# THE ANALYSIS OF THE RURAL INFRASTRUCTURE DEVELOPMENT IN SOUTH-MUNTENIA REGION

# Elena LASCĂR

University of Agricultural Sciences and Veterinary Medicine Bucharest – Faculty of management, Calarasi Branch, Romania, Phone/Fax: 00 40 745 17 15 83, Email: elenalascar@yahoo.co.uk

Corresponding author: elenalascar@yahoo.co.uk

#### Abstract

The infrastructure is an element of support, with particular importance for the support of all economic and social and cultural activities in the rural area. The infrastructure covers both the structural area, giving unity to the system and the space area, thus creating a viable territorial configuration or not, which is reflected by different levels of accessibility. Actually it is the circulatory system of the economic and social body, individualized in a well determined area as the regional one. South-Muntenia Region is characterized by a well defined infrastructure due to its advantageous geographical position. Its location in a peripheral area of Romania has favoured the emergence of some major roads, which allowed the development of its relations not only with the neighbouring national regions, but also with the neighbouring country Bulgaria. It location around Bucharest-Ilfov Development Region, resulted in shaping a dense infrastructure for transport and communication, an extension of that developed in Bucharest, the most important city and administrative centre.

Key words: development, infrastructure, region, rural area

#### INTRODUCTION

South-Muntenia Region covers an area of 34,453 square kilometers and represents 14.45% of Romania. The seven districts, administrative and territorial units that compose South-Muntenia Region, occupy a territory that covers the following geographic divisions, from the South to the North [1]:

- The Danube River and Valley; GuraVaii-Calarasi sector, Calarasi-Pătlăgeanca sector, the Danube Valley, including Balta Ialomiței;
- the Romanian Plain with subdivisions (from the East to the West) Bărăgan Plain, Ialomiței Plain and Teleorman Plain;
- Getic Piedmont Piedmont Plateau, Getic Sub-Carpathians and the Sub-Carpathians Curvature;
- the Meridional Mountains and the Eastern Carpathians Mountains from the group of Curvature mountains.

South Muntenia Region is bordered to the North by the Center Region, to the North-East to South East Region, to the South with Bulgaria, the limit is given by the natural border - the Danube River, and to the West by South West Region. The presence in Southern

region of the Danube River gives it the possibility to have communication links with the 8 river countries and through the Danube - the Black Sea channel, access to the Black Sea and Constanta Port. Including the capital city - Bucharest within the region is by infrastructure, including existing international airport Henri Coanda, an economic and social advantage. South-Muntenia Region consists of: 7 counties [2]: Arges (6,826 sq km), Calarasi (5,088 sq km), Dâmbovița (4,054 sq km), Ialomita (4453 sq km), Giurgiu (3,526 sq km), Prahova (4,716 sq km) and Virginia (5,790 sq km), with 16 municipalities, 32 towns and 519 communes.

#### MATERIALS AND METHODS

In this paper, I used and processed the data made available from the national Institution of Statistics and Romania Yearbook 2010 and Regional Statistics regarding South-Muntenia Region regarding its infrastructure.

#### RESULTS AND DISCUSSIONS

The physical infrastructure as a specific form for both the development of the rural area of South-Muntenia Region and for the urban areas, includes transport infrastructure and means of communication, technical infrastructure which includes the distribