The territorial system of ecological stability (TSES) in the planning practice in Slovakia

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The creation of ecological networks represents basic strategy of the nature and landscape protection. This principle is declared in many international documents, as are: AGENDA 21, Convention on biological diversity from Rio Summit °92, Pan-European strategy about biological and landscape biodiversity, EECONET in European programme IUCN, Landscape Convention etc. The maintenance of valuable natural ecosystems is basic principle of NATURA 2000, too. From these international concepts and programme outcomes national programme of ecological networks.

In Slovakia, the concept of Territorial System of Ecological Stability (TSES) has been developed. It is a result of long-time effort of Slovak landscape ecologists to prepare landscape-ecological tool as a support to solve landscape-ecological problems and strengthen the ecological stability of the landscape.

Design of TSES is based on concept of understanding of spatial landscape ecological stability as dynamic ability of landscape structure to maintain spatial ecological relations within individual ecosystems for dynamic variability of conditions and life forms (Forman, Godron, 1993, Naveh, Lieberman, 1993, Miklós, 1996). The TSES is a concise method based on landscape ecological research which modified the ideas of ecological networks towards integrated managment of optimum organisation and utilisation of the landscape as a whole. TSES was developed as a routine procedure to the spatial planning practices very early, since 1984, together with the methodics of landscape ecological planning LANDEP (Ružička, Miklós, 1982).

After the political changes in 1990 the TSES has been involved as important **part of the state environmental policy** to the legislation (Miklós, 1991) as a corner-stone idea to the Act on Nature and Landscape Protection, than consequently as obligatory regulative to other acts concerning the spatial planning. The basic documents have been elaborated, too: the General TSES for the whole territory of Slovakia, the regional TSES for all districts of Slovakia, and, several hundreds TSES on local level. The TSES was successivelly implemented as obligatory regulatives to the act on agricultural land arrangement, act on spatial planning, act on water, act on flood protection, act on environmental impact assessment, act on forests.

The procedure of the TSES is basically oriented to the a) delineation of main elements of the TSES: biocentres, biocorridors and interactive elements. Those elements compose the frame of an ecological network. As biocentres should be delineated those biotopes which serves as the basis for food, shelter and site for reproduction, as the biocorridors and interactive elements should be projected chains of biotopes which brake the isolation and ensure the migration and interaction as well as the spatial ecological stability of the landscape; b) definition and proposal of so called ecostabilising measures, which should fulfil different practical ecological function as soil and water protection, microclimatic, hygienic, aesthetic and other function. Among those the agro-technical, agro-meliorative and forest management measures might be underlined. By combination of both group of actions the TSES becomes a whole-space covering – "territorial" – system, what differs of "classic" ecological network concepts, which mostly concentrate only to biocentres and biocorridors. The basic output of the TSES project is a set of maps with a projection of biocentres, biocorridors, interactive elements, eco-stabilising measures, conflict of interests of TSES and threatening phenomenon (Izakovičová et al., 2000).

The basic goal of the paper will be presenting of a special ecological network concept, the concept of the territorial system of ecological stability in the Slovak Republic and its application in the planning practice.

On the poster we would like to present an example of the creation of the territorial system of ecological stability on regional level – district Trnava. It is typical agricultural landscape with intensive agriculture with law degree of the ecological stability. Institute of landscape ecology SAS in the region began with the regeneration of ecological networks. We build here new elements of the TSES – urban biocentre and biocorridors. On a particular implementation of these elements together to participate various organizations operating in the territory- Elementary school Suchá nad Parnou, Municipal and Parish Office Suchá nad Parnou, Hunting Association "Zelený háj".

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Michala Kopečková

How do Natura 2000 network and Green Belt overlap?

During the second part of 20th century very valuable habitats were preserved and many precious and endangered species found their refuge in the border region between Western and Eastern Europe, in the area now called European Green Belt. It is not surprising that many Natura 2000 localities are found in the Green Belt, because for the Natura 2000 network the most valuable, endangered or endemic species and habitats were chosen. Here the Natura 2000 and Green Belt initiative may cooperate to gain the most effective protection for valuable sites. Some of the localities are transboundary, but many times the locality on one side of the border doesn't continue on the other side. It may be because the landscape is really different, one country is non-EU or simply because the selection of Natura 2000 localities was not coordinated. The idea of Green Belt can help to improve the cross border cooperation in such cases.

Is EIA and SEA an opportunity for the Green Belt?

