

SUMMARY

Keywords: *landscape, metropolitan area, environmental quality, rural development*

Suburban space is a fundamental taxonomic unit in urban geography, as an intermediate step in the gradual transformation of the rural world under the influence of urban areas, but at the same time is a compromise between order and spontaneity found in urban development and peace, traditional and picturesque of countryside. This character partially explains the difficulties encountered to be placed a pattern that is assigned to strict rules for sustainable development.

Therefore, with the changes taking place in these areas by adapting to new habitat standards, urban equipment and services, diminishing specific areas of agriculture, forestry, and lifestyle and with this, the most important - green areas.

Ecological, environmental, social, cultural, green space is a resource that contributes to the quality of people's lives and promotes economic activity, so its protection, planning and management are very important to the sustainable development of suburban areas based on a harmonious balance between the social and economic requirements and the environment.

Neglecting these areas in recent years and profound changes occurred after 1990 require studies designed to revive, in all aspects, these areas and to ensure integrated sustainable development.

Research conducted by doctoral thesis, has as main goal *the development of studies on improving green space management to ensure improvement and environmental quality enhancement of peripheral areas of Iași through an integrated sustainable development.*

The objectives of the research were as follows:

- * Theoretical foundation of the concepts of rural space, green space, suburban area, rural development according to existing criteria in the European Union;
- * Presentation of the research in Romania and worldwide relating to in perspective sustainable development of suburban area;
- * Characterization of the natural frame and social suburban area of the city;
- * Diagnostic study of green space in the suburban areas of the city;
- * The design of a strategy for improving the management of green space intended to

ensure improved quality green space by conducting a case study in Bârnova commune, representative for the suburban areas of the city.

The thesis is divided into seven chapters, plus a set of 158 bibliographic references.

The first chapter of the thesis is entitled „*Theoretical aspects and the research stage on management of rural development and rural green space*”.

In the first part were analyzed different definitions of rural areas, showing differences in the interpretation of this concept, namely those defined by Recommendation 1296/1996 of the Council of Europe on "European Charter of countryside" and the definition accepted by Romania. Also in this part is presented the structure of the countryside, which describes the features of the various types of Romanian rural space according to geographical location and position towards urban agglomerations. Is also analyzed the theoretical foundations of rural development in line with principles by which it is governed, established in Cork Declaration and which are the basis for EU policy for sustainable rural development.

The second part of the chapter is reserved for suburban space features and the importance of different types of green spaces as part of sustainable rural development, where green spaces are given functions of protecting and improving the environment as well as social, aesthetic and utility functions. The chapter ends with the issue of administration and green space management on the sustainable development of green areas by aligning with international standards.

Chapter II entitled “*Presentation of the administrative structure of suburban area of Iași*”, first part, contains aspects of the administrative structure and the dimension of the suburban area of Iași.

Iași suburban areas are in the central-eastern part of Iași County, consists of nine communes which are composed of 55 administrative villages. They are arranged radially from Iasi, on a length of 15 km, with a total area of 42,645 ha, representing 7.78% of the county. Communes sizes range from 1,300 ha (Valea Lupului) and 8,257 ha (Miroslava).

The second part presented some aspects of agriculture, land structure as well as human resources of the suburban area of the city. Agricultural land in the surrounding area is 30,872 hectares and occupies 72.39% of the total suburban area, of which 45.67% is arable and 21.22% are pastures and meadows.

Studied area population is 71,876 persons, of which 55.5% men and 45.5 women and the population density is 168.97 inhabitants / km². Employed population is 23,715, of which 39.27% is occupied in agriculture and 24.38% in manufacturing. Inactive population of 34,602 persons (56.04%), category pupils and students represents 21.40% and 14.76% are retired persons.

Chapter III contains “*Research purpose, objectives and research methodology*”.

At first the main purpose of the research is presented, represented by the thesis theme as well as specific objectives that took into consideration improving the quality of life of peripheral areas of the city.

In order to use a coherent methodology for the analysis of suburban rural space, there were established representative indicators reflecting the status, socio-economic characteristics and potential of localities in the suburban areas of the city.

