# SUBURBAN AREA OF GREEN SPACE IASI - CHARACTERIZATION AND ACTION ELEMENTS

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#### **Abstract**

This paper aims to identify the green areas in the city's suburban area, to improve the quality mediulu, so suburban, and urban. Present study is part of a broader research paper "Study on improving the management of green space in the suburban areas of the city Iasi". Indicators take the study refers to the structure of land use categories, categories of existing green space, degraded areas, etc.. Special attention is given to green space characterize important factor in sustainable rural development.

In the suburban areas of the city green space is composed of forest reserves and national forest, parks and squares, areas of protection of access routes by road and rail alignments of trees, individual gardens, pastures and meadows and other green spaces.

The study shows a total area of 29,380.56 hectares of green space, ie 41% of total surface area suburban Iaşi.

Din it the largest area is occupied by pastures and meadows with a rate of 19.15 %, followed by the area occupied by forests with 17.88%, then the green surface road protection.

The small area of green space is occupied by parks and squares, ie the area landscaped.

Suburban area of green spaces make a great contribution to improving environmental quality and socio-cultural environment, both the city and the outskirts of Iasi, forming a true "green belt" for the city of Iasi, the contribution of forests that have functions recreation and leisure, such as: Ticau-Brandusa-Carlig(3112ha), Breazu- Munteni (71ha), Dancu (11ha), Valea lui Darie (22ha), Marzesti (110h), Vulturi (21ha), Vanatori(198ha), Dorobanţ (48ha), Aroneanu (305ha), Uricani (107ha), Galata (90ha), Paun(2725ha), Bârnova-Pietrariei (183ha), Poieni (1166ha), Vlădiceni-Tomești (80ha) and Valea Lupului (118h).

Road protection zones are areas consisting of alignments of trees and grass and trees in particular roads, in particular that: Yuglans regia, Populus alba, Prunus sp., etc.Alignments are very small areas with declining trend.Railway protection areas are herbaceous vegetation and woody vegetation spontaneously, without proper maintenance.

In recent years, the suburban areas of the city experienced a rapid growth at the expense of built surface area occupied by vegetation.

In all municipalities in the suburban areas of the city were destroyed forests, orchards and other types of green spaces for housing construction and other types of construction plant and rearranged without compensation for their green spaces.

Key words: management, green space, suburban, Iaşi.

Green space consists of all vegetation (trees, ornamental shrubs, flower decorations, lawn), traffic routes, of different forms of water development and decorative and utility facilities existing at a given time in an urban area (built) or peripheral (outside) (Iliescu, Felicia Ann, 2006.

All units of green space is a system of green space areas.appropriate.

Green space is an indicator of the degree of civilization of a people lies in the optimal parameters in societies characterized by prosperity. Both research and creating new resources, it is important that rural landscapes are preserved, arranged and sustainable recovery, it is an essential part of the heritage of our country and throughout Europe (Muja, S., 1994).

Ecological, environmental, social and cultural, green space is a resource that contributes

to the quality of human life and promote economic activity and therefore protect, rehabilitate and his management is very important for sustainable development, based on a harmonious balance between social needs, economics and the environment (Dinu, V., 1979; Iliescu, Ana-Felicia, 2006; Fitiu, A., 2003; Muja, S., 1994; Otiman, P.I., 2006).

# MATERIAL AND METHOD

For the study used official statistics were available in the county of lasi, as well as official data in each community studied.

The research was completed with its own field investigations. Were used, both general classical research methods; monographic method, method comparison, extrapolation, and specific

methods such as interview and questionnaire (Ciurea, I.V., 1999; Ciurea, I.V., Brezuleanu, S., Ungureanu, G., 2005).

#### RESULTS AND DISCUSSIONS

# A. The structure of land use categories

Suburban area of the city taken in the study is composed of 13 municipalities located around the city, a distance of up to 30 km and the total area of 71,330 hectares (Breviar statistic, 2007; Echiparea teritoriului zonei metropolitane Iaşi, Anexa 1, 2009,)

The composition of these villages are both specific urban areas such as villages with village Ciurea Fortress Meadow, Holboca Dancu village and commune with the village Tomeşti Tomeşti and specific areas such as rural villages Aroneanu,

Bârnova, Letcani, Miroslava, Popricani, Rediu, Schitu Duca, Ungheni, Valea lupului and Victoria. Therefore, in areas of urban built areas cover over 50% of total surface area and built in rural areas occupy less than 10% of total area.

