

GREEN DEVELOPMENT FOR THE CITIES-INTEGRATED MANAGEMENT

LIVIU NEAMȚU

ASSOC.PROF.PHD, CONSTANTIN BRANCUSI UNIVERSITY FROM TARGU JIU

ADINA CLAUDIA NEAMȚU

PROF.PHD, CONSTANTIN BRANCUSI UNIVERSITY FROM TARGU JIU

e-mail: professor.neamtu@yahoo.com

Abstract

This paper aims to provide a policy model to improve green spaces in urban areas. Current management structures leave much to be desired and, unfortunately, they do not seek to manage the green spaces on types of activities and these activities are not integrated into a unit structure to ensure coordination of operations for maintenance and expansion of these spaces.

Given the necessity of an integrated management for urban space, the model proposes solutions to eliminate functional overlaps by creating a set of action, together with arrangements for its effective support. Developing effective solutions to managing green spaces for recreation and leisure becomes an obligation for the next period under conditions of increasing green areas arranged as parks and other types of green spaces and hence an increase for the cost of their administration.

On the other hand, the paper addresses the issue of integrated management for both, green areas and recreational and leisure facilities existing within the urban areas, by giving more importance and impact for these spaces within communities.

Keywords: urban, policy, green areas, managerial structures, smart growth.

JEL Classification: Q2, Q5, R5, M1, O2

1. Introduction

The qualitative appreciations concerning the identity of the green areas, of the quality of their arrangement and of the coherence of the system of urban green areas does not create a unitary system in terms of the space and are completely isolated from the extra territory (Cameron and others, 2012; Campbell, 1996).

Those surfaces included in the green area of a green city are not only compact areas, clearly defined and arranged as parks. Inventories for improvements and extensions of green areas must take into account the greenery portions and trees among blocks, and also landscaped green space within households or peripheral green areas of the city.

Cities are facing an acute shortage of green spaces. It is a common problem, regardless of the season. One by one, green areas have left the place in the city for parking place or diverse building: from supermarkets to firms, residential construction and even churches. The grass was quickly replaced by asphalt. Also, the local species of trees and shrubs that create identity of the region for a particular city were cut, and in their place were planted other trees which do not integrate into the landscape site specific zone of the urban center.

Most affected by the lack of these green areas are residents living in downtown or city center so they have often only 3-4 square meters of greenery per capita. One thing not by chance if we think that in these areas is the highest density of population related to the surface expressed in square meters, in most cases more than half the city's population living here.

For example, green spaces decreased continuously in several cities in Romania regardless of their demographic size or geographical positioning. In terms of population size, the most affected were large and medium cities who felt negative influences of rising real estate market that had sometimes aggressive tendencies. Also, in terms of geographical location, the most disadvantaged cities were those in the hilly areas which due to misconceptions that are located in areas with more green space outside the city, did not favor them green areas inside their urban territory. The phenomena were felt at the level of exaggerated urban land concession from public domain.

Green cities have to be urban areas where green space is wanted, appreciated and maintained by every inhabitant. This is why the cities have to promote the establishment of an efficient urban management system of green areas and civic awareness. In order to achieve this, we have to develop a specialized service or even department able to manage these activities and able to directly be involved in various partnerships from the private field.

This is how the cities will be able to develop and implement pilot projects for arranging and using green areas. It is important to select of base of potential investors in projects of green areas arrangement. Investors will be encouraged to take part in these projects through the possibilities given by the use of these areas in partnership.

In addition, local institutions in partnership with NGOs and various institutions, donors, economic agents will be able to organize information and civil information actions and campaigns, in order to make the population aware and receptive towards urban space arrangement problems. It is even necessary to create some Advisory Councils for problems of “green” arrangement of urban areas, councils that will observe and assess the quality of actions developed by the authorities in the field. These Councils will periodically publish assessment and observation reports.

It is necessary to involve the community in the management of green spaces, in order not to develop practices for withdrawing them from the public patrimony. Citizens’ opinion has to become decisive in the matter of green spaces arrangement for children’s amusement as well as for adults and elderly amusement.

The main objective should propose a city to become a green city is to hold a minimum of 40 square meters of green space per capita according to the World Health Organization (caspersen and others, 2006). This objective is almost impossible without a coherent strategy and policy together with an action plan and appropriate organizational formulas.