In the conducted study three research methods were used of specific character: economic, deductive and quantitative analysis, SWOT analysis and socio-economic survey or participatory research, using the questionnaire as research technique. As a source of data were used existing statistical documents from the Department of Statistics, Iași, Iași Metropolitan Area Association, proceeding of scientific specialty papers of internal and international sources various books and treaties in the field of the thesis, and some existing data from the city halls in the surrounding area. Much of the information was obtained through inquiry and direct measurements on the field. For data processing the procedures used were: analysis of parameters and specific indicators, comparison, monograph, graphic process. The research aimed aspects of peripheral areas of Iași, and the case study was located in the suburban commune Bârnova.

Chapter IV entitled “*Characterization of the natural frame, economic and administration of the Iasi city's peripheral areas*”, presents, in the first part, aspects regarding the natural frame of the suburban area. Relief is diverse, represented by structural forms, made of structural plateaus and slopes. Sculptural, the relief consists of interfluves and slopes of accumulation being represented by the plains and terraces. The average altitude of 100-150 m is registered for hilly plains, 300-350 m for hills and plateaus and 31 m in the meadow.

The climate is temperate continental, more excessive in the hilly area and moderate in plateau zones. The average annual temperature is 9-10 ° C in the hilly plains (north-east) and 8-9 ° C in the plateau (south-west).

The natural vegetation is typical forest steppe, represented by patches of forest and meadows strong anthropically transformed and changed. The fauna is closely related to specific vegetation cover, being characteristic to the forest-steppe, meadows and water streams.

The second part of the chapter presents the technical characteristics of suburban area of the Iasi city. Infrastructure is characterized by inappropriate maintained roads, with few exceptions, well developed railway, one airport requiring rehabilitation and modernization. Water network serves 21.70% of the peripheral areas households and the sewerage network only 2.17%, being developed currently, only in four of the nine communes of the peripheral areas.

All communes are electrified, in average percentage of 98%, natural gas network is

partially developed, serving only six communes of the suburban area and the telecommunication network is well developed for the entire suburban area of the Iasi city.

The chapter concludes with the presentation of social infrastructure, socio-cultural and housing. In every village of peripheral areas of city there is a medical health center (family medicine), private medical cabinets and pharmaceutical health points. Schools are declining, with poor facilities requiring rehabilitation and modernization. Housing stock increased by 43% in recent years, reaching 22,216 dwellings currently with an average of 43.19 m² / dwelling and 13.35 m² / inhabitant, with the increasing trend in the future, due to urban population exodus to the suburban areas.

Chapter V is entitled “*Diagnostic study of green spaces in Iasi city suburban areas*”.

The chapter contains the structure analysis of surface area and the area of green space in the suburban areas of Iași as well as analysis of the evolution and factors affecting the development of green space. From the total area of Iași peripheral areas of 42,645 ha, agricultural area holds 72.39%, 11.47% is forest, building area 3.60%, 1.76% ponds and 10.77% unproductive areas. In the structure of agricultural area, arable land is 19,475 ha (63%) and pastures and hayfields occupy 9041 ha (29.28%). Agricultural and forest surfaces are declining in favor of built area.

In terms of structure, the size of green space of 5,383.48 ha is composed of 4893 ha, (90.89%) economic utilitarian green space, 407.54 ha (7.57%) protective green space and 82.94 ha (1.54%) green space for resting, recreation and decorative purpose. Green space occupies 12.62% of the total suburban area and represents 749 m² / inhabitant.

Suburban area green space of Iași decreased by 13.16% in recent years as a result of conversion of utility areas with green spaces in built areas, even if green space for resting registered a slight increase of 5.74% between 2008-2011, due to legislative action.

Among natural, biological and anthropic factors, a major influence in the development of peripheral areas green space of Iași have the following factors: urban pressure, financial strength, administrative policy and natural factors (relief, soil, rainfall, wind, drought, etc.).

Chapter VI “*Case study on green space management improvement in the area of Bârnova commune in the surroundings of Iasi city*” holds share in structure of the thesis as importance and size.

