TRENDS IN SUSTAINABLE LANDSCAPING OVER THE LAST DECADES

TENDINȚE PEISAGISTICE SUSTENABILE DIN ULTIMELE DECENII

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Abstract. *Currently, in the sustainable landscaping domain, the focus is on creating unpolluted environmental areas, which can offer facilities for collective forms of contact, recreation and leisure. These new creations of ambient will be able to effectively solve the "4 basic requirements" of human settlements: healthy life, balanced work, leisure and communication. The accelerated rhythm of work and overwork tendencies have changed the structure of human leisure time, landscaping process being forced to adapt to this phenomenon, offering a multifunctional and original design of various creations. The implementation of these sustainable projects, in last decades, was able to effectively combat the urban and territorial congestion, overcrowding and pollution.*
Key words: sustainable, landscaping, trends, design

Rezumat. *În prezent, în domeniul sustenabilității peisagistice, accentul se pune pe crearea unui mediu urban nepoluat, care să dispună de amenajări şi facilități pentru forme colective de contact şi odihnă. Aceste ambientări noi vor putea să rezolve eficient cele patru cerințe de bază ale aşezărilor omeneşti: viață sănătoasă, muncă echilibrată, recreere şi comunicare. Ritmul accelerat de muncă şi munca în exces au modificat structura timpului liber al omenirii, peisagistica fiind obligată să se adapteze acestui fenomen prin oferte multifuncționale din ce mai variate şi mai originale. Concretizarea în ultimele decenii a tendințelor sustenabile peisagistice a reuşit să combată eficient congestia, aglomerarea şi poluarea urbană şi teritorială.*
Cuvinte cheie: sustenabil, peisagistică, tendințe, design

INTRODUCTION

Over time the man allowed himself to be mesmerized by the material power, by the search for new techniques and sciences, to such an extent that led to the destruction of most of the planet on which he lives. Many of the contemporary troubles are obviously the result of the rush for wealth and power. The aggressive human intervention in the natural environment, especially in the last two centuries, shows an accelerated involution of understanding and respect for nature. Currently, it seems extremely doubtful that in future, the man can still survive in an atmosphere totally artificial and polluted, on a planet where natural

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elements are deeply affected. Most current problems arise from the fact that pragmatism, managed by human greed, try to destroy much of the health and balance of the Earth.

"Toward what are we heading?" is the question which, nowadays, has become extremely stressful for humanity, considering the rapid degradation of human awareness, on multiple levels, about the state of natural environment and human relationships. The actual urban stress is emphasized by the multiple forms of pollution, also by the overwork and the lack of free time needed for relaxation. Added to this is the lack of adequate public spaces designed to foster the needed human contact so healthy for both, communities and residents (Krier, 2006). The consequences of all these phenomena, longer-acting in time, are visible to the younger generations, dramatically alienated by the artificial universe in which they live.

MATERIAL AND METHOD

Comparative analysis of the latest relevant landscaping achievements has a particular importance, enriching the knowledge with the most efficient approaches and scientific researches (Dascălu, 2016). Currently, in the landscaping field, the focus is on creating unpolluted urban and territorial environments, equipped with facilities for collective forms of relaxation, comfort and repose. These new types of proposals could give a positive response to the "4 basic requirements" of human settlements: life, work, leisure and communication. The accelerated rhythm of work and overwork has changed the structure of human leisure time - landscape architecture is forced to an adaptation process to this phenomenon, increasing the offer of varied and original sustainable design. By this way, urban congestion, overcrowding, pollution and many other actual problems could be effectively countered.

Analyzing landscaping experiments and achievements, starting with the postmodern era until now, we can see the gradual emergence of new issues and sustainable trends, in contradiction with some future trends that are trying to create an artificial universe. Nowadays human awareness of huge pollution has led to the increased collective concern for the environmental health and for the development of policies to protect natural values. Multipurpose research of sustainable solutions it was generated by the growing need for urban natural spaces, facing the lack of urban space where landscape projects can be created. The accelerated degradation and degeneration of urban public spaces created also the need to find new ways to increase the search for curative and preventive solutions of urban rehabilitation and regeneration (Dascălu and Cojocariu, 2016).