2. Future urban development. Urban smart growth and green cities

The lifestyle based on consumption is the way to generate urban sprawl. Urban expansions are caused by changing lifestyles and consumption and not necessarily by population growth, but also are caused by tolerant strategies regarding urban environment.

However, many more people migrate from rural to urban areas because on the cities there are more jobs, and agriculture does not provide sufficient income. Therefore, the cities are expanding continuously, so natural spaces are fewer and fewer. If in 1900 the people living in the cities amounted less than 15% of the population, in 2014 more than half the population was domiciled in cities with at least 100,000 residents. Trends for the future is obvious that. Worldwide, the cities grow in a faster pace than the number of population so the quality of life decrease in urban areas and many problems related to the environment occur.

It requires an action plan to address the two cases of extending the model of urban development intensive: consumption over the needs of the standard living space (approx. 25 sqm/inhabitant) and tolerant policies of construction and spatial planning (urban planning).

Urban policy will be one that the principles of action will have an important role in preventing aggressive urban sprawl and promoting and maintaining a balanced intensive-development complemented by extensive development only to certain areas. Besides reviewing the strategies underlying urban plans, there are needed a green taxes reform, one which goes gradually toward pollution taxation and for inefficient use of land, materials and energy.

Current estimate of the urban population growth rate is over 5%, which means a doubling of urban population in about 20 years, and many areas of land will be transformed into an urban area.

Today more than ever, the cities tend to consume land resources they have for future decades of development because their aggressive urbanization. The main risk that come out inside the cities is the built area consumption over the standard needs of a human being. This phenomenon translates into an aggressive real estate development.

High demand for new housing, but also for business centers and commercial areas has led to an accelerated pace of construction in urban areas. Chaotic development of cities affects the life quality of residents, and the entire business environment, resulting in considerable losses.

Aggressive and free from strategy real estate development can have serious consequences: the destruction of green belt areas of cities, land with immediate development potential as green areas occupancy and real estate penetration in existing green areas. Currently, cities face these problems generating considerable decrease of life quality.

The number of people suffering from lung disease in Romania (bronchitis, asthma, etc. angina) or heart (myocardial infarction or ischemic heart disease) has dramatically increased. For example, according to Ministry of Health in Romania, where in 1995, 700 inhabitants in 100,000 suffering from ischemic heart disease, in 2014 was their number reached 1500 in 100,000 inhabitants.

Cities administration and land owners together with estate developers should consider implementing concepts such as "smart growth" or "urban renewal" to prevent critical problems, as happened in western cities of Europe 50 years ago (sanesi and chiarello, 2006).

However some cities have managed to find balanced solutions between urbanization and the preservation of the natural environment, particularly through green areas.

In cities such as Graz and Vienna (Austria) and Helsinki (Finland) there are at least 110 square meters of green space per capita. In cities like Brussels (Belgium), Copenhagen (Denmark), Liverpool (UK) and Hamburg (Germany), each inhabitant has between 30 and 35 square meters of greenery. At the same time some large European capitals such as Stockholm and London, currently owns 83 and 64 square meters per capita (baycan-levent and Nijkamp, 2009).

Vienna for a long time holds one of the first places in the world in terms of quality of life. Vienna is a model in respect of landscaping green areas. But what are the reasons why it is considered a model and what are the differences from the model applied in Romania?

The project European Urban Audit of Eurostat assessed the quality of life in 258 cities in the EU and found that Vienna ranks first in most areas related to quality of life, the use of public transportation and availability of green areas, which demonstrates why Vienna is considered a model in the field of balanced development.

But what are the reasons regarding Vienna as a model and what are the principles relating to environmental protection applied in Vienna? A very important role in ensuring high quality of life it is represented by the green areas already mentioned. Almost half of Vienna surface is covered by greenery which determines very good air quality.

Regarding organizing system and management of green areas, there are specific departments that manage these areas. It is those departments of City Hall of Vienna whose activities have a direct link with nature and green spaces, such as MA 22 (Environment Protection) and the MA 49 (Forest Service) with about 100 employees - experts in environmental legislation, noise protection, or nature protection, etc. The main aim of experts of the city is keeping quality of the current green spaces, so city of Vienna to offer after 50 or 100 years the same better condition of life and environment.