Environmental Impact Assessment (EIA) and Strategic Environmental Assessment are strong tools of environmental and nature protection. They can be used for the protection of the European Green Belt, though it has limits. As the Green Belt is not protected by the law as whole, it cannot be a reason for some restriction itself, but it can be a supporting argument for protection of valuable localities at the border. A bigger opportunity may be SEA of the spatial plans that is sometimes elaborated already during the preparation of the spatial plan. The idea of Green Belt can be reflected in the spatial plan as a value worthy of protection and as a chance for tourism. It requires a strong informational campaign and communication with municipalities and regional governments and also with authors of spatial plans. Nevertheless without being incorporated in the spatial plans the protection and benefits of the Green Belt will be weaker and too dependent on actual projects.

Habitats Directive Art. 6 Appropriate Assessment: Effectiveness of This Tool along the Green Belt and beyond

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A theoretical advantage of the Natura 2000 network established pursuant to the Habitats Directive (92/43/EEC) is not only the opportunity to put many valuable habitat types and habitats of species of EU importance under the formal (legal, administrative, and/or contractual) protection but also the obligation of all concerned countries to develop procedure preventing the sites of Natura 2000 from deterioration or destruction by development plans and projects – so-called Appropriate Assessment (AA). Its framework is given by Art. 6.3 and 6.4 of the said Directive and if properly applied it has a potential to become one of the most effective nature protection tools worldwide, showing also the way how to protect sites outside the network (e.g., protected areas). However, its implementation lies with particular countries, and no information about the real situation across Europe has been available until now. Recently, independent studies have been carried out providing a picture about the AA across the countries along the Green Belt. An overview of these data has shown very uneven approach to the same (or comparable) assets among particular countries from both procedural and content perspective. These findings will be publicized and briefly discussed at the conference session as it is questionable if the AA can fully meet its purpose if implemented in the current way.

Governance of the German Green Belt Ecological Network : Implications for the Korean Demilitarized Zone

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The German Green Belt (GB) is a 1,398km long, valuable ecological network along the former border between East and West Germany, created in late 1989 as an outcome of the Cold War. The exemplary project for the conservation of the German GB not only inspired the development of the European GB along the whole former Iron Curtain in Europe, but has also received great interest from Korea for the policy-learning applicable to the conservation of the Korean Demilitarized Zone (DMZ) after the eventual unification of North and South Korea. Meanwhile, the German GB has often suffered threats to its conservation, and has witnessed conflicts among involved actors, which were closely related to social and political factors such as the post-reunification policy environment, in addition to ecological factors.

The present study intends to address the above challenges as well as to understand the evolution of the conservation framework of the German GB using the governance approach, since the concept of governance is instrumental in understanding a complex socio-ecological system through interdisciplinary study. The governance analysis framework for the research was formulated in specific consideration of scale (ecological network) and external policy environment (relevant socio-political context). The data collected from semi-structured interviews as well as other various sources were used for analysis.

Based on a critical understanding of the German GB governance, the present study identifies the main features of its evolution and its success factors and challenges and recommends the desirable changes in the governance for the successful conservation of the German GB. The analysis results also provide useful implications for the Korean DMZ conservation. As an empirical study of biodiversity governance, the present study also contributes to the discourse on biodiversity governance, particularly on its scale- and context-specific considerations.

In conclusion, the present study clearly verifies that the German GB governance has been characterized by the complex and dynamic features of a large-scale socio-ecological system and influenced by its specific socio-political context. The main findings of the research include that: 1) large-scale institutional arrangements are highly necessary in the multi-level structure or decentralization approach of biodiversity governance to enhance governance effectiveness and the achievement of conservation goals; 2) as the important role of environmental NGOs in the German GB governance explicitly demonstrates, government is not the only actor that can improve biodiversity governance; and 3) a context-specific governance approach that considers the influence of the external policy environment, such as the post-reunification policy environment of the German GB governance, facilitates an understanding of complexities of governance system and contributes to better addressing its broadly interconnected issues.

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Others: Since 1998 he is the scientific supervisor of national and local researches. He is a member of the International Society for Ecological Economics (ISEE), of the International Association of Agricultural Economists (IAAE), of the European Association of Agricultural Economists (EAAE), of the Italian Environmental Analysts Association (AAA), of the Italian Society of Agricultural Economics (SIDEA) and of the Italian Society of AgroFood Economics. Editor-in-Chief of The three-monthly International Agricultural Policy - IAP (Politica Agricola Internazionale - PAGRI) review. Chairman of the Centre for Theoretical and Applied Ecology (Centro di Ecologia Teorica ed Applicata - CETA), Gorizia.

SOME RECENT PUBLICATIONS (English selection):

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2nd scientific GreenNet conference | Paper about Database of measures

When planning measures on Environmental Impact Statements (EIS) it came about again and again of incomplete and different detailed collection of particular measures. As there was no central administrative system which includes all information in an uniform manner, the collected data were difficult to overlook and redundant or contradictory measures occurred partly.

In case of avoiding those problems, freiland and revital developed together a system, editing data in a common form and allows each member of the project team access to the necessary information. Aim was to have the measure planning more efficient and readily comprehensible.

