhabitant’s responses. This paper argues that Gascoigne engaged in a frugal and tactile approach, often recycling elements direct from her arid surroundings in a fashion similar to John Dewey’s ‘art as experience’ type writings. Whilst McCahon donned his gumboots and wandered off into the damp and rugged New Zealand countryside and sought ‘images afresh’ with his eyes but all the while literary words followed him like a loyal sheepdog. His resulting painterly images including various texts (often from the Bible), hovering over or monumentally set within the painted landscape images seem to express for many New Zealanders’ some real ‘nuances of place.’ Drawing upon both artist’s own words and the writings of other Artists such as Agnes Martin, Mark Rothko and James Turrell; along with authors such as Gaston Bachelard, Juhani Pallasmaa and Sarah Robinson this paper will attempt to tease out some of the contrasting ways as to how landscape can shape an artist’s perception, and mould their aesthetic. This paper’s argues that such contrasting haptic and visual responses may add some layers of meaning for Landscape Architects as they go about their design business of intervening and / or engaging with landscape.

**Pál Raczky, Alexandra Anders**

***The landscapes of the Polgár-Csőszhalom settlement from the 5th millennium BC***

For several reasons the site is special in the Late Neolithic of the Tisza Region. The settlement complex is composed of two structural units, a horizontal settlement and a tell — which is the northernmost settlement mound in Southeast Europe —, surrounded by a multiple palisaded enclosure. The discovery of a previously unknown second enclosure via geophysical survey in 2013 was an important new development in the research of the Csőszhalom site. This feature is located some 200 m south-west of the 'main' tell and its enclosure system but still on the territory of the horizontal settlement. Preliminary research has shown that this feature was in use in the same time as the other part of the settlement. Altogether this means that the interactions between people, things and places may have been much more sophisticated in the vicinity of the Csőszhalom settlement complex than thought before.

In archaeology, interaction between man and his environment is traditionally studied within the framework of the dialectic relationship between human communities and the physical landscape. However, the natural environment is rarely perceived in its totality; instead, communities create various "scapes" representing elements of the landscape affected by their activities (Ingold 2000). These "scapes" are not constant because they change dynamically both in time and space according to the different levels of interaction within and between communities (taskscape). In terms of human subsistence, the most vital elements are represented by the natural resources. Resourcescapes are representations of the natural resources created from the spatial dimensions of their location, the temporality of their accessibility and the social dimensions of their exploitation strategies. The rich and various find material of Polgár-Csőszhalom lead us from the close microregion of Polgár to different distances; e.g. to the Mátra and Tokaj mountains, to the Kraków region and to the Balkan and the Mediterranean.

The presentation will attempt to display the different landscapes, taskscapes and resourcescapes of the settlement complex at Polgár-Csőszhalom.

**Sarvesh Kumar, Rana P. B. Singh**

***Riverfront Cultural Landscape of Ayodhya (India), develop as ancient Hindu Pilgrimage centre***

Purview of cultural landscape recognises the perpetuity between the past and with people living and working on the land today. The Riverfront cultural landscape reflects upon a way of seeing landscapes and associated attributes that emphasizes the interaction between human beings and water body as a natural subsistence after passage in time. The river Sarayu (the Ghaghara) has manifestation of evolutionary story of riverfront sacred city of Ayodhya. Since the ancient days of the Vedas and Puranas, Ayodhya has been a famous place of pilgrimage, salvific quality and holy tradition of Hindu religion, wherein the river Sarayu perceived as a goddess just like the Ganga and many other great rivers of India. Ayodhya is assumed to be the birth place of Lord Rama, the mythological seventh incarnation of Indian God Vishnu. It is evident through literary and archaeological evidence that in the CE twelfth century there were five important Vishnu's temples located one each at Guptar Ghat, Chakratirtha Ghat and Janmabhumi and western and eastern sides of Svargadvara Ghat. Ayodhya records a number of rituals, pilgrimages and important ancient temples, river ghats (stairways and bathing places), holy tanks, holy wells, and holy ponds; those are the representative grandeur of art and landscape design indicating distinctions and phases of the evolution of religio-ritual sacredscapes. Riverfront bathing sites are the common places where every pilgrim performs the variety of rituals that together with the environs converge into ritualsapes. The present paper has de-

scribe the historical, mythological and heritage values of waterfront cultural landscape, ritualsapes, and sacredscapes of Ayodhya.

**Krzysztof Rak, Mateusz Mynarski**

***Archaeological perspective on "Natural and Cultural Sanctuary of the Bandiagara Escarpement"***

The Dogon Country is located on the territory of the present day Republic of Mali in the western part of the continent of Africa. Due to the extremely precious cultural values permanently embedded in the structure of the local environmental landscape, in 1989 it was entered onto the UNESCO World Heritage List. The official entry was made under the name of "Natural and Cultural Sanctuary of the Bandiagara Escarpement" (Sanctuaire naturel et culturel de la falaise de Bandiagara). The name underlines both the cultural input of the Dogon Country in the common global heritage and its natural environmental conditions which have had a great influence on the development and characteristics of the human culture. It was this mutual blending of the influences of the natural environment and the human culture that created this cultural landscape so characteristic for this region. Therefore, it is no surprise that the entry onto the UNESCO list was made on the basis of not one but two criteria which the organisation has in place to assess the most valuable cultural and natural sites around the world. According to criterion V, which refers to historic heritage, the sites which require special international protection are those which present special examples of traditional human settlements, land use, or sea use, representative for a given culture, or human interaction with the environment, in particular, if it has become vulnerable under the impact of irreversible change. Whereas criterion VII, which concerns the environment, states that special protection should be provided for unique natural phenomena or areas of exceptional natural beauty. It is obvious that future wide-scale archaeological exploration projects in the area of the Dogon Country must take into consideration, during each phase of their implementation, the abovementioned special natural conditions where cultures developed which are subject of potential research. In the first part of the speech, the cultural characteristics of the societies living in the area of the rocky cliffs of Bandiagara will be outlined in detail. In the second part of the lecture, possible archaeological methods which will assist us with researching the past of human settlements in this area in the most optimal manner will be presented.

**Łukasz Misk**

***The role of new technologies in the studies on landscape of ancient city. New approach for the concept of urbanization processes in Nea Paphos (Cyprus)***

Nea Paphos played a role of a main administrative and economical center on Cyprus in Hellenistic-Roman period. The center have been a subject of investigations since more than fifty years. During that time knowledge about space organization and development of the city was based mainly on the archeological studies (excavations and surveys). In the recent years, new approach for the reconstruction of the landscape of ancient Paphos have been applied during expeditions conducted by researchers from Jagiellonian University. In the present work three main methods of prospection: remote sensing, geoarcheological and geophysical studies will be presented. Combination of these three disciplines together with the support of theoretical background allow to increase the number of possibilities of interpretation of the research process. As a result of such approach source base for the analysis of space structure, organization of economy or influence of natural environment on development of the city have been already obtained. The complex analysis of gathered data will allow for better organization of the archeological landscape, which is permanent part

of modern Paphos, and protection of the cultural heritage. The heritage, which is all the time endangered by public and private construction works, may be protected only if we know about its existence, and the application of new investigation techniques should allow to expand such knowledge. Thus, complex approach for studies on preserved landscape of the ancient city is crucial not only from the point of view of research process, but also for attempts of perception of this landscape and its protection. The presented results of the studies performed in Paphos consists a good example of such methodology.

### **Joseph Ragsdale**

#### ***Extractive Landscapes: The Quarries of Rome and the Creation of the Eternal City***

Over 2,500 years of continuous cultivation and production of the landscape in and around Rome offers ripe territory to research, document and reveal the processes, forms and materials that have built the Eternal City. Within the walls of the city, an amazing conglomerate of vernacular and imported geologies is reflected in the fissured Colosseum walls, the tuff bases of pagan temples, and the rough, cobbled streets. These tectonic layers also reflect a source landscape of a geologic and cultural context - the subtractive, modern travertine quarries of Tivoli, the hewn tuff caverns of the Roman Campagna and the fractured basalt pits of ancient lava flows along the Appia Antica. Outside of the city center's defensive walls and beyond the sprawling 'periferia' (suburbs) lie landscapes that reveal the volcanic and material origins of the Eternal City.

To understand Rome, we must also understand the influence of the volcanic landscape of the Roman Campagna. This paper will present the results of a multifaceted research project that has examined the over and under looked source landscape of the Eternal City. Results of the study will offer insight into how these landscapes and resources helped shape the pattern of Rome's development over time. Using research, field surveys, mapping, analysis and photography, the project reveals unique cultural processes that have shaped the land around Rome and intersected with the volcanic origins of the broader landscape. The study reveals eight unique stone types utilized within the city's urban core as primary building materials throughout the ages and the reflections of eight unique landscapes located within 15mi/25km of the city center. The study reveals the quarries and communities as unique cultural landscapes – ones that reveal rich intersections among history, ecology, culture and technology. The conclusion of this paper lays out an argument and program for the promotion and protection of these source landscapes in order to increase our understanding of Rome's development over time and to reflect upon our contemporary interactions and relationships with the landscape.

### **James Moir**

#### ***Scotland, Scottishness and Wilderness***

This paper considers the ways in which Scotland is perceived as a landscape and how this has shaped representations of Scottishness. This is particularly apparent in the post-Jacobite Highlandisation of Scottish culture; a romanticised view of the wilderness and its people. Mythologies surrounding buns, Burns, Balmoral and Bonnie Prince Charlie and infused with images of Highland heather glens, deep lochs, wild deer and remoteness from urban living and civilisation. These representations of Scotland's landscapes are inter-twined with notion of Scotland's culture and its people; a wild people, now tamed like the land itself but nonetheless moulded by their geography. However, while these kind of images are useful for tourist marketing purposes, the most sublime example of this being Loch Ness monster, it is nonetheless an ideological façade. The paper argues that Scottishness

as a characteristic national trait is pegged to the distinctiveness of 'Scot-land'. This can manifest itself in the belief that Scottishness is as timeless as the land itself and can hinder the adoption more modern and perhaps productive representations.

**Maria Shulgina, Alexander Zaraychenko**

***Historical Landscapes of Monastic Settlements on the Territory of the Onega Peninsula: Peculiarities of Investigation and Preservation***

The Onega Peninsula is located in the northwest of Russia in the southern part of the White Sea. Since the XI century people of Novgorod land inhabited river creeks, where such branches as salt production, pearling and fishing were developed. In the XVI–XVIII centuries fiefdoms of Solovetsky monastery were organized on the coastal and island areas of the White Sea.

The traditions of rational nature care are reflected in the historic landscape of monastic settlements. As the complex historical and archaeological research demonstrated, the temple ensemble was the core of rural settlements. The landscapes of monastic settlements on the coast of the White Sea were characterized by their diversity and utility. Among its integral elements there were quays, fences, roads and pavings, cemeteries, fishery places, household services (saltworks, stables, brickyards, stockyards). The systems of hydraulic structures (wells, quays, drainage grooves, drains, canals, water mills) made up a separate group among the landscape elements.

In the Soviet period the churches on the territory of the White Sea, as well as many Orthodox monasteries of the whole territory of Russia, suffered from the policy of atheism. The churches, deprived of their designated purpose were destroyed or adapted for utility needs. As a result, the sacred landscapes that had been scenic before, were deteriorated without their system-forming elements, and then desolation affected villages on the shore of the White Sea in general.