In Vienna there are 18 protected areas that occupy about 15,000 ha, comprising a national park, a protected biotope as well as more than 400 natural monuments. The oldest natural monument in Vienna is an ancient yew tree with a thousand years (*Taxus baccata*) remaining - according to tradition take - from a yew forests of the Roman Empire. Approximate 30.66% of the surface of Vienna represents protected areas. Lainz Zoo has a surface almost equal to that of the only national park in Vienna, Donau (Danube Valley), and along this it is the largest environment protected surface, each occupying about 5.5% from total protected area in Vienna. The most popular green area protected in Vienna - which in the meantime has been included in the route of the annually marathon held by the city, highly appreciated at internationally level - is Prater Park.

In addition, Forest Service of Vienna's City Hall manages Rax and Schneeberg areas as well as the Hochschwab massif, a surface of about 32,000 ha of forest, grassland and meadows, which allows activities such as forest management, tourism, hunting and fishing being coordinated that way to ensure water sources protection.

3. Development policies of green areas in an urban smart growth process

Local authorities from urban environments have to take notice of the existing deficit of green spaces and based on a development strategy of the green space they have to develop a coherent support policy of this strategy.

The integrated arrangement policy of the urban territory will have to comprise the action principles within the plans developed within the strategy on at least 6 main directions.

This study are proposing a policy model regarding the green spaces from the urban environment that shows some ways to joint the efforts in order to provide a better environment and living quality, because noise, polluted air, hard traffic, green environment neglecting in favour of built space, the lack of environmental and green areas management and the lack of a strategic planning can result into health problems and a lower quality of living standards.

Based on the legislation in the field, we will have to fund a developing policy of the green environment specific to the town and adapted to the concrete conditions. The main measures should focus on:

1. *The sustainable protection and management of green spaces as public interest objectives* of the urban environment so that these areas could be efficiently managed by means of general town planning. Thus, the town should take the measures necessary in order to avoid the damage of the green spaces in the developing areas and, implicitly, of the life quality of the inhabitants, measures leading to the maintenance and the increase of these surfaces.

2. *Improving the urban environment* by correlating the increase of the surfaces with green spaces arranged in report to the built surface, suggesting thus a limit of the occupying percentage of the field under 50%, a limit that should have to be imposed by the local legislation for each landlord. Based on this policy, there will be their sustainable protection and management, and also the increase of the inhabitants' living standards. The green spaces of the strongly urbanized localities have a powerful influence on the inhabitants' life quality.

3. *The efficient management of the green spaces*, based on evaluating indicators for every green space, park, planted alignment and square, becoming thus different and attractive places in frame of the developing areas of the town. One of the main directions of an efficient policy in the fields is the one of keeping and developing the biodiversity of the green spaces in the town. By arranging them, the inhabitants may have the possibility to have contact with species of the wild flora so that this interaction could lead to the increase of the awareness regarding the environmental problems. Regarding the impact on the environment, this will be positive and the green spaces register as one of the most important tools for improving the quality of the air, of the water and of the soil.

4. *Project-based development* represents the approaching solution of the developing policy of green spaces. The simple development of the supporting strategy of green spaces development cannot be efficient without the existence of concrete project in frame of a plan developed on the following years. Accessing funds of different environmental programmes and regional development should be a priority for the following period, considering the fact that the necessary funds cannot be covered by the town's budget and the participation of the private environment.

Also, the increase of green spaces surfaces and the closeness of their size, per inhabitant, to the European standards will be able to be accomplished only by means of governmental support. The projects will be oriented towards: the development and modernization of the green spaces and the settlement of new parks, squares and planted alignments.

For that, the local authorities should lay down projects that should be selected in order to be financed.

5. *Forbidding constructions on green areas* based on the demand on the real estate market should become the basis of the developing policy of the green area, considering several aspects: the damage of the green spaces on the territory of the localities caused by their destruction as a consequence of the development of the economical and social activity; the necessity to improve the environmental factors and life quality by increasing the green spaces surfaces in localities, sustainably protecting and managing them; the impossibility of a corresponding environmental management in the localities, in lack of an immediate regulation and of a strategical planning in this field. Thus, the regulations should be also transposed in decisions of the Local Councils, so that the change of destination of the fields arranged like green spaces and/or regarded as such in the urbanism documentations, the reduction of their surfaces or their migration are totally forbidden, no matter the juridical system of those fields. Also, the administrative or juridical documents emitted or contracted by disrespecting the previously mentioned stipulations should be hit by an absolute nullity.

6. *Establishing fines for disrespecting the regulations referring to the green spaces* will have to become a priority of the local policy.