In the suburban areas of the city, the largest area is occupied by agricultural land, out of a total area of 71,330 ha agricultural area occupies 48,320 ha, which represents a rate of 67.74%.

# **B. Structure of areas occupied by green space** In the suburban areas of the city green space is composed of forest reserves and national forest, parks and squares, areas of protection of access routes by road and rail alignments of trees, individual gardens, pastures and meadows and other green spaces (*tab. 1*).

Table 1

The estimated structure of lasi green spaces

Nr.crt.	Commune	Forests (ha)	Parks and squares (ha)	Road protection zone (ha)	Railway protection zone (ha)	Meadows and pastures (ha)	Vineyards and orchards (ha)
1	Aroneanu	44.15	1.8	117	0	915	179
2	Bârnova	1407.9	1.2	6.3	14	725	625
3	Ciurea	14.14	2.1	30	76.8	793	110
4	Holboca	1459.6	0.75	58.2	12	746	107
5	Leţcani	11	0.45	4.8	28.8	1688	50
6	Miroslava	745	1.5	26.8	14.4	1728	464
7	Popricani	33.28	0.32	8.4	0	2118	83
8	Rediu	37.15	0.07	62	0	1712	13
9	Schitu Duca	5600	0	8	0	1650	167
10	Tomeşti	1029	2.22	3	0	537	449
11	Ungheni	0	0.4	4.5	0	0	0
12	Aroneanu	0	0.05	2	9.6	226	177
13	Bârnova	974.41	0	2.6	0	823	40
Total		12,755.5	10.86	333.6	155.6	13,661	2,464.0

The study shows a total area of 29,380.56 hectares of green space, ie 41% of total suburban area of the city.

Since it is the largest surface area occupied by pastures and meadows with a rate of 19.15%, followed by Adur area occupied by 17.88%, then the green surface road protection.

The small area of green space is occupied by parks and squares, ie the area landscaped.

Two important issues, giving personality and style of Iasi are concentration dendrological parks in the north, towards the area of Ciric and the existence of a well defined green belts around the city.

This important feature should be well preserved, enhanced and exploited.

Suburban area of green spaces make a great contribution to improving environmental quality and socio-cultural environment, both the city and the outskirts of Iasi, forming a true "green belt"for Iasi (Table 2) by the contribution of forests that have recreational and entertainment functions, such as: Ticau-Brandusa-hook (3112ha), Breazu Muntenia (71ha), Dancu (11ha), Valea of Darius (22ha) Marzesti (110h), Vulturi (21ha), Vanatori (198ha), Dorobanţ (48ha), Aroneanu (305ha), Uricani (107ha), Galata (90ha), Paun (2725ha), Bârnova-stonemasons (183ha), Poieni (1166ha), Vlădiceni-Tomești (80ha) and Valea Lupului (118h).

Table 2 Protected areas of national importance

Nr.crt.	Name of the target protected (nature reserves and monuments)	Location (village, city))	Area (ha)	Features
1	Forest Uricani	Village. Miroslava	68.00	Reserve forest steppe mixing specific trees in which a powerful phenomenon is characteristic for the species of oak hibridogeneza.
2	Forest Poieni - Cărbunăriei	Village. Schitu Duca	9.20	Reserve coniferous trees exceeding 100 years, over 30 m high and 70-120 cm in diameter.
3	Forest Dancu	Village. Holboca	10.80	The Protective Forest Reserve.
4	Secular meadws Valea lui David	Village. Miroslava	45.36	Reserve flora typical for steppe vegetation, undisturbed or slightly disturbed man-made, unique flora rich in Moldova by nature Ponto - Sarmatian.
5	Field Coroanei Poieni	Village. Schitu Duca	1.50	They are important for the value dendrological and landscaping, and tree species on abuşti, native and
6	Field Inculet Bârnova	Village. Bârnova	0.50	exotic properties and large areas of Romania's political and cultural figures, so their value is
7	High School Agricol Miroslava	Village. Miroslava	1.00	complemented by natural cultural value, which is subordinate.
8	Forest Medeleni	Village. Victoria	102.6	Reserve forest meadow representing a specific highway Prut, with oak, ash, elm, maple, which occur between oak and elm trees of 50-100 years.
9	Forest Breazu - Munteni	Village. Rediu	70.8	Forest plantations around the city made mainly to stabilize slopes. Now they are part of the group
10	Forests Brânduşa - Ticau, Cârlig	Village. Popricani	219.90	responsible for forest protection, complex role: protecting soil and water, improve climate and air purification, recreation and leisure.
11	Wooded massif Bârnova - Repedea	Village Bârnova	15.00	These are ideal areas for habitat, shelter and nesting of many species of native birds or passing, some rare and others protected by law.