Nowadays the remnants of different elements of landscapes can be found only during the detailed archaeological investigation. Archaeological expedition of the Northern (Arctic) Federal University conducts comprehensive studies of the monastic settlements on the coast of the White Sea. The experience of a series of studies gave the opportunity to formulate the methodology of landscape archaeology of coastal and island territories. The analysis of the records, maps and illustrative data combined with the archaeological and geomorphologic studies allows to obtain productive results in the reconstruction of landscapes. The data of visual inspection of landscapes, taken by the unmanned aerial vehicle (drone) on a height of 500 m, are particularly informative.

Landscapes of the monastic settlements on the coast of the White Sea are in need of conservation and restoration. Among the factors accelerating the destruction of landscape elements we can mention rainfalls, coastline changes, anthropogenic activities. Remote location and absence of roads make it difficult for the specialists to come there. Materials of archaeological researches are intended to promote reconstruction and museumification of endangered landscapes.

**Grzegorz Bąk-Pryc**

***Ancient rock outcrops in the landscape of the Eastern and Western Deserts in Egypt***

Egypt, the cradle of one of the major ancient civilizations, inspired interest and caused admiration among ancient writers and chroniclers. As Herodotus put it: "Egypt is the gift of the Nile". That phrase best describes the significance of the only river which divides the country in half. The picturesque, luxuriant and green Nile Valley borders on its both sides the difficult and inhospitable area of the Eastern and Western Deserts. The rocky hills arising from the sand became the source of very important material used by ancient Egyptians in architecture and art. Various types of rock were ap-

plied both in construction and manufacture of items of everyday use: from light and transparent calcite and travertine, pastel-tinted limestone, green greywacke, red agate, blue lapis lazuli up to black basalt and other. The process of obtaining the stone material was a complex logistic undertaking. The places where the material was sourced from were located even hundreds of kilometres from the nearest water and food supplies. They were sited in the desert areas covered with rocky hill chains and cut by networks of wadis, i.e. valleys along which water would flow after heavy periodic rains. The inhospitable landscape and difficult access to places from which the highest quality material was sourced made the tiniest objects produced from it exceptionally valuable.

The aim of the lecture will be to present the results of a field survey conducted under the Ancient Stone Quarries Project in 2012, in well-known locations from which different types of rock were obtained during the time of the Egyptian civilization and in present-day quarries where rocks used in architecture, among others, are extracted.

### **Marta Niepytalska**

#### ***An Environmental History of California's Salton Sea***

The Salton Sea is the largest body of water in California. It was created in 1905 as a result of a breach in the Colorado River. This man-made lake underwent a series of curious transformations and today, with its ecosystem on the verge of collapse, it remains a question mark on the American map.

In spite of its vibrant history, the Salton Sea is surrounded by an academic silence. My goal is to write an eco-biography of the Salton Sea – that is, to provide a detailed account of its life.

In this study, I will identify and examine cultural and ecological transformations of the Salton Sea.

Extending beyond the Salton Sea itself, my findings will demonstrate how human actors deal with unforeseeable dynamics of ecosystems. I will argue that cultural landscape transformations of the American West have been a combination of profit-seeking rapid interventions followed by long periods of oblivion and denial.

The Salton Sea is not one but many landscapes. In the very beginning it was a dump, gathering irrigation waters that drained the soil of the Imperial Valley. With time, it became a place of leisure for visitors from the neighboring cities of Los Angeles and San Diego, who used it for sailing and fishing and who introduced new fish species to its waters. The artificially created ecosystem of the Salton Sea collapsed unexpectedly in the 1950s. Since then, it has undergone a series of self-restoration and of further catastrophes, remaining hazardous but strangely productive at the same time.

By late 1960s, visitors who once were seeking leisure and wildlife at the Salton Sea, left this “miracle in the desert” behind. Today, it is home to one of the poorest communities in California. Water, initially the treasure of the Salton Sea, became trash due to hyper salinity and evaporation.

Environmental disasters turned the region into a wasteland and today, the Salton Sea is a manifestation of the American Dream turning into a nightmare. Understanding that the ecological landscape transformations of the Salton Sea are inseparable from the cultural ones, I will develop and apply a research method of eco-cultural transformation in this study. I will argue that this remote desert landscape is an extension of the suburban California and I will picture it as an anthropogenic landscape, where the mindset of the Gold Rush still echoes through the landscape.

### **Katarzyna Łakomy**

#### ***Searching for identity in old landscapes - archival photographs***

Changes in landscape are a constant process, changing in time and character. This process can be positive or negative and can occur homogeneously or chaotically. Modern problems with space and

landscape are a result of multiple anthropogenic factors - mostly political, cultural, economic and urban transformations. Recognizing and deciphering them is the main problem of modern landscape activities. Archival plans and maps are the main source of knowledge about space transformations, yet they are completed by photography, especially popular since the 1950s. Both documentary photos and family ones, keepsakes, may become a very important source of information about the shape of historical landscapes, their compositions, characteristic elements and local traditions of their inhabitants. Archival photography, useful for historians, ethnographers, geographers and landscape architects, allows for determining the initial shape of the landscape and diagnosing the directions of its transformations.

Therefore, this paper is aimed at bringing attention to the usefulness of archival photography in the revitalisation process of degraded areas through seeking characteristic features of space that in the process of many years of transformations have become blurred and which might again become an element creating the identity of the place.

Analyses will be carried out based on the area of Upper Silesia which dynamically developed in the 19th c. when its landscapes were full of contrasts, surprising industrial structures, areas inhabited by various social and ethnic groups. Hence it is no surprise that there are so many contemporary photographers interested in this region, photographs of new buildings in local newspapers or historical cities in guidebooks for people eager to learn about this interesting land. From the second half of the 19th century and the beginning of the 20th there are a few interesting albums preserved, presenting new cities, factories, but also country landscapes, folk customs and traditions. Comparative research will focus mainly on the ones included in the collections of Silesian Library and Silesian Museum.

**Karol Dzięgielewski**

***Tracing the onset of the anthropocene near Cracow. Diachronic changes in landuse at Modlnica (southern Poland) reveal early human impact***

Large-scale excavations on a loess hill in Modlnica near Cracow allowed for a detailed insight into the occupation history over the last 7.5 thousand years. A major shift in the landuse pattern observed after 300 B.C. (discontinuation of residential function in favour of economic and cult uses) is believed to be the result of earlier, long-lasting human-induced modifications (deforestation, erosion and desiccation) of the hill. This local scenario became a starting point to express some general observations on the 'acceleration' of the human impact at the beginnings of the Iron Age in temperate Europe (800 B.C. – A.D. 100). More or less from this period on, the anthropogenic pressure increased and became large-scale and permanent. In the ongoing attempts to position the onset of a new, human-dominated geological epoch (the Anthropocene) in the timescale, broad B.C./A.D. boundary should be considered as one of the key steps towards determining a stratigraphically distinct 'Anthropocene' (mid-20th century). This view is compatible with the notion of the long-term and step-wise character of this 'onset' (the period of 'Palaeoanthropocene' sensu Foley et al. 2011).

**Justyna Liro, Izabela Soljan**

***From the industrial landscape to the one of religious nature - transformations of the "White Seas" area in the 9th district of Łagiewniki-Borek Fałęcki in Krakow***

The aim of this study is to present the transformations of the area of "White Seas" in Kraków's Łagiewniki-Borek Fałęcki district in the last one hundred years.

The discovery of deposits of shale clays and gypsum in the 19<sup>th</sup> century resulted in the development of industry in the village of Łagiewniki, which had been mainly agricultural until then. In 1906, the

B&W Liban Factory of Chemicals in Podgórz launched the production of soda. The "Solvay" Soda Plant in Krakow operated until the 1990s and was dominant in the landscape of this part of the city. It was officially closed in 1990.

Over time, the area, which had been extremely degraded by industrial activity, became subject to reclamation, transformation and development with functions far from religious ones, and in 2007 part of the area owned by the city was handed over for the construction of the emerging St. John Paul II Centre.

A new pilgrimage centre, i.e. the Shrine of St. John Paul II, which has been operating within St. John Paul II Centre since 2012, was located on the reclaimed brownfields.

In this way, a new and important religious pilgrimage centre began to develop far away from the centre of Krakow. It is a unique project, unprecedented in other pilgrimage centres. Along with the Shrine of the Divine Mercy, the Centre occupies several hectares of land and, taking into account the adjacent urban areas, where post-soda waste from the former Solvay used to be dumped, and where a large park with an area of approx. 10 hectares is expected to be established, it is going to be one of the largest in the world layouts with the dominant religious function.

The establishment of this centre was primarily determined by historical and religious conditions. Additionally, urban policy guidelines for the development and valorization of industrial areas are also important in the case of St. John Paul II Centre. Over three decades, the industrial and post-industrial landscape in the eastern part of the former Solvay factory has changed its nature and function, and along with the Shrine of the Divine Mercy it forms a multi-purpose sacred area.

Particular attention was paid in the study to the factors and conditions of changes occurring in the use of this space, and the consequences and threats stemming from them were highlighted.

**Diana Dushkova, Matteo Proto**

***Interpreting the cultural landscape: cases from Germany, Italy and Russia***

This paper presents the results from a research project investigating the cultural landscape as social construction and its perception in every-day life in German, Italian and Russian cities. It has a special focus on dynamics, actors, and cultural values around landscapes of Berlin, Venice and Arkhangelsk. Particular attention is given to the broad definition of the term "cultural landscape", analyzing this phenomenon from its origin and development in the Russian, German and Italian geographical schools to its meaning in ordinary life of citizens. This complex approach to the study of cultural landscape perception and to landscape as a construction allows us to better understand the interactions between landscape and its different actors such as citizens, governmental institutions, and private companies. Inhabitants and economic actors shape on the one hand this landscape, and on the other hand are influenced by these transformations. The case studies demonstrate the dynamic relationship between patterns in the landscape narrative and patterns in the real (built) environment of cities. Both the narrative and physical landscape patterns have been shaped by a local process of constant comparison and contrast with well-known symbols (landmarks of regions). In particular, the paper illustrates how the landscape will be interpreted in the local dialogue of place, especially in the perceptions of its residents, tourists and local experts as reported in semi-structured interviews and participatory observations. The cultural landscape of today's Berlin, Venice and Arkhangelsk represents a bridge between the history of the cities and present development and at the same time acts as a symbol of economic and cultural power on national and international levels. As a memory and place of belonging, landscape is not only what we see, but also a way of seeing, e.g. how we interpret

it with our mind. In this way, paper explores also some of the associated ideas of landscape as social construction in reflections to people of different cultural, natural and social background.

**Silva Sabkova**

***The Lower Danube Limes in Bulgaria: development, degradation, preservation***

The term Danube Limes refers to the fortified frontier of the Roman Empire along the river Danube. Nowadays it is regarded as a complex, multinational cultural heritage site, which also makes part of a larger system: Frontiers of the Roman Empire (FRE), multinational UNESCO World Heritage Site since 2005.

The Danube Limes is a system composed of three main elements: defensive constructions, infrastructure, landscape. It is the landscape that defines the character of the manmade system of structures; on their hand, these structures transform the surroundings, therefore they are strongly connected and form a cultural landscape. The process of preservation must regard simultaneously all those 3 elements in order to obtain an integral and homogeneous result. A particular challenge when dealing with the Danube Limes it is that, unlike other sections of the FRE (the Hadrian's wall, the Antonine's wall and the Upper Raetian Limes), there is no artificially constructed barrier that defines the boundary and forms a clearly recognizable unifying element. This fact renders difficult the direct perception and understanding of the integrity of the system and the cultural landscape that it forms. Therefore the preservation, enhancement or reestablishment of these more elusive, yet real relationships between the elements of the Danube limes system must be considered with special care.

