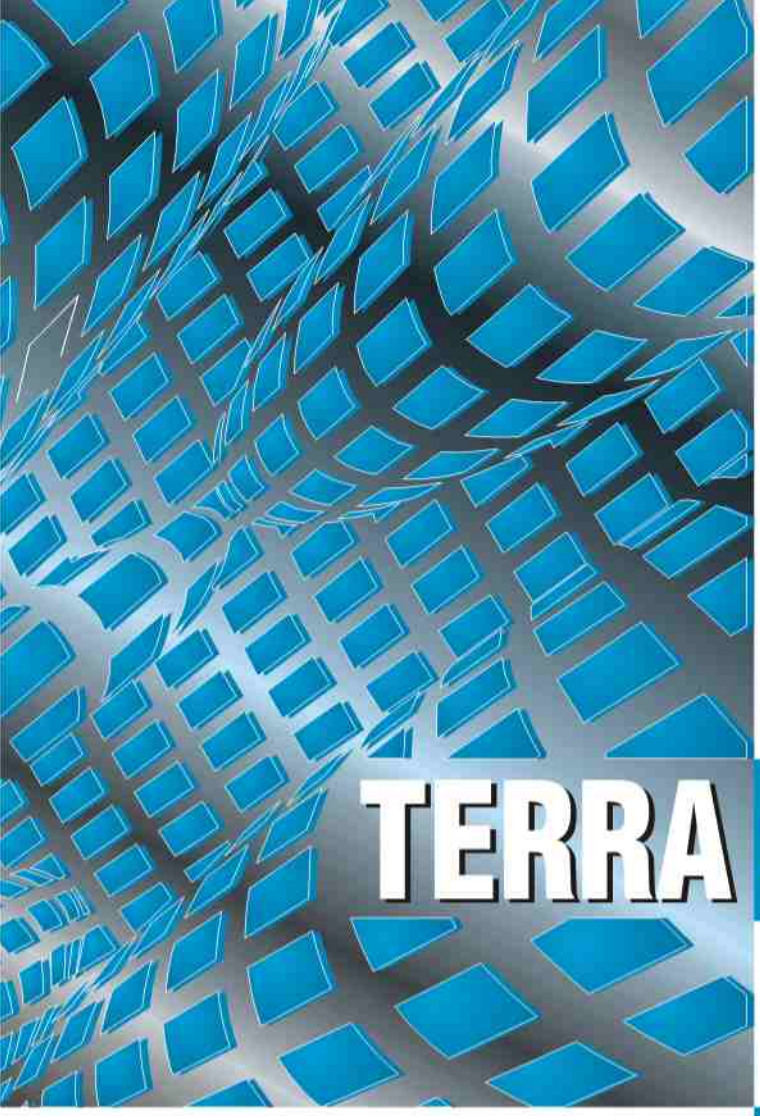

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TERRA SPECTRA

Planning Studies

Central European Journal of Spatial and Landscape Planning

1

2018

SPECTRA
Centre of Excellence

VOLUME X
1/2018

TERRA SPECTRA STU

PLANNING STUDIES - CENTRAL EUROPEAN JOURNAL OF SPATIAL AND LANDSCAPE PLANNING STU

Address:
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Publisher : STU Bratislava,
SPECTRA Centre of Excellence EU

Layout and Printing: *ROAD* Bratislava, 2018

ISSN 1338-0370

Contents:

Európska únia
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FOREWORD

Central European space is facing multiple challenges. Dominant part of them are joint challenges with the other parts of Europe and World resulting from global processes e.g. climate change, urbanisation, societal transformation towards civil society, development of knowledge based economy or migration. In addition, the specific historical societal and geographical preconditions derive specific challenges, threats and problems. The broad scale of the problems in the spatial development in central European space is a big challenge for spatial planning practice, theory and education. New tasks and new frameworks, brought by current development of the transformation of society and economy, require the implementation of new approaches, methods and instruments, in some cases not only new but very specific as well, in the spatial development management, new understanding of the role of planning. Those challenges are addressed by current research under broad participation of young generation of researchers in spatial planning, who present their papers in this issue of TERRA SPECTRA.

The effort of presented research work is to contribute towards integrated approaches to sustainable development and the processes of economic, social and cultural transformation. The interdisciplinary research on current problems and challenges is integrated part of the education and training of young researchers emphasizing the integration of landscape-ecological, economic, social and technological aspects.

Research and its outputs in the form of the proposals focused on optimising the spatial structures contribute to the sustainable spatial development, to balancing negative effects of regional disparities and at the same time to preserving cultural and ecological diversity, to improving the quality of life and to strengthening of social cohesion in Europe.

Trans-disciplinarily based research projects under participation of young researchers, primarily TRANSGREEN project of the Danube Transnational Programme, the outputs of which are represented in this issue, have been focused on creative research work starting from the issues of complex planning of sustainable spatial development in functional urban areas (FUA) and ending with the focus on specific problems of a region lagging behind in Slovakia and on efficient use of the EU structural funds.

I believe that the papers will find respond among academic society in the field of spatial planning not only in the CEE countries and bring impulses not only for research but and for societal practice as well.

Maroš Finka

Micaela Scacchi [1]

"CHINA: FROM ECO-CITIES TO ECO-REGIONS THROUGH ECOSYSTEM SERVICES

Abstract:
Today, in the global context, "the City" are the epicentre of the reorganization of economic, social and cultural dynamics, as well as the organization of space and time.
In particular, in Countries with a strong growth economy, like China, "urban space" has become a crucial place for overall societal transformation, for developing and disseminating innovations - the places where mobility, flows, networking and all their dynamic interactions take shape in a concentrated and complex fashion. Contemporary City is a point of intersection of the local and global, between the natural and the man-made; it is the space where intersections between new urban economy, new urban ecology and new urban society create synergies. So, rethinking the City and its government and its transformation, focusing on among new urban economies and urban ecosystems seems crucial in catalysing transition to a new form of urban socio-ecosystems resilient in the face of global and local crises.
This article is about the Chinese urban development and a more holistic approach with the use of nature-based solutions to address urban challenges and climate change adaptation/mitigation.

Key words:
Environment and Sustainable Urbanization; Urban Ecosystem Management; Nature-based solutions and Resilience

Introduction

The search for an "Ideal City" recurs in all cultures, but while stimulating new reasoning, definitions, models, it can remain a good intention if not supported by political decisions, social sharing and spatial transformations.

Today, the main challenge of the upcoming decades is to handle a series of challenges: economic (growing global competition); environmental (less renewable energy sources, more carbon produced); demographic (ageing, migration); socio-spatial (migration with growing inclusion problems, growing inequalities within society).

More than one half of the world population lives now in urban areas, and virtually all Countries of the world are becoming increasingly urbanized, but contemporary urban boundaries are transformed. The city spreads over the territory, it expands, yes disseminates. The diffusion of the city manifests itself in a sort of "urbanized continuum" and in the densification around some nodes. There is a "specialization" of areas in the territory (trade, leisure, health, culture, residential): the territory becomes multipolar. These characteristics require ideas but also innovative capacity for new territorial integration. One of the main tasks of contemporary urban areas concerns the development "based on integrated complex infrastructure eco-systems to ensure comfort and healthy environment to their residents" (Moustafa Saada M. et al., 2017).

As for the People's Republic of China, it is undergoing the largest scale urbanization in history and new, bigger and complex cities and conurbations are being built.

Strongly influenced by national land use policy and the history of urbanization after 1949, China's urban ecology has gone through three main development periods: the emergent period (1983–1989); the early growth period (1990–1999), and the rapid development period (2000–present).

After more than 5000 years of being predominantly agrarian, China is now urban, and will become only more urban in the future. This continued rapid urbanization has inevitably brought severe pressure on resource conservation and environmental protection in territorial eco-systems. China, therefore, has become a living laboratory for studying urbanization, and Chinese urban ecology seems poised to make strides in the coming decades.

Mega-urban agglomerations play a vital role in both national economic development strategies and new-type urbanization. However, they suffer a series of environmental problems in the process of development. If since 1971, with China's participation in UNESCO's Man and Biosphere Program (MAB), the Chinese government has recognized the importance of Sustainable Development, then it began a "gradual interdisciplinary research on urban ecosystems" (Jehpsson, 2014) with a constant presence of these issues on the political Agenda (Fengrui et al., 2009).

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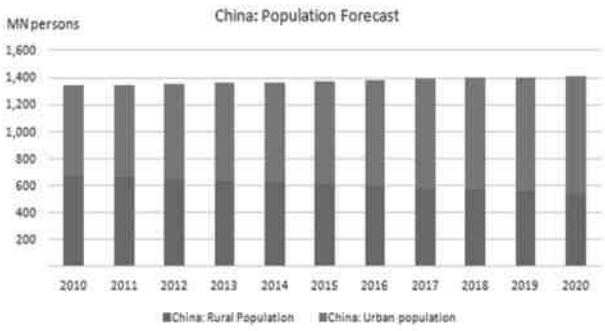
From an ideal definition of some models of urban development, promoted as prototypes, exemplars for a "harmonious development", the constant transformation of Chinese urban areas is increasingly growing linked to economic and technological development and to great social changes. It, indeed, has led to this interest that is having direct repercussions on the realization of new urban expansions. Since the early 2000s the research has been oriented, to do this, to focuse on the configuration of "sustainable development hypotheses" applied to cities (Girardet, 2005).

Among the UN Sustainable Development Goals (SDGs) , one wonders about how to achieve a transition to sustainable cities, with a focus on cohesion, inequality, diversity, well-being and specific cultural heritages? Which solutions to adopt to offer the systemic and scientific decision making for sustainable development of urban agglomerations?

The European Union is positively involved and active in promoting new urban economies and best practices to identify innovative eco-solutions and to promote projects of urban regeneration. The triple helix (3H) of university - industry - government relations has become one of the most popular innovation models in the last two decades. "The helix (DNA) is used as an image to illustrate a complex network of relationships rather than three connections arrived at by placing the three sectors in a triangle" (URBACT II, 2015). Sharing this knowledge, States like China have seen organising and optimising their "helices" as a priority, rethinking their policies and strategies to improve sustainability and integration in many cities (megacities) and regions. Chinese professionals and scholars have promoted "a holistic, use-inspired, transdisciplinary philosophy for studying and managing urban systems, which has unique Chinese characteristics" (Jianguo Wu et al, 2014).

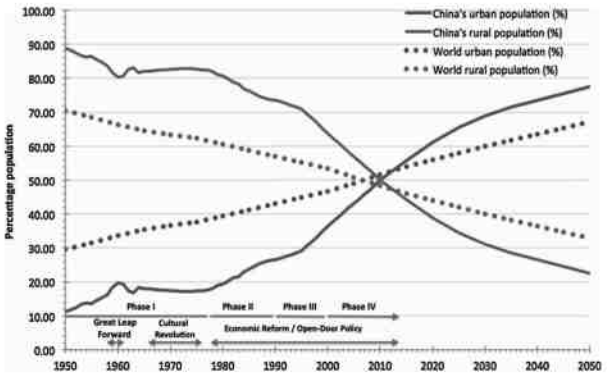
The following charts represent the Chinese population forecast and temporal dynamics of the urbanization levels (urban population) for China and the World. In the second, the data for China between 1950 and 2010 compiled from the 2012 and previous versions of China Population and Employment Statistics Yearbook, published by the National Bureau of Statistics of China (http://www.stats.gov.cn/) and the rest of the data all from http://esa.un.org/unpd/wup/.

Graph 1. C**EIC China Discovery (CCD)'s forecast**



(source: https://www.ceicdata.com/en)

Graph 2. **Temporal dynamics of the urbanization levels for China and the world**



(source: Jianguo Wu et al, 2014)

From an "Eco-desire Idea" to a concept of "Smartness"

Recognizing that China is one of the countries that are highly vulnerable to the impacts of local and global climate change and that these resource, environmental and health challenges are intrinsically linked to the construction and operation of cities, new city development concepts have entered policy and planning and the "Eco-City concept" has been gradually translated into practical initiatives. The main aim had been to tried to create the union between prosperity and green economy, eco-sustainability and energy self-sufficiency.

The so-called "Chinese eco-desire" was based on three closely related factors: technocratic trust in engineering; reliance on authoritarian political structures to facilitate environmental progress; "ecological harmony between man and nature" conceptual idea (Sze J., 2015). This led to the search for a "new urban dimension" declined through the combination of imagination, design, ecology, technology and politics, but without a real integration with the context. Therefore, the illusion of rapid urbanization has led to the "failure" of a lot of these projects: many cities built in China remained empty, ghost towns, denouncing the disaster of a governmental plan of wrong development.

The contradictions and excessive rates of development, the large pollution indexes, the extensive socio-economic disparities and widespread political and entrepreneurial corruption have led to the failure of the utopia of an ideal model, such as Dongtan City on Chongming Island in eastern China (Shanghai), which was sponsored as "the First Great Ecological City in the World". A few years ago I wrote an article on this Chinese eco-city idea, in utopian part, promoted as urban model at the World Exposition 2010 Shanghai China. Dongtan in Shanghai was to be a model for the world, but after lots of "great expectations", the results to date mean little has happened, nothing has been built, apart from some buildings in progress and a giant bridge linking the island to Shanghai.

This allowed however to reconsider the initial idea, to change the political strategies and to develop a "smarter" urban ecosystem management and to propose contemporary projects addressed on nature-based solutions and urban resilience. The public "eco-desires" today can no longer be just a utopian fantasy, but it is necessary to define it as an essential operative approach for the future of the world ecosystem.

The Chinese government, therefore, has recently been increasingly moving towards urban policies and planning that are no longer oriented towards "quantity" but to "quality". The innovation and "competitiveness" of contemporary cities is not only being measured in terms of competitive economic and built environment outcomes, but rather to be evaluated in terms of social benefits and costs and their distribution among citizens. For this reason in the latest years, China is been inclined to consider the importance of a more sustainable development, which reflects models to increase urban climate change adaptive capacity and the principles of a urban circular economy development. Therefore new standards are proposed on energy efficiency, conservation of natural resources and the environment, scientific and social innovation in the revitalization and development of urban conurbations and regional-metropolitan areas. Innovation, as it is understood "is a social and territorial construction, whose production and effects depend on local and global socio-economic contexts that are conflict ridden and hierarchical. From this perspective, the territory mediates and structures arrangements of production actors, organizations and decision makers, thus allowing for the emergence of specific innovation cultures but that are not isolated from nor independent of more global contexts" (EaSI, 2013).