An online database was developed, which supports the measure planning from the beginning. Sectoral conflicts and necessary measures will be adopted and coordinated. The product includes a package of measures on which all authorised persons have access. Thus a common measure description can be ensured.

All orders for discovery and measures are basis for the realisation and can be worked off target-oriented. The database can also be applied in the measure-maintenance and in the success-monitoring in the company.

Essential advantages of the database tool are:	
	Transparency for the whole procedure
	Simple application "online"
	Common system for all EIS
	Cost monitoring- and costs-by-cause principle
	Standardised EIA-measures (measures pool)
	Basis for tenders of detailed planning and environment construction supervision
	(areas, hectare, quantities)

This database, on the condition that applied exactly, gives the user the possibility to plan measures understandably and to keep them up-to-date. The database is already used in all ASFINAG¹-projects and also at the Tauern gas line.

The next step can be the cross-project use, also apart from EIAs. Therefore the organization of measures, as for projects from the federal government, the federal land or other institutions can be effected superordinate – an overview of all relevant measures concerning nature conservation in one space and its state is possible. Contraries can be shown and corrected immediately. The aim is a coordinated measure planning for one region and not only for one project!

Thus the database comes to an important tool for the concept FORGREENING. The concept FORGREENING (FORCEFUL GREEN INFRASTRUCTURE) includes the expansion and strengthening by bundling of measures in the scope of EIAs (Environmental Impact Assessm Assessment ent) in designated green zones of the "Green Infrastructure in Europe" and therefore also in the range of the European Green.



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 $^{^{1}}$ ASFINAG is the sole operator of the entire Austrian motorway and expressway network. It is responsible for planning, construction, operation and on the Austrian primary road network.

IENE – Infra Eco Network Europe: A network for sustainable green infrastructure compatible with transport routes and corridors

Infra Eco Network Europe (IENE) is a European network of authorities, institutes and experts from about 50 countries involved in the phenomena of habitat fragmentation caused by the construction and use of linear transport infrastructure. The network represents an independent, international and interdisciplinary arena for the exchange and development of expert knowledge with the aim to promote a safe and ecologically sustainable pan-European transport infrastructure through recommending measures and planning procedures to conserve biodiversity, counteract landscape fragmentation, and reduce vehicular accidents and wildlife casualties. Fragmentation of natural and human living spaces with subsequent adverse effects on wildlife and social life has been recognised as one of the major unresolved threats to the biological diversity worldwide.

There is urgent need to integrate transport planning and ecological concern in Europe and to re-establish and secure connectivity across fragmented landscapes. Overcoming these negative impacts is possible, necessary means and knowledge is available. It is even possible to transform these corridors into a habitat valuable to biodiversity. What lacks behind are often economic constraints and shortcomings in environmental policy to build a safer and an ecologically sustainable infrastructure. Landscape values – such as habitat connectivity – need a general and juridical recognition that provide the necessary tools for decision makers to consider biodiversity already from the start.

As a result of the COST 341 Action "Habitat fragmentation due to Transportation Infrastructure" IENE developed "A European Handbook for Identifying Conflicts and Designing Solutions concerning Wildlife and Traffic" in 2003. This handbook was used in many countries inside as well as outside Europe as a basis for the development of national guidelines in many countries, even outside Europe. During the last decade many good projects have been realised that proved that the preservation as well as re-establishment of connectivity can be achieved by setting proper measures. To sustainably safeguard the connectivity of these green corridors they need to be incorporated in spatial and land-scape plans and they need to be supported by all concerned stakeholders.

In the framework of the EU Green Infrastructure policy, the Convention on biological diversity and the European Habitats as well as Birds Directive the planning and protection of a functionally linked network of high-quality ecosystems need to be effectively implemented in the coming years. Green Infrastructure serves not only for the protection of biodiversity but also as a multifunctional recourse delivering benefits and services that human society receives from nature.

Therefore major emphasis needs to be put to the Green Belt Europe, which connects a large number of ecologically valuable areas representing a cross section of all European

bio-geographical regions and which could mark the backbone of a Pan-European ecological network.

Ondřej Volf, Ametyst: Appropriate assessment (Natura 2000 assessment) as a tool for protection of Green Belt localities – practical examples

Appropriate assessment or Natura 2000 assessment is an important part of our activities. Some of case studies which we were dealing with were located in landscape of former Iron Curtain in the Czech Green Belt. On the examples we can show, how the assessment can help in protection of localities important for connectivity of Green Belt.

European Beaver could serve as symbol of Green Belt between Bavaria and Czech Republic. Beaver population expands from Bavaria to Cesky les. Katerinsky potok stream is designated as Natura 2000 site with beaver as a target feature. Due large flood caused by beavers the water administrator wanted to abolish beaver dam on the stream. During assessment process the plan was rejected and newly established wetland was saved.

