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Strategic and Resilient Urban-Territorial Planning of the Integrated Landscape Related to the Natural and Anthropic Protected Areas

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Abstract: Starting from the definitions of the terms and establishing the most important theoretical scientific ideas in the field of strategic urban-territorial planning, resilience and the concept of Landscape, we propose a new syntax, namely that of the "Integrated Landscape", in the idea of cross-disciplinary correlation of all its natural and anthropic components (including architectural and urban heritage), but also of its cultural, economic and socio-human components, considering each scale of the landscape, macro-, mezzo- and detail. The two types of protected areas will be able to be approached as two interconnected systems: the cultural route will be linked with the green infrastructure network. Promoting such a landscape has the potential to give birth to a Landscape Brand, which would encourage the involvement of different urban actors, including the authorities.
The article aims to achieve a comparative scientific approach to the problem of the "Integrated Landscape", related to the Natural and Anthropic Protected Areas in the european and national context.
It will highlight the similar components and typologies, as well as the existing differences, leading to a dangerous legislative "void", that allows the irrecoverable loss, destruction and non-use of this valuable potential and of the particular urban-territorial character of the Natural Protected Landscapes, Anthropic and / or Cultural, assets in today's urban-territorial development of a territory, region, locality or urban / rural / rurban area.
In this process, the urban landscape designer is a potential conflict moderator and a key actor, but also a specialist in adapting the city to climate change.

Keywords: *"Integrated Landscape"; Protected Areas; Strategic Planning; Urban-Territorial Development; Resilience;*

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Introduction

The complex functional content of any urban-territorial entity (geographical space, landscape, region, subzone, urban space, protected area, etc.), also implies a behavior as a unitary whole which, at planetary level, of the geographical area, is presented after "harmony of an organism", an idea that appeared since 1900. (Mehedinti, 1994).

Thus, currently there is a need for a systemic resizing and ecological opening of the concepts regarding geographical units and landscape, through a process of alignment with the ecological demands of urban concepts, which took place on the territory of the systemic paradigm. (Crăciun, 2008). Today, there is a need to be aware of the aggressiveness of human pressure on nature, which is currently becoming more widespread and to find resilient solutions, including in the development and urban sprawl, as well as in the issue of natural, built and cultural heritage.

Between the city and the environment, the imbalance is growing: "Not understanding cities, urban life, we kill them. And when they are dead, we will break our hands in pain and give them artificial respiration" (Koolhaas, 1999).

The urbanization process is booming, and the ecosystem is under extreme pressure. Given that more than half of the world's population lives in the city, the connection between the urban and the quasi-natural environment becomes even more important, both for environmental conservation and for the health of the population. Climate change causes us to adapt and adopt new methods of urban planning to increase the resilience of cities. Protected Natural Areas can be starting points of the conservation process, taking into account their ecological value. Those inside or that are partially overlapping the city are even more vulnerable to the process of urban expansion, but if properly addressed by the responsible authorities, they can be real vectors of development in the urban agglomeration. The potential of Protected Natural Areas in cities is not only motivated by the positive influence in environmental conservation, but also by the beneficial effects they have on the health of the population, especially those living in its vicinity.

Along with Protected Natural Areas, Protected Built Areas are important components of a society's cultural landscape. Making the connection between the two types of protected areas, will result in a more complex type of landscape, an integrated landscape, which once adopted / applied, will have multiple roles, from environmental conservation (both natural and anthropogenic - cultural), to the positive effects on tourism and

implicitly on the city's economy, with the possibility of adopting even a landscape brand as a marketing strategy.

The importance of the connection between the anthropic environment and the quasi-natural environment

The city is perhaps one of the most complex systems, being defined by an infinity of relationships. Given that the city was formed and is still in a natural environment, can it be considered an ecological system? In his paper, "Artificial Ecologies", Felix Guattari (2016) mentions that approaching the city as an artificial ecology can lead to a deeper ecology, one that does not work with fixed categories of sustainable practices, but raises larger issues. of natural and urban environments and takes full account of coevolution.". The approach to the contemporary city as an ecological system that is "fundamentally out of control and the observer is always part of the observed system" (Weaver, 2016) includes the city population as an integral part of this system in which all components the city is, in fact, its habitat. The description of the city as being out of control draws attention to the risks to which it is constantly exposed, but also to natural changes or disasters that may affect it - "An exact conception of the initial conditions, accompanied by awareness of inevitable changes, is a cultivation strategy survival through adaptation and coevolution." (Risser, Karr & Forman, 2016).