It is necessary to keep an evidence of the occupying degree of the field for different developing areas and to establish some acting priorities also reflected by the building authorizations granted in frame of these areas. Disrespecting these regulations and the building authorizations constitute a contravention and may be sanctioned with fine, for natural persons and judicial entities.

4. Conclusions

The process of a community economic development must be accompanied by the identification of the impact on the natural environment and by establishing mechanisms to control and limit harm.

Also, the local economic development should be responsible for the support of the approach of the existing environmental problems. The key issue for sustainable development of urban green spaces is the reconciliation between two human aspirations: the need for further economic and social development and environmental protection and improvement.

To prevent adverse functional developments cities will have to achieve a functional zoning strictly on functions and densities, indicating the percentage of occupancy (CAN), coefficient of land use (CLU) and multiplication indicator of development land (as UNCHS Habitat: media between the average price of land with public utilities in urban area and the land outside without public utilities) that will be essential in making decisions about urban development in the area for both private and public investors.

To coordinate the management of functional city areas and also of the green areas is necessary to conduct a management plan of public and private real estate properties to meet future demand for land without causing damage to the balanced development of the city and the environment surrounding areas following some directions:

- ensuring the control of the supply of urban land available for construction by coordinating urban development planning, management of urban land and land taxes;
- influencing behavior of the owner/user of land by local regulations for the General Urban Plan;
- improve the performance of City Hall in the public domain management, by landscaping the green spaces and recreational and leisure areas in order to generate income and reduce maintenance costs of the land.

At administrative level, changes will be necessary in order to create the organization structures necessary for applying the support strategy and politics of green space development. Organization reform measures at institutional level in local public services refer to:

1. Creating specific organization structures able to manage the integrated development of green spaces.

2. Providing this structure capacity to fulfil the development objectives of green areas.

3. Increasing the capacity to fulfil its duties at the level of urban arrangement. In order to achieve this it is necessary to pass the objectives and measures through the sustainability strategy for “green development” on the list of priorities.

Beyond the strengthening of the specialized operationalization structure capacity, this organization will allow to create the premises for:

- increasing the flexibility towards change;
- establishing a specialized professional and neutral service;
- simplifying administrative procedures;
- increasing the transparency level;
- decentralization decision etc.

5. Bibliography

- [1] Baycan-Levent, T., Nijkamp, P., Planning and management of urban green spaces in Europe: Comparative analysis, *Journal of Urban Planning and Development* , 135.1 (2009): 1-12.
- [2] Cameron, R. W., Blanuša, T., Taylor, J. E., Salisbury, A., Halstead, A. J., Henricot, B., & Thompson, K., The domestic garden—Its contribution to urban green infrastructure, *Urban Forestry & Urban Greening*, 11(2) 2012: 129-137.
- [3] Campbell, S., Green cities, growing cities, just cities?: Urban planning and the contradictions of sustainable development., *Journal of the American Planning Association* 62.3 (1996): 296-312.
- [4] Caspersen, O.H., Konijnendijk, C.C., Olafsson, , A.S., Green space planning and land use: An assessment of urban regional and green structure planning in Greater Copenhagen, *Geografisk Tidsskrift-Danish Journal of Geography*, 106 (2) 2006: 7-20.
- [5] Kongjian, Y., Principles and Practices of Affordable Urban Green Space, *Journal Landscape Architecture*, (1) 2007: 55-64.
- [6] Lo, A.Y., Jim, C. Y., Willingness of residents to pay and motives for conservation of urban green spaces in the compact city of Hong Kong, *Urban Forestry & Urban Greening* 9.2 (2010): 113-120.
- [7] Neamțu, L., Neamțu, A.C., Strategic Management, Brancusi Academics, Targu-Jiu, Romania, 2010.
- [8] Rosol, M., Public Participation in Post-Fordist Urban Green Space Governance: The Case of Community Gardens in Berlin, *International Journal of Urban and Regional Research*, 34.3 (2010): 548-563.
- [9] Sanesi, G., Chiarello, F., Residents and urban green spaces: the case of Bari." *Urban Forestry & Urban Greening*, 4.3 (2006): 125-134.
- [10] Selitsaniotis, I., Nikolaou, K., Planning for the upgrading and increasing of urban green in the city of Larissa, Greece, *Journal of Environmental Protection and Ecology*, 10 (2), 394 (2009).