Another process assessed the influence of new touristic path and border crossings on capercaillie in Sumava mountains. The population of that bird lives on three states – Czech republic, Austria and Bavaria and it is one of the most important populations in Middle Europe. Touristic infrastructure often means possible risks for this sensitive species.

In South Moravia we evaluated the project of small hydroelectric power station on Dyje River. The river is designated as Natura 2000 site for many habitats and species. The project had to be rejected because the dam as part of the project could be very problematic barrier for connectivity of river system.

Eva Chvojková: How to assess negative impacts of human activities on nature?

According to Article 6.3 of the Habitat Directive any plan or project could be agreed on only after having ascertained that it will not adversely affect the integrity of Natura 2000 sites. This rule brings important question – how to recognise "adverse effect on integrity"? Answering this question in the framework of Natura 2000 could serve as an example for GreenBelt and nature protection generally.

Although Habitats Directive Art. 6 Appropriate Assessment (AA) is performed in many different ways in member states from the procedural point of view, there exist common basic principles to reach best practice. Such principles are defined for example in the Czech guidance on AA.

Very good data of distribution of assessed habitat types or species (target features) and best scientific knowledge including their sensitivity to impacts is needed. Relevant experts should be involved as consultants. Wider consensus of them is required. The precautionary principle is used in case of uncertainty. AA has to be compiled thoroughly, in an objective and independent way. Transparent rules for setting significance of impacts are very useful.

After plan or project has been assessed that it has significant impact (adversely affects the integrity of Natura 200 sites), the proponent of the plan or project has to stop it or go through quite complicated procedure. It must be proven that there exist no other alternative of the plan or project, that it has overriding public interest and there exist compensatory measures. Because the procedure is quite strict, the results of appropriate assessment are perceived as a barrier of development. This brings a big challenge to nature protection. We should be able to explain the need to protect nature and discuss plans and projects with proponents in very early stage of their development so as they could be modified and significant effects eliminated.

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Title: Developing a common methodology for the assessment, preservation and management of European landscapes.

This presentation outlines a synthesis of the process, documentation and recommendations drawn from the work of 14 European cities, regions, universities and agencies involved in the EUROSCAPES project, a 3 year-long effort funded by the European Union to implement a global methodology for the preservation and maintenance of European Landscapes of particular value.

The 2010 European Landscape Convention defines landscape as those portions of the environment valued by individuals and communities for its aesthetic, ecological, cultural qualities. This suggests that local communities hold the responsibility to assess the cultural, ecological and economic value of their landscapes and to identify those most deserving of preservation. The landscape convention offered the conceptual grounding for the EUROSCAPES project. The documentation included each partner's maintenance and preservation methodology, a section focusing on GIS technology, and landscape maintenance and preservation best practices illustrating various applications of the methodologies.

Experts Deni Ruggeri and Anne Jaluzot were charged with the analysis of the extensive data gathered by the project. The goal was to highlight areas of convergence and divergence between partners in terms of type of landscapes considered, methodologies used, and processes followed in landscape maintenance and preservation projects. Methodologies, GIS practices and best practices were coded for their adherence to the Convention's "landscape" definition and to the EUROSCAPES project's sustainability goals. Moreover, a series of quantitative indicators were used to assess the "impact" of each project in terms of ecological, cultural, socio economic or policy value.

The experts concluded that the EUROSCAPES' emphasis on community engagement and its innovative use of GIS technology as a communication and management tool were the project's most distinctive contributions. They also called for a more rigorous assessment of each project's economic and socio-cultural impacts, including the integration of a benchmarking system to facilitate the monitoring of future impacts.

Implementing Green Infrastructure and ecological networks in Europe: lessons learned and future perspectives

Landscape fragmentation by human activities and infrastructure is a major cause of the alarming decrease in many European wildlife populations. The current trend of steadily increasing landscape fragmentation contradicts the principle of sustainability and there is a clear and urgent need for action. Ecological networks represent a very effective tool in combating the effects of fragmentation by: counteracting fragmentation; conserving and buffering core areas; maintaining and establishing ecological connectivity; being a tool for ecological design and planning; being a tool for interaction with other land uses; being an important political instrument.

A lot of work has been done in relation to implementing the ecological networks in Europe at various levels, with the Pan European Ecological Network (PEEN) as an umbrella initiative which was very successful in reaching its goal of promoting the idea of a pan-European vision of biodiversity through a European Ecological network. Several Multi-lateral Environmental Agreements (MEAs) and international and regional policy processes have built an enabling framework for the development and implementation of ecological networks at different levels. They either refer directly to ecological networks (like the PEEN), or they embrace provisions which are relevant from an ecological connectivity perspective (e.g., recognizing the importance of maintaining ecological coherence and connectivity as a contribution to biodiversity conservation, designating protected areas and buffer zones, protecting migratory species, etc.).