The first part presents the characterization of the natural frame and the administrative structure of the locality Bârnova.

The commune is situated in the southern suburban area of Iasi, covers an area of 4122 ha and a length of 15 km. The population is 4540 inhabitants, of which 49.9% male and 50.1% female. The landscape is varied, consisting of slopes represented as a percentage of 85-90% and

of plain of about 5-7%. Structural plateaus have altitudes of 350-400 m and are mostly forested being located in the southern part of the commune. The climate is temperate continental, with more moderate tone in the south and more pronounced in the north, with an average difference of 1.2° C. Prevailing winds are from the northwest and north bringing heavy rainfall and the eastern and south-eastern which differentiate summer and winter temperatures. Precipitation has average values of over 500 mm being unevenly distributed, mainly in spring and summer. The commune is crossed by Nicolina River, which originates in the southern part of the locality, after which it crosses the village from east to west. Soils are gray in the coastal zone and the underlying depression, brown forest in the coastal zone and leachates chernozem on slope areas north of the commune. The natural vegetation is very diverse, with rich floristic elements characteristic for the forest area represented by deciduous forests belonging to oak and sessile floor and lower limit of beech and depression lower area represented by patches of forest and meadows.

The commune is made up of six villages with 1704 households and 2899 houses, have electricity grids, water and partially natural gas. Transport is carried out on highways, county and communal, on a length of 129 km, of which 22 km asphalt. The main activities of the inhabitants are agriculture (19.34%), wood processing (3.37%) and service. The commune has high tourism potential, represented by objects of historical, cultural and biological meaning: Bârnova Monastery, Bârnova Memorial House of Ion Inculeț, St. John the Baptist Church in Bârnova, Repedea Hill, Bârnova palynological reservation, paleontological reservation Pietrarie, Holy stone Monastery (Tarata) of Pietrarie, Union chestnut tree (1859) in Visan, Repedea - Păun Forest, etc.

The second part of the chapter presents the structure and evolution of community green space on administrative subunits. Bârnova commune green area is 2410.37 ha and represents 58.48% of the total surface of the commune, and 5309 m² green space / capita. Existing green space is composed of agricultural green space "green agriculture" in the area of 1262 ha (52.37%), forests and recreation forestry 1100 ha (45.64%), green areas for institutions 6.51 ha (0, 29%), green areas for road access routes 11.4 ha (0.46%) and individual gardens 30.46 ha (1.24%).

Among the administrative subunits of the commune, the village Todirel has 34.55% of the village green space, Visan 24.43%, Bârnova 14.72%, Pietrarie 11.12%, Păun 7.80% and Cercu only 7.38%.

Surfaces with green space in Bârnova commune decreased by 22.45% in recent years, although there has been an increase in individual gardens from 5.11 ha to 30.46 ha.

The final chapter presents the SWOT analysis, surveys on green space and its management at the commune level, and strategies for improving the management of commune

green space and the suburban area of the city. Green space SWOT analysis performed revealed aspects of "weaknesses" such as reducing and anthropogenic degradation of green space by the air and water pollution, chaotic construction, lack of education and public information. There are many "strengths" which refers to the existence of a potentially high natural and cultural tourism and the existence of protected spaces (Repedea reservation).

Questionnaire-based survey was conducted in Bârnova to consult residents on social cohesion and green space management in suburban area.

In developing the strategy there were considered existing elements of the commune administrative units, especially data from a questionnaire survey conducted among inhabitants in Bârnova. Among the priorities inhabitants are considering to improve the quality of life are mentioned: development of access roads, the water and natural gases supply, development of sewerage network, development and endowment of green areas, their proper recovery to a greater extent natural potential, access a greater volume of non-refundable grants, increasing diversification and larger green spaces, greater involvement of leaders to solve the community problems.

PhD thesis ends with Chapter VII which includes the conclusions from research content and a set of recommendations that summarizes the policy options aimed at improving the management of green space suburban area of Iasi, in order to improve the quality of life of both the suburban area population and urban population of the city.