Being essentially an artificial realization, the city is a real ecosystem, which has specific physical factors (climate, soil, relief, etc.), houses many plant and animal species, and its main feature, the fauna, is dominated by a specific species (man). It has gained the power to considerably change its environment, to adapt the environment to its needs, which allows it (apparently) to free itself from natural constraints.

It is important, at the first level, to study the relationships between organisms that make up the living community of ecosystems as well as between organisms and abiotic (lifeless) factors in their living environment. At the second level, we can discuss the study of the relations between the neighborhood ecosystems, because none of them is completely autonomous and it can even be said that there is an interdependence between the set of terrestrial biotopes that constitute the biosphere.

For what is urban ecology, the same distinction can be made between: the study of the urban ecosystem itself and of human relations with the environment (human ecology); and the study of the relations of neutrality, symbiosis or conflict between urban ecosystems and the surrounding natural ecosystems, in which the natural green system can be integrated.

Applied urban ecology expresses a search for the means of a biological management of space, later appearing a new term ecopsychology, which adds to the ecological and biological meaning the psychological one. (Theodore, Gomes, Allen & Kanner, 1995).

Due to them, the concepts of geosystem, ecosystem, ecology are directly related to urban metabolism. The successive discovery of various sources of energy and the technical advances that followed gave man very powerful means to act on the environment.

Of course, every planted green space plays a role in the city and has a more or less strong positive effect - "Essential element of human habitat, urban green space capitalizes on the biological and aesthetic potential of vegetation, harmonizes urban architectural ensembles, sanitizes and beautifies the urban environment, thus reducing its aggression on the city's inhabitants." (Muja, 1994). Given, however, the current trend of landscaping in the city, they may not be representative of the local native landscape, because in many cases it highlights the importance of aesthetics, to the detriment of the ecological, specific to the place. Thus, allogeneic plant species are introduced into local ecosystems, perhaps even invasive, which may affect the habitat of the planted area or other adjacent spaces - "Habitat loss is the greatest danger to biological diversity, in general, and to vulnerable species, in particular, the negative effects cumulating with the overexploitation of species and the invasion of alien species. This process takes place through the destruction of the habitat, through its fragmentation and through degradation due to pollution" (Pricope & Paragina, 2013).

Because the main role of the city today remains to be a "giant processor of raw materials" (Girardet, 1992), which continuously convert raw materials into artificial anthropic "objects", this is the main element that through internal processes destroys the habitat.

In a natural protected area, but also in an urban system, a lot of partial dependencies that take place "in parallel" is always preferable to a system of serial dependencies, whose fragility is similar to that of the weakest link in a chain, the phrase "the city is not a tree" (Alexander, 2016), thus becomes a complex fabric, in the sense of a metabolic living city.

Architect Kate Orff has made, over time, projects in which she took into account and even managed to highlight the natural context specific to each place. She argues that ecology should be understood, rather as a process in which the population participates and in which the city is a support / a type of habitat - "<<Ecology>> has gone beyond human conception to describe the relationships and interactions between organisms. and their built environment - to include people, institutions and even government. Together,

the terms urban and ecology describe a permanent relationship of life support projected across the technological globe." (Orff, 2016). At the same time, it highlights the importance of landscape planning in this process, being the link between the two seemingly separate environments, and which can highlight both the natural landscape and cultural values - "Landscape practice has evolved over the centuries to claim the potential for reconciling urban landscapes as natural and cultural tissues that could alter human behavior." (Orff, 2016).

Integrated Landscape – structuring tool of urban development

Approaching the city as an ecological system, so as a component of the quasi-natural environment, the importance of the relationship with it becomes even more justified. Being potential vectors of urban development, protected areas, both natural and built, become the basic elements of the integrated landscape. The alternation and the connection between the two types of areas will be the key elements that will render the specifics of the place from the point of view of the local natural and cultural characteristics.

The integrated landscape is a complex system that structures the territory, in which the natural, the anthropic and the cultural component are researched transdisciplinary, in a holistic connection, both at the level of detail, and at the mezzo and macro-territorial level. Urban politics and culture are also parts of the Integrated Landscape, in which the physical structures of a city can be repaired and rebuilt, but its cultural system is unique and non-transferable (Yeo, 1999).

Case studies – Romania - Europe

To illustrate the current situation of the relationship between protected natural and built areas at national and European level, two case studies were analyzed. The first case study includes three Protected Natural Areas located along the gorge of Crisului Repede River, partially overlapping the urban area of Oradea - The sites "Lunca Inferioară a Crişului Repede", "Crişul Repede amonte de Oradea"and "Lacurile de acumulare de pe Crişul Repede". The second case study analyzes two areas inside the city of Rome, components of the same protected natural site - the site "Villa Borghese e Villa Pamphili". All four sites are part of the network of Natura 2000 sites.