As a response to the Aichi targets signed at COP 10 of the CBD in 2010 and included in the European Commission's EU 2020 European biodiversity headline target and 2050 vision, aimed at halting and reversing the loss of biodiversity across the EU territory of the member states, Green Infrastructure has recently been launched as a new concept and important policy instrument.

Green Infrastructure should provide a strategic approach, with objectives that support biodiversity recovery and the re-establishment of a suite of ecosystem services. The main aim is to improve connectivity, permeability, heterogeneity and avoid further loss and fragmentation of natural/semi-natural habitats; increase the surface area of semi-natural habitats (semi-natural farmland, green belts and open spaces) within man-made landscapes; and to improve the connectivity of wildlife corridors across the boundaries between different countries at the European level.

However it is finally interpreted, green infrastructure will clearly have some form of coherent ecological network at its core. It would therefore seem prudent to take into account the work that has been done at various geographical levels in order to define areas of existing and potential ecological connectivity.

Perhaps the step that green infrastructure can take beyond what has already been achieved (with ecological networks) is to provide further context for informing the important decisions that need to be made in relation to the planning and management of the wider countryside outside of protected areas and other special sites. Thus, the consideration of issues such as ecosystem services, climate change adaptation and ecological resilience can be integrated within the new approach. Hopefully, some of these ideas will be reflected in the upcoming European Commission's Green Paper on Green Infrastructure.

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Landscape development What really matters are people behind the landscape

The contribution will explain the thesis that people not regulations are most important driving force behind every landscape. We will try to reveal the idea that people who work and live in the specific landscape and people who make decisions about development are crucial for landscape development. This means they should be very well aware of the meaning of landscape as well as of the regulation and policy that stands for it. The argument will be explained on the case of Slovenia's practice and proposals for improvement will be presented at the end.

European landscape convention (ELC) irrevocably changed the perspective of landscape development in Europe by raising the cultural meaning of landscape into the focus. The document demonstrates the predominant public believe that European landscapes are a cultural phenomenon as much as natural. From that point on cultural meaning of landscape becomes a legitimate issue in the debate about development. Surprisingly from that point on people and public opinion become more important for further development of specific landscape than any kind of regulation, even ELC. This is proved by the state of landscape and practice of landscape planning and management in different countries. There are countries like Austria which didn't signed the convention but are leading a respectful landscape policy and countries like Slovenia which ratified the convention but fails to lead evident landscape policy.

In this perspective the case of Slovenia is very interesting because landscape proved to be highly valued national symbol and in line with this Slovenia also, professionally speaking, awaited the ELC well prepared, with a long range of professional expertise performed in nineties. What went wrong afterwards can't be simply described and it wasn't so for only one reason, but evidence shows that one of possible reasons is that public opinion and people were almost completely forgotten, left out from the process of professional valuation and even more important from the political process of planning landscape development and ratifying the ELC. On the case of three distinctive Slovenian landscapes we will demonstrate problems of the recent practice and suggest how they can be conquered. This is going to be done with a short brief into the results of transnational project Vital Landscapes in which one of these landscapes was involved as a pilot area.

Crossborder spatial planning as a method how to push the implementation of the European Green Belt: Example of the Project BAUM

The European Green Belt is a great Idea, but the same fact that allowed us to think about this concept is holding us back from its realization: Borders.

The development of the city of Bratislava and its region has always been and in the nearest future will be determined by its specific location at the borders of three countries. Due to elimination of political barriers like joining the EU and the Schengen System, entirely new conditions for spatial planning have been created. To determine the framework of functional land use of the border area became necessary. In the past, formation of views and opinions how to deal with the border area in between Austria and Slovakia went on in two projects (Project KOBRA, Project CUPA). In both of these projects the creation of a green belt around the city of Bratislava played an important role. Now, another project called BAUM (www.ba-um.eu) is in realization. And this time the ideas shouldn 't stay only on the paper, they will be realised. The Project has two main goals: First, to create an urban-regional management for the border area and second, to elaborate a common spatial planning doument that will be transformed in to binding planning documents on both sides of the border. The result of the project should be a coordinated development of the common border area, wehere excellent and innovative ideas like the green Belt of Europe will always play an important role.



About the Author: Marek Dinka studied geography and spatial planning in Bratislava, Vienna and Münster. He is working for the city of Bratislava in the area of regional planning and he is a PhD-candidate at the Slovak Technical University in Bratislava.

Abstract for the 2nd scientific & midterm GreenNet conference: How to push the implementation of the European Green Belt by landscape policy instruments?