The present PhD research by arch. Silva Sabkova (Politecnico di Milano), supervised by Dr. Gergana Kabakchieva (NAIM- BAS), is focused on examination of the relations between the individual archaeological sites, the main infrastructure and the landscape in the case of the Roman Danube Limes in Bulgaria (consisted of more than 70 fortification structures only on the waterfront), and the perspectives for the preservation or reestablishment of these connections. Understanding the character of this partially lost cultural landscape is based on the theoretical reconstruction of the spatial and chronological development of the Danube limes and on the direct observations on the spatial disposition of the sites, visual and other connections between the key elements of the system. The final aim of the research is to provide a set of guidelines for future territorial planning and architectural design projects, that would guarantee the preservation and the enhancement of these relations that bind the elements in a perceptible way and define them as a unitary system and thus – as a cultural landscape.

**Rachael, Byrne**

***Clothing the irish landscape. A case study of tenant tree planting in Co. Mayo 1765 to 1910***

This paper centres on the legacy imparted upon the land by tenants engaged in state sponsored tree planting in the modern period. The study seeks to ascertain the relationship of the tenant agrarian landholder to the planting of trees, through a state-incentivised tree planting scheme in the eighteenth and nineteenth centuries. For the tenant population the state initially espoused a coercive approach to induce tree planting from 1698. A more benevolent tree planting scheme evolved and was implemented in 1765. This created a registry of trees for tenants, which is the principal source reviewed here. This register contains a wealth of material on the tenant population, tree species, number of trees planted, location and the landlord involved. Drawing on work by the woodland his-

torian Eileen McCracken and geographers Smyth and Tomlinson, the research seeks to extend the focus of their research to elucidate the cultural significance of this documentary evidence. This paper examines how landscape reconstruction from documentary evidence can enrich our understanding of the rural Irish Landscape but also the intersection of state and local actors who shaped it.

**Upali de Silva Jayawardena**

***Changing of natural geomorphology with the increase of development in Sri Lanka***

Sri Lanka is an Island in the Indian Ocean. The total land area measures 65,610 square kilometers. Geologically nine tenth of Sri Lanka is made up of high grade metamorphic rocks of Precambrian age. These are very hard and strong and consist with various geological structures. The land surface of Sri Lanka has been subjected to a prolonged period of weathering and erosion under different climatic conditions and shows most of the various natural geomorphological features. Physiographically Sri Lanka consists as a central mountainous mass surrounded by a low, flat plain on all sides and extending to the sea. Sri Lanka can be divided into three main morphological regions as The Coastal Lowlands (consist with flat lands and isolated inselbergs from 0-270m MSL), The Uplands (consist with ridge and valley topography and highly dissected plateaus with well-developed steep scarp slopes from 270m-1060m MSL) and The Highlands (consist with well high planes and plateaus rimmed by mountain peaks and ridges at the center of the Island above 1060m MSL). In addition there are various recent sedimentary deposits with various slope angles at different levels. Rainfall divides Sri Lanka into Wet and Dry Zones. The radial drainage that carries surface water down from the high watersheds includes 103 distinct natural river basins that cover over 90% of the Island. No groundwater seepages from the other countries as an Island.

During Sri Lanka's ancient civilization in the first millennium and before it, major population centers were in the Dry Zone areas of the lower basins. The hill country mountainous watersheds were largely undisturbed. Under colonial rule this problem drastically changed. The hill country forests were progressively denuded for plantation agriculture. All major ancient reservoirs have now been renovated for irrigated agriculture development. Accelerated development programs were initiated in this country about 35 years ago. The large scale hydropower and irrigation projects, construction of buildings, settlement of people in different areas, construction of roads and agricultural projects were some of those. Most of the undisturbed mountains and hill slopes were destroyed.

The landslide incidents have been increased drastically within last 25 years parallel to the development programs and human activities. Therefore the rate of erosion and reduction of land surface in the mountainous areas are much higher than the earlier. Now the landscapes around the hilly urban areas show a few natural features due to the construction of retaining walls and other ground stabilizing structures.

**Jan Bulas; Michał Kasiński; Ronny Schmidt; Piotr Wroniecki**

***Multidisciplinary, archaeological, landscape studies in the vicinity of the modern Michałowice village, Lesser Poland Upland***

The use of complementary scientific methods allows us to gain a more holistic view of the past. Through this poster we aim to present a case study aimed at understanding the diachronic landscape changes of an archaeological site, studied since 2012, in the broader context of past human activity in the micro-region. The poster will present a kind of „history” of this place, located on the ground of the modern Michałowice village.

The first moment when the natural landscape of this region was substantially influenced by human culture was the Neolithic. Deforestation and agricultural activity accelerated erosion processes and resulted in the transformation of the undulating environment of the region. Even though there are no direct traces of settlement activities from the Neolithic on the presented site, we can observe how this revolution made its mark on the landscape of the region. The few flint tools found on the site are probably connected with erosion processes as these finds were located in colluvial sediments deep beneath younger archaeological stratigraphic units. During the Iron Age Michałowice was settled by people connected with the La Tène culture and subsequently habituated by representatives of the Przeworsk Culture. They adopted elements of the landscape for their distinct purposes. A nearby river valley was a convenient source of water used in varied production processes that they undertook. Excavations revealed evidence of resource exploitation for the purpose of lime production. Following the departure of Przeworsk culture peoples, the area was not settled again until the medieval period, although it was used in other ways as archaeological and historical evidence demonstrates. In the early medieval period the site was in the vicinity of one of the largest hillforts in Poland (located in the neighbouring village of Stradów). Aerial photography shows evidence of a possible road connection that lead to the fortification. The site was still used after the hillfort lost its significance. Analysis of archival maps and historical sources shows that at least in 18th or in the beginning of the 19th century a fishing pond and a mill functioned in the area. Available LiDAR datasets reveal that in order to build the mill and to swell the water, part of the river valley was levelled. The mill was deconstructed around the beginning of the 20th century, the pond dried up probably shortly before. Currently the fields are used in an agricultural manner partly as pastures and arable land. The poster will present the antiquity of a seemingly unsubstantial archaeological site, a small piece of landscape studied with the use of interdisciplinary approaches.

**Maria Łanczont, Przemysław Mroczek, Teresa Madeyska, Maryna Komar, Beata Hołub, Krzysztof Sobczyk, Jarosław Wilczyński**

***Palaeolandscapes of the Vistula River Valley in the Gravettian – a case study: Jaksice II and Kraków Spadzista sites***

Palaeolandscapes of Vistula River valley and its surroundings in the Gravettian (MIS3/MIS2) are the subject of archaeological and environmental studies. The research is conducted in two open-air sites (24-20 ka BP) distanced of 45 km from each other: Kraków Spadzista (Kraków Gate, Sowiniec Horst) and Jaksice II (Proszowice Plateau - Vistula Lowland Valley). Nowadays it is a zone of loess landscapes with numerous erosion and denudation forms conditioned by strong anthropopressure. Gravettian horizons are developed as a buried intra- (Kraków Spadzista) or subloessic layers (Jaksice II) covered by younger loess. The overlaying loess is also the conserving layer for the fossil landscape formed during the camp activity.

The sites are located within an important ecological corridor of supra-regional importance (Vistula R. valley) and characterized by the different geomorphological position and lithology of surface rocks. Jaksice II site is situated on the Pleniglacial, alluvial, silty-sandy terrace of the Vistula R., which during the Gravettian had low-lying position relative to the bottom of valley with the braided river channel system. Nowadays, the terrace is preserved in the form of a narrow, discontinuous strip. The archaeological layer is correlated with the A horizon of interstadial brown soil. Soil type indicates good drainage conditions and low groundwater level. In the vicinity was probably dominant typical dry periglacial landscape with mosaic steppe plant cover and groups of trees. The structure of archaeological layer indicates the redeposition of artefacts, which implies that the camp was likely located

slightly higher, i.e. at the foot of slope, in the outlet of dry valley system which was local ecological corridor between two valleys of Vistula and Szreniawa Rivers. During the Gravettian the catchment of these small valleys had erosion-denudational relief, milder than modern, formed on sandy pre-Quaternary sediments and older loess.

In the Kraków Spadzista site, the floor layer is composed of Pleistocene, sandy-silty series with palaeosols covering the karstified limestones. Thickness of the whole series is spatially varied from 0 to 6 m. This variability shows that the relief of Sowinec during the Gravettian was different from the present one. The camp occupied a local depression within a flat slope additionally limited by high and steep tectonic edge. Depending on the relief various economic zones were distinguished inside the camp. The soil cover was developed as the gleysols and the plant cover had the character of periglacial mosaic of tundra and steppe with groups of trees (mainly coniferous).

**Maria Łanczont, Teresa Madeyska, Paweł Valde-Nowak, Beata Hołub, Maryna Komar, Przemysław Mroczek, Anna Kraszewska**

***Podhale landscape in Allerød - view from the Obłazowa Rock over the Nowa Biała 1 open site***

Palaeolandscapes of Vistula River valley and its surroundings in the Gravettian (MIS3/MIS2) are the subject. The Podhale historical-geographical region is located in the eastern part of the Orawa- Nowy Targ Basin. Flysch basement of the basin is covered by the Neogene lacustrine deposits and the fluvio-glacial gravelly-sandy fans (genetically related to the Pleistocene glaciations of the Tatra Mountains). An important element of the Podhale relief are isolated, steep, limestone rocks - fragments of the Pieniny Klippen Belt. Between two of them (Obłazowa and Kramnica) the Białka River formed a picturesque gorge. The Obłazowa Rock (670 m a.s.l., 53 m over the river level) is a very interesting object. A cave inside it contains the Middle and Upper Palaeolithic multi-layer site, and at its western foot there is a unique open site of Federmesser Culture from the Allerød period (Nowa Biała 1).

In the Late Glacial the relief near the Obłazowa Rock was similar to the modern one, and the Białka River gorge already existed. Erosion-accumulation processes involved then mainly the formation of alluvial fans downstream from the gorge, and slope processes – talus at the foot of rocks. The view from the Obłazowa top to the south includes the eastern part of the Spiš-Gubałówka Foothills (about 1000 m a.s.l.) and reaches the Tatra Mountains. To the north it includes the Gorce Mountains (up to 1390 m high). The Allerød vegetation was reconstructed based on the pollen analysis of mineral deposits from the Nowa Biała 1 site, supplemented with the data obtained for some mires of the Podhale region, and indirectly – on the composition of fossil malacocoenoses. These data indicated that this area was covered by mixed pine-spruce forests. Forest line occurred probably at 1150 – 1200 m a.s.l. so the whole basin was within the forest zone. Local, mosaic diversity of the Allerød vegetation near the Obłazowa Rock resulted from the varying topoclimatic conditions due to diversified relief. The second cause of vegetation diversity was the varying lithology of basement (deposits of fluvio-glacial fans and river terraces, near-channel gravel-banks, limestones, flysch). Fir grew on wet habitats in forests, and valley bottoms were covered by meadow communities with alder and willows. Mires occurred on waterlogged habitats, and steppe communities – on dry habitats of rocky hills. As a result, the Allerød vegetation near the Obłazowa Rock was diversified, which in turn conditioned the abundance of game. The Białka River gave the possibility of easy fishing. This biodiversity increased the attractiveness of this place for the Federmesser hunters.