"Lunca Inferioară a Crişului Repede", "Crişul Repede amonte de Oradea" and "Lacurile de acumulare de pe Crişul Repede"

The municipality of Oradea has a privileged location in the network of Natura 2000 sites - in its vicinity there are eight protected sites, three of

which partially overlap the built-up area - the sites "Lunca Inferioară a Crişului Repede" in the west, and "Crişul Repede amonte de Oradea" and "Lacurile de acumulare de pe Crişul Repede" in the east (Fig. 1).

These three sites follow the Crisului Repede gorge. Most of the river segment in the built-up area is not, however, declared a protected natural area. The discontinuity of the protection regime can have negative consequences on the flora and fauna specific to the river, the shore areas and the adjacent spaces.

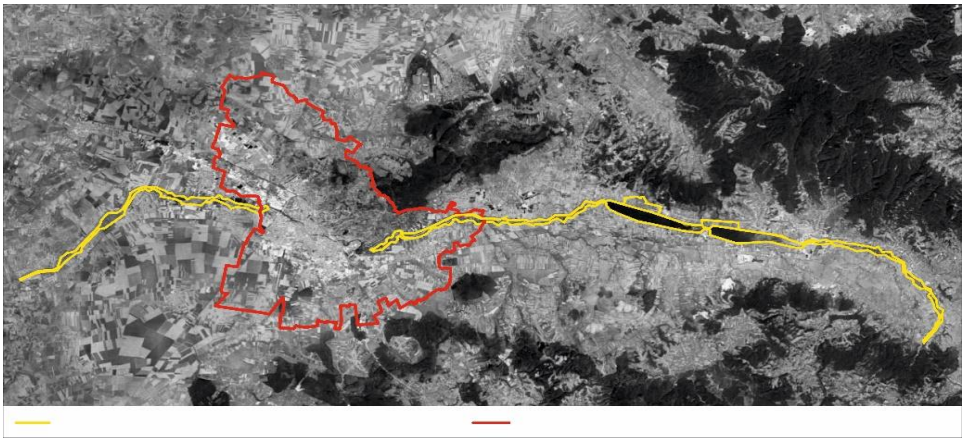


Fig. 1 - Natura 2000 Sites– "Lunca Inferioară a Crişului Repede", "Crişul Repede amonte de Oradea", "Lacurile de acumulare de pe Crişul Repede" and the administrative territory of Oradea

The river crosses the old city center, which is regulated as a protected built area, being among the most valuable and diversified protected built areas nationwide.

The relation of the protected natural area from the west with the two from the east, by establishing a protection regime on the unprotected segment that crosses the city, would give Crişului Repede the character of an ecological corridor at regional level on a much larger area, compared to the two currently protected ecological corridors. Also, it would become possible to connect two types of protected areas - two types of landscape, and it would become possible to adopt a landscape brand.

The implementation of such a strategy could then be used as an example applicable to other protected natural areas, and would prove the potential of protected natural areas as a vector of development of the city, having the potential to reduce the current reluctance of authorities to address these types of areas.

"Villa Borghese e Villa Pamphili", Site, Rome

Located inside the urban fabric of Rome, Villa Borghese and Villa Pamphili parks are among the main attractions of the city (Fig. 2). Their cultural value is reflected by their origin from noble Roman families. Therefore, these sites have both an important natural component, being protected natural areas of the Natura 2000 Network, and cultural, being part of the network of cultural tourist objectives.

However, at the level of the two parks, the adoption of a landscape brand is not noticeable. Marketing focuses on the cultural value of the two constructions and the art objects on display. The adjacent green spaces are not presented on the web pages dedicated to the villas. At the accesses to the parks there are maps of the main objectives, but there are no informative panels regarding the status of the protected natural area or regarding the specific regulation. So far, for the site made up of the two parks, the management plan has not been developed.

Although this site has all the chances to become or adopt the strategy of an "integrated landscape", its potential is not really exploited. The cultural level is much more highlighted, or maybe even the only one that was given importance, at least from a tourist point of view.