Related topics: Good examples of landscape and spatial planning in the partner countries, Significant reduction of ongoing fragmentation and intensification of land use (as these are the 2 most threatening causes to ecosystems, biodiversity and life) within ecological networks/landscape

GREENWAYS: A LANDSCAPE PLANNING TOOL FOR RESTORATION OF LINKAGES IN THE LANDSCAPE

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The traditional agricultural landscape of Nitra Region faces nowadays the consequences of agricultural collectivization from the second half of the 20th century. During that time the agricultural production and land use were intensified. This trend significantly changed the landscape structure and its image. While linkages and connections represented an inherent element of the 18th and 19th century landscape, the 20th century landscape has gradually changed and in many cases lost its permeability. Linkages are easy to recognise on historic maps as physical elements of the landscape structure with an important social dimension. They connected a settlement with the surrounding open land and with neighbouring settlements as well and were accompanied by alleys or by single lines of trees (similarly like watercourses). These linear landscape structure elements together with field baulks and a higher portion of meadows and grasslands created an ecologically more stable landscape. The portion of nonforest woody vegetation in agricultural landscape was increased by planting of new windbreaks in the second half of the 20th century.

Nowadays we face the need to restore the landscape not only in terms of ecological stability, but also in terms of visual and perceptual quality and social values. It's evident that we cannot return to historic landscape structures. The needs of contemporary land use would not allow such a visionary approach. That's why we have to look for effective landscape planning tools to gain sustainable solutions. We applied greenways as a tool in the case study of rural settlement Tvrdosovce and its micro-region Cergat-Vah (Nitra Region) situated in the rural agricultural countryside of south-western Slovakia, in the Danube Lowland. The greenways concept for the micro-region was elaborated based on visual interpretation and GIS analyses of topographical and orthophoto maps. It contains biotic structures (watercourses and their accompanying vegetation with different levels of significance) and abiotic structures (field routes which increase the permeability of the landscape and thereby its recreational potential as well). This infrastructure has got a range of functions which can be summarised into four main service-groups and dimensions: ecological, urban (spatial), social and economic. The greenways concept for the village Tvrdosovce was elaborated according to analyses of historic landscape and settlement structures worked out by visual interpretation and GIS analyses of cadastral area maps from four different time periods (18th, 19th, 20th and 21th century). The main function of this concept is to define and improve a complex linkage between settlement and landscape with a range of service layers (visual and aesthetic, social, ecological, urban etc.).

Keywords: greenways, landscape planning, landscape structure, land use, linkages in the landscape *Acknowledgement:* This paper was financially supported by KEGA No. 020SPU-4/2011 of the Ministry of Education of the Slovak Republic.

From an outstanding European Greenbelt to a UNESCO designation: a feasibility study on the designation of the European Greenbelt as World Heritage Site

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Abstract

The "Iron Curtain" divided Eastern and Western Europe for about 40 years by cutting off many links between both sides. On either side of the border, States developed their own economic systems and military alliances. Physically, the Iron Curtain was highly militarized and was marked by a series of border defences. The highly militarized borderline led to unintended consequences for nature conservation. Today, several habitats are articulated into what has been described as the European backbone or as a living monument of European history. Since the fall of the Iron Curtain, old and emerging ideologies, symbols and landscapes have been under continued reinvention and reinterpretation along the European Green Belt (EGB). Its cultural and natural heritage have been considered repeatedly as having outstanding universal value (OUV) as in the case of UNESCO World Heritage designated sites. The guestion on the feasibility of designating the EGB by its OUV under the UNESCO World Heritage Site label remains open, and is addressed by the German federal Agency for Nature Conservation under a R&D project. The objective of this R&D project is to develop a series of scenarios that ground on the UNESCO World Heritage nomination criteria, integrity and authenticity, and that depending on the sites' combination, shed some light into the possible conservation and management aspects of a tentative designation. This recently launched R&D project is carried by the Institute for Landscape Management at the University of Freiburg and the Agrathaer GmbH for strategic land-use, subsidiary of the ZALF. First observations along the EGB have demonstrated a complexity of borders and scales that require further discussion under a spatial and thematic scopes. Purpose of this paper is to stimulate exchange on methodological approaches as well as on landscape policies in Europe and its neighbours. The results are expected to bridge aims and synergies for the future scenarios on EGB cohesion and management coordination.

The Green Belt-pilot area of BUND in Altmarkkreis Salzwedel A best practice example for the interaction of landscape policy instruments and awareness raising for the ecological network

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Abstract

BUND (Bund für Umwelt und Naturschutz Deutschland, Friends of the Earth Germany) has been engaged to protect the valuable habitats along the former inner-German border since the fall of the Iron Curtain in 1989. The Green Belt Germany is 1393 km long, passing 17 distinct physiographic regions from the Baltic Sea to the intersection of the border between Saxony, Bavaria and Czech Republic. It runs through almost every type of German landscape – from the coast to lowlands and low mountain regions. The special status of the Green Belt derives from the connection of different habitat types, a fact extremely rare in the intensively used and fragmented German landscape. Fallow grassland, shrubland, dry grassland, pioneer forests, wet meadows, water bodies and bogs are linked and interlinked.