**Jerzy Czerniec, Krystian Koziół, Krzysztof Misiewicz**

***Cultural landscape. Geomorphometric studies in the Chełmno Land***

The Chełmno Land district is one of the regions of Poland where the presence of rich and well organized prehistoric settlements dated from the Mesolithic to the early Middle Ages times have been recognized by the project The Archaeological Record of Poland (ARP). These facts predispose the area mentioned above for the examinations based on the application of modern noninvasive surveys and analytical methods. For the Chełmno Land geo-spatial system of inventorying results of the Archaeological Record of Poland has been recently prepared in the project "Geospatial system of inventorying of ARP objects on the area of Chełmno Land." The digital map prepared for this region of Poland with effective explicit localization of geo-referenced archaeological sites with determination of its possible extent was attached to the base. The GIS database system contains 6500 sites with their exact location. The query and analysis of sources were executed for that's date's by using the Web application data filtering by category: location, chronology, site area. In results of these selection the digital map's has been generated, for the representative group of the site's. Then all vector and raster maps resulting from the study and generated from pre-built packages of spatial data have been integrated in one system. Further, processing of data has been based on the application of analysis: Risk of destruction, Neighborhood of water, Slope Analysis, Analysis of exposure and Landform analysis. The expected results of the project can greatly expand the range of questions posed in the case of studies on the reconstruction of the prehistoric settlements. They allow, not only to obtain more modern documentation of archaeological sites, but also enable reconstruction of their position in the wider context of the archaeological landscape. It is required a number of labor-intensive studies related to the necessity of analysis of different types of sources including maps and in not always of the highest quality topographical sketches. Gathering all information on the environmental context of archaeological sites combined with data on found on the surface in the single database, but also in the course of the archeological research of archaeological materials, makes the work on comprehensive analyzes of settlement contexts much easier.

**Negin Jahed**

***Cultural Impact of Persian Garden Structure on Persian Garden Carpet***

This paper intends to study the cultural and environmental fundamentals of the Iranian gardens before and after Islam. A set of beliefs and religious values that not only have affected Persian art and landscape, but also have been tied with all aspects of their daily life. since the beginning of the Persian art history, Persian Carpet as a daily use or as an antique decorative object has been more enthusiastic to reflect the cultural and religious values within its stencils. comparisons of similarities between Persian gardening formal elements and motifs of Persian carpets show that the most effective factors of Persian landscape on Persian carpet patterns are square geometry, Mandela figures and he Chahar Bagh (the Four Garden) pattern. The first part of the article refers to some of the most important aspects and basic principles of Persian Gardening. The second part of the paper constitutes a general comparison of the formal elements of Persian Gardens and Persian Garden Carpets throughout the different eras (before and after Islam). In this approach, the following questions configures the framework of the study. How these characteristics are manifested as the stencils of a Persian carpet? Which basics or elements of Persian landscape have been used as carpet motifs? Is there any logic relevance and integration between their gardens, which is known a walled paradise and their carpets as a small woven paradise?

**Maria Dankowska, Magdalena Nowak, Miłosz Łukomski**

***The archeological heritage in the urban jungle - case study, Lodz***

The archaeological heritage is the oldest manifestation of human activity that creates historically shaped space with natural factors. Its value, which forms the identity of humanity cannot be overestimated, but it is a legacy difficult to see as it is usually hidden under the ground. How to effectively protect such a fragile and difficult to identify resource?

As part of the work on a new strategic document of the city - the study of the conditions and development approaches of Lodz urban planning, one of the major issues which has been diagnosed are the traces of settlement from various prehistoric eras and from different periods of the modern city development. An original method for the analysis of the source data has been developed. On this basis and as a result of cooperation between municipal urban planning office and voivodship conservational services, and in collaboration with the experts, it was possible to diagnose the landscapes and the archaeological heritage. This action resulted in developing a proposal for protection arrangements. The planning decisions in this area complement the tools of conservational protection and are an example of a common concern for multithreaded cultural landscape of our city.

**Sylwia Rudyk**

***Scenery of Reda delta and its concealed past***

Ujściowe odcinki rzek, tak jak i krajobrazy dolin rzecznych, jest to problematyka stale aktualna w badaniach, studiach i analizach. Interesuje ona nie tylko geografów, ale także historyków i przedstawicieli nauk humanistycznych, medycznych czy rolniczych. Dostępne obszernie piśmiennictwo o deltach poświęcone jest wielu bardzo różnym aspektom problematyki badawczej, a znacząco wpływa na jej wagę interpretacja zapisów zmian sieci hydrograficznej oraz śladów działalności człowieka pozostawionych na przestrzeni dziejów. Tylko interdyscyplinarne podejście umożliwi poprawną interpretację materiałów źródłowych i krytyczny do nich stosunek. Materiały kartograficzne, graficzne, fotograficzne, tabelaryczne i opisowe dotyczące badanego wycinka środowiska geograficznego stanowią formę zapisu, która bliska jest każdej z tych dziedzin. Dane ze źródeł kartograficznych i opisowych mogą zostać przetworzone w postaci geoinformacji, a te mogą stanowić nową formę postrzegania poznawczo-porównawczego przestrzeni geograficznej i przedstawione w postaci mapy.

Podejście badawcze bazuje na zasadzie uniformitaryzmu, której autorem jest James Hutton. Zakłada ona, że na podstawie współczesnych obserwacji można odtwarzać procesy, które w przestrzeni geograficznej zachodziły dawniej. Ideę tę, znaną jako zasadę aktualizmu geologicznego, rozwinął Charles Lyell w Principles of Geology. Wyraża się ona w haśle "teraźniejszość kluczem do przeszłości". W rozumieniu tej teorii współczesny stan środowiska geograficznego jest obrazem jego zmian od rozpoczęcia sedymentacji aluwii poprzez dalszy naturalny rozwój oraz zmian wywołanych działalnością człowieka, który na przestrzeni dziejów swoją działalnością gospodarczą przekształcał to środowisko. Zasięg stałego lądu w Pradolinie Redy można odtworzyć na podstawie mapy geomorfologicznej i znalezisk archeologicznych. Przebywająca nad Zatoką Pucką ludność pozostawiła po sobie ślady znajdowane jako pozostałości osad lokalizowanych na krawędzi kępy wysoczyznowych w bezpośrednim sąsiedztwie wody.

Bazując na zapisach archeologicznych i porównując je z okresami rozwoju Bałtyku można wnioskować, że na tym obszarze już około 8500 BP pojawiły się pierwsze kultury osadnicze prowadzące gospodarkę typowo mezolityczną, czyli łowiecko-zbieracko-rybołowiecką. W tym czasie pojawiły się więc dogodne warunki bytu mogące wynikać z sąsiedztwa akwenu wodnego u ujścia Redy.

Na tle powyższego, korzystając z modelu cyfrowego obszaru ujściowego Redy prześlędzono, czy rozwój osadnictwa na tym obszarze udokumentowany zapisami archeologicznymi koreluje z rozwojem delty i tym samym z przebiegiem linii brzegowej występującego na jej przedpolu zbiornika. Współczesny obraz sieci rzecznej w Pradolinie Redy powstał w wyniku silnej ingerencji człowieka w przebudowę naturalnego układu drenażu, którego celem było pozyskanie użytków rolnych oraz ich ochrona przed powodzią i podtopieniami. Z interpretacji materiału kartograficznego, wynika, że cieki drenujące ten obszar wykorzystywały i obecnie wykorzystują koryta utworzone przez wcześniejsze rzeki.

**Iga Solecka, Hanna Olczyk**

***Approach to preservaion of historic parks in 20'th century***

This paper talks about shaping the notion of preservation, legislative documents about preservation and describes different approaches to preservation of historic parks in 20'th century. Enumerates main characters who took part in the process of preservation of historical parks. In Poland after 2nd World War the pioneer in this field was Gerard Ciołek, and his followers Longin Majdecki and Janusz Bogdanowski. Janusz Bogdanowski presented holistic approach to landscape preservation, which is very similar to the approach of European Landscape Convention. This paper presents main resolutions of Florence Charter, which is an international document about protection, preservation and exploitation of historical gardens in a complex way. Publication shortly describes functions of historical parks before and after 2'nd World War to explain what kind of difficulties can appear in preservation of those areas, shows present tendencies related to preservation of historical parks and opens discussion about protection possibilities.

**Müge Cengiz, Mine Tanaç Zeren**

***Archaeological Landscape: Yassitepe Tumulus***

Yassitepe Tumulus which is located in Bornova Plain, İzmir-Turkey, is an Early Bronze Age settlement dated B.C. 3000-2800. Some proposals to arrange this area are brought forward for protection of this archaeological site located in center of the city and explaining and exhibiting the prehistorical elements of the area in an inviting and distinct manner. In this context; axis are specified for approach to area primarily and landscape areas which contact with city and the archaeological area are designed. A preservation shelter is designed to protect archaeological remains in Yassitepe Tumulus and also a walking platform proposal is brought forward for providing circulation of visitors. At the same time; archaeological remains belonging to early bronze age houses are reconstructed for experiencing houses and life in early bronze age by visitors. Main aim for this archaeological area is to become an important focus in the city center and also a bridge from past to present is being built with proposals of arrangements and landscape designs for protecting and exhibiting the archaeological site. In poster presentation; proposals of arrangements and landscape designs in Yassitepe Tumulus will be presented. \*Research Assistant. Müge CENGİZ , Graduate Student in Dokuz Eylül University, Department of Architecture \*Associate Professor Dr. Mine TANAÇ ZEREN, Dokuz Eylül University, Department of Architecture

**Aylin Ozodabas**

***Bulak Houses***

Safranbolu is wealthy towns in Turkey in terms of culture and history. Safranbolu is a town in Karabük in the Black Sea Region in Turkey. It is distance to Black sea is nearly 60km. Bulak is a village

which is township of Safranbolu. Historic houses located in Bulak village also were carrying the architecture of Safranbolu houses. These houses that give importance to the city were built in the 18th and 19th centuries. Safranbolu houses that were made with great architectural knowledge reflect history of the Turkish society, economy, culture and lifestyle. It formed in a centuries-old process that has brought home to the present Turkish city culture. On 17 December 1994 was taken by the UNESCO world cultural heritage list. There are about 2.000 traditional Turkish houses in Safranbolu. Almost all of them are under legal protection including on Bulak village houses. In this study, some of the historic houses in Bulak village layout and parcel number were specified, it were photographed facades and architectural detail. Front views, sections and floor plans of the building survey drawings were made; architectural details and originality cases were investigated. Also the materials used are given in brief. Survey drawings and photographs taken in the common source of information for the damaged regions restoration projects to be carried out taking into account the future has been created.

