

Healing Water: Greenway Strategy and Landscape Perspective Shaping the Urban Revival of Historical Spa Resort Towns in Transylvania

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Abstract

The management of natural resources, especially water, within green and blue infrastructure and urban green networks are key elements in current urban and spatial planning. The idea of sustainability in a historical cultural landscape is very much present in both academic research and professional practice. Băile Tuşnad, Borsec and Sovata are case studies that can be good examples for both. Their central positions in Transylvania, Romania, as resort destinations with a tradition in spa tourism, is shown by multiple factors: a trademark built heritage, characteristic to most resort towns of the former Austro-Hungarian Empire at the turn of the 1920th century, and an exceptional natural environment with the (mineral) water resource at their core structure. These factors define a special cultural landscape shaped by the (mineral) water, a specificity materialized in the blue and green infrastructure elements (urban parks and forests, touristic greenways, a network of creeks, mineral water fountains and natural outdoor pools etc.), in cadastral, open space and building patterns or in a particular, traditional (tourist) use of the landscape.

Despite the outstanding heritage, their existence at the end of the 20th century was marked by economic-social uncertainty and decay, similar to most resort locations in Romania, coupled with a general degradation of the built and natural environment.

A current rebirth is due to a landscape management and urban planning that is more aware of the importance of sustainability (ex. diversified-localized and prudent tourism development, a gradual removal of polluting industries, restructuring and renaturalization of former mining sites, protection of the water resource, reforestation etc.). The long (green) road of recovery is still an ongoing process based on a sustainable urban landscape planning and development.

The present paper proposes research on the role that a landscape approach and greenway strategy for urban/territorial planning and development can have on achieving sustainability in a historical spa landscape.

Introduction

Ecological concepts, landscape perspective and greenways strategy have become leading design principles in today's professional practice and theory in urban/territorial landscape planning, a

compulsory attribute of the contemporary mindset and (urban) landscape shaped by concerns about human's relationship to (natural) environment, climate change etc.

The proposed research focuses on the role ecological concepts, cultural landscape perspective and greenways strategy can play in understanding the phenomenon of sustainability in planning, development and management of historical spa landscapes. They are not only attributes of the traditional spa landscape, but also generators in present day development of historical resort towns around Transylvania. Its landscape as a complex, built and natural, social and economic environment is undergoing a sudden and accelerated transformation. These are concepts that can enhance finding solutions to urgent social and environmental challenges regarding efficient management of resources, agricultural production, sustainable tourism development etc. The ever-shrinking natural environment, uneven demographic growth together with excessive urbanisation, wasteful resource-energy management, and pollution are all results of unsustainable development models. Resilience and sustainability, the cultural landscape perspective in urban/territorial planning and development are essential in the process of identifying a mutually beneficial coexistence of human and natural habitats.

Background and Literature Review

The recent revival of historical (spa) resort towns in Transylvania serves as the impetus to pursue the present research, having current urban/regional/territorial landscape planning theory and practice on a national/international level as its working background.

The resort towns that were analyzed are representative of the historical spa landscape in Transylvania at the turn of the 19-20th century. They are defined by a valuable built heritage and exceptional natural resources combined in a unique cultural landscape. Their existence was marked by economic-social uncertainty, similar to most resort locations in Romania at the end of the 20th century, coupled with a general degradation of the built and natural environment.

Their gradual economic/social/cultural recovery are the result of urban/territorial planning that was shaped by current ecological concepts, landscape perspective and greenways strategy. In Romania, landscape and greenway planning are intrinsic components of the urban/territorial planning process. Among the latter categories, *General Urban Plan (GUP)* represents the legal ground for any development action proposed, including rules with respect to urban planning matters.

The research literature that was reviewed for this study belongs to two main categories: (a) academic/research papers on two distinct subcategories, subjects, (a1) a more general one about current theory and practice in landscape planning, including greenways strategy, and (a2) a rather particular subject concerning the cultural landscape of historical spa resort towns in Transylvania, (b) set of urban/territorial planning documents and their relationship to landscape perspective and greenways strategy. In (a1) subcategory two main publications give the necessary theoretical framework: (a1.1) *Applying landscape ecological concepts and metrics in sustainable landscape*

planning and (a1.2) *Greenways as Strategic Landscape Planning: Theory and Application*, the latter having Jack Ahern as author, while the former in completion, André Botequila Leitão. In subcategory (a2) there are also two papers about historical spa landscape in Transylvania: (a2.1) *Az erdélyi fürdő aranykora*, by László Kósa, and (a2.2) *Az erdélyi fürdők*, by Jenő Pataki. Category (b) contains two regional development projects, and (b1.1) *The Salt Route*, and (b1.2) *The Road of Mineral Water*, and as an urban planning document (b2), the *GUP of Borsec*.

Based on research literature that was analyzed, (a), landscape planning can be defined as the practice of planning for the sustainable use of physical, biological, and cultural resources, thus seeking the protection of unique, scarce, and rare natural resources and accommodating development in appropriate locations. Landscape planning is closely linked with the spatial sustainability.