In seven pilot regions along the Green Belt Germany BUND has purchased unique habitats mostly from private owners—up to now around 700 ha. The land purchase is financed by private donors. The area with the highest amount of land purchased, including around 450 ha, is located in rural district Altmarkkreis Salzwedel in Federal State Saxony-Anhalt. In these areas - mainly valuable alluvial forests, wet meadows and fens - implementation measures for protection and development of the unique ecological corridor are carried out. The implementation is supported by and takes place within a framework of various landscape policies: Natura 2000, EU-funded agro-environmental programmes to maintain valuable habitats and landscapes, instruments like land consolidation and compensation measures as well as many regional and local landscape instruments, e. g. land exchange. Moreover the example shows that strong and long lasting cooperation between governmental and non-governmental organisations on different levels as well as with farmers and land users on side is one successful formula to protect the Green Belt in the long run.

Other aspects are the comprehensive awareness raising measures, such as the implementation of eco-tourism, e. g. within the project "Experience Green Belt", environmental education and the close participation of local people and key players.



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- Independent whether an area of the Green Belt (GB) is under any sort of protection or not, there is no common knowledge about the landscapes, their character, size and need. This unsatisfactory circumstance must be changed. Ecovast Austria, being partner as external expert of the Boku-University, Vienna, therefore identifies the landscapes at the project regions with the help of its own method developed for purposes like this and designed to involve the interested local people ("stakeholders"). This approach also is totally in line with the requirements of the Council of Europe and its initiative, the European Landscape Convention.

We have accomplished this task until now for the three project regions in Austria , and are now going to present this to the audience (following now is a PPP on the subject). But already now, after carrying out this part of our working contract it became obvious that this task also is a task concerning the whole of the Green Belt. We come back to this issue in point three of this presentation

- There exist landscape politics that are of use for the Green Belt in Austria despite the fact that Austria just as Germany officially is neither willing to ratify nor to sign the convention. There are a whole lot, because even the officials that are following the political motivated attitude of the federal state, declare in personal talk that they do not at all object the contents of the convention. Now follow the presentation of three examples, probably the most important ones:

In Lower Austria for example there exists the provincial institution called "Landscape Fund" that with its operations is carrying out many tasks in line with the ideas of the convention. This landscape fund is supported by a sort of tax gained by a low percentage rate of every m³ sand or gravel that is exploited from the landscape. It supports programmes of education, awareness raising and conferences in behalf of landscapes.

Secondly, and also in other Austrian provinces there are the so called "Regional Managements" (RM). They are committed to the welfare of the rural regions and the people living there, including also matters concerning the landscapes. There are five regional managements co-financed from the province and their region. Often the regions of these managements are the same as landscapes (e.g. the Wood Quarter, Wine Quarter and the Cider Region). Two of them, RM Wood Quarter and RM Wine Quarter are covering the Lower Austrian section of the GB. These two RM officially have nothing to do with the GB and its needs, but it should be a good idea to get them involved, not only in Austria.

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The Austrian positive exception is the RM Burgenland that officially is project partner in behalf of the GB.

The third example is the initiative "ÖPUL" (not alone in Lower Austria). This acronym stands for the "Austrian Programme of Environment Protection in Farming". This programme, beside other tasks is responsible for the contracts between farmers and nature conservation with its specific requests.

You easily can see that all these measurements are of high value for the GB, its issues of nature protection, landscape and cultural heritage.

- Last but not least I think I should mention an initiative that is strongly favoured from Ecovast Austria and International together with other European bodies. It originally was raised in Germany and is of high importance for the further development of the GB, although it might seem to be lying rather far in the future. It is the initiative to install the GB as a World Heritage Site. The necessary preliminary talks between institutions and countries already have begun.

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THE USE OF A FORMER DEATH ZONE TO STUDY THE DIVERSITY AND CONSERVATION OF LIFE

By. Andrew J Gregory (PhD.) and Prof. Paul Beier (PhD.)