### **SESSION 3 - PROBLEMS OF PROTECTION & LANDSCAPE SHARING**

**Agata Zachariasz**

***Research, planning and designing of landscape at Krakow Landscape Architecture School***

The paper presents the achievements of the Krakow Landscape Architecture School. Methodology and research, planning and design at different scales, from regional to object landscaping are shown. The city of Krakow is a major case study considered in this article and it was chosen because of many reasons such as: its beauty, a former national capital, distinctive characteristics of the space and genius loci. The image and identity of Krakow is determined by unique landscape, that constitutes an integral part of its heritage. The fact that the city is a phenomenon on many levels is determined by a number of factors including: the river running through the city, a large number of natural viewing points, and a series of architectural dominants. Major elements of local landscape include the valley of the Vistula river and its cultural heritage. Krakow has special 'sacred' places, that are highly respected not only by its citizens, but also by the whole nation, because of the national importance, for example the Wawel Hill or mounds. These are protected because of their significant cultural values. In addition, Krakow landscapes' diversity includes a mix of styles: medieval, 19th-c, socialist-realist, fortress, small-town, riverside, open space, post-industrial park landscape and sound. Protection and shaping of Krakow landscape is regulated by the provisions and the local urban plans, that are an integrated part of a local law. Park Zwierzyniecki and the Old Town Cultural Park were used as examples of Krakow's experience with introducing cultural parks, one of the forms of historic monument protection. This proves that: a form of historic monuments protection that is supposed to protect distinctive and typical landscapes, requires specific provisions and work including building an increasing awareness of the society. The analysis covers issues related to integrated protection and an increase in urbanization pressure on areas boasting particular landscape values. In addition to provisions of important and priority landscapes, a comprehensive protection should be also provided for everyday landscapes. What matters in terms of landscape quality includes: developing and urbanizing suburbs, and embracing a particular type of local landscape in new designs and local development plans, as well as preserving green areas, that are vital in shaping a landscape of the city. This paper also discusses development of urban areas and how their establishment can create conflict with other design projects.

**Katarzyna Pałubska**

***Valorisation and management of the cultural landscapes in Poland, with the case study of Warsaw***

Separation of natural and cultural environment is the most serious problem threatening the adequate protection and valuation of landscape, especially in the context of the famous U Thant's report of 1962, which emphasized the consistent thinking about the environment not only in terms of biotic and abiotic components, but also human. The basis of knowledge of the rules governing cultural landscape is to understand extent of its impact on the environment, manifested in an attempt to characterize the typology of the characteristics of the resource according to certain criteria. A variety of cultural landscapes' classification on the types, forms, styles and varieties is reflected in the complexity of the valuation and valorization methods. Especially because, in practice, we always have to deal with complex landscapes, combining together different types, in terms of form, content and function. The latest report about the system protection of cultural heritage in Poland suggests that the identification and protection of cultural landscape is minimal and not being given its proper place.

Management and valorisation of resource properly conducted 'on the occasion' by various administrative and scientific groups. The cultural landscape, colloquially understood as the historical landscape remains in the group interests of conservation services, while the contemporary landscape is influenced by urban planners.

Other landscapes with natural features advantage are protected and managed by environmental specialists. The discrepancy between the landscape policy of the different stakeholders in Warsaw complicated by additional administrative division of the city into 18 districts and the creation of many central authorities with overlapping responsibilities in the field of landscape issues.

Elaboration coherent, integrated policy of protection natural resources, monuments and landscapes recommended by the European Landscape Convention, seems to be the best option for the protection and management of the 'flexible' cultural landscape resources. However, this requires the establishment of institutional bodies and legal tools operate cohesively, rather than separately as was shown by the practice so far.

**Miguel Costa**

***Ways of Engaging: Temporary and Small-Scale Projects as a Fieldwork Strategy***

The difficulty of engaging publics around the processes of the urban landscape planning, maintenance, restoration and rehabilitation continues to be a challenge to participation — the inclusion of the citizens in participatory processes still requires renewed skills and strategies to move away from the traditional participatory sessions and to embrace new approaches to engage the publics in the complexities of urban landscape, its built structures, public spaces and green infrastructures.

This paper aims to reflect about other ways to activate engagement processes by introducing temporary and small-scale projects as a fieldwork strategy, as well as using the contribution of different professional practices and knowledge for its monitoring, execution and implementation (art, landscape architecture, urban planning, architecture, design, sociology, anthropology). These strategies address a more interdisciplinary, transdisciplinary and performative approach. Its purpose is not only related with the significance of the urban landscape but also with the significance of the public spaces and green infrastructure in the development of the city life, urban ecology, collective memory and culture.

The goal is to discuss the relevance of this small-scale, bottom-up fieldwork operations regarding the topics of **public engagement** (to stimulate and gather people around urban landscape concerns and

knowledge), **ecological awareness** (to understand green public spaces as an opportunity to enable alternative and creative forms of relationship between people, place/urban form and its dynamic environmental processes) and **sense of belonging** (to use place connection to empower people in their civic role and responsibility, where the direct participation of citizens over the territory has an active influence on formation of attitudes towards the future relationship with that territory).

**Damian Poklewski-Koziell**

***How to deal with UNESCO World Heritage Zones. Analysis of the results of the competition for Bamiyan Cultural Centre in Afghanistan***

Afghanistan or Ancient Ariana, as many ancient Greek and Roman authors referred to this area is the multi-cultural cradle of Central Asia, linking West with the East through the course of major trade conduits. Today Afghanistan is a multi-ethnic and multi-lingual country. At the moment, it takes second decade of democratic governance after the long years marked by political conflicts that have made the country one of the poorest in the world.

At the end of 2014 international architectural competition has been launched for the design of the Bamiyan Cultural Centre in the town of Bamiyan, located on the western edge of the Hindu Kush mountains, about 120 km north-west of the capital city Kabul. Region is comprised of three main valleys Bamiyan, Foladi and Kakrak. A characteristic element of the landscape is the patchwork of mainly cultivated fields of potatoes and wheat, interspersed with the main buildings of brick or pressed earth, silhouetted against the background of the surrounding mountains.

Chawni Hill of two levels of a flat terrain has been selected for the competition site, offering a breathtaking view on the cliff located at the northern side of Bamiyan Valley. This cliff stretches over a length of two kilometers and rises to a height of 160 meters above the surrounding terrain. It is marked by the presence of thousands of smaller niches where traces of wall paintings and sculptures carved in the rock can be found. But the most important testimony to the presence of Buddhist culture are two niches in which until 2001 there were sculpted figures of Buddha - the East Giant Buddha - 38 m high and the West Giant Buddha - 55 m high. Unfortunately, in March 2001 statues were destroyed by the Taliban. Two years after Bamiyan valley, Foladi, Kakrak and other valuable areas in the region have been inscribed on the UNESCO World Heritage List.

The article will focus on the landscape and cultural characteristics of the valley of Bamiyan. Particular accent will be placed on the local building traditions and typologies, materials and their availability. Author - participant of the competition, analyzes awarded projects for their ability to blend into the extremely demanding landscape and cultural context. Article answers the question to what extent the landscape conditions has determined the form of the objects and how the modern form of the building has been defined in the spirit of the respect for the local building traditions.

**Dominika Kuśnierz-Krupa**

***Cultural landscape of Nowy Korczyn. Relics of the old heritage***

The former town of Nowy Korczyn is situated in the Ponidzie region, in the Świętokrzyskie Voivodeship, at the border of the Lesser Poland Voivodeship. Since the time of its foundation which took place in the mid-13th century, until the 17th century, Nowy Korczyn was one of the most important towns in Lesser Poland, which is confirmed by the monuments preserved till today in the form of two churches: the post-Franciscan of St. Stanisław from 1257 and the Holy Trinity from the 16th century, the 18th-century synagogue, the medieval market square and relics of historic buildings around the market.

Nowadays, it is a forgotten and neglected town with partially preserved relics of its eventful past. The beginnings of organised settlement in the region of the later town date back to the 11th century. A trade settlement existed here, located on the route leading from Krakow to Ruthenia. In 1226, Duke Bolesław Wstydlivy (the Chaste) was born in Korczyn, which proves that a ducal court must have existed here previously. In 1258, the duke issued the foundation charter for Nowy Korczyn, and thus contributed to its rapid development that was also enhanced by its advantageous location at the crossing of trade routes and a close proximity of the ducal court. In the 14th century King Kazimierz Wielki had a masonry castle erected in Nowy Korczyn, in which almost all Polish monarchs stayed during the following centuries. The town was also a venue for political conventions and nobility meetings. A town hall, a town hospital, baths and a water supply system existed here, which bore evidence of the town inhabitants' affluence.

A gradual decline of Nowy Korczyn began in the 17th century and was caused by e.g. transferring the capital from Krakow to Warszawa which enfeebled the political role of the Lesser Poland nobility. The town did not regain its importance in the subsequent centuries. It was continually harassed by enemy raids, frequent fires and plagues. As a result of the Partitions, Nowy Korczyn found itself under the Russian occupation, which led to its loss of town rights in 1869.

This once vibrant town is now sadly neglected. Relics of its eventful past are the already mentioned monuments and historic buildings disappearing before our very eyes. The progress of civilisation and not fully controlled development negatively influence the cultural landscape of this exceptional town, as indicated by the article's author. There seems to be no idea here for the revalorisation of historic space and simultaneous tourist-oriented activation of the town. Paradoxically, it is the cultural landscape and eventful past of Nowy Korczyn that offer the town a chance for development.

### **Iga Solecka**

#### ***Approach to preservation of historic parks in 20'th century***

This paper talks about shaping the notion of preservation, legislative documents about preservation and describes different approaches to preservation of historic parks in 20'th century. Enumerates main characters who took part in the process of preservation of historical parks. In Poland after 2nd World War the pioneer in this field was Gerard Ciołek, and his followers Longin Majdecki and Janusz Bogdanowski. Janusz Bogdanowski presented holistic approach to landscape preservation, which is very similar to the approach of European Landscape Convention. This paper presents main resolutions of Florence Charter, which is an international document about protection, preservation and exploitation of historical gardens in a complex way. Publication shortly describes functions of historical parks before and after 2'nd World War to explain what kind of difficulties can appear in preservation of those areas, shows present tendencies related to preservation of historical parks and opens discussion about protection possibilities.

### **Juan Antonio Mira Rico**

#### ***Castles or cultural and natural landscapes? A new approach to the management of fortifications in the south of the Valencian Community. Examples of Castalla and Sax (Alicante)***

The current administration of cultural heritage requires a joint management of its tangible and intangible assets, as well as natural heritage in its environment. However, it is an approach that is not always carried out. Thus, it is not surprising to see how some cultural and natural assets are managed depending on specific interests at the expense of others.

If the topic focuses on castles in the south of the Valencian Community –one of the 17 Spanish au-

onomous communities, located in the east of the Iberian Peninsula–, it can be observed that their management is the most important. In this regard, many fortifications are presented as exclusive heritage sites that can hoard all actions carried out in their sites.

It has been possible to find out the real heritage diversity –cultural, tangible, intangible and natural–, which was practically invisible in many cases, on the basis of the work developed in the Castalla Castle Heritage Site (2009) and the PhD project performed within the Department of Prehistory at the University of Alicante (2013). In addition, it has also been able to study how castles are managed in the province of Alicante –the south province of the three that make up the Valencian Community. In this way, Castalla Castle and Sax Castle are taken as a reference point in order to state their rich heritage. This should serve as a starting point for a new approach that focuses on the overall management with regards to cultural and natural heritage (situated on the sites of these fortifications) to achieve a proper administration. That is to say, a new point of view where they are not considered as isolated elements in the landscape, but as authentic heritage sites that, either larger or smaller, become complex and interesting cultural and natural landscapes.

**Ayşe Ceren Bilge**

***Problems with the conservation of cultural heritage and cultural landscapes of the island Gökçeada (Imbros)***

Cultural landscapes are the reflections of the interaction between the natural and cultural forces in the environment. This interaction attracts more attention where the relationship of nature and culture become intense under the limited circumstances. Islands all around the world have unique ecosystems under the limited natural and cultural resources. According to this most of the islands have precious cultural landscapes that formed with these natural and cultural effects.