As potential structuring elements of landscapes, greenways are described as networks of land containing linear elements that are planned, designed and managed for multiple purposes including ecological, recreational, cultural, aesthetic etc. purposes compatible with the general concept of sustainable land use. Greenways strategy is consistent with the concept of sustainable development. Usually, greenways planning strategy needs to be part of a larger and more comprehensive landscape/physical planning activity.

Research focuses on the role of landscape perspective and greenways strategy concepts on selected regional development (projects) and urban landscape planning documents.

Method and Data

The research methodology has two distinct, but interconnected components: (4.1) contextualizing of proposed subject within a review of relevant academic/research literature, including the definition of key concepts, as historical/cultural landscape perspective and greenways strategy in urban planning followed by the (4.2) analysis of recent historical urban spa landscape development, projects and programs, according to previously set criteria through characteristic attributes of landscape planning (holistic-systemic, integrative, regenerative) and of greenways strategy (facilitating connectivity, spatial structuring and multiple use).

Data has been collected directly, through on site visits or taken over from analyzed relevant research literature available in various online sources or database of academic and administrative institutions.

Results

The following preliminary findings can be drawn from a general analysis, common to most of historical resort towns in Transylvania, and particularly the detailed case studies:

(5.1) historical resort towns in Transylvania are exceptional cultural landscapes, that can be an important resource for sustainable urban development

(5.2) historical resort towns were marked by economic-social uncertainty, by shrinking at the end of the 20th century, coupled with a general degradation of the built and natural environment, aggravated by the insufficient, unclear legal framework and missing correlation of planning, regulation and design process on different landscape scales as well as ownership problems

(5.3) recent urban revival is a result of efforts in the planning, regulation, design and building process, facilitated by the greenways strategy and landscape perspective as core planning elements; greenways have the capacity to highlight both historical landscape heritage and ecological values, by deliberately “reintroducing nature” to the urban landscape

(5.6) inherently present in a historical cultural landscape, sustainability and resilience components can be revealed through diversified-localized, prudent economic/tourism development and thoughtful landscape management

Discussion and Conclusion

A critical view on sustainability in a historical-cultural (spa) landscape in Transylvania, Romania, considering the set of criteria from part 4, constitutes the main body of present research. Preliminary general findings, identified in the previous part, are exemplified, detailed in the selected case studies.

Historical resort towns in Transylvania, their current rebirth based on greenways strategy planning, the sustainable management of natural resources, especially mineral water resources, were analyzed, then detailed in the case studies: Băile Tușnad, Borsec and Sovata.

Cultural landscapes are a record of human interaction with nature, with the land. Consequently, historical spa landscape in Transylvania are the result of how local communities related to (mineral) water, to natural resources to gain economic, social, and cultural benefits. In these resort places, there is a trademark built heritage and exceptional natural, especially water landscapes, most of which are protected. In all three case studies, the historical resort quarter is marked by wooden architecture characteristic of the leisure-recreational developments of the former Austro-Hungarian Empire. This built heritage is firmly connected to the surrounding landscape defined by unique natural elements: in Băile Tușnad the Olt river, the Mohos muskeg zone and the St. Anna Lake, the only well preserved lake of sizable dimensions formed in a volcanic crater in Europe; in Borsec, the multitude of mineral water springs and special microclimate with many sunny days; while in Sovata the salt resources, the salt water lakes, and also a microclimate similar to Borsec. Generally, cultural landscapes are perceived as having sustainability and resilience attributes given the fine layering in time, patterns of the human ecosystem that have proved to be in balance with nature.

Until recently, traditional urban spa landscapes in Transylvania and related spa tourism used to be resilient, sustainable due to the scarcity of financial, socio-economic resources that kept infrastructure investments in accordance with the scale and character of the particular landscape.

A steep decline in tourism occurred starting from the 1980's and lasting until after the transitional period of the following decade. This was aggravated by property ownership issues, by insufficient, unclear legal framework and missing correlation of planning, regulation and design process on different landscape scales. The lack of the landscape perspective and greenway planning strategy in urban and territorial landscape planning also contributed to this phenomenon. A gradual recovery in tourism activities can be observed in the second half of the 2000's in the context of a general improvement of economic situation as Romania joined the EU in 2007. Best placed in this effort was Sovata, given its more central position, its proximity to international airports and an active local administration, followed later by the revival of Băile Tuşnad and Borsec.

Rediscovering defining cultural landscape components, amongst them, the green and blue infrastructure generated by mineral water resources, large forested areas, specific microclimate conditions was a key factor in this process. Several tourism development programs, initiated by the local, regional and national government¹, financed from EU and national funds, were implemented, various recreational and environmental projects, specific green and blue infrastructure built. *The Salt Route* project considered Sovata and its surrounding salt landscape in a systemic view as one territorial unit that should be developed as strategically in a coherent, holistic way. It focused on creating a greenway system in Sovata by linking the salt lakes and urban forests on the outskirts of the core resort part.