Conservation corridors are the most promising conservation intervention available to preserve biodiversity in light of ongoing human pressures. Conceptually, corridors are based on a simple premise. Namely, that by linking together smaller and more isolated natural reserves, these areas will be better able to resist anthropogenic pressures. However, to date little research has empirically tested this idea at relevant spatial scales or in a realistic landscape context. The EU Green Belt present a wonderful natural experiment to test corridor efficacy at relevant spatial extents, and last year at the meeting of the EU GreenNet I told members of a first of its kind global study to do just that. Over the past year I have identified >75 suitable landscapes for this study worldwide, including nine along the EU Green Belt. In this talk, I will update members on the status of the global corridor efficacy project, the study sites we have identified, and the detailed methods being employing to determine which traits are associated with corridors that do work. The full list of these sites and methods will be made available to conference participants. Finally, we are still seeking research partners, to join our study, and for site recommendations. We are interested in both long-term collaborations and simple site recommendations. We offer access to genetic data and shared research resources to all partners/collaborators. You can learn more about this study by visiting our website at: www.docorridorswork.org.

Voluntary activities in the landscape management of the Green Belt

The Green Belt is the backbone of a unique national ecological network along the former inner-German border. The diverse and often small-scaled open land habitats serve as valuable retreats for numerous endangered species. They often form the last remaining close to nature structures within the monotonous agricultural landscapes. As an overall goal the distinguished habitats of the Green Belt must be preserved. Likewise its function as a visible living monument for future generations is an important conservation target. To maintain the open characteristic of the land that is necessary for preserving this natural and cultural heritage, either an extensive or an active landscape conservation is required.

Voluntary activities are presented here as an approach to contribute to the sustainable management of the Green Belt. For voluntary landscape conservation work several groups can be addressed: school partnership projects, cooperation's with companies or active work outings, international work-camps, combined operations of the local Community together with land users etc., to name some examples. They can support the active landscape management work in the Green Belt, especially on areas, where other landscape management methods cannot be realized, for example when a lot of manual work is necessary. The characteristic small-scaled habitats of the Green Belt are often well suited for voluntary activities because the required tasks are manageable and foreseeable. In addition to the benefit for landscape management, the inclusion of volunteers allows to reach people personally regarding nature conservancy issues. Voluntary activities shouldn't be underestimated as a connecting link to environmental education and public relations.

A recently completed research project gives an overview of historical development and present situation of volunteerism in nature conservation and landscape management in the Green Belt on the basis of a literature analysis. The study gives focus to challenges related to working with volunteers as well as to positive impacts of voluntary activities on further areas. In addition, thematic starting points for the mapping out of relevant areas are offered. Reference area for the project was the Green Belt in the southeast of Thuringia.

The thematic review serves as basis for an information system development to create an information and management foundation for voluntary activities in the landscape management of the Green Belt. A concrete technical proposal for an information system will be developed in the next months. The target in mind is a stocking of relevant areas for volunteer working assignments to facilitate their management.

Voluntary activities can be used to achieve active participation of people and thereby promote the significance of the Green Belt as an important retreat. By being part of the efforts to preserve these distinguished habitats and by experiencing the human influence on both landscape destruction and landscape development as well as their consequences for biodiversity, people can see themselves as part of the greater whole. This support of the population can be seen as the basic requirement for the implementation of important nature conservation projects like the European Green Belt.







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ABSTRACT - Cross Broder Ideas for Nature Protection and Landscape Conservation (Martin FARTHOFER, Competence Center Envrionment; A-9500 Villach, AT

When talking about special nature areas we want to protect, it will need a wide interdisciplinary approach to succeed.

We will need a totally new view on the interactions of conservation areas, special agricultural possibilities, soft tourism, mobility and accessability and innovative energy production in situ.

To be able to protect our last green ressorts in Europe the first necessary issue will be to point out some possibilities of agricultural use that is meeting the requirements of sustainable landscape protection – for example the production of forage-pellets from meadows only cut two times a year to guarantee the natural succession – or – forest ecosystem management producing high class wood for special cabinet making.

An additional source of income must be soft tourism fostered by local communities arranging tours and guided long distance trips through these areas. That will need a structure of e-mobility – e-tourism trains, e-bikes and maybe in some fun areas even e-quads - linked with in-situ power production by photovoltaics or hydropower – in that case I prefer talking about the use of soft production tools like Turbine Blades – a kind of undershot waterwheel – or swimming power plants like the Strom-Boje. In case of local power production there is no use for top level efficiency but only for coverage of the local power consumption.

The next item will be a stricitly closed circle of wateruse for the buildings in that area – small drinking water plants with small scale water purification when needed, grey water reuse by simple but state of the art purifying solutions and black water treatment – in agricultural areas maybe in cofermentation plants or in small waste water treatment plants.

When we take the chance to proof that we have a lot of technologies and tools to be able to run small scale solutions at affordable costs when taking into account the less amount of nature we use and when we foster the products made out of sustainable agriculture, we will be able to set up a model region for all other countries – evaluated by the method of the Sustainable Area Budget (SAB – Levine, 2006) – making sustainable use of protected landscapes, helping to create economically viable structures far off the mainstream.

That should be worth changing local policies to the basic needs of such a system.