Gökçeada (Imbros) which is the biggest island of Turkey has a special natural environment where varies of plant and animal species exist. This environment is an inseparable whole with the cultural structure that is changing and developing over the years along with the social diversity. Because of being on a strategically important location, Gökçeada has inhabited by various communities since ancient times. Today, the island has many cultural assets owing to this generous historic and cultural background.

After World War I Gökçeada excluded from the process of exchange arising from the treaty of Lausanne but unfortunately it has affected from political period and lost greater part of its Greek inhabitants until today. Thus, abandonment process has been the beginning of problems about conservation on the island. Villages, fields, houses, churches, chapels, laundries and more structures and elements about the island fell to ruin due to not being maintained. Moreover, there are significant conservation problems today that damage historic, natural and cultural properties of the island. Nowadays inhabitants who left the island after the war began to return to their homes therefore population on the island has grown. Pressure on the physical and social environment has increased and significant changes occurred. Due to the lack of resources for being an island Gökçeada is stricter against change and could not exhibit a flexible structure. Besides natural causes such as earthquakes, floods and unfavorable weather conditions also, socio-economic causes, political causes, current legal regulations, wrong urban planning strategies, unqualified repairs, restorations and unskilled public works are the main topics of conservation problems.

Determining conservation approaches for the protection of Gökçeada's cultural landscape values is crucial. But firstly, root of the conservation problems must be understood in detail. The aim of this study is to investigate the conservation problems that threat the future of the island and to clarify

what can be done for the conservation of natural and cultural values. Also this study may lead to other researches about conservation of cultural landscapes.

**Agnieszka Wójcik**

***Influence of urbanisation on heritage register sites. Rzeszów manor-garden ensembles changes over time***

Landscape of Rzeszów dramatically changed within last century. At the beginning of XXth century the city was still small, living in the shadow of other wealthier regional centres such as Przemyśl. Particularly quick urban and territorial development took place after WWII. Within the area of gmina Rzeszów remain 7 manor-garden ensembles set in XVIIIth and XIXth century. Four of them are recorded in heritage register. Despite of that political and social transformations and spreading urbanisation left their stamp on these historical ensembles. Apparently it were not the war acts that brought the greatest damages to the manors and its surroundings. Actually it were the extensive investments in 1970's and 1980's. Historical ensembles in Staromieście, Załęże, Zalesie and Słocina after WWII were nationalized and there were allocated different public functions such as hospital, school, penitentiary, university campus and orphanage. This investments entailed most often far changes in land use of former manor-park ensembles.

In Staromieście in 1954 municipal hospital was located in former Jędrzejowicz palace from late XIXth century. Later hospital extension caused severe loss in the park structure. Now its historical composition is illegible. Similar history shared the ensemble in Załęże - also a possession of Jędrzejowicz family. After WWII the manor was turned into a Security Service school. In 1970's manor park was almost completely destroyed by the establishing penitentiary there. Historical manor in Zalesie with its park surroundings and a folwark was created by Gumiński family in early XIXth century. In 1980's this area was handed to Agricultural University of Cracow branch in Rzeszów. The manor ensemble lost its atmosphere by introducing modern buildings of campus. Relatively best preserved is XIXth century manor-park ensemble in Słocina. Therefore Słocina is quite young city district, there were not carried out any municipal investments in manor's nearest surroundings. Only folwark was divided between different owners. Currently unused manor is decaying and park needs restoration.

To sum up, spreading urbanisation, particularly locating of public services buildings in second half of XXth century changed former spatial structure of manor ensembles. Changes affected folwarks and edible gardens at first, then parks. Nowadays remains of former manor-park ensembles are usually residential sites.

**Barbara Wycichowska**

***Legislative problems of landscape protection***

After the economic, political and social system transformation in Poland, the process of natural and cultural landscape degradation advanced due to the lack of radical pro-landscape changes and insufficient enforcement of the existing laws. This led to the depreciation of the protected landscape forms, the loss of the natural and cultural heritage elements building local and supra-local identity, and as a consequence to a lower standard of living in cities, towns and villages, the loss of tourist potential, and broadly speaking – to the depreciation of the environmental and landscape potential (natural and cultural), where high quality is always the main development factor.

The responsibility for the definitely bad visual state of the landscape, resulting from the lack of genuine protection, lies first of all with the imperfect legal system. The regulations concerning landscape protection on three planning levels are inconsistent, which makes them unreliable. The Study of the

Conditions and Directions of Commune Spatial Development, which by definition is the basic planning regulation concerning landscape, have lost its importance in a situation when the local spatial development plans are fragmented and viewed exclusively from the investment perspective. Landscape protection in Poland has been limited to the protection of special areas (the protection forms), as well as to the protection of particularly valuable natural features. The situation will not change at least until the "landscape act" starts to work (an act amending some laws which regard reinforcing landscape protection tools will come into force on 16th August 2015). The present regulations are not enforced effectively enough.

Currently, we deal with the regression of landscape protection, compared to the previous legal system, which included other regulations concerning landscape protection apart from the established forms, i.e. the common nature and landscape protection (the Nature Protection Act of 16th October 1991; the Construction Law of 24th October 1974).

In order to achieve the desired effects of landscape protection, it is necessary to make specific moves (in a proper order), which will ensure smooth functioning of the landscape protection system and forming the landscape from rational landscape planning (activity based on detailed investigation and monitoring), through shaping it to caring for it. The range of the activity will require precise definition in the country's jurisdiction (it has not been defined so far).

**Bogusz Modrzewski, Anna Szkołut**

***Poznan campuses - are they 'biophilic'?***

In search of a quality of daily work, learning and simply, living with possible comfort and stress reduction, an influence of natural landscape, especially within urban context is one of the key ingredients of today's quite chaotic urban environment. A theory of biophilia is partly based on landscape feature preferences (savanna hypothesis) and an scientific character of natural and designed fractal features and it's impact on human biology. Chosen biophilic patterns (or simply - biophilic pattern language) describe the natural and eligible preferences for those specific natural physical and psychological features.

This paper's subject concerns of biophilic and landscape features and qualities of chosen Poznan academic campuses as the perfect surroundings of mixed use - natural and manmade landscape and cityscape: Adam Mickiewicz University campus Morasko, Poznan University of Life Sciences campus, Poznan University of Medical Sciences and Poznan University of Technology - Piotrowo. The main research question of the study is: do campuses have intentionally designed biophilic potential and to what extent it is really utilized within daily academic routine. Multiple case study method adopted in this paper includes mixed methodology of research - in one part it is author's urban evaluation of spatial and landscape phenomena compared to biophilic qualities, in other it is confronted to the experience of its daily users.

**Izabela Sykta**

***The impact of Worlds' Exhibitions on landscape and development of cities***

The Worlds' Exhibitions – from London 1851 to Milano 2015 – have been creating the special circumstances, favoring an implementation of extremely original and controversial architectural forms and objects. In time they have become significant dominants or landmarks in the urban landscape of hosting cities. Exhibition grounds have become a kind of testing grounds on which the latest technical inventions were presented, new constructions and forms were tested, unhindered by views of the traditionalists, commonly shared tastes and aesthetic habits, determinants of urban context or

local legislation. Sometimes, despite the presumed temporariness of exhibition structures, they were not undergoing liquidation, have remained at the exhibition areas, often radically changing city landscape. The structures remained after exhibitions have attracted attention and generated new tourist attractions. Very often – as Eiffel Tower (1889) or many others – they have become icons or symbols of a much broader sense. Expo villages were built in the areas within existing field reserves in the city, as parks, commons or river waterfronts or on neglected and abandoned terrains, often degraded by industry. After the Exhibition they were restored to the city with new infrastructure and multi-purpose buildings, contributing to development of the city.

This article is focused on analysis of urban and landscape legacy of Worlds' Exhibitions at selected case studies.

**Chun-Hsi Wang**

***Planning and Managing Changes in Rural Landscape Conservation – the Case of Jianan Irrigation Cultural Landscape in Taiwan***

Abstract: An irrigation system with rural lands could be considered as a continuing evolving cultural landscape. Jianan Irrigation System, built in 1920 by the Japanese Colonial Government and is still working, was registered as legal cultural landscape with cultural heritage value in 2009 for its importance in Taiwan's engineering and agricultural history. The protection of this living landscape, which represents how people use the land and what purpose they want to achieve, would be the essential part in conservation of cultural landscape. It needs not only conventional preservation method, but also planning tools in landscape scale; it also needs reflection on life of people in the cultural landscape, and consideration on possible and ongoing changes in the landscape.

If the agricultural process in the landscape declines, the historical irrigation cultural landscape would also disappear or lose its original function. However, the livelihood and rights of people in it should not be ignored in heritage conservation, since the role of people in a cultural landscape could not be neglected. In this sense, different approaches have been considered in conservation and management plan of Jianan Irrigation Cultural Landscape. The land subject to agricultural purpose should not be easily changed to others, since any intentional change by people would not be recovered. In reality, a living cultural landscape cannot and should not be frozen in a specific state, guiding, managing and monitoring change through planning process, which integrate the needs, wishes and imaginations of people in it, is essential for conservation. With the participation of local people, promotion of tourism or other activities may contribute to the conservation of cultural landscape with cultural heritage value, while those should neither digress from the theme of cultural landscape, nor the life style of people which was respected as characteristic of cultural landscape.

In this paper, the authors will explore issues of planning and managing changes, and different approaches of participation of people in the conservation program of Jianan Irrigation Cultural Landscape in Taiwan.

**Zuzanna Napieralska**

***City Landscape. Present state and problems with protection post-war single family house complexes from uncontrolled modernizations***

The subject of modernization post war prefabricated architecture is relatively popular today, in contrast to discussion about renovating socialist single family buildings and estates, which is still rare.

Those renovating problems are often solved by the house owner, who usually doesn't have an engineering experience - the results of those interferences in the building are sometimes very poor and

make integrated urban area more disorganized.

Typical and normative postwar architecture is undoubtedly a problem for the modern urban landscape. Most of the post-war projects, however have carried certain values and architectural plan. Among dozens of similar buildings, there are also some interesting realizations and urban complexes, created in a difficult for creative architectural thought, socialist era. It is worth to protect them from uncontrolled changes. Today the entirety and modernistic character of those post-war residential housing is brought into the question. It might be "to be or not to be" for this architecture. Numerous interventions in the original volume of the buildings, due to the generation change or just an individual need, are systematically and permanently changing the character of this specific city landscape. The article, apart from presenting problems with protection of post-war single family house estates, will also present the current state of socialist single family settlements in Wrocław, focusing on houses at Kwiska street, Ołtaszyn and Partyńce. The article will also present the present trends in modernizations and restorations those buildings.

**Agustina González Cid**

***Productive Landscapes: Argentinean Rural Towns and their Disconnection with the Surrounding Fields***

The Argentinean Pampas are an extremely flat landscape with detached urbanizations almost completely surrounded by grain production. This territorial logic was a direct result of years of local and international pressures that resulted in towns that are now almost totally disconnected from the productive land surrounding them. This paper analyzes how the pampean region was manufactured into a productive machine, its current situation and the challenges that it may face, arguing that by designing the landscape it is possible to create a space in-between rural and urban that could better prepare the towns for the future.

In the 1880's the global demand for food became superior to that of textiles and Argentina became an agro exporter power. To fulfill this new role, the territory was adjusted to perform in a different way, connecting by rail the western parts of the pampas with the ports in the east and populating the area with small towns where European farmers would live and work the land.

Over the past years, the technology used to produce, harvest, store, transport and control grain completely changed, resulting in the disconnection of these "rural towns" with the surrounding productive landscape. This resulted in fewer jobs connected to agriculture and young people leaving the area in search of better opportunities. The disconnection is such that these islands of urbanization import the food they require to fulfill their daily diets from metropolitan areas instead of eating the product of the land around them.

For these reasons these towns now face many challenges. Apart from the fleeing young population, reverse migration is also taking place; changes in technology allowed people to move in and work online with people anywhere in the world while enjoying a calmer rural life but demanding city-like services. Another important challenge for these towns is the world tendency to look for local and fresh food. These towns, located in the middle of one of the most fertile areas on earth, could produce their own food without depending on other cities and endless chains of transportation.

Based on visits to the towns, photographs, academic writings and interviews, this paper suggests that it is possible to address all these challenges by designing spaces in-between rural and urban. As part of the conclusions, a design proposal is presented to show an alternative way of inhabiting rurality.

**Maria Ktori**

***The ancient harbour of Amathus: current perceptions and future prospects of a submerged landscape***

The ancient harbour of Amathus is located in the south coast of Cyprus. It is situated at the west of Ayios Tychonas village, in close proximity to the Amathus archaeological hill-site and 10 km east from the city centre of Limassol, with the ancient city of Amathus being on the opposite hill. The ancient harbour of Amathus lies today underwater, at a maximum depth of 4 metres, expanding for 10 metres from the shore to the beginning of the west mole. The habitation evidence from the area date from the 10th century BCE onwards, whereas the harbour is dated in the 4th-3rd century BCE.

The underwater excavations were conducted in the 1980s by an archaeological team led by Dr. Jean-Yves Empereur that investigated the submerged outer harbour. This still is a highlight in the discipline of Maritime Archaeology in Cyprus. The findings of this expedition largely contributed to the better understanding of the Hellenistic Period in Cyprus. On the other hand, the contemporary archaeological research focuses on the protection of cultural and natural heritage while simultaneously welcoming public engagement.

In 2005, the Department of Fisheries and Marine Research published a report on the hypothetical creation of an artificial reef that would include the ancient harbour of Amathus. However, the large scale accessibility of any archaeological site would surely affect the landscape integrity. In the case of the ancient harbour of Amathus, the current heritage management difficulties and the perspectives of this site as a potential underwater park or as a preserve are evaluated and discussed under the scope of recent developments in the field of underwater cultural heritage. Additionally, the relationship between sustainable development, the stakeholders, the submerged landscape treatment and management are all important factors taken into consideration.

**Katarzyna Hodor**

***Old paczków, working on preserving identity***

The legacy of villages located in Poland is a resource worth preserving although for years it has been neglected and its values unappreciated. There will be a description of methods based on patterns from the area of Rhineland and Palatinate aimed at saving tradition and identity compared with an example of a village located in opolskie voivodeship. The process of preserving landscape values in rural arrangements is difficult due to economic aspects which are an important foundation of functioning for these small towns

**Catalina Soto de Prado y Otero, Leonor Pérez Ruiz, María Ruiz del Árbol Moro, Cristina Borreguero Beltrán**

***The management of immovable and immaterial cultural heritage. Landscapes of war in Castilla y Leon region (Spain)***

Landscape has been fully incorporated several decades ago to Spanish archaeological research. This contrasts with the present practice in the protection and management of Spanish cultural heritage, in which archaeological- historical landscapes have a fragmentary presence in a panorama in which the protection and development of the territory is the domain of the environmentalists or the urban planners. This poster aims to present the State of the Art in Spain and to present through a case study, the possible ways of protection and enhancement of cultural heritage in rural regions. The poster will discuss critically issues regarding landscape protection, landscape integrity and public engagement. Our case study will be the landscape of the Independence war (1808-1814).

**María Ruiz del Arbol Moro, María García Hernández, Manuel de la Calle  
Vaquero, Inés Sastre Prats, Juan Luis Pecharroman Fuente**

***The present of the past: problems with the valorization of archaeological sites in a cultural landscape perspective. The case study of the region of Madrid.***

This poster aims to present issues regarding the valorization of landscape elements through the case study of the region of Madrid. This includes discussion about concepts and trends in archaeological landscape research and planning in Spain.

Nowadays, and according to Madrid regional heritage laws, different areas are defined as “cultural landscapes” or classified under several categories with a territorial character (“historical place”, “archaeological area”). The protection of such “areas” or “landscapes” means a qualitative change in the conception of the character of the heritage and facilitates connections and links with the global process of territorial management (through links with environmental laws, or normative of environmental impact...). This is both a challenge for the public administrations and an opportunity to increase the benefits (social, economical, environmental) of archaeological heritage.

Our proposal aims to explore these issues, and to analyze the opportunities that the archaeological past offers for sustainable economic development in rural areas. Our approach will focus in the case study of the “open to the public archaeological sites” in the area of Madrid and its role in the context of the landscape definition and protection. We aim to make a critical reflection on landscapes management policy and its convergence with promotion and valorization strategies.

**Łukasz Pardela**

***Sustainable landscape design vs. The New Dutch Water Line 1–1***

The inspiration for initiating this study was the restoration and investment of over 200 million euro of The New Dutch Water Line that is now starring to the Dutch tentative list of the UNESCO World Heritage. It is a well know European example of the large-scale (85 kilometers long) military defence system (water hazards – irrigated land, vegetation and fortifications) originally designed in central Netherlands in 1815. Historically less accessible to public The New Dutch Water Line was engineered to protect the country against any invaders. It is known as the "best kept secret of the Netherlands". Today the landscape became a valuable public space supporting sustainable territorial development within a one, large Masterplan to serve other small plans, that consists and integrates cultural, economical and natural values in order to transform The New Dutch Water line into a recognizable spatial entity for day functions such as; agriculture, commerce, leisure, nature, and water management, mentioned in the application for the Landscape award of the Council of Europe.

The preservation through development was a goal for the restoration, enhancing visibility and accessibility of the cultural landscape along the cities and rural areas.

**Katarzyna Kołodziejczyk**

***The secret and the value of the place. About coexisting of the landscape with the sensory nature of the art site-specific***

In the article an issue of peculiar and odd space, found landscape, place at the same time however shaped by the works of art, getting essence was brought up and restoring his memory. We are talking here about the art site-specific, held as multidimensional reflection, deep kontekstualnej i.e. dependent on place and time. That kind of art forms are aimed at emphasizing coexistence of the art with the space, interrelation, values complementing each other. Art site-specific is using peculiar code, literary language being means of communication in itself, unique composition of signs closed in

the legible form. The landscape similarly to the works of art constitutes kept tracks of the memory, tender registers of senses: of colour, smell, sound, touch; symbols of both the financial presence and metaphysical meanings. The present article was devoted to analysis of work of chosen artists of the refined class i.e. Dani Karavan, Nancy Holt, Robert Smithson, James Turrell, Charles Ross, Walter Benjamin in terms of contents, the form and their function with reference to the context of the place. Shown works constitute the indissoluble part of the space, in which they came into existence and which belong to. The universal symbolism, intelligible to the wide circle of recipients and character of chosen spaces of the creative act are linking work of chosen artists. Artists appointed by me are emphasizing meaning and the specificity of the place, since their work is creating the cohesive integrity with the landscape. It is type of the conceptual art, highly intellectual, constituting the demonstration of the secret of the existence, humanities, the ceremony of the human spirit and his coexisting with nature, environment, space. Of authors in all implementations chosen it just constitutes the space key part in the process of the creation. The space became greatest fascination, passion not to say obsession of contemporary artists. They made the redefinition for her, putting the special pressure on intrinsic values for the given place, by getting his meaning, restoring history forgotten for him, the return to the source. Authors of these semantic experiments, are making room exceptional. Thanks to them, it is becoming an entire world, and rather than that how Martin wrote Heidegger *światoobrazem*. The image is a notion special, deciding about the symbolic space of the transformation. He is both with word, place, symbol preserving the continuity of the creative process. The manner of the forming of the image is expressing the ratio of the man to world, to his existence in matter, has intentional character. And so visual imagining the artist is reflecting the cultural original form of a specific social group. Here both an individuality of the man and experiencing the space which is becoming a part of the works of art through interactions of recipients are significant. This space is a place of experience of not only the author but also the experiencing spectator which through his participation is reviving the works of art and is granting the new quality him.

**Monika Wasilewicz-Pszczółkowska**

***Landscape multisensory in theory and application***

Over centuries, due to the application of the landscape concept under a variety of scientific disciplines, a number of specialized theories of the same issue have developed. Intensive research work on the perception of the landscape, carried out in the 80s of the twentieth century, resulted in the formulation of the so-called multisensory landscape concept. According to this theory, the landscape is recognized in the context of how it is directly percept by senses. In this aspect, it is understood as an objectively existing structural and territorial reality perceived by an observer with all the senses: sight, hearing, sense of smell, touch, and taste. This concept undermines the notion strongly rooted in the theory of aesthetic about the supremacy of vision over the other senses in the process of assessing the aesthetic value of the landscape and its social utility. The aesthetic value of the landscape, in the context of its multisensory, is one of the very important factors stimulating the use of the space, and thus the kind of social activities undertaken in it, among others, of a tourist, recreational, resettlement, business and even industrial (e.g. high tech) nature.

The primary objective of this study is to determine the effect of non-visual perception of landscape on its aesthetic value, in multisensory terms. The research conducted involve the assessment and valorization of the multisensory landscape of the area situated in the peripheral zone of the city of Olsztyn. The subject studies are based on an author methodology which takes into account the crite-

ria of assessing the landscape, assigned to the respective spheres of its sensory perception: visual, auditory, olfactory, tactile, and gustative. The results of the analyzes are presented using GIS tools.

**Karolina Zięba**

***The landscape recomposition of the of Festung Krakau – a new approach based on Airborne Laser Scanning point cloud processing and GIS spatial analyses***

The landscape is a key resource of a fortified area, with camouflage greenery being an important element. An understanding of a historic fortification system in its entirety and the associated cultural and environmental heritage is the main argument calling for the necessity of having an interdisciplinary approach to the research of historic fortification greenery and the landscapes of historic fortifications. The enormous area of the sites, the techniques that went into designing them based on an analysis of the topographical landscape and the scope of the changes made to the landscape demonstrate the advanced level of military engineering that went into creating this structured greenery, the remains of which have amazingly survived to the present. The composed arrangements of fortress greenery are a valuable part of the natural environment, would guarantee that endangered species of flora and fauna are preserved in the environment. The contemporary role of fortress greenery is to serve as the foundation for consolidating or renovating areas on the outskirts of the city that were part of the former fortification landscape. This is also a guideline for the modern use of the imitative method in connection with undesirable areas in the landscape. With Airborne Laser Scanning data this study identifies forms of fortifications, visualizes data and analyzes visibility to project recomposition of landscape of III Fortified Sector of Festung Krakau.

ALS data are new form of geospatial data useful for landscape architects. These data gives new means to protect and revitalize cultural landscape. Study discusses possibilities of adaptation and modernization of fortification based on landscape conservation theory and project practice. Possibility of using III Fortified Sector of Festung Krakau for recreational and didactic purposes is proposed. Project based on visibility analysis and historical materials shows way to restore compositional values of landscape with fortifications. Analysis 3D GIS showed high usefulness to identify fortification, visualization of these objects and performance analysis visibility. In contrast to traditional methods (inventories and historical documentation), data from laser scanning are the new generation of geospatial data. They offer an opportunity to develop a new, faster technology used in the restoration, preservation and inventory of architecture militaris.

**Beata Makowska**

***The interaction between landscape and art***

The paper presents selected parks and gardens associated with natural landscape which surrounds them, the history of places and people living there (i.a. parks of memory, parks designed close to the museums). Such parks constitute a kind of sculpture gallery in the open air. They unite open and built space, emphasizing landscape and local cultural values. Owing to places for recreation and cultural events they became attractive public space for residents and tourists. An example of this category is the park des Personnalités in Honfleur (France) created in area of estuary of Seine. It is devoted to memory of the outstanding persons associated with local history (artists, writers and outstanding persons), whose busts located in separately designed parts of the park are commemorating them. Another example is the Livsglede park in Bryne (Norway) designed in the form of walkway along the river with sculptures of the local artist Fritz Røed. The elements inspired by natural Norwegian land-

scape were used there (waterfall, lake, hytte).

The paper also presents gardens located in the neighbourhood of museums in Paris (the Musée du Quai Branly, the Museum of Middle Ages) and on Capri Island (Axel Munthe Museum). These gardens are integrally connected with museum collections, serving an important role in their promotion. The integration of gardens and museums appeals new visitors to them, it has educational values as well. It creates cultural models and increases attractiveness of public spaces in a crowded cities. The garden at villa San Michele on the Capri Island is an extraordinary example. The beauty of landscape inspired the Swedish doctor, writer and art collector Axel Munthe to build a house here, including the sculpture loggia, as well as the garden contained unique flora and the vantage point. Advantages of landscape were exploited as the background for the works of art and plants. Munthe popularized the protection of endangered species of animals and plants, thanks to this unique specimens preserved here. During holidays villa offers a lively cultural programme of music and art. This place is one of most important tourist attractions of the island.

The interaction between landscape and art influence a protection of regional identity and traditional elements of the environment. They are developing awareness of the existing values, shaping perception of space and increasing sensitivity for art (i.a. land-art). They are also considerably contributing to formation of cultural models and mechanisms.

**Éva Papp, Bradley Pillans, Amy Mosig Way, Ken Aplin**

***Lake George, Weereewa, Lake Ngungara***

The Lake George Basin is a small, closed basin about 50km NE from Canberra, Australia's capital city. The basin is a very distinct landscape unit, and for many generations it has been a natural meeting place for several Aboriginal groups. There is evidence of at least 6000 years old human artefacts on the shores of the lake, and a currently ongoing PhD project is adding detail to our understanding of the human occupation of this area. There are also known mega-fauna fossil finds, including of the extinct kangaroo genus *Procoptodon* from deposits originally dated to between 21,000 and 26,000 years BP, but now considered to be older.

The site for Canberra was chosen in 1908, resolving a long running debate about where the National Capital should be located. The main rivals were Sydney and Melbourne, and the diplomatic compromise was to establish a new capital midway between the two. Lake George had been a substantial body of water until 1900, and the Lake George Basin had been considered as a possible site for the new capital. Luckily, another nearby site was chosen because lake levels fell during several years of drought and the lake was dry from 1901 to 1915 and on several occasions since.

Currently the lake is dry again, giving access for a large interdisciplinary team to study the landscape, its tectonic, sedimentary and hydrogeological evolution, as well as the paleontological and archaeological history of the area.

The Lake George Fault, elevated 200 metres above the western shores, is a 75 km long major north-south tectonic feature. The lake bed is filled with up to 165 metres of sediments, providing the longest known continuous Quaternary and Pliocene sedimentary record of any lake in Australia, encompassing approximately 4 million years.

Today the land around the lake is privately owned, while the lake bed is Crown Land. The landscape elements are defining features in current land use, planning and development. Our research aims to create new knowledge that will advance the protection and sharing of the landscape without hampering its development.

Our project is “work in progress”, with funding for another two years. Funding is provided from the Australian Research Council (LP140100911). We acknowledge the First People of Australia as the traditional owners of the land on which we live and work.

**Milos Rozkosny**

***Methodological approach to evaluation of the threat to the state and quality of the environment of water elements forming part of cultural heritage***

Aquatic and wetland habitats are among the most endangered habitats in the landscape. At the same time, even the smallest water elements in terms of area, including pools and little ponds, represent a valuable refuge for the survival of a number of protected species of flora and fauna. Numerous heritage monuments and areas, including several UNESCO heritage sites, both in the Czech Republic and in the world, are to varying degrees interconnected with these habitats, which are often part of the overall composition of the assets and grounds, especially as part of parks and gardens. They can also form significant areas in terms of nature and landscape protection, including, water-dependent habitats, e.g. in the Czech Republic: the Lednice-Valtice Cultural Landscape, or the ponds system in the Třeboň region (Rožmberk National Cultural Heritage).

In terms of hazards posed to water elements, we may identify in particular the threat to the quality of their water environment (flow of pollution from point, area and diffuse sources of pollution), endangering of the spatial characteristics (the process of gradually filling in with detritus and turning into land, clogging, drying up, etc.) and the threat to the quality of the accompanying vegetation (spreading of invasive species, threat of drought, flooding, changes in groundwater levels, pests and diseases, etc.). Contamination of sites from leaking sewerage and sumps, especially during floods, is described as one of the problems.

A significant role in compromising the quality of water elements is played by water eutrophication. A major problem is also the deposition of sediments and gradual siltation and subsequent overgrowing with vegetation, which can pose a problem also in case of water elements of heritage sites that are connected to surface water of inadequate quality, bringing erosion downwash.

Maintenance and monitoring of the state of heritage sites, including parks and gardens and water elements, will play a significant role in connection with climate change and the occurrence of extreme weather conditions.

The first part of the paper and the poster presentation would briefly present the methodology for assessing the threat to the state and quality of the environment of water elements including wetland sites forming part of cultural heritage sites, based, among other things, on a questionnaire survey, measuring the quality of the aquatic environment, sampling and recording the incidence of invasive plant species.

The second part of the paper and the poster presentation would deal with environmentally friendly and non-invasive technologies to maintain or improve the quality of the aquatic environment of water elements including wetlands and ponds located within cultural heritage sites and historic settlements using modern technologies.

**Maria Busse**

***The acceptance of innovative strategies for sustainable valorisation of marginal wetlands in the Spreewald region (Germany) – a study design***

The marginal wetlands are a core element of the cultural landscape in the Spreewald region, which is grown over the course of centuries. Nowadays, these wetlands are increasingly under threat of fall-

ing out of use due to economic and cultivation-related reasons. Their continual use is aimed at preserving biodiversity and providing an attractive landscape for tourism. Therefore, an innovative and systematic strategy for the sustainable valorisation is under development using a transdisciplinary innovation process. The innovative strategy consists of an alternative financing option for the maintenance measures and the thermal recycling of the landscape scrap. However, this strategy has to be accepted by the affected actors in order to achieve a successful implementation. Accordingly, diverging interests have to be identified by the acceptance study, which in turn helps avoiding potential land use conflicts.

In this study, we ask for 1) the hindering and positive factors influencing the land owners' and users' acceptance of the innovative strategy 2) the acceptance barriers and the options to overcome them without overly stressing the actors.

The conceptual framework for measuring acceptance merges approaches from the sociology and the technology assessment. Thus, it considers the social context of decisions and the process-oriented and interactive character of acceptance. With this model, acceptance can be measured on three levels (the level of attitudes and values, the level of taking actions and the level of long-term use).

The study is divided in various working phases. Within these phases, we are using mainly qualitative methods from the social science. In the already performed situation analysis, we conducted 14 explorative expert interviews. To identify acceptance factors in detail, we will conduct semi-structured interviews with land owners and land users. In four focus group discussions, the acceptance factors will be discussed and the innovative strategy will be developed. The measures to overcome acceptance barriers will be developed in a co-design process and will be implemented and tested in the innovation process.

The main expected result is a transferable and complex tool for a strategic acceptance enhancement. It consists of three modules (the acceptance analysis, the measures of acceptance enhancement and the crisis management). At the end of the study, this complex tool will be ready for application by practitioners who are planning the development of innovative strategies for sustainable land management.

### **Scott Jennings Melbourne**

#### ***Yangon Ecologies: Landscape infrastructures in Myanmar's commercial capital***

What are current ecological conditions in greater Yangon, and how might these systems be structured in a framework that helps guide a sustainable future for that city's urban growth?

This study begins the process of identifying critical landscape systems within Yangon's peri-urban region that are in the process of undergoing significant urban change. By initiating a hitherto non-existent dataset of the city's ecological potential, this ongoing research functions as a first step toward advancing novel methodologies for assessing environmental conditions in areas of rapid change, generally, and more specific to Yangon, informing policy and decision making to facilitate a sustainable transformation of the city.

Yangon (Rangoon), the cultural and commercial center of Myanmar (Burma), has like the rest of the country remained largely isolated from international contact and investment during the past half century of authoritarian rule. A recent and ongoing political transition toward some form of representative governance has been accompanied by a dramatic increase in international engagement. The combination of political opportunity and development potential was behind Myanmar being recently awarded "country of the year" by The Economist magazine.

With a well-defined historic core built during the colonial era, Yangon has experienced limited formal urban development over the past century. Even so, the city maintains an outsized gravity in the country, constituting approximately 10% of Myanmar's total population. The major proportion of this population resides in informal settlements with poor living conditions in townships north of the city's historic core. These settlements are interspersed amongst heterogeneous landscapes that hold a combination of wetlands, agriculture, housing, and industry. It is these rich and varied township landscapes stretching in a wide arc north, east and west of Yangon's current periphery that are anticipated to absorb the majority of the city's infrastructure and housing development in coming years, and yet an understanding of the place's existing ecological systems is extremely limited. Housed within HKUrbanLab's Sustainable High Density Cities Lab, this effort builds from the the University of Hong Kong Division of Landscape Architecture's more than three years of engagement on urban and environmental issues in Yangon.

**Barbara Sowińska-Świerkosz, Dawid Soszyński**

***Ranking of the projected cultural parks of the Lubelskie voivodship in terms of providing cultural ecosystem services***

One of the contemporary trends in landscape research and planning is ecosystem services issue. They are understood as a set of ecosystem products and functions which are useful to human society, satisfying their fundamental needs and have a direct impact on human health and material well-being. According to Millennium Ecosystem Assessment (2005) one of them are cultural services defined as the non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation and aesthetic experiences. The aim of the manuscript is to assess such set of cultural benefits for the selected projected cultural parks of the Lubelskie voivodship. The implementation of this goal adopted a four-stage procedure: (1) typological analysis of a set of projected cultural parks based on 10 variables reflecting the resources, values and state of maintenance of cultural heritage; (2) selection of representative areas; (3) analysis of cultural services provided by selected parks; (4) comparison of selected cultural parks and determination of their ranking in terms of provision of benefits. Due to the specificity of study areas services assessment will be focus on following subcategories: aesthetic, recreational, cultural heritage values, historical values, cultural diversity and educational values. The assessment will be executed based on a standard model used in landscape valorisation. It involves ascribing grading points to each of the subcategories of CES, and then summing them to determine the overall benefits generated by a given site.