Figure 1. Greenways educational trail, *The Salt Route*, Sovata (source: Vallum Miercurea Ciuc)

The Road of Mineral Water was a similar project of Covasna and Harghita, two neighbouring counties with abundant mineral water reserves. It proposed the connecting of several mineral water springs in the region of Seklerland into a green-blue touristic network. In Băile Tuşnad and Borsec,

¹ Borsec, together with Sulina and Băile Herculane, was part of the strategic integrated development project initiated in 2011 by the Romanian Ministry of Development and Tourism in partnership with UNDP

historical mineral water infrastructure, pavilions and public bath facilities, altogether with protected natural landscape components, were included in this project. Furthermore, nearby Băile Tușnad, a newly created recreational/educational trail connects the scenic Mohos muskeg zone to the Olt river valley, thus functioning also as an ecological corridor.



Figure 2. Ecological corridor and educational trail, Mohos muskeg zone (source: www.medveles.hu)

These two projects are among the first ones that were shaped by a coherent landscape (ecology) perspective and greenways strategy. They contain the latter's defining attributes, like a proactive, multi-objective planning approach that identified the highest density of cultural and natural resources, increased landscape connectivity with multiple use of trails and corridors as linear spatial elements.

In Transylvania, Romania, recent international trends, contemporary principles in landscape planning have become present in current territorial/urban (landscape) planning theory and practice relatively late. Nevertheless, the General Urban Development Plan of Borsec, entitled *Borsec, the Queen resort location at the gateway to the Road of Mineral Water*² is one of the first, best practice planning documents in this respect, in considering landscape perspective and greenway strategy as urban planning instruments.

² Planwerk, 2016: Plan Urbanistic General și Regulament Local de Urbanism Orașul Borsec, pp. 137



**Figure 3. Borsec, the former railway viaduct as an opportunistic greenway element
(source: Planwerk Cluj-Napoca)**

As expressed in the title, the GUP considered the concept of a greenway structure well anchored in a local, regional context. Its core spatial element is the refurbished/renaturated railway track and viaduct, once used for transportation of bottled mineral water, an opportunistic greenway planning strategy component. A balanced spatial scheme is proposed: revitalization of former industrial-mining areas (abandoned quarries, industrial platform area in upper Borsec), controlled and phased expansion in the southern area, near the industrial platform in the lower town, while densification of some areas in the center (area adjacent to the administrative center) and reconsideration-restriction of the buildable surface in sensitive natural areas, valuable from a natural-ecological, cultural-identity point of view. The two center urban morphology specific to the town was also important to preserve. The integration into the wider, regional context of this urban landscape is facilitated simultaneously by the network of existing rehabilitated and newly proposed green spaces. Green links are proposed between green spaces and the surrounding natural environment, greenway corridors with a threefold role: functional (leisure, sport, recreation), ecological (oxygenation of the urban areas) and protective (vegetation barriers between polluting units - industry, etc. - and residential neighborhoods, respectively between historically established and new areas). These urban planning measures will result in an "ergonomic" form, which fits harmoniously into the landscape, into the riparian natural context, in the valleys of the streams, with morphological, spatial-functional elements related to the route of the former narrow-gauge railway, extended "virtually" to the historic resort and the cyclingsport areas in its vicinity (stadium, ski slope, popular bath, etc.). Thoughtful management of natural resources, especially defining mineral water resources, is facilitated, supported not only by restricting urbanization process and subordinating it to landscape ecology requirements, but also by the refurbishing/renaturalization of former industrial/mining sites, reducing air pollution of the motorized traffic system, reconditioning and optimizing of general water infrastructure through collecting storm water, reforestation and further protection zones around main mineral water springs.



Figure 4-5. The GUP greenways strategy concept: Borsec, the gateway to the Road of Mineral Water (source: Planwerk Cluj-Napoca)

In both Borsec and Sovata, the emerging paradigm of sustainability had significance for landscape-scale planning decisions as well as site-scale design decisions. Stemming from the cultural landscape planning and greenways strategy, principles of sustainability and resilience, the ecological perspective can be traced in detailed linear spatial elements- recreational routes, ecological corridors, educational-cultural trails- connecting various, highly important and partially already protected landscape components, as mineral water springs, natural protected areas, important habitats, refurbished-renaturalized former industrial and mining sites, urban forests and parks etc.

The greenway/landscape/urban planning process is inherently interdisciplinary and integrates public expert participation and advice. Thus, direct communication with local community stakeholders, multiple public consultations have guided the whole process of elaboration of the GUP Borsec, as well as previous implemented projects. A unique approach that the design team used was online media and social networks, to take advantage of the public participation opportunities offered by prevalent communication modes used today. Comments and proposals came both from locals of different ages, ethnicities, representatives of public institutions, members of the local community who have left Borsec, but who still follow the evolution of the resort town, as well as local and central institutions, representatives of civil society. This approach is useful for other planners and landscape architects engaged in cultural landscape planning and design projects.

In conclusion, the cultural landscape perspective and greenways strategy could be fundamental instruments in guiding the long (green) road of sustainable and resilient recovery of historical (spa) urban landscapes in Transylvania, Romania, and beyond.

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