The "13th Five-Year Plan" for economic and social development of the People's Republic of China (2016-2020) focuses heavily on new urbanization to develop "harmonious and pleasant cities"; to promote coordinated urban and rural integrated development and to implement the master strategy for regional development; to have a vision of new eco-society of XXI Century. [http://en.ndrc.gov.cn/policyrelease/201612/P020161207645766966662.pdf]

Two are the main topics on which the today's Chinese urban development must be focused: on the one hand the integration of the economic-technological development with the safeguard of the environment and natural resources; from the other the direction towards new models of urban life and social innovation. In the recent years, along with a broader concept of developing a "resource-conserving and environmentally friendly society", China has initiated policies, strategies and pilot projects at both national and local levels to address this challenge (Wu Deng, 2017).

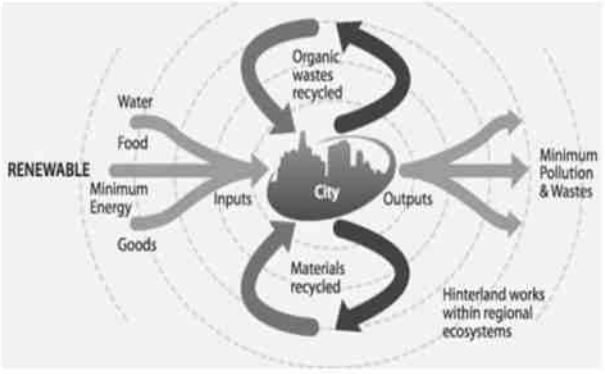
The Country mentioned in its suggested 13th five-year plan the target of doubling the country's GDP in 2020 compared to 2010. Urbanization is one of the economic engines to maintain the country's high to medium economic growth and China has already started a new-style urbanization plan in 2014. The term "new-style" refers to the urbanization plan that would not degrade residents' living quality, the region's agricultural development and ecological environment (CEIC Data, 2015).

The Chinese political structure and its "top-down and large-scale approach" can bring about these radical changes, but will it succeed in sustaining them for the long term? Perhaps moving from an "eco-desire idea" to a concept of "smartness", through the identification of alternative urban ecosystem solutions and the inclusion of social and institutional innovations can lead to the satisfaction of the needs of all citizens, entrepreneurs and other stakeholders.

Eco-regions and Nature-based solutions

The best way to overcome the challenge of restoration and rehabilitation of urban ecosystems is to address the complex transformation of social-ecological systems of cities and regions (core cities, their agglomerations and their functional areas). Technically Ecoregions are geographical units with characteristic flora, fauna and ecosystems. Political divisions of countries do not respect ecological processes, so it is very important to develop an eco-regional approach and policies that include appropriate spatial scales and that consider environmental dynamics. Contemporary city is an unsustainable ecosystem: it dissipates energy, wastes resources and produces waste and socio-economic conflicts. It is necessary to intervene, making a "circular city". The approach to follow is the implementation of nature-based solutions for creating a resourceful circular city. Circular metabolism cities reduce consumption and pollution, recycle and maximize renewables (Girardet H., 2013).

Picture3. **Visualising the Regenerative City**



(source: Girardet H.,2013)

In order to tackle challenges, it is necessary to promote healthy urban living environment through a holistic and systemic sustainable approach that combines local climate regulation; noise reduction; recreation and cleaner air; multi-functional areas; green infrastructure.

Nature-based solutions (NbS) are multi-functional and they can be applied in different urban strategies. They are defined as "actions to protect, sustainably manage, and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits" (International Union for Conservation of Nature, 2016).

These innovative solutions are designed to bring more nature and natural features and processes to cities and landscapes. They, also, support economic growth, create job and enhance our well-being.

Picture4.**Conceptual framework on Nature-based Solutions as an umbrella term for ecosystem-related approaches**

(IUCN: International Union for Conservation of Nature)

Below is a selection useful for the relationship between the environment and the human pressure, to prevent and mitigate some urbanization problems:

- Natural Resources: safeguard, protection, management of biodiversity, forests and agro-ecosystems and also marine and freshwater systems very important is also the prevention of erosion and maintenance of soil fertility, essential for plant growth and agriculture and well-functioning ecosystems supply.
- Climate Changes: mitigation of climate changes and local climate conditions; regulation of urban temperatures; removal of air and noise pollution and regulation of air quality through the use of "green, natural elements" (green space; urban gardens; urban forest; green roof; green walls, vertical gardens …) and water recycling and reuse.
- Moderation of Extreme Events: ecosystems and living organisms create buffers against natural disasters (floods, storms, tsunamis, avalanches and landslides), thereby preventing possible damage.
- Implementation of Cultural Services: important role of green spaces for the recreation and mental and physical health, the development of relationships and the increase in tourism.
- Sustainable Urban Planning and Design: importance of integrated land-use and ecological transport planning; discovering and incentivize different building materials and new technologies; climate and energy neutral construction; efficient water management and green areas for pleasant and healthy urban living.
- Extend the concept of Eco-City to Eco-Region: development of effective policies to reduce soil consumption and to aim a low-impact development model.

An intelligent economic and cultural growth of the city, that also develops new solutions and new spatial shapes, can be pursued considering a new ecosystem approach to the protection of natural resources and to a sustainable transformation of the human settlements.

In general, the objectives of ecosystem recovery, pursued through innovation services and eco-solutions, aid the development of society and to safeguard human well-being according to environmental, cultural and social heritages. In specific, to explore the potential of ecosystem services, it is necessary to describe a range of valuation approaches (cultural values, health benefits, economic costs and resilience) and then to develop urban planning and territorial governance practices.

Conclusion

The massive urban expansion has resulted in significant natural habitat loss in some areas in China. This raises serious concerns about biodiversity and climate change phenomena. Effective policies, regulations and sustainable projects must be implemented and enforced to sustain regional and national development in the protection of the natural and man-made environment. Nature-based solutions can definitely change urban landscapes and provide different benefits both for city governments and for residents. Through a regional ecosystem approach it is possible to overcome the gap between rural and urban planning in China.

Yet there is still work to be done to facilitate wider implementation.

In addition to the directives from the central government, local governments also have an important role to play in building collaboration among stakeholders to ensure ecosystem services and nature-based solutions become part of planning and policy across sectors.

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Milan Husár

TRANSGREEN APPROACH" IN STAKEHOLDER ENGAGEMENT

Abstract:
Article provides a conceptual and systematic approach to stakeholder participation and engagement within green and grey infrastructure development processes. The concept is a output from Interreg Danube Transnational Programme project – TRANSGREEN focused on better connected Carpathian Region with transport infrastructure that takes nature conservation into account and aims to contribute to safer and environmentally-friendly road and to project green infrastructure and rail networks in the Central-East Europe (Czech Republic, Hungary, Romania, Slovakia, and Ukraine).

Key words:
Transgreen, stakeholder, participation, engagement, inftastructure development, harmonisation.

Introduction

The European Project TRANSGREEN (DTP1-187-3.1-TRANSGREEN) is one of the approved and co-funded projects inside the "Interreg Danube Transnational Programme (DTP)" through Priority 3 - Improving connectivity and energy accountability of the Danube region and it will be implemented between 1 January 2017 and 30 June 2019.

The key concept, slogan of this project is "to integrate transport and green infrastructure planning in the Danube-Carpathian Region for the benefit of people and nature".

(www.interreg-danube.eu/transgreen).

The TRANSGREEN Project, indeed, means better connected Carpathian Region with transport infrastructure that takes nature conservation into account and aims to contribute to safer and environmentally-friendly road and to project green infrastructure and rail networks in the Central-East Europe (Czech Republic, Hungary, Romania, Slovakia, and Ukraine). The main aim is to avoid the pressures and potential threats posed by the transport infrastructure and to set environmentally friendly planning of transport corridors. Another important objective is to development methodology, trainings and common strategies, into TEN-T related transport infrastructure development, to contribute to an environmentally-friendly infrastructure network in the Carpathians as part of the wider Danube River. The relationships between transport sector and the environment are complex and multidimensional. The growth of mobility in recent decades has expanded the role of transportation as a source of emission of pollutants and multiple impacts on the natural environment.

Linear structures can significantly damage and fragment many significant protected areas, including sites of community importance. Project innovative pilot actions will focus on elements of Green Infrastructure, in particular ecological corridors and on concrete environmentally-friendly and safe road and rail transport solutions.

Integrating green infrastructures into planning means defining GI as a "strategic network of natural and semi-natural elements with high environmental and identity characteristics designed and managed to offer a high range of ecosystem services" (EU, 2013, Green Infrastructure (GI) — Enhancing Europe's Natural Capital).

The project concerns the collaboration of an interdisciplinary partnership and integration of territorial planning with the infrastructure system/network, as basic management function, involving formulation of plans to achieve optimum balance of needs or demands with the available resources. The concept of development expressed in this project is not identic with the quantitative growth, but it is understood as a qualitative capacity of to improve environmental, economic and social well-being.

In the Carpathians, four pilot-areas were selected for which specific measures will be proposed for the planning, building, management and monitoring of large infrastructure: the Beskydy motorway (Czech Republic-Slovakia); the Miskolc (Hungary) – Kosice (Slovakia) – Uzhgorod (Ukraine) motorway; the Tîrgu Mure□-Ia□i motorway (Romania); the Curtici (Radna)- Deva railway (Romania). Essential has been the phase of data investigation and collection, both at the national scale (e.g. observation of long distance migration routes and the connection of isolated wild populations) and at the regional and local scale (e.g. habitat and species diversity; the impact of the infrastructure and mitigation measures; the conservation status and landscape elements; the protection zones; the density of built-up areas and infrastructure networks…).

Taking into account aspects of road safety and biodiversity conservation, the project will improve the coordination and interoperability among partners, to develop a scientific knowledge, training modules on Environmental Impact Assessment, Catalogues of measures and common standards and also the production of ready-to-use methodologies for stakeholder Participation Processes (detailed below).

Cooperation and Participation

One of the aims promoted by this project is to identify a specific and innovative approach to involve several stakeholders and decision makers (the lead partner is WWF International Danube-Carpathian Programme, Austria) in a cooperation based on common strategies and guidelines. The TRANSGREEN project brings together organizations directly involved in the development of large road transport infrastructure plans and nature conservation institutions (e.g. National Motorways of the Slovak Republic and Slovak State Nature Conservation), research centers, international and national environmental and territorial planning organizations. Project partners have the experience and capacity to propose solutions and concrete "green" measures and the Cooperation Programme is structured across 4 priority axes. These axes (innovative and socially responsible Danube Region; environment and culture responsible; better connected and energy responsible; well-governed Danube Region) mean to develop coordinated policies and actions in the programme area reinforcing the commitments of the Europe 2020 Strategy towards the three dimensions of "smart, sustainable and inclusive growth". The strategic framework is the Communication Strategy and it is basis of the Danube Transnational Programme (DTP) during the whole programme period 2014-2020.

It forms an integral part of the programme implementation and aims to ensure that programme communications are well co-ordinated, effectively managed and responsive to the diverse information needs of the public. The strategic vision is "policy integration" below the EU-level (Natura 2000) and should influence national/regional/local policies and actions of the involved States.

For the purpose of introducing the TRANSGREEN Project to interested parties and starting project implementation, the concepts of cooperation and participation are the basis of the union strategy and the promotion and implementation of innovative approaches and planning tools in the field of transport infrastructure planning and management, nature conservation monitoring and green infrastructure projects.

As specified in the introductory documents (Transgreen Kick-off event Report) the main actions of this Project concern:

- the identification of a better coordination and inter-operability among relevant partners from transport spatial planning and environmental sector;
- the creation of a scientific knowledge base for the development of tools, methodologies and guidelines for decision-making;
- to support activities and projects in the pilot areas regarding nature conservation and green infrastructure.

In addition to the drafting of main documents and the selection of pilot areas especially in Slovakia (sites of Beskydy and Miskolc-Kosice-Uzgrorod), the SPECTRA Centre of Excellence of the Slovak Technical University (STU) has developed a web-based database, a planning toolkit for scientific support and an innovative approach in stakeholder engagement, as provided in Work Package n.3. The aim of the WP3 is to collect research and information material; to develop tools, methodologies and best practices; to support activities in the pilot areas (WP4) and to involve all stakeholders in an integration process of transport infrastructure, ecological corridor and spatial planning, sustaining also the Carpathian Convention Working Group (Wp5).

Tools like GIS based data, telemetric data maps, spatially referenced and tool for road-kills registration were very useful to create the database of information to find innovative solutions for conflicts between transport planning objectives and nature conservation.

The participation process and the creation of stakeholder's consortia are of crucial importance to promote and support knowledge and best practices for conflict resolution.

Participatory Process and Stakeholder Analysis

In recent times, the complexity and the interdisciplinary of urban issues have increased and politicians and technicians need to move from traditional models of "vertical" governance to "horizontal, territorial and network" models. This model proposes an integrated multi-functional approach to spatial planning (UE, 2010) and it provides a better involvement, with greater openness, accessibility and transparency for reaching out to citizens and civil society through representation and involvement. A participatory process allows sharing and accelerating "change" through participation and engagement of stakeholders and citizens.

Also the 2014-2020 European Programming recognizes the public participation as a strategic scale for the EU urban dimension and has defined new instruments for cohesion and territorial development strategies. Strategies that encourage local communities to participate and develop integrated bottom-up approaches, as promoted by the TRANSGREEN Project. Public Participation is a tool which enables local people and interest groups to get involved in the planning and delivery of innovative solutions to local problems, empowering stakeholders in decision-making.

According to the "EU Directive 2003/35/EC" on public participation and the "Aarhus Convention" on Access to Information, Public Participation and Access to Justice, the "Public" is defined as "one or more natural or legal persons and, in accordance with national legislation or practice,

their associations, organisations or groups". Therefore, the citizens can be involved on all "scales" and it includes them both in directly affected stakeholders and non-directly affected public.

This means that "Public" can affect, but also complicate the decision-making process, so it is very important to carry out a proper stakeholder mapping and analysis. Then, a stakeholder analysis is both a multi-criteria and multi-factor approach, which includes, as its main objectives, the involvement and participation, the mediation and the information facilitation on the project. Below I will describe the involvement process of stakeholders in this project.

TRANSGREEN approach in stakeholder engagement

The "TRANSGREEN approach" in stakeholder engagement regards an interdisciplinary partnership comprised of planners, economists, engineers, and ecologists will integrate and apply their specific knowledge. Participatory process management means that all participatory activities are embedded in the overall planning activities of the Project. In this project there are 11 main Partners from 5 European Countries, 9 Associated Strategic Partners from 3 more countries and other bodies involved (National and Regional public Authorities; Sectoral Agencies; Infrastructure and public Service Provider; Interest Groups including NGOs; Local Communities).

Therefore, "participation" means to integrate Central and Eastern European institutes and organisations and to involve different stakeholders across the regions to cooperate on developing guidelines and best practices in the field of integrated transport infrastructure planning, spatial research, management and monitoring, taking into account aspects of road safety, biodiversity conservation and local development. The overall benefit of stakeholder participation in management planning is a better quality of a management plan. Indeed, this approach increases sense of ownership and awareness about agricultural and urban landscape quality and ecosystem services and management as a phenomenon of land-use life quality.

The TRANSGREEN approach in stakeholder engagement develops innovative methods joining scientific knowledge and their applicability in practice. The most significant criteria for the participatory process are identified as "objectives and collaborative behaviour", "stakeholders mapping", "phases of involvement" and "communication mechanism/tools" which together organize a framework for linking generally applicable methods with local conditions and the aims of the Project.

This approach considers continuous consultation in various stages of the management plan production to be the most appropriate Strategic Action Plan. Stakeholders should be involved when all options are still open and engagement should continue throughout the all planning process. Several meetings and innovative tools have been developed for implementation action plans and to produce a "Strategic Plan" to promote a smart, sustainable, inclusive development and economic, social and territorial cohesion. According to "Eurosite Management Planning Toolkit" , the consensual/participative management planning approach can be achieved in different ways:

- consultation before drafting of the plan begins
- cooperative working during the whole drafting process
- consultation following various stages of plan production
- consultation on completed draft plans

Moreover, as stated in IUCN Guidelines for Management Planning in Protected Areas , the list of benefits includes increased the sense of ownership; greater support for the protected area; links planning for conservation with planning for development; provision of communication mechanism. It enables better quality of decisions, and creates common basis for harmonized actions.

Stakeholder engagement also increases the legitimacy of the planning and decision-making process as it enables a dialogue and deliberation about the issues. The following main participation principles are crucial for successful stakeholder engagement in decision-making process:

- Efficiency (clear and well-designed procedures as well as a stakeholder engagement plan for informing, consultation, and active participation);
- Inclusiveness and transparency (an open, transparent and inclusiveness engagement process);
- Effectiveness (it is essential that the stakeholders' views are taken into account and have a real impact on plan or policy development and implementation).

Procedure of public participation

In the figure 1 SPECTRA team has developed a scheme of the participation procedure. The objective of the proposed procedure of public participation is to engage the stakeholders in the project. This needs to be done in gradual steps as it is continuous process with its internal logics. The procedure has 5 main steps in which the decision makers are engaging with the stakeholders with one initial phase of stakeholder mapping which provides the essential early information about the stakeholders of the project.

All the steps need to be performed as one is related to another, from a passive process to an active one. The difficulty of involving the various stakeholders is mainly their different involvement in the various phases. The implementation needs to be efficient without unnecessary

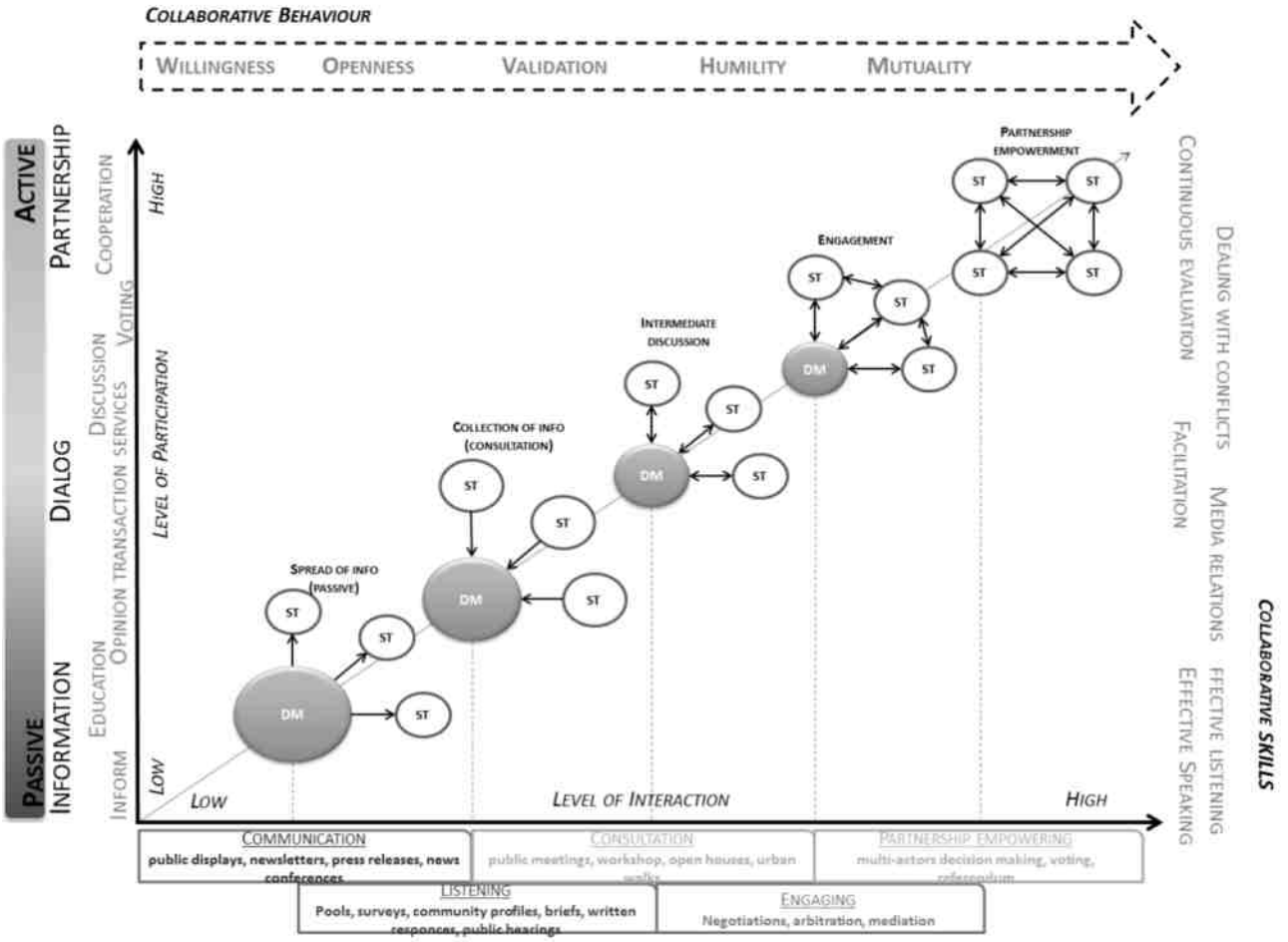

Figure 1: **Scheme of Participation procedure**
(Finka, et al, 2017)

stages which can render the stakeholders uninterested after the initial stages. The whole participation process is a procedure of trust building between the decision maker and stakeholders, inherently a two-way process. It is essential to make stakeholders feel listened to and appreciated in practice, not only in theory for the whole duration of the process.

The first step of the stakeholder analysis is to identify the key-stakeholders from the large array of institutions and individuals that could potentially affect or be affected by the proposed intervention. It is important in the mapping to understand "who" the potential beneficiaries are and "who" might be positively or adversely impacted.

It is necessary to identify the stakeholders involved in the process, their impact on the project and the relationships between them.

Before the beginning of the participation process it is crucial to select groups of the likely stakeholder categories and those who are directly or indirectly affected:

- Direct key-stakeholders = the subjects who are affected by the decisions in direct way, the decision regards them and their interests or properties; they are mainly involved as leaderships or partners in the promotion, organization, management and financing of the decision-making and the protection and transformation of the Territory (Ministry of Environment; Ministry of Economic Development; National, regional and local Governments – Professional/Planner – International Associations for environmental protection and animal as WWF, LIPU, Greenpeace EU – Universities and Research Centres on the environment, the territory and economic development – Association for the sustainable development and the rural environmental protection; Cooperatives of large land producers – regional and local Farmers Associations – National and International Companies related to the environment and natural resources – National and FUA area communications and infrastructures Companies…)
- Indirectly affected = all public people who can bring information, tools and support in participation, promotion and realization of the process, for example individuals or groups who have interest in building green eco-corridors in

general (Local Representatives of the city cores – Cultural, Environmental Local Associations – Small Landowners and Local Farmers – those who has an interest in the local projects and consider the land as "common good" to be protected; Citizens who are involved in environmental protection and local development.)

After this first basic division, three other main levels of participation can be considered:

- Level 1 - the actors who have direct economic relations with the organization
- Level 2 - the stakeholders that may influence or be influenced by the project directly, or unmediated
- Level 3 - people who interact with the organization in an indirect way

There are different tools for involvement of these groups, nevertheless, independently from this division the logic remains the same, to achieve collective decision making in form of partnership empowerment. In phases one to four, the mediators are needed to moderate the discussion and mediate the interests; the phase five considers mediators to become stakeholders as well and the dialogue shall take place in form of partnership in which all actors are considered stakeholders. These tools can be divided into two main categories: offline and online methods.

In the first group are the tools, as methods of involvement; face to face meetings; reports and conferences; public events, school lessons; direct questionnaires; traditional advertising and promotion techniques; co-design activities…

In the second group there are the tools with the aid of the virtual network, as internet platforms; websites and mail list for documents and information; virtual forum; online surveys, social networks; guided or virtual tours on the project sites…

Questionnaire for stakeholder mapping A first acquaintance and selection of the interested parties shall be drawn up on the basis of a questionnaire. It has been important for the relevant data collection and to understand the capacity contribution of stakeholders to the project. The questionnaire is divided into six sections, covering general concepts, competences, interest and expectations for the TRANSGREEN project, knowledge of the topics and about the key actors, documents, laws and strategies.

This questionnaire was divided into 6 sections concerning:

- Section 1 – Introduction. Basic information about the position and the knowledge of stakeholders;
- Section 2 – Expectation from the TRANSGREEN project. Interest and expectations on the project;
- Section 3 – Experience with integrated transport and green infrastructure planning. About previous experience with dealing with integrated and green infrastructure planning;
- Section 4 – Issues of integrated transport and green infrastructure planning. Evaluate the knowledge and deepen the opinion of the stakeholders on the main problems and the need for change;
- Section 5 – Key players. Questions about the main decision making in the infrastructure and environment planning;
- Section 6 – Key documentation. Some questions regarding existing documentation and relevant strategies in the project field. (Finka, et al., 2017)

A second phase of in-depth analysis foresees stakeholder analysis for each pilot-area, using a table-report on "State of the Art" and "Gap Analysis" in the field of environmentally-friendly transport infrastructure development. Analysis and monitoring of environmental impacts of transportation were performed and instruments of ecological connectivity are developed for an integrated land-use management and sustainable recommendations for the improvement of transport infrastructure development addressing the political level.

CONCLUSIONS and next steps

In conclusion, this report discusses some TRANSGREEN project steps and it reports the knowledge acquired during my collaboration with the SPECTRA Center of Excellence EU. During this period, several general and local meetings combined with research and training events were held. I had the opportunity to listen the kickoff meeting about the topic and objectives (2017 - project manager Hildegard Meyer, from WWF Danube-Carpathian Programme, Austria); to participate in an online meeting and to attend the project working meeting, held in Bratislava in January 2018. The last one was focus on the final project output production, the Guidelines on Integrated Transport Development and it was a collaborative work of expert-authors from across the region and across fields of expertise. The most important project issues and the need to work on the use of a common technical language and platform (to integrate the possible misunderstandings related to difference knowledges or professional figures involved) have been highlighted in the different chapters of this final handbook, still in progress.

The next important event will be in September 2018 still in Bratislava, with a conference on "Sustainable Transportation Planning in the Carpathians. Latest developments and steps forward", organized by WWF Danube-Carpathian Programme, Slovak National Motorway Company, CEEweb for Biodiversity (Project Partners) and Secretariat of the Carpathian Convention with content support from IENE - Infra Eco Network Europe.

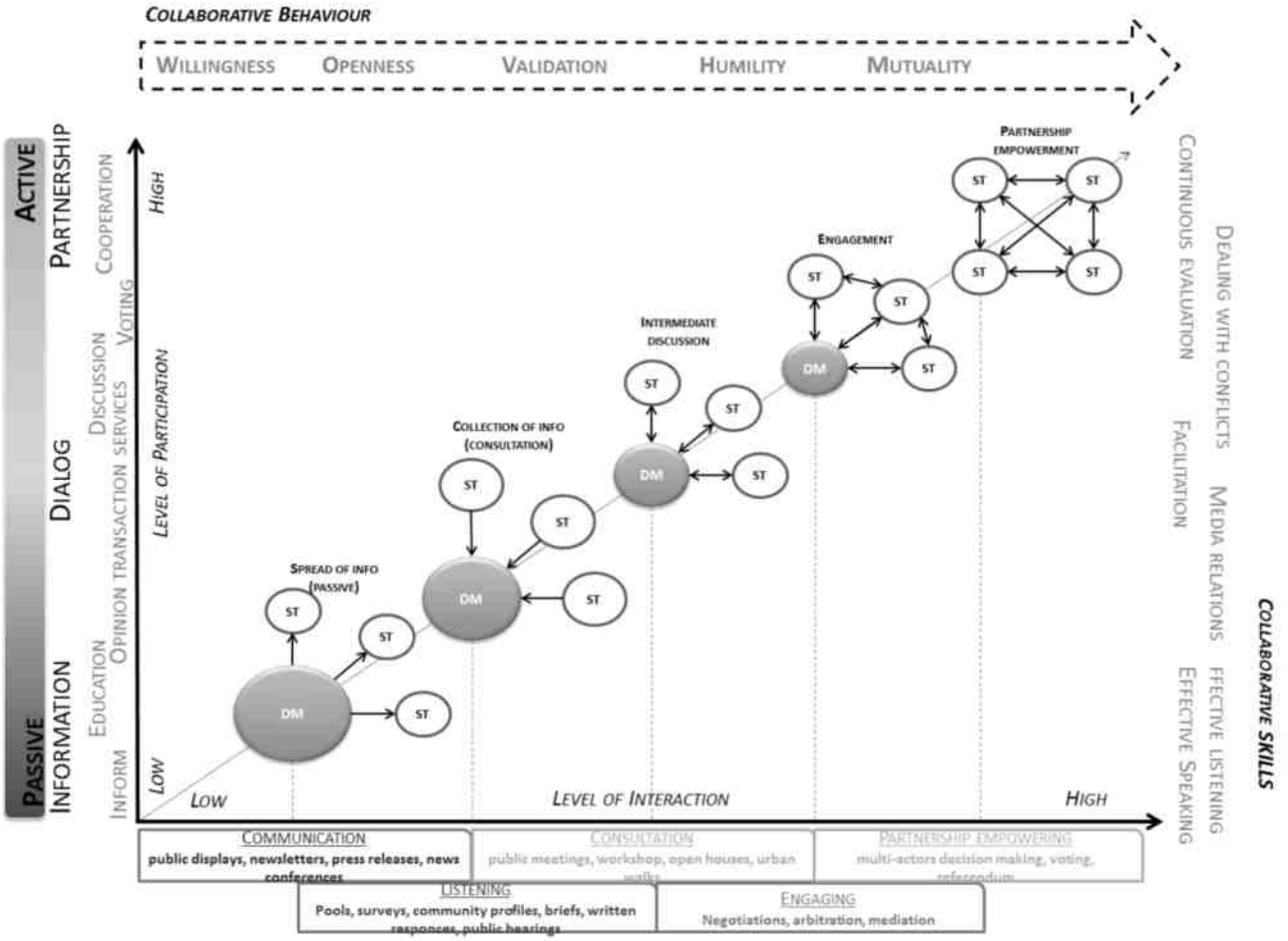

Figure 1 **Scheme of Participation procedure**
(Finka, et al., 2017).

Collaborative Workshops will also be organized, aiming at bringing together cross-sectoral perspectives on the current research and policy recommendations in the field and the main purposes are:

- to learn about recent developments in the Carpathians and to raise awareness on the need for cross-sectoral approaches on sustainable transportation infrastructure development in the Carpathians;
- to gain feedback for preliminary findings of the TRANSGREEN Project for better integration of stakeholders' needs in the documents to be developed;
- to prepare the basic background for elaborating the Carpathian Convention Strategic Action Plan on Sustainable Transportation in the Carpathians.

Hereby, I would like to express my gratitude to the SPECTRA Center Excellence EU of the Slovak University of Technology in Bratislava (STU) for their involvement, encouragement and the way I was welcome. The participation in the TRANSGREEN Project, so interesting in the purpose and so complicated in the organization, has allowed me to improve an integrated ecosystem approach to the planning/project management and the process of mapping and involvement of the partners/stakeholders. It is in my interest to follow the development of the project and the results dissemination in the coming months.

Annexed diagrams and tables: Below are diagrams and tables regarding the data and participatory process developed in the TRANSGREEN Project.

It describes the phases of the procedure and its internal logics.

Stakeholders associated with/interested in the topic		Field of activity	Official role/ responsibility	Type	Position	Impact			Involvement		Level of involvement	
Name	Contact info					Positive	Negative	Importance*	Direct	Indirect	Current	Desired
				Examples: consultant advisor decision-maker investor broader public interest group (NGOs, clubs, quasi-governmental body voluntary activist entrepreneurs (e.g. in forestry - forest business, wood producer, agricultural enterprises owner individuals	Examples: citizen state body subject of law professional	X		Phase 1 + Phase 2 ++ Phase 3 +++ Phase 4 ++ Phase 5 +++	X			

Table 1 - **A3 Stakeholder mapping tool (Finka, et al., 2017).**
It provides a sheet of main phases with brief explanation of each phase which is to be used by practitioners as a tool for running the procedure in the projects.

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PHASES 0-5	*Phase 0 Stakeholder mapping*	*Phase 1 Spread of Information*		*Phase 2 Collection of Information*		*Phase 3 Intermediate discussion*		*Phase 4 Engagement*		*Phase 5 Partnership, empowerment*	
Purpose	Is to introduce the project and to establish who are the stakeholders who will be relevant for the project.	It is to inform the stakeholders about the project, its objective and its vision and how the project will continue. It is important to create a common baseline knowledge and to formulate a common glossary		It is dedicated to collecting the responses and information from the stakeholders; to inform the decision-makers about ideas, opinions...		to create the dialogue and facilitate open and inclusive conversations and transaction of opinions		To engage stakeholders with the decision makers. It is a process of closer involvement and direct work		It is to foster cooperation in the project via partnership and empowerment	
Behavior	It maps out the stakeholders and sorts out their relevance to the project.	It is willingness on which the phase is built on. The provided information is aimed at catching attention and kindling interest of stakeholders.		The collaborative behavior required from the stakeholders is openness, to express them to the decision makers		To justify their different ideas and clarifying their views on the project		It is humility and respect as the main principles of this phase		To support of participatory process acknowledging and working towards the common objectives as equal partners.	
Skills	It is important to identify various groups, and those who are directly or indirectly affected.	It is effective speaking and the ability to provide the right amount of information to catch the attention and to inform.		Is the ability to listen effectively and openly		Media relations and the ability to share ideas and facilitate the discussion		Negotiations, arbitration and mediation to assist a continuous dialogue and effective facilitation		Dealing with conflicts and continuous evaluation of the process using the feedback of all participants	
Tools	Expert opinions; Focus groups; Interviews; Self-selection; Check-list	Direct S: Newsletters; Journal; Websites; Events; Questionnaires	Indirect S: Newspapers; Journal; Websites; Information Sheets	Direct S: Survey; Meetings; Summary; PPGIS; SWOT;	Indirect S: Community profiles; Public; PPGIS; On-line platforms/ Tools	Direct S: Meeting; Workshop; Interactive form of discussions	Indirect S: Public meetings/ events; Urban walks; questionnaires	Direct S: Action Planning; Meetings Conference	Indirect: Public Meeting; Workshops Reports	Direct: Multi-actor decision making Meetings	Indirect: Voting Referenda;

Table 2 - **A3 Phases and tools of stakeholder participation processes. It describes more in detail the different phases with purposes, skills and tools.**

Stakeholders Position	Stakeholders Type	Impact						
		Positive	Negative	Importance*				
		X		Phase 1 (spread of information)	Phase 2 (collection of information)	Phase 3 (intermediate discussion)	Phase 4 (engagement)	Phase 5 (partnership)
State Body Subject of law Professional	decision-maker	X		+++	+++	++	++	++
	investor	X	X	++	+++	++	++	+
	advisor	X		+++	+++	++	++	+
	consultant		X	++	++	+++	++	+
	entrepreneurs (e.g. in forestry - forest business, wood producer, agricultural enterprises...)	X		+++	++	+++	+++	+++
Citizen	owner	X	X	+++	+++	++	++	++
	individuals		X	+	+	++	++	+++
	interest group (NGOs, clubs, quasi-governmental body...)	X	X	+++	+++	+++	++	++
	local communities	X		++	++	+++	+++	+++
	voluntary activist	X	X	+++	++	++	++	+++
	broader public		X	+	+	++	++	+++

Table3 - **A3 Impact of stakeholders in respective phases. It deepens the impact and the involvement of stakeholders in respective phases.**

Attila Tóth
Matej Jaššo

THE PERCEPTION OF UNEXPECTED DISASTERS BY STAKEHOLDERS FROM PERIPHERAL AREAS – CASE STUDY RIVER IPEĽ

Abstract:
The influence of peripherality as the result of different processes based upon the physical-geographic, economical and social factors has been observed and studied in various contexts and dimensions. Peripheral territories are less or more successful through the integration of their individual and collective structures, processes and systems. Current European neo-regionalism is based on the reduction of regional disparities through activating of endogenous potential of local users in given area, through improving of social capital, social memory, mutual participation and increased cohesion in regions. A perceptions of risks and disturbances (e.g. floods and others natural disasters) and self-organizing capacity of local stakeholders are the most important elements for stimulation of the spatial resilience and also for de-locking from rigidity trap. Risk perception as special type of human cognitive behavioural structure is set up to the broader framework and thoroughly analysed, with special attention to its spatial dimension. In Case study of cross-border region (Slovakia/Hungary) of River Ipeľ was used quantitative methods provided by statistical data as well as the qualitative methods (blind maps, interviews, workshops and questionnaires) were used in the survey. The research question with regarding to the key elements with positive influence on a improving resilience again unexpected events was answered, forasmuch as a common planning culture within whole cross-border area with focus on vulnerable groups and shared responsibility for this area will help create a completion of services within naturally self-organising processes and mainly keep a capacity of adaptability.

Key words:
Peripherality, floods, risk perception, self-organizing capacity, cross-border region, River Ipeľ

Introduction

The influence of peripherality as an output of difficult conditions of physical-geographic, technical and social factors is possible to observe in particular after the change of political regimes and after the end of central planned economy in Central Europe. Peripheral territories have a complementary function for centres in general (Hampl, et al., 1987), e.g. providing foods, providing labours, and also peripheral territories are more appropriate areas for the leisure time activities in quiet surroundings.

According to Schmidt (1998), peripheral territories are less or more successful by the integration to individual structures, processes and to systems (Schmidt, 1998). This asymmetrical relationship between centres and peripheral territories makes itself visible through various levels of stability and potential (Havlíček & Chromý, 2001). After the change of political regimes many subsequent changes followed with great speed at local and regional scale. In 1990s, high expectations for regional differences solutions were related to the development of ICT (Information and communications technology). Anyway, education and social activities and relationships among local stakeholders remain more important factors than ICT.

The article is focused on the issues of local stakeholders perception of risks and spatial disturbances (e.g. floods, natural disasters).

Stakeholders (especially local inhabitants) are the most important elements for stimulation of the spatial resilience as collective capacity (Walker, et al., 2004), adaptability and for de-locking of the rigidity trap due to the local vertical and horizontal relationships. This article is based on the PhD research of A. Tóth - Regional resilience and risk management (Tóth, 2016). Subordinate topic of dissertation thesis was dealing with an individual risk perception, impact of peripherality and self-organizing capacity for coping with the vulnerability in selected model area (River Ipeľ). Two main research questions for this article was what enhances self-organising and human capital of given area with regard to the reduction of the peripherality and risk perception, and identifying of the key elements with a positive influence on a improving resilience again unexpected events.

Theoretical overview

SCOPES OF RESEARCH ON LOCAL SCALE

An important factor is the size of settlements, settlement intensity, assessment of the social structures as well as the other conditions of human life in municipality and region (Havlíček & Chromý, 2001).

For research of peripheral areas in micro-regions, the fieldwork is essential, due to the absence of data. Statements of local users/stakeholders are important as a suitable complement to objective statistical data. It is appropriate to focus on research of mobilization by local stakeholders and land-users, because this internal activation is dependent on a subjective perception (Havlíček & Chromý, 2001) and can be key element for de-locking from a poverty trap. Moreover, a current European neoregionalism is based on the reduction of regional disparities through activating of endogenous potential in form of local users in given area, through improving a social capital, mutual participation and enhanced social and territorial cohesion in regions (Chromý & Skála, 2010, p. 224).

Cultural and geographical aspects (in form of soft factors as perception, identity and certain stereotypes for perception of surroundings) are the important research elements of polarization within territory (Chromý & Skála, 2010, p. 224). Peripheral areas kept traditions and original identity in past due to isolation from mainstream of innovation and global trends, that are concentrated in centres. On the other hand, peripheral regions can be subordinate of one centre, but also of more centres due to greater distance and smaller impact of administrative centre. This ability of re-orientation can influence also the regional identity (Siwek & Bogdová, 2007), and can create new subcultural forms through generational alterations – e.g. Paloc culture in Slovak cross-border area with Hungary or Goral culture in cross-border area with Poland.

SPATIAL RESILIENCE AND VARIETY OF STAKEHOLDERS

In socio-ecological systems like human societies that belong to Complex adaptive system's (CAS's), shifts are driven especially from the „bottom-up" through local interactions and measures among various stakeholders (Bristow & Healy, 2013, p. 11). In these complex relationships, the key element is in formal communication for efficient exchange of innovation that supports innovative solutions in civil society. Complex systems are characterized by complex unexpected non-linear dynamics and an adaptive capacities that enable them to rearrange their internal structure spontaneously, whether in response to an external or to some internal shock, in relation to 'self-organised criticality' (Complexity thinking and evolutionary economic geography, 2007, Bristow & Healy, 2013, p. 2).

The local spatial resilience as the lowest level is derived partly from global and regional resilience. The local resilience consists of spatial resilience (arrangement of parts, system morphology, boundaries, phase differences and location properties) and identity (components, relationship, innovation, adaptation, continuity and memory, thresholds and local perturbations, Cumming, 2011 p. 48).

Within local resilience, it is necessary to mention community resilience, whose quality is dependent on the state of the following three components: environmental capital, social capital and economic capital (Wilson, 2012). On the communal scale, these three factors together create the territorial capital.

Various stakeholders (individual actors) play their roles in providing elements of community as leadership, social relations, vision and meaning, local knowledge systems and social memory (Folke 2006, p. 262). Walker (2002) claims that, 'how the social-ecological system respond on local preferences and the extent to which local adaptive capacity, exhibited through memory, creativity, innovation, flexibility, and diversity of ecological components and human capabilities' (Walker et al., 2002). Thus, 'the flexibility of rules, efficient use of local knowledge, self-organisation, and legitimacy of an increased number of decision-making actors may create the prerequisite conditions for renewal, and increase the adaptive response to external disturbances' (Finka, Kluvánková 2014).

For adaptation to new challenges and the resilience against disturbations the sensitivity towards threats is important thanks to which it is possible to perceive risk rate, its scope and opportunities for adaptation or other possibilities (Gallopín 2006, p. 300). On other hand, sensitivity of perception can be influenced also by certain scope of social system tolerance. For research and work with local knowledge, it is important also to work with emotions as the determinants of risk perception (Sjöberg, 2006), e.g. in form of sense of security and attractiveness of territory.

RISK PERCEPTION AND RISK MANAGEMENT

Risk is the chance that some thing bad/negative with potentionally detrimental effects might happen (Ropeik 2010). According to the National Safety Council (2003, In Inouye 2016), risk is „a measure of the probability and severity of adverse effects". Short (1984, In Sjoberg et al 2004, p.7) defines risk as „the likelihood that an individual will experience the effect of danger" and Rayner and Cantor (1987, In Sjoberg et al 2004, p.7) share the consensus about essence of risk „as being consisting of the probability of an adverse event and the magnitude of its consequences". Risk is generally considered as the likelihood of the occurence of bad incidence and the likelihood of its dire consequences. Another key element of the any risk situation in a certain degree of uncertainity: psychological sense of uncertainity and its coping is assumed to be important mediator of any human response in situation with unclear outcome (Sjoberg et al 2004).

Risk perception, or the ability to discern risk, is tied to risk tolerance, or an individual capacity to accept a certain amount of risk. (Inouye 2016). There is no universal concept of risk perception, due to the huge variety of risk factors and other variables.

What is obvious, is that any understanding of the risk on the indivudual level is socially and culturally determined and learnt and is related to the structuration of the world, what is and what should be (Boholm 1998, in Sjoberg et al 2004, p.7). It reflects not only some individual variables (personality, cognitive styles, decision making style) but the general values, norms, ideology and cultural layers as well. The first concepts of the research of public risk perception from 1960s were related to the public opposition to nuclear technology, transport issues and industrial hazards (Sjoberg 2004). In 1980s, the general discourse adopted risk as an integral part of the modern world, some kind of „system element", which has been explained e.g. in the famous theory of Ulrich Beck („Risikogesellschaft", Beck 2004).

System failures endangered all forms of life in our planet and these failures are deeply anchored in deep crisis of all societal institutions of modern civilizations. Concept of risk society is based upon the assertion, that not the revolutionary clash of paradigmas (modernity versus post-industrial society), but the „calm" everyday modernization steps and their collateral effects are the most prominent risks and prerequisites of the destruction of human civilization (see more Beck 2004).

Psychological theories of risk perception divide the individual responses into following categories:

1. Cognitive response covers weighing the risks and benefits, technological details. The initial surveys (Gorman 2013) have indicated, that rational arguments (providing information) were the key factor in risk coping mechanisms. Cognitive rationalization takes into account several other variables, e.g. sometimes the consequences of hazards might be detrimental, but exposure is rather low. While experts judge risks in quantitative aspects (e.g. morbidity), laymen are generally heavily influenced by other factors, e.g. emotional.

2. Affective response includes emotions, anxiety, withdrawal and negative learning. The general public is involving much more emotional processes activated when dealing with risks. Psychological research have shown, that risk is much better accepted when it is associated with benefits and when the participation is voluntary (Starr 1969, In Sjoberg 2004). Fear of loss is one of the key emotional issues in the risk aversion strategies of individuals.

3. Behavioural response is residual structure of the phylogenetical predispositions to fight or flight. People tend to be highly intolerant of risks that they perceive as being uncontrollable, having catastrophic potential, fatal consequences and bearing an inequitable distribution of risks and benefits. The most adversive reactions are concerning the risks, which are new, unknown and coming with delayed effect (extreme fear of nuclear weapons versus lower degree of adversity to risks related to automobile traffic).

Another valuable contribution to analysis of personality determination of dealing with risks might be Rotter´s theory of locus of control: externalists are those who attribute the decisive role of their fate to external factors, internalists consider themselves as the principal agent (more see Rotter 1954). Moreover, there is always so called framing effect delimiting context of risk perception. Risk perception might later alter after the framing into familiar/known frames. We are tending to social conformity and social framework might significantly change our attitude toward the risk, especially when this risk is repeated or long-term.

Cultural cognitive framework is one of the crucial variables influencing long term risk perception. If the risk is not fatal, there might be also some trade off balance in play: we render the benefits with losses etc. There are many further personality factors influencing risk perception, but this goes beyond the scope of this article.

Three perspectives on the risk-resilience relationship were intensively discussed worldwide. First perspectvive is the resilience as the goal of Risk Management. This approach is focused more on the reduction of the impact and probability of risk, but not on avoiding the risk. "National Infrastructure Protection Plan of the Unites States" was published in this context. Second approach is the comprehensive risk-resilience management. This approach is very popular in business world as "Business Continuity Management", and is focused on how to keep the business going under adverse circumstances. In this direction, the document "Keeping the Country Running: Natural Hazards & Infrastructure" was published by British Cabinet Office.

Third approach consider to be the Resilience as an Alternative to Risk Management. Australian policy document "Critical Infrastructure resilience strategy" is based upon this approach. This document put stress on independence of all critical infrastructure, which should avoid a failure of infrastructures in cascading effects. Self-organization, freedom and flexibility are key elements of this approach (Center for Security Studies (CSS), ETH Zürich, 2011).

All three approaches are useful, and it is possible to use their combination like it was realized in Swiss strategy, which emphasizes the importance of cross-sector collaboration among all relevant stakeholders (Center for Security Studies (CSS), ETH Zürich, 2011). In Slovak republic, there are used more effective regulations in building code and in other legal instrument like masterplans, e.g. with restriction of building activities in flood and landslide areas.

ATTITUDES AND OPINION

Questionnaires (completed and précised by an additional interview, if necessary) have been set up as the main interactive method for this analysis. They served as a tool to identify and assess perceived spatial characteristics of each examined area. The word "perceived" indicates that we are not measuring/examining knowledge but rather subjective category of attitudes, opinions and leans (see more Jaššo, In Giffinger 2012). These categories are not measurable directly. The most renowned definition states that attitudes are learnt predisposition to favoring or refusing reaction toward given object, person or event (Fishbein, Ajzen 1975, In Hayes, 2003, p. 95). Generally, the attitudes are learnt, mutually consistent, stable in time and space and are concerning the positive or negative reactions. Each attitude has cognitive (opinion based on rationalities), emotional (feelings and emotions) and behavioral (willingness to act) dimension. Regarding the events related to increased risk, we can assume over-proportional representation of emotional dimension.

Ajzen and Fishbein (more in Hayes 2003) formulated in 1980 the theory of reasoned action (TRA). Theory of Reasoned Action is derived from the supposition that individual behavior is based upon the intention to perform the behavior and that intention is a function of individual set of attitudes. Expressed behavior is always based on the intention which might be unconscious. Intention is thus the cognitive representation of a person's readiness to perform a given behavior, and it is considered to be the immediate antecedent of behavior. Each intention is basically determined by the underlying attitude, the set of subjective norms and the individual behavioral control. Subjective norms might strengthen or diminish the intensity of the expressed attitude. In other words, the people with rather strong subjective norms might inhibit their attitudes and behavior in significant way.

For example, if the reference social group is rather condemning some attitudes and behavior, the mere belief or individual assumption might not be strong enough to modify the attitudes and intentions into open expression (or behavioral act).Attitudes can be modified and changed both internally and externally. Modifications and shifts within the one´s attitude in time and space is conceivably explained by theory of cognitive balance and cognitive dissonance (Heider, Festinger 1957, In Hayes 2003). Discrepancy within own attitude system is solved by the change or shift of one or more attitudes. The internal harmony and balance is restored.

Other theory, so called „self-perception theory" (Bem, Cooley, in Hayes 2003) interpret attitudes as a result of continuous individual comparative analysis. Each individual is taking into consideration the following assumptions:

1. supposition how own individual is influencing others
2. supposition, how the others evaluate own behavior
3. feeling of pride, shame and disappointment conducting own behavior

There is a range of subtle distinctions between attitudes and opinions. In general the following ones are considered to be most significant (elaborated according to Jaššo, In Giffinger 2012):

Attitudes

- are more difficult to research, because they might be hidden and invisible
- are stable in space and time, deeper anchored and usually are modified continuously
- are more consistent within each other
- are resistant to arguments
- are more related to abstract and philosophical themes (ethic, truth, moral...)
- have certain logical structure

Example of attitudes in our questionnaire is question Nr.10.

Opinions:

- are more rational and civil
- are more focused on external, non-personal issues (e.g. the right approach toward technical difficulties conducting the revitalization of urban area...)
- are more sensible toward contra-arguments
- are more easily to modify or shift
- are easier to measure and to evaluate

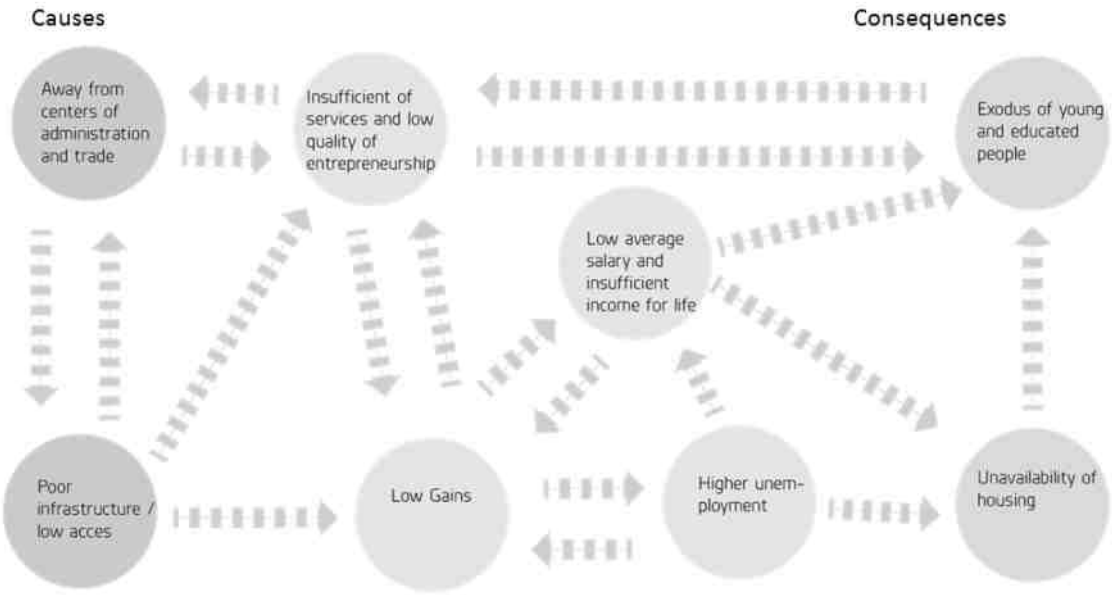
We assume that the attitudes, opinions and leans of respondent are influenced mainly by the following patterns and factors:

- professional experience and background
- situational context (whether the respondent is now working on projects regarding the examined city, the political situation, previous experiences from similar surveys etc.)
- personality of respondent (his/her personal values, characteristics, interests, hobbies)
- social desirability (tendency to answer in expected way, especially when the researcher is somebody who is personally known/respected by the respondent)
- individual motivation and engagement of the respondent

PERIPHERALITY

Peripheral regions are in poverty trap very often; or at least they have not a good attribute of connectivity and utilisation of soft components. The improvement of their situation could be reached through the support from various stakeholders as a part of social capital within decision making. Peripheral areas are poorly integrated parts of territories, they are partially or totally not integrated

Fig. 1: **Problems of cross-border areas**



(Tóth, 2013, p. 9)

into various structures, processes and systems (Schmidt, 1998). This solitude sustains original traditions from global trends and it extends a diversity of solutions within various aspects. Also, the relationship between centres and peripheral areas is asymmetrical and it makes itself felt with various levels of stability and potentials (Havlíček & Chromý, 2001). Objective factors (Havlíček, et al., 2005), which have impact on peripherality are physical geographical aspects (morphology, climate, altitude etc.), geometric features (distance from centre, and etc.), economic aspects (unemployment, low purchase power etc.), socio-demographic aspects (educational structure, age structure), ecological aspects (environmental pollution, habitation fragmentation etc.), cultural aspects (ethnicity, traditions, identity etc.) and political aspects (administrative division, in/dependency and etc.).

Problems of cross-border areas are often perceived by local residents as "a together connected and insolvable mesh of problems" (Tóth 2013, p. 9). The dissatisfaction with the state of art of the territory inflicts three different reactions (Chromý & Skála, 2010). First answer is in form of a positive motivation to improve the current situation (e.g. creative anti-identity (Vencálek, 1998). Second type of reaction can be a resignation and an escape from territory. Third possible form of reaction is a complete disinterest and indifference. Therefore an enthusiasm of local stakeholders is crucial factor for smooth development of peripheral areas (Chromý & Skála, 2010, pp. 226-227). The creative ability of social and functional networks within a territory (Coleman, 1988), quality of relations among local land-users, social norms and traditions (Putnam, 1993), the ability of corporate communication and cooperation, an integration ability of resources and an activation of endogenous potential (Hampl 2003) are the important indicators of social capital in any given territory (Chromý, Skála 2010, pp. 226-227). Great potential for peripheral areas lays in using its distinctive traits and characteristics, e.g. in form of traditional village, but with developed tourist incentives. These incentives have to exceed not only municipal boundaries, but also national borders for the completion of services and various infrastructures in towns and villages in same border region. According to Reinöhlová (2005), peripheral areas should be focused on the development of social capital, on dynamics of innovation processes by local economy, on environmental quality, on official and unofficial cooperation among municipalities (Reinöhlová, 2005 s. 38). In peripheral regions, it is very helpful, if more public services as public transport system, accessible school system, public health, public safety, access to sources and courts are supported and promoted (Godfrey, 2007).

Local identity as element of local adaptive capacity, of local knowledge and social memory of endogenous sources

Local/regional identity, its preservation, management, perspectives and social dynamics have been subjects of many research projects and surveys conducted on the local, regional, national and European level. European spatial development based on the socially cohesive regions and cities is the process going behind pure aggregation of spaces and spatial structures. Promoting the unique and competitive identity of regions, cities or places became highly imperative nowadays, when regions and cities are under the pressure of recent socio-demographic development, struggling to maintain their economic, demographic and social potential and perspectives.

Identification with the city or region, its positive acceptation and the readiness to partcipate in its development is the key element of territorial capital (see more Jaššo 2015). The social memory is formed from accumulated experience and development of the system, and 'it provides context and sources for renewal, recombination, innovation, novelty and self-organization following disturbance' (Folke, 2006, p. 259). Local adaptive capacity with local knowledge, self-organisation and with social networks (social capital) plays the principal role (Olick & Robbins, 1998) in terms of the spatial resilience against external disturbances.

Model area – Euroregion Neogradiensis

Model area in cross-border territory of river Ipeľ is extended more than 80 km along the border between Slovakia (SK) and Hungary (HU). In total, river Ipeľ delimits the border between Slovakia and Hungary in length of 140 km. This cross-border area Neogradiensis (Novohrad – Slovak part, Nógrad – Hungarian part) is a historical region, which was integrated area within Austria-Hungary Empire and was divided after World war I. in 1918. Slovak part Novohrad is only 100 km away from Hungarian capital Budapest. Field research was executed on the base of information from theoretical research related to spatial resilience. There were 9 villages selected in Slovakia (i.e. Kováčovce, Vrbovka, Slovenské Ďarmoty, Balog nad Ipľom, Ipeľské Predmostie, Ipeľský Sokolec, Pastovce, Kalonda and Rapovce), and 2 towns and 5 villages in Hungary nearby the river Ipel (i.e. Szécsény, Balassagyarmat, Örhalom, Ipolyvece, Drégenypalánk, Vámosmikola and Ipolytarnóc). This cross-border region was chosen because it belongs to those parts of both countries which are heavily hit by poverty (ESPON Atlas 2014) and had been endangered both by the floods (Slovenský Vodohospodársky Podnik, š.p., 2010) as well as by earthquakes frequently in recent years (GeoRisk Kft., 2015).

Fig. 2: **Model area – territory in the surrounding of cross-border's river Ipeľ**

Source: Authors

Tab. 1: **The list of municipalities in research with attributes of experience with floods and identity to group of tourist micro-region**

Municipalities	Number of the population 1.1.2015	Country	Group of tourist district	Direct experience with floods
Ipeľský Sokolec	852	Slovakia	-	In urbanized area !
Pastovce	503	Slovakia	-	Only in rural zone
Vámosmikola	1 650	Hungary	-	Only in rural zone
Kováčovce	365	Slovakia	-	Only in rural zone
Vrbovka	351	Slovakia	-	In urbanized area and rural zone !
Szécsény (town)	5 937	Hungary	-	In urbanized area and rural zone !
Örhalom	967	Hungary	-	Only in rural zone
Slovenské Ďarmoty	570	Slovakia	(A) -partly	No
Ipeľské Predmostie	633	Slovakia	A	In urbanized area and rural zone !
Balog nad Ipľom	833	Slovakia	A	Only in rural zone
Drégelypalánk	1 496	Hungary	A	In urbanized area and rural zone !
Ipolyvece	757	Hungary	(A) - partly	Only in rural zone
Balasagyarmat (town)	15 570	Hungary	A	Only in rural zone
Kalonda	214	Slovakia	B	Only in rural zone
Rapovce	951	Slovakia	B	In urbanized area and rural zone !
Ipolytarnóc	455	Hungary	B	Only in rural zone

Source: Slovak and Hungarian Statistical office, Questionnaire

Selected municipalities for proving the hypotheses on collaborating villages were situated in two areas of tourism activities. First group of municipalities (Group A of tourist district) is composed from villages and towns in middle part of stream, which is close to wetlands within Ramsar Convention (Ipeľské Predmostie, Balog nad Ipľom, Drégelypalánk, Ipolyvece, Balasagyarmat and Slovenské Ďarmoty). Second group of municipalities (Group B of tourist district) is in upper part within the catchment area of river Ipeľ (Ipolytarnóc, Kalonda, and Rapovce), because they are placed ahead of tributaries of bigger creeks.

Methodology and data collection

Desk-research was focused on spatial resilience on the local and regional scale, perception of unexpected disasters and the impact of peripherality especially in cross-border areas. Consequently within the field research, a bilingual workshop and research investigation (through questionnaire adapted according to the type of stakeholders) with 32 residents on Slovak side of the border and with 20 residents on Hungarian side of the border were externalised. The stakeholders were divided onto five groups such as authority of communities (mayors), residents, local entrepreneurs, environmentalists and stakeholders of nature (as farmers, rangers and fishermen), in terms of a methodology of inspiring Norwegian-Supported Regional Training Program (Kyoji Sassa et al. 2005).

Tab. 2: **The structure of participants in a workshop and research investigation according to education (n=52)**

Count of participants per country		Age From-To (average)	With finalized elementary school		With finalized secondary school		Finalized with academic degree	
			Abs.	%	Abs.	%	Abs.	%
Slovakia	32	46.21	1	3.12	19	59.37	12	37.5
Hungary	20	44.45	-	-	10	50	10	50
Total	52	45.53	1	1.92	29	55.76	22	42.30

Due to the particular interests of various stakeholders, many conflicts were expected. This research was a good opportunity for participation on spatial decisions with various local stakeholders in five mentioned groups. The process of participation can be expressed in four forms (accroding to Jankowski, Nyerges 2001): communication, cooperation, coordination and collaboration, whereby the field research was focused on individual interests without communication, subsequently also on communication and collaboration.

The key element of collaborative spatial decision processes is map-using (Nyerges et al., 2011, p. 114), which was presented in form of a blind map with identified areas of urban area, forests, lakes and also areas delimited according to the degree of soil quality. Adger (2000) defines social resilience as "the ability of groups or communities to cope with external stresses and disturbance" and therefore it will be relevant to consider diversity of various stakeholders within decision-making process as important element for higher (spatial) resilience of peripheral regions than cross-border areas.

The workshop was composed from three rounds of land-use game, whereby the particular attention was paid to individual local knowledge, social memory, collaboration of stakeholders and capacity of adaptability according to on new knowledge about area. The territory of cadastre was divided within this game into a matrix of territorial homogeneous parts (patch-matrix paradigm) which are non-linear, and differ from its surroundings (Cumming, 2011, pp. 143-144).

This matrix was based on homogenous quality of soil on certain piece of area within chosen cadastre of village/town. Chosen unit was evaluated according to the relationship to its natural resource whereby it was inspired according to method LUCIS (Carr & Zwick, 2007), which is focused on self-interest of local stakeholders within these conflicts analyses.

In the first round of the land-use game, there were tasks about individual localisation of simulated investments according to role and thereafter an identification of risks within graphically divided map regarding the quality of soil (without measurable indication of this quality). Authority of communities had to localise the area for industrial concern (with dimension 45.000m2), and also educational institution/health facility (with dimension 2.500 – 5.000 m2) and wastewater treatment plant - if there is none within municipality, or they do not have one planned for the next 30 years. The residents had to locate a residential complex with regards to individual municipality (with dimension 22.500 m2). Third group of stakeholders was represented by local entrepreneurs, who had to localize new shops or new small industrial enterprises. Since the environmentalists were not present in all municipalities, environmentalists and „stakeholders of nature" had had common task in form of localising a lake with agricultural (with dimension 45.000 m2) and other countermeasures for environment improvement according to their identified needs.

Participants had to label not only the places for the chosen investments, but also they had to use their mental maps to set a priority of selected places (from 1 to 9, where 1 was absolute unconcern, and 9 absolute concern according to their simulated investments). At the end of this first round of the game, participants had to identify and assess risks in individual cadastre according to local knowledge (from minimal 1 to maximal 9).

In the second round of land-use game, participants had individually situated investments from the first round. Difference between first and second round was based on using the local knowledge about risks and also they had an access to information about measurable indication of the quality of soil. Participants were informed about importance of the quality of soil for their local economy, biodiversity and how to use this map with measurable indication of quality. The quality of soil had values from 0 to 9 according to Slovak soil map, whereby 0 means built-up areas and others areas, which are not agricultural areas as e.g. forests.

The quality of agricultural areas was measured from 1 to 9. The best soil by means of fertility is marked as 1, and the worst as 9. It was inspired by Slovak laws, because the quality of soil from 1 to 4 belongs to protected soils (it is a pity that only through advanced tax, but these are not blocked against new investments). Analysing of priorities and conflicts was also inspired by LUCIS model (Carr et al, 2007 p. 11), which evaluates the possible conflicts in given area.

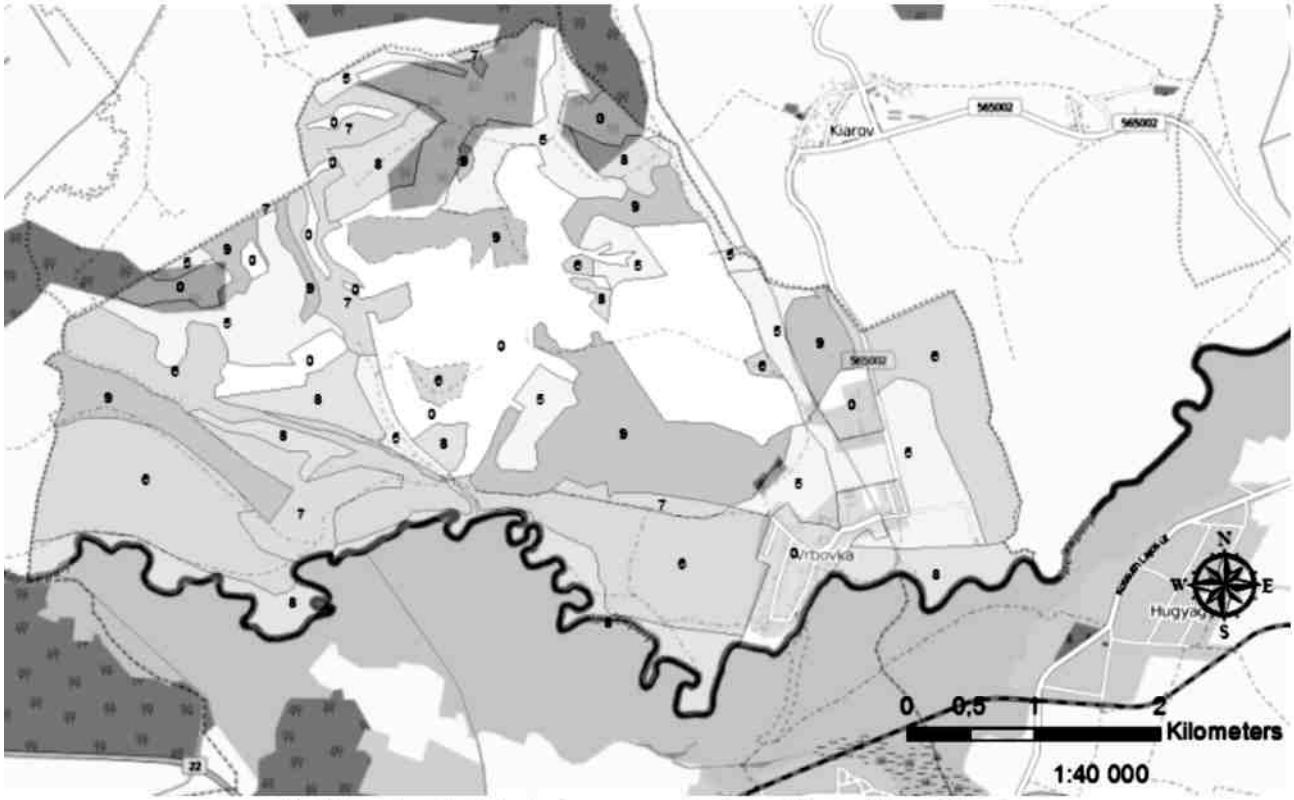


Fig. 3: **Example of divided cadastre map according to a quality of soil for participants of workshop during first round - with measurable indication of quality**

Thus, there was chosen the procedure for a measure of regional resilience and a mutual relationships and also conflicts among five different stakeholders in the same cadastre of model area – territory in the surrounding of cross-border river Ipeľ.

The third round was the last part of the workshop, and the main aim was communication among stakeholders and solution of potential conflicts, if different stakeholders had same preference for same piece of cadastre. Participant had an access to the same map with measurable indication of quality, to cadastral map and to historical map from period before world war I. (A.D. 1806-1869) where there was noticed the authentic river-basin short of stream regulation. During third round there was a place for mutual sharing of the local knowledge on quality of soil and risks, which are in the territory and also for an informal discussion. A common map was prepared in accordance with discussion, where there were accepted preferences of all participants.

The research investigation of qualitative data was also externalised during the workshop with the same residents from these five groups of stakeholders through questionnaires. It seems that social memory, social relationship (in form of peace or conflicts), diversity of stakeholders, local adaptive capacity with local knowledge and self-organisation play the principal role in process of spatial resilience against external disturbances, therefore these elements of the resilience were chosen for empirical research by qualitative analyses.

For analysing of peripheral areas, appropriate quantitative methods by statistical data through correlations, spider chart to self-organizing capacity (this tool is in development process), table of success of selected factors between Slovak and Hungarian municipalities and also network GIS analyse (identification of service areas for emergency rescue) were utilised. On the contrary, the subjective data from field research about characteristics of the territory were analysed through qualitative methods such as blind maps and conversations on workshops and questionnaires.

Results - evaluation of data

RESULTS OF WORKSHOP

The first step during the workshop was the investigated application of local knowledge of risk by particular stakeholder groups. The layer of the identified risks and the layer of localisation of simulated investments according to the stakeholders were used for analysis. Second analysis was focused on identification of conflicts within the territory according to the intentions of individual stakeholders (inspired by LUCIS model (Carr & Zwick, 2007, p. 11)), and according to marginalised groups. Willingness for resolution of regional problems within the catchment area was investigated indirectly according to reactions and responses of stakeholders.

Tab. 3: **Analysing of graphical part of workshops: survey of the preference for localisation of imagined investments within Slovak respondents**

Slovakia	Preference to urban area		Preference to open spaces		Preference to both area		Preference to floodplain	
Group of stakeholders	ABS	%	ABS	%	ABS	%	ABS	%
Authority of communities			4	57.14	3	42.85	1	14.28
Local entrepreneurs	1	50			1	50	1	50
Residents			6	75	2	25	2	25
Environmentalists			1	100			1	100
Stakeholders of nature (farmers, rangers and fishermen)			4	80	1	20	1	20

Tab. 4: **Analysing of graphical part of workshops: survey of the preference for localisation of imagined investments within Hungarian respondents**

Hungary	Preference to urban area		Preference to open spaces		Preference to both area		Preference to floodplain	
Group of stakeholders	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Authority of communities			3	60	2	40		
Local entrepreneurs	2	66.6			1	33.3		
Residents	1	33.3	2	66.6				
Environmentalists					1	100		
Stakeholders of nature (farmers, rangers and fishermen)			6	100			6	100

For this article, it is important, that the importance of individual experience or social memory was proven in terms of planning and floods.

According to obtained preferences of local stakeholders (tab. 3 and 4) it seems that residents prefer a build-up spaces particularly in direction from built-up areas to open spaces. Similarly, preferences of authorities of municipalities had priority to open spaces. In opposite, the group of local entrepreneurs preferred built-up areas for simulated investments in the field of trade and services. The group of environmentalists has shown the biggest creativity in comparison with other groups of stakeholders. Their investments were arranged to urban and also rural territory for improvement of ecosystem services. At the surveyed municipalities, there was an impact of the common planning/organizational culture, since the responses of particular stakeholders within the same group were similar within specific municipality.

This monitoring of preference of stakeholders is very important, especially due to the urban sprawl which raises the vulnerability to external disturbances such as floods or landslides, whereby a good helping tool is social memory of dangerous localities. Within this research, high significance of local knowledge, social memory or experience was identified. Many stakeholders had preference for built-up in floodplains. Surprisingly, among these stakeholders there were not only the residents and local entrepreneurs, but also the authorities of municipalities.

On the other side, the questionnaires were mapping out the feeling of danger. The correlation between a feeling of danger and the real danger of floods was not confirmed. People without direct experience do not understand circumstances of floods, and people with experience have less sensibility on floods in case that they were not directly hit. This effect seems to be similar to a skilled driver without sensitivity to risk due to carelessness and reliance in the social memory.

Higher state of preparation in municipality in Hungarian side was identified (see tab. 5), and same feeling of inhabitants in Hungary and Slovakia, without regard to real danger of floods and state of preparation.

Tab. 5:**Unconfirmed correlation between a feeling of danger and real state of floods in urban area of cross-border area**

Evaluated area with 22 inhibitants	Cross-border area	Only Slovak area	Only Hungarian area
Correlationvalue	0.227	-0.358	0.064
Significance F	0.396	0.343	0.890

ID	Selected factors (answers on 1.-7. questions from mayors; 8.question from inhibitants)	Abs. SK	% SK	Abs. HU	% HU
1.	Prepared masterplan or strategy of development	9	77%	6	100%
2.	Problems with marginalised groups	9	14%	6	100%
3.	Solidarity with others municipalities	9	89%	6	67%
4.	Identified danger localities in managed area of municipality, during workshop through using of local knowledge of respondents	9	66,6%	6	50%
5.	Critical impacts after natural disturbances (deaths, significant financial losses)	9	44,4%	6	50%
6.	Warning system in municipality	9	66,6%	6	83,3%
7.	Executed countremeasures against floods, landslides,...	9	33,3%	6	83,3%
8.	Feeling of danger among inhibitants	13	77%	4	75%

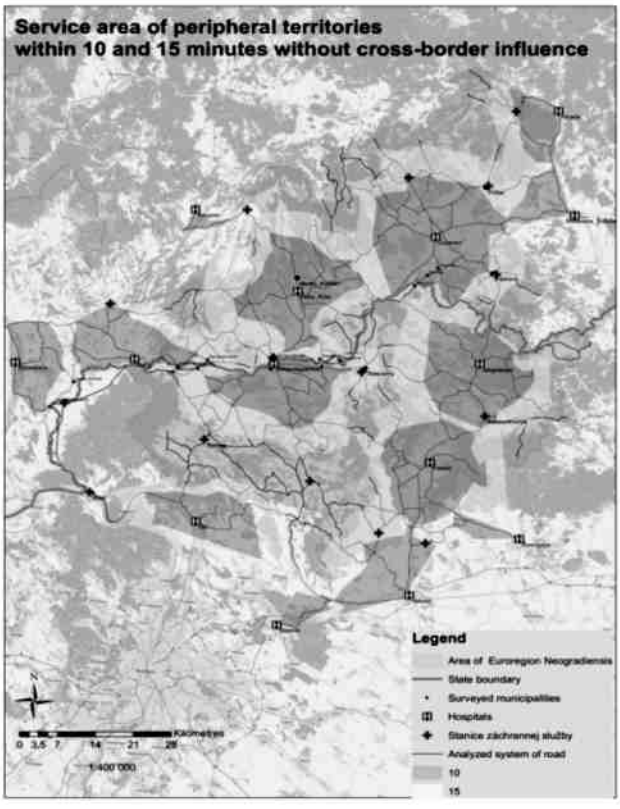
Tab. 6: **Table of success of selected factors from empirical research in municipalities of cross-border area**

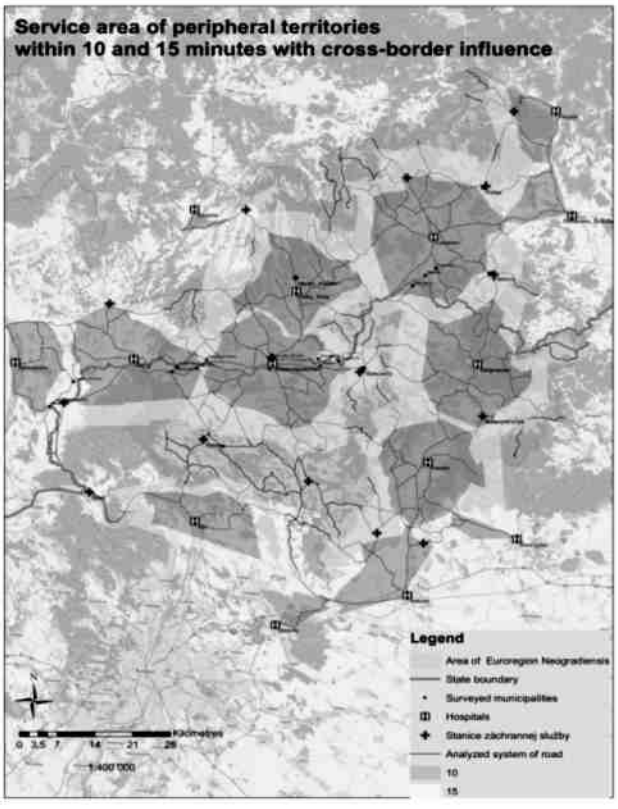
The absence of masterplan by municipalities from down-stream of River Ipeľ on Slovak side can be a reason for problems during floods, because these municipalities have active development (100% successfulness by developments purposes for next years). Furthermore, there was a suggested relationship among the absence of masterplan, the complementariness of service towards other villages and facilities of villages (public water-supply and public sewage). It is also interesting that only 66% of municipalities within whole sample of municipalities possess free ample space for new industrial investments.

RESULTS OF GIS ANALYSING

Fig. 4 and 5: Network GIS analyse: Identification of service areas for emergency rescue

According to the figure on left side (Fig. 4), it seems that borders create less effectiveness and higher vulnerability of society in comparison to cross-border's partnership of emergency services. Municipality Ipolytarnóc (HU) from Group B was located outside of tolerable accessibility (red area – in border cross-border area Neogradiensis) 15 minutes resp. 22,5 km to closest hospital, and it means a threat for residents and visitors. These analysed area was created through existing transport network with estimated speed of ambulance in average 90km/h. Right figure (Fig. 5) proves need for higher stimulation of cross-borders partnership, which will cover accessibility not only within 15 minutes (yellow area), but also within 10 minutes (gree narea).





RESULTS FROM CHOSEN VARIABLES OF QUANTITATIVE DATA

Tab. 7: **Chosen variables within municipalities in model area**

Municipalities according to country (Slovakia as SK or Hungary as HU)	Number of the population in 2011	Total growth between 2001 and 2011, in %	Representation of minority groups (Roma population), in %	Education index
IpeľskéPredmostie (SK)	633	-2,21169	0	156,83
BalognadIpľom (SK)	846	5,910165	0	169,925
Kalonda (SK)	216	-11,5741	0,92	168,95
Rapovce (SK)	979	8,988764	26,55	148,165
Drégelypalánk (HU)	1516	-9,36675	12,79	147,3
Ipolytarnóc (HU)	445	-19,3258	13,03	131,445
Ipolyvece (HU)	777	-9,78121	5,92	162,12

The extremely intensive outflow of residents between 2001 and 2011 was remarkable in village being located very peripherally – Ipolytarnóc (according to GIS analyses this municipality is outside of services area for national ambulance).

High representation of houses in ownership of minority groups in flood areas is the evidence that low prices of real estate are attractive especially for vulnerable groups (minority groups of Roma population, young families etc). This aspect is strengthened in municipality Rapovce (from Group B), in which usually the price of real estate is higher due to an occurrence of sources of underground sea water having considerable tourism potential.

Based upon the existing discussions between authorities of municipalities and residents in separated area, it seems that planning/organizational culture plays an important role and is not dependend on educational factors. Almost any discussion beetween stakeholders about public domain was observed in area of municipalities from Group B. On the other side, educational indicator had impact on quality of private-public partnerships.

PLANNING CULTURE AS DEMONSTRATION OF SELF-ORGANISING

Preferences and lop-sidedness for changing of decisions was designated for measuring of ability for using a local knowledge and a precondition for better adaptability. Furthermore, focus was placed on self-organising as internal process in municipality resp. in microregions.

Two groups of municipalities were set up for comparison of planning cultures: Group A (Drégelypalánk, Ipolyvece, Ipeľské Predmostie, and Balog nad Ipľom) including municipalities having more successful partnerships and Group B (Ipolytarnóc, Rapovce, and Kalonda) including municipalities seeing each other more like competitors.

In these municipalities, good local knowledge was identified because nobody had preference for investments in flood areas.

On other side, municipalities from Group A had higher lop-sidedness for changing of decisions during workshops between first and second round of land-use game. The highest adaptability during workshop was in Drégelypalánk, where also this mayor of municipality displays a good positive leadership of the whole cross-border micro-region. Better self-organising capacity is also influenced by three various cities that are adjacent (Veľký Krtíš, Balassagyarmat and Šahy), with mutually superimposed impact.

For evaluating of self-organising processes, the following factors are essential: support of identity by municipality, support of new investors/inhibitants, public discussions with authorities of municipality and with stakeholders of nature, accessibility to information, satisfaction with public services, qualitative evaluation of cross-border partnerships, qualitative evaluation of public-private partnerships.

Tab. 8: **Self-organising capacity (in development „Aspects of internal social and human capital"**

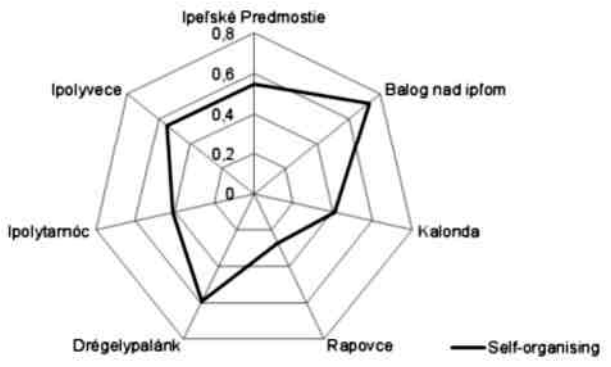
Municipality	System pointer for self-organising	Solidarity	Support of identity	Support of new investments	Public discussion (from side of municipality and stakeholders of nature)	Accesibility to information	Satisfaction (with higher public authority by municipality)	Satisfaction (by local entrepreuners)	Satisfaction (by residents)
Group A									
Ipeľské Predmostie	0,4090909091	1	1	1	2	1	1		2
Balog nad ipľom	0,5909090909	1	1	1	1	0	3	3	3
Ipolyvece	0,4545454545	1	1	0	1	0	3	2	2
Drégelypalánk	0,4545454545	1	1	0	2	1	3		2
Group B									
Ipolytarnóc	0,3181818182	0	1	0	0	0	3		3
Kalonda	0,2727272727	1	0	0	0	0	3		2
Rapovce	0,1818181818	0	0	0	0	0	3		1

In the pilot questionnaire, the respondents (residents and entrepreneurs) expressed their satisfaction or dissatisfaction with the governance in both countries of the model area based on a Likert scale (1-3). This brings important feedback with information on the self-organizing processes when implementing the new proposals as well as when interpreting regional and local elections.

According to the results of self-organising indicators comparison it seems that the access to information and public hearings are of considerable impact on the quality of municipalities partnership and planning culture that is correlative to solidarity and activities to support new developments as well as with local identity.

Municipalities satisfaction with governance of the region as well as the satisfaction of residents and entrepreneurs play an important role. Low satisfaction does not necessarily mean bad management quality but expresses certain requirements of stakeholders as motivation for future growth but it can also be a signal for the need of changes.

Fig. 6: **Radar chart of self-organising capacity among selected municipalities**



In the frame of self-organisation indicators the best results have been reached in the municipalities of the more successful group in micro-region A. Slovak municipality Balog and Ipľom together with Hungarian municipality Drégelypalánk belong to the best municipalities, with good managerial abilities of the their mayors who support cross-border cooperation and try to extend cooperation also to common attractive space for regional entrepreneurship in the field of agriculture and food production. At the same time they try to create common agricultural region. Conclusions

Participants like authority of communities (mayors), residents, environmentalists, local entrepreneurs and "stakeholders of nature"(farmers, rangers or fishermen) were suggested as the most suitable stakeholders of research. The chosen stakeholders are considerable due to their local knowledge, capacity of adaptability, the character of public-private activities, self-organisation processes and social memory, the relevance of which was confirmed, but they have certain limits in form of sensitivity on change, education, ardency for public activities, carelessness and missing of experiences. This article was based on a question research investigating elements fortifying a self-organising processes and human capital for maintain or improved the risk perception.

Individual experience is an irrecoverable fact for creating a social memory and local knowledge. Without direct experience old memories are forgotten. Very interesting contributions from workshops is that preferences of mayors and residents to locate new areas are focused outside of built-up area, which brings many problems with no local knowledge in new areas and by bigger fluctuation/outflow of residents. These problems can especially increase gradually if there are no masterplans and other planning documents and tools. In two cases, the participants of workshops have had the preference for placing of new housing in floodplain. There have been two unexpected results. The first one was that in the municipality of Slovenské Ďarmoty they do not have direct experience with the floods and so they located new development in the village in the floodplain, although they identified them as flood areas. These stakeholders were not only residents and local entrepreneurs but also mayors. The second unexpected result is unwillingness to transfer to ecological agriculture, moreover even support to growing genetically modified plants also in the localities near protected areas of Ramsar Convention.

In order to strengthen resilience, it will be necessary to invest financial means to improve social services (education, health services and transport) and thus contribute to overcome social fragmentation and social exclusion that are the limitation for the access to the health care, education and employment market (Currie 2010, Cumming 2011, p.190).

The educational level in municipality does not have an impact on culture of planning as processes of discussions at public domain, but it is a good base for public-private partnerships with higher quality in peripheral areas, especially in peripheral areas. As an example if there is a lack of public services in municipalities in peripheral area that has negative influence for social defragmentation of socially vulnerable groups as minorities and young families. Inner potential of the territory and the quality of public services has significant impact on mitigation of social vulnerability.

Very important issue is the process of cultivation of social-ecological relations, which are connected at sensitivity at risk through educations, discussions, and mutual public private projects among local stakeholders, and at especially willingness for search some solution at not only on local scale, but within whole deprived region. These relations can be supported through enhanced tools at local and regional scale (e.g. master plan or prepared regulation documents within small municipalities and also within common micro-region, enhanced school system for better integrating of marginalized groups with higher requirements on results, and participating processes as attributes of improved the social capital due to direct feedbacks).

For answer on research question about the improvement of preparation for unexpected events, it will be beneficial to create the common planning culture within whole cross-border area with focus on vulnerable groups and local specifics, whereby a participating processes will use an enthusiasm and local knowledge of local stakeholders to development of this peripheral area.

This shared responsibility for the whole catchment area will help create a completion of services within naturally self-organising processes and mainly keep a capacity of adaptability, for as much as due to diversified sight. This will be monitored by many various aspects of non-linear processes, e.g. indirect correlations of the problems of the regions. Also feeling of security will be more accurate, preparing to unexpected events will be more serious regarding a change in mentality from passive stakeholders to active stakeholders.

It is apparent that the first main limit for this paper was a small group of respondents, and questions which were focused on issues of risk perceptions. It will be necessary to create separate research, in the meantime the issue had to be solved with low presence of local environmentalists and local entrepreneurs in some small municipalities of peripheral areas.

Second main limit was an absence of tools for comparison of municipalities in terms of a capacity of self-organising. Therefore the suggested chart of self-organising will be good base for next research, but current need is the future research in many municipalities, whereby these municipalities cannot be localised only in peripheral areas. Also an vital opportunity for next research is the focus on the quality of existed masterplans in terms of perceptions of risk and collaboration processes with local stakeholders with local knowledge and social memory, especially by elderly residents.

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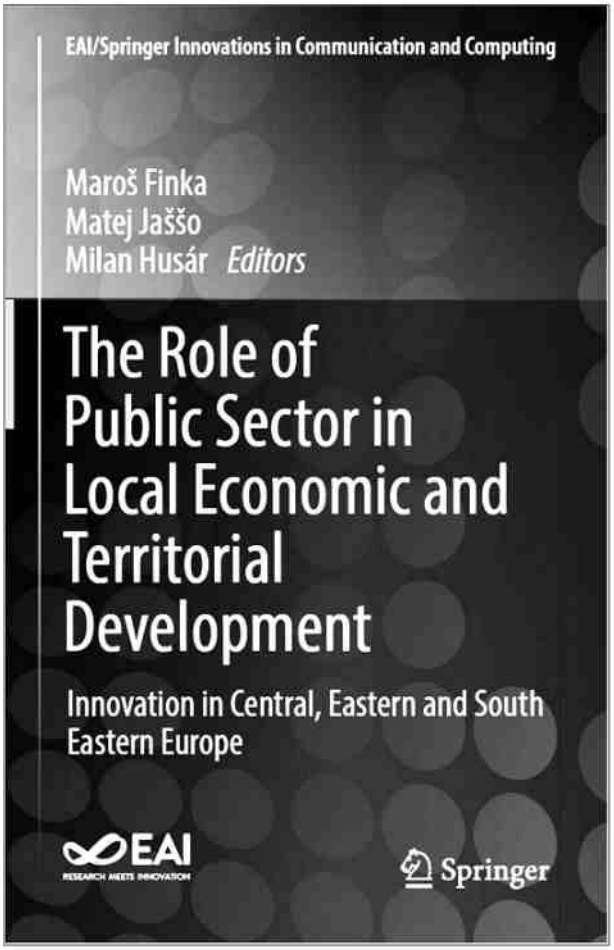
Dagmar Petríková

THE ROLE OF PUBLIC SECTOR IN LOCAL ECONOMIC AND TERRITORIAL DEVELOPMENT - INNOVATION IN CENTRAL, EASTERN AND SOUTH EASTERN EUROPE



THE ROLE OF PUBLIC SECTOR IN LOCAL ECONOMIC AND TERRITORIAL DEVELOPMENT - INNOVATION IN CENTRAL, EASTERN AND SOUTH EASTERN EUROPE

Editors: Maroš Finka, Matej Jaššo, Milan Husár
Published by: Springer International Publishing AG, part of Springer Nature 2019
ISSN 2522-8595 ISSN 2522-8609 (electronic)
EAI/Springer Innovations in Communication and Computing

ISBN 978-3-319-93574-4
ISBN 978-3-319-93575-1 (eBook)
271 p.

The book "The Role of Public Sector in Local Economic and Territorial Development" discusses the current trends in research of institutions within the Network of Spatial Research and Planning in Central, Eastern and South Eastern Europe—SPA-CE.net and their contribution to professional debate on the role of the public sector in innovative local economic and territorial development in Central, Eastern and South Eastern Europe.

The position of the public sector within development strategies has been changing for the past decades and poses new challenges for the spatial development. This includes the development of civil society, ongoing European integration, transformation towards knowledge-based economy, demographic shifts, strengthened environmental awareness, increased fiscal concerns and more nuanced views of growth determining the framework not only for territorial and economic development itself, but for its management and for the role of the public sector in it as well, resulting in the formulation of new qualitative and quantitative demands and new opportunities for smart growth.

Chapter 2 "Innovations and changing role of public sector in spatial development strategies" introduces and examines the problems and challenges for local and regional development in Central and Eastern European countries resulting from the global transformation processes of the society and economy accelerated by the transition process in the majority of the countries in Central and Eastern Europe.

Chapter 3 "Spatial planning policies and the integration models as a means for a better delivery of services of general interest" deliberates new approaches to the services of general interest (SGI) provision, especially in remote mountain territories and border areas.

Chapter 4 "Utilising endogenous potentials via regional policy-led development initiatives in (post-) industrial regions of Central Europe" studies the ways how place-based endogenous potentials are conceptualised and used, particularly in the local and regional context.

Chapter 5 "Energy sensitive spatial planning as a public sector tool towards sustainable economic and territorial development" concentrates on sustainable energy transition increasingly regarded as a key topic of both policy and research in the EU context of the global process towards sustainable development.

Chapter 6 "Determining land values by location: supporting public valuation expert committees in the provision of market transparency" discusses land values reflecting the spatial location within a territory.

Chapter 7 "Forest commons as a model for territorial governance" refers to the territorial governance patterns generating perspective, place-based and highly adaptable models.

Chapter 8 "The role of leadership in the current contexts of Central European planning culture" debates the relation between two of the most significant soft factors in spatial development, namely leadership and planning culture.

Chapter 9 "Urban transformation - cultural heritage and local economic development: the public sector on the battlefront?" explores the phenomena of historical cities in Central and Eastern Europe beyond the booming metropolis, facing stagnation or decline of population and economic development.

Chapter 10 "Social innovation and sustainable economic development: participatory tourism destination management" addresses the role of bottom-up innovation to support sustainable local development, in particular in local tourism development, and introduces the case study of Gramsh, a remote Albanian region.

Chapter 11 deals with "Professional capacity building as the public sector intervention towards sustainable economic and territorial development" and introduces a key study devoted to knowledge hubs network for energy efficiency.

Chapter 12 "The public in search of identity: new symbolism in urban spaces. A study of central squares of Balkan capitals" is dedicated to thorough analysis of the process of building new political and cultural identities in the Western Balkans.

Concluding chapter "Professional associations as public actors in the formulation and implementation of spatial development policies. Key study monitoring and evaluation standard for the urban environment of Sofia" deliberates the gradual shifts of the role of planning profession, its institutions and planning in general in Bulgaria.

This book aims at providing a view on the potential of the public sector's involvement in the Central, South and South Eastern European countries being represented by national, regional and local governmental and self-governmental bodies, public institutions, non-governmental organisations, groups of activists and professionals to help communities to identify and leverage community assets to create sustainable policies, plans and practices reflecting dynamic development and unique framework preconditions and challenges in new innovative planning and development concepts.

Dagmar Petríková

LUMAT PROJECT MEETING AND PROJECT STEERING COMMITTEE IN LJUBLJANA, SLOVENIA 24-25.05.2018

Venue: Urban Planning Institute of the Republic of Slovenia

The main objective of the Project Steering Committee meeting was to monitor the project smooth running and prepare the public conference of the LUMAT project in September 2018.

In the frame of the agenda of the project meeting there was session on Work Package T2 – discussion on management structures – exchange of experience on capacity building meetings organized or planned in partners' countries (A.T2.4) and on public discussions on action plans (local public events and interactive tools development – A.T2.7).

Part of the agenda of the project meeting was

study tour to Škocjanski zatok in Koper (Adriatic coast)

which is an excellent example of cooperation between the representatives of civil society and the members of the Bird Watching and Study Association of Slovenia who have prevented the Škocjan Inlet from completely drying out and being covered with buildings. Since 1999 it has been carefully managed by the Bird Watching and Study Association.

Public conference in Slovenia on 25 September 2018

will be in the SlovenianConference centre Brod pri Kranju, back-to-back with the project meeting. Discussion on Conference subjects and LUMAT possible presentations resulted in the agreed title of the Public conference "Future challenges of land management" as well as in preparation of The public conference agenda that will be based on the LUMAT project results.

Ljubljana is a unique city – small by its surface area, but high in a quality of life. The entire Ljubljana urban region has approximately 538,000 residents. With its 170 m2, it has all the characteristics of big metropolises and at the same time, it provides lots of greenery, cleanness, and safety for residents and tourists.

Since 2007, when they introduced the Vision for Ljubljana 2025, they have set out to ensure that their city becomes a sustainable and ideal city by 2025 - a city that nurtures history, ensures life quality, safety and tolerance, is environmentally friendly and connected to its landscape. In the Vision, the concept of sustainable development and urban planning are closely and harmoniously intertwined. Ljubljana was awarded the title „The European Green Capital 2016".

Following this Vision, several sustainability strategies and plans have been developed and adopted by the City Council, for environmental protection, sustainable energy, mobility, zero waste and other sustainability plans such as a brand new Sustainable Development Strategy (2020). The city government decided that the priority should be to become a city that is friendly to people, which in terms of sustainable mobility means reversing the current transport mode. This was taken into consideration in the Sustainable Urban Mobility Plan, adopted by the City Council in September 2012. With a cohesion of measures in the field of sustainable mobility, urban planning and environmental protection they plan to, by 2020, reduce CO2 emissions by 30%; balance the distribution of mobility, so that 1/3 of all travels will be made by public transport, 1/3 by foot and bicycle and only 1/3 by car. Halfway through, the share of walking has increased drastically at the expense of car usage.

Study Tour – Škocjanski zatok in Koper (Adriatic coast)

Visit in Škocjanski zatok Nature Reserve in Koper as an example of the ecosystem upgrade and maintenance. Different ecosystem services have been implemented Nature reserve from 1998 upon and Natura 2000 site. Natural value – geomorphologic, hydrologic, botanic, zoologic and ecosystem value.

On the border between the sea and the land, where the rivers Rižana and Badaševica used to flow into the sea, lies

the Škocjan Inlet Nature Reserve: the last witness to the insular past of Koper and the Slovenian largest brackish wetland, which has today again become a natural gem thanks to human love and dedication.

The Škocjan Inlet Nature Reserve is as an oasis of peace at the threshold of Koper, alluring for anyone who wants to learn about nature and experience it. The main attractions for visitors are sports activities and relaxation, as well as the observation of animal and plant species. The unique variety of species, mainly birds, the small surface area and special infrastructure for the observation of nature, which is also adapted for persons with special needs, make every visit special.

The goal of the protection of the Škocjan Inlet is the conservation of brackish and freshwater habitats and bird habitats, which nest, winter and stop during migration in this inlet in large numbers. Besides the birds, visitors can see dragonflies and butterflies in all colours and listen to the frogs croaking. In the wet meadows, the vegetation is balanced by Podolian cattle and Camargue horses grazing. The inlet is distinguished by halophytes– plants, adapted to grow on salty ground.

The Škocjan Inlet is a good example of cooperation between the representatives of civil society and the members of the Bird Watching and Study Association of Slovenia who have prevented the Škocjan Inlet from completely drying out and being covered with buildings. After 1993 the area was protected and in 1998 it was permanently protected. Since 1999 it has been carefully managed by the Bird Watching and Study Association.

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