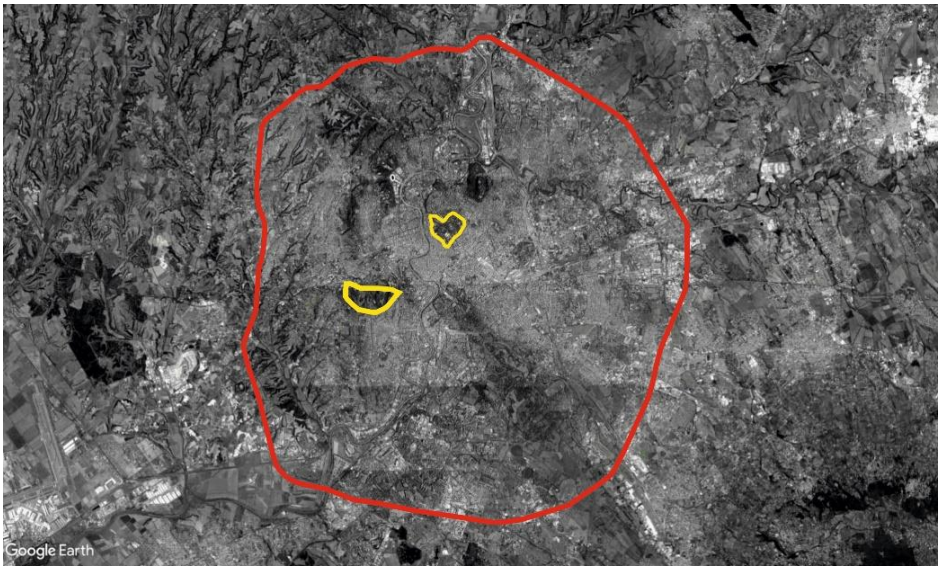


Fig. 2 - Natura 2000 Site – "Villa Borghese e Villa Pamphili" and the ring road of Rome

Raising public awareness of the value of protected natural area and how the public can participate in its conservation, while maintaining interest in its cultural level, could positively influence the involvement of local communities and tourists, and also create a new type of tourist objective, defined by the concept of "integrated landscape".



Fig. 3 – Map of the objectives from Villa Borghese Park, access area - 2017. Source: authors

Adoption/Application of the concept/strategy of Integrated Landscape – potential, constraints and risks

The complexity of the Integrated Landscape can be a difficult factor in the planning process. The characteristics of protected natural areas and those of protected built areas, approached simultaneously, can generate new challenges, at least in the process of their relationship.

By adopting a strategy to increase an Integrated Landscape, it will be possible to highlight both the connection of man with history, with its cultural values, and the connection between man and nature, characterized by a relationship of mutualism. "Mutualism in biology describes a relationship between two species in which both benefit from association.

Designing for mutualism means recognizing and stimulating the links between the environment, organisms and land use practices - both human and animal - and identifying the complex cycles that link different species and species systems." (Orff, 2016).

The Integrated Landscape is, therefore, dedicated to both man and the environment, emphasizing the effects they have on each other, and the ways of relating man to the valuable built environment, and to the natural environment.

Legislation and management of Protected Areas in Romania and in Europe – Comparative Analysis

Protection of Protected Natural Areas is regulated in Italy by Law 394 of December 6, 1991. The main objective of this legislation is "integration of man and the natural environment by protecting anthropological, archaeological, historical and architectural values, traditional activities, agricultural practices, pastoral and forestry." (Slevert, 1998). Therefore, the importance of protecting both natural and anthropogenic elements is highlighted. According to Slevert, however, this act also has a number of gaps / problems: it does not regulate the relationship between several protected natural areas in order to form a green network and offers decision-making power to local authorities, often the consequence being the adoption of management measures taken by people who do not have the necessary training.

At the national level, there is also a similar problem in the management of Protected Natural Areas. Until 2016, protected natural areas were managed by their custodians, which could be a non-governmental organization, composed of various actors interested in protecting the area. In 2016, the National Agency for Protected Natural Areas was established by law no. 95 of May 11, which took into custody all the protected natural areas at national level, the status of the old custodians being, at present, an uncertain, unregulated one. The management of all natural areas protected by a single custodian can generate major problems in the conservation process, due to the large volume of tasks allocated to a small number of people, but especially due to the impossibility of approaching all areas in context. The result can be a superficial management, not adapted to the local characteristics, which could even have negative effects on the habitats.

Conclusions

In the context of drastic climate change and the urgent need to adopt measures to increase the resilience of cities, it becomes necessary to

implement new types of strategies, appropriate to both the natural context and the cultural value of the place. In his work, "The Posthuman", Rosi Braidotti (2016) wonders if we will be "forced to choose only between sustainability and extinction as the horizon of our common future or there are other options."

By adopting a strategy for implementing or augmenting an Integrated Landscape, it is observed that sustainability can be adopted within a project in various ways, and especially as a link between various fields.

The relation within the Integrated Landscape in transdisciplinary vision, of the protected natural areas with protected built areas, represents the chance to adopt a complex system, dedicated both to human health and the environment, but also to the values of a certain society, from historical and cultural point of view.

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