RESULTS AND DISCUSSIONS

A brief overview of the most important landscape trends from the second half of the twentieth century and early twenty-first century would be very useful to understand toward what moves the landscaping today.

Major programs to achieve regional and urban parks, created in the early twentieth century, were expanded, upgraded and functional diversified in the second half of the century.

The tendency to use in a rational way the urban land came into contradiction with the explosive demand of urban entertainment facilities consuming large surfaces.

In this context, in the last decades of twentieth century were created *huge entertainment parks and not least the great multifunctional urban parks*. All these far surpassed as surface and functional diversity the first early twentieth century public parks.

An important branch of the great parks programs is represented by the *technological parks, created to promote technical and scientific innovations or research* in a more attractive manner of landscaping, for tourism and economic development. Their names vary from Techno-Polis to Scientific-Technical Parks, depending on the areas occupied, because some areas are very large compared to other parks, covering surfaces equivalent to cities. Design effort for the parks is considerable, either in urban-architectural terms or in landscaping ones. The results are spectacular, attracting many visitors, contributing to economic growth.

Major *sports parks and Olympic parks* constitute also a theme offering ample opportunities for the development of landscape design.

Another theme that offers the possibility to develop on extensive surfaces and very diverse presentation facilities is represented by *the parks for annual landscaping exhibitions or landscaping shows,* increasingly visited by nature lovers from all around the world.

One of the new trends approached both by the major entertainment landscape programs and also by the general green spaces programs, is the *spectacular aquatic design* created in special aquatic parks or in public spaces. These programs involve the presence of aquatic show facilities, which occupy large surfaces, both indoor and outdoor.

A unique combination of dynamic and interactive landscaping manner, currently offering multiple major attraction areas, is the theme of the *new modern botanical gardens* created for multipurpose activities. To generate a new way of communicating information, in order to attract more visitors to the regions where they are located, the new botanical gardens manage to combine scientific research and education with fun and relaxation, giving up old thematic programs imposed by the history.

The trend of *storied systems of huge landscaped tiles* located above areas stations, crossings, car parks, commercial galleries, watercourses, etc., generated new types of urban public spaces for relaxation and healthy natural recreation. In the same context, *landscape conversion of old overhanging industrial railways* created new multifunctional famous promenades.

The sustainable issue of *green roofs* is linked to the fight against urban pollution, either visually or by noxes or by overheating. Studies started with experiments on horizontal small roofs, continuing with gardens designed on whole floors, open or closed.

Green walls or green facades trend have been conceived in the last decades to cover various degraded buildings and provide research subjects for urban and regional landscape rehabilitation domain. Scientific research of plants capable of covering external surfaces, being resistant to pollution and extreme weather conditions, currently still offers a large field for scientist's studies (Dascălu and Negrea, 2016).

Sustainable landscaping design could be an instrument helping the city to become a homogenous whole, unifying its fragments. In this context, we can understand the utility of the ideas that support the use of landscaping to correct, rehabilitate and unify urban areas and damaged or broken tissues. Feature green spaces to serve as a bridge, a link for interstitial transition between different urban areas, has inspired new directions for research and implementation of new projects. In this context, there is a new type of urban landscape that favors the entering in crowded urban textures of the green multifunctional spaces prevailing environmental protection.

Landscaping solutions to solve urban traffic problems propose a particular design, especially in residential areas. The routes are called "*streets for all" or "woonerf"* and require slowing traffic to 15 km/h using landscaping instruments. In this way on these streets can circulate peacefully together pedestrians, cars and cyclists, without any inconvenience.