Road protection zones are areas consisting of alignments of trees and grass and trees in particular roads, in particular that: Yuglans regia, Populus alba, Prunus sp., Etc.

Alignments are very small areas with declining trend. Railway protection areas are herbaceous vegetation and woody vegetation spontaneously, without proper maintenance.

# C. Evolution of the size of green space built

In the suburban areas of the city occupies a building area of 6.35% percentage of total area and are both occupied area with buildings and land occupied by roads and other structures (tab. 3).

This area is higher in crowded areas (residential) near the city, and less in more remote areas of the city of Iasi, such as joint Victoria Schitu Duca.

In recent years, the suburban areas of the city experienced a rapid growth at the expense of built surface area occupied by vegetation, even if the pace is not the same, due to global economic crisis, it is growing today.

In all municipalities in the suburban areas of the city were destroyed forests, orchards and other types of green spaces for housing construction and other types of construction plant and rearranged without compensation for their green spaces.

Table 3

Structur	a ocupationa	na a zonei p	enurbane iasi
Tatalana	Agricultural	Canada d	D 34

Nr.crt.	Total Village	Total area (ha)	Agricultural area (ha)	Forested area (ha)	Build area (ha)	Degraded area (ha)	Ponds area (ha)
1	Total	71330	48320	12755	4529	5422	574
2	Total %	12755.100	67.74	17.88	6.35	7.6	0.8

# **CONCLUSIONS**

\* Science suburban area is characterized by a temperate - continental, a varied landscape consisting of plains, hills and plateaus, a specific natural steppe vegetation.

\*Network major pan-European communication routes (road, rail, sea and air) and National are partially furnished with green areas protection.

\*Technical infrastructure is ubdimensionata. and presents numerous degradation, of the total 333.38 km, about 200km to be modernized, but many passages are decorated with green protected areas and alignments of trees, shrubs and trees.

\*In the suburban areas of the city is tourism and recreational forest areas from Peacock, quickly, in the south Barnova and DN24 of the exit route from Iasi to stoning-Poieni-Schitu Duca is considered as a special route picturesque.

\*The estimated green spaces make a great contribution to improving environmental quality and socio-cultural environment, both the city and the outskirts of Iasi, forming a veritable "green belt" for the city of Iasi, the contribution of forests, which have recreation and entertainment functions, such as:Ţicău-Brânduşa-Cârlig (3112ha), Breazu-Munteni (71ha), Dancu (11ha), Valea lui Darie (22ha), Marzeşti (110ha), Vulturi (21ha), Vânători (198ha), Dorobanţ (48ha), Aroneanu (305ha), Uricani (107ha), Galata (90ha), Păun (2725ha),

Bârnova-Pietrăriei (183ha), Poieni (1166ha), Vlădiceni-Tomești (80ha) and Valea Lupului (118ha).

\*In addition to green space, but with the same important role in improving the environment, environmental, aesthetic and recreational rivers are Bahlui, Jijia and Prut, which provide an attractive and fitting together with the chain of fish, are places of attraction practice of sports such as fishing.

\*With the same functions found in the suburban areas of the city, areas Jijia and Prut floodplain and the accumulation of Dorobant area (70ha), Aroneanu (23ha), Rediu (15ha) and Ezăreni (47ha) for hunting activities (Rata salbatica, Lisita, etc.).

\*Green space in the suburban areas of the city is declining, and areas of landscaped green space is insignificant to a normal socio-cultural environment, but tends to rise, local governments have already taken measures being receptive in this regard.

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