Another issue to be considered is represented by the trend of *urban sprawl trough university campuses* areas that have promoted the multifunctional and sustainable landscaping.

The tendencies of planting the new emerging neighborhoods on the periphery of big urban centers, improving their microenvironment, constitute another sustainable development direction of the late twentieth and early twenty-first century (Krier, 2006).

Large landscaped areas with symbolic and monumental meanings illustrate another important trend of the end of the twentieth century. We can find in the great capitals of the world the exemplified idea of symbolic cities axis linking major urban points in order to restore town's personality through a comprehensive and spectacular landscaping.

But the most important trend of all, the one that can really save the Earth, is the domain where the landscaping was deeper involved lately: *the rehabilitation and conversion of landscape areas damaged by industrial activities or natural processes and phenomena* (Rottle and Yocom, 2011).

This theme bestows real hope to the humankind through many creations, important architectural and landscape rehabilitation and conversions, saving and regenerating polluted and degraded areas. Interdisciplinary scientific research and studies are currently looking for effective curative and preventive landscaping solutions. Designers teams from all over the world are connected for saving large degraded areas, their projects being an example of living systems, where green infrastructure provides multiple services created both for society and for nature.

Another priority issue for efficient sustainable landscaping is the *environmental rehabilitation of areas damaged by the presence of old technical equipment or by car or rail services and circulation* (Bendtsen, 2010). These interventions consist not only in masking landscape design, but especially in the functional conversion proposals that provide multifunctional creations using landscaping elements and special plantations to combat multiple pollution forms.

The problems raised by *the safe circulation of wild animals on their migration routes generated environmental projects called "green bridges" crossing the highways*: these are bridges with widths ranging from 10-50 m, covered with vegetation.

Landfill created in beautiful natural areas with high tourism potential represent another important problem of the current period. *The pollution caused by the leakage of waste into soil and water required significant regeneration and conversion solution for huge surfaces.* Concretization required scientific ingenious researches: soils and water infested with pollutants were cleaned and treated in successive stages. The beauty and health rebirth of the landscapes gave a new life to the many polluted areas (Krauel, 2006).

Currently, digital design and computational techniques have turned into an important part of the act of landscaping creation, so that contemporary design is no longer just a simple software-aided process. In this context, the role of many experts, as architects, urban planners, landscape designers, should be redefined.

Uptake of digital technologies in architecture, urbanism and landscaping design, increasingly differentiate many contemporary creations of previous achievements. The explosion of "blobitectural" current with futuristic computerized forms has inspired sustainable landscaping creations, either organic or geometrical, many of which being already implemented (Dascălu and Cojocariu, 2016). *The wave of futuristic green buildings with abstract forms and the green cities with buildings imitating planted landforms* is increasingly appreciated and approached by many designers.

The idea of extending on water some sustainable urban and territorial landscaping projects attracted numerous designers. Inspired by structures of marine oil platforms, *floating green parks were designed in the shape of giant trees with many levels*, each floor hosting varied natural habitats with plants, birds, animals and insects. Another important sustainable trend consists in *floating green cities projects* for approx. 50 000 inhabitants, designed to be placed either near the shore or on the high seas.

CONCLUSIONS

Generally, landscaping concepts involves complex spatial projects and arrangements, which are to be perceived in relation to the environment – natural, artificial, social and historical.

Sustainable landscape design requires a work that cannot be reduced to a simple assembly of components. It comes to proposals of functional solutions,

stemming from the real needs of cities and inhabitants, according to their characteristics and particularities, helping to ensure their physical and psychological comfort, a healthy life and, not least, to restore their identity, self-esteem and confidence in future.

In tandem with the architecture and urbanism creations, the landscape design researches undertakes many difficult tasks vital for humanity, in order to regenerate Mother Earth, to offer curative and aesthetic experiences, to materialize fascinating interactions between causes and effects, to embody for real seemingly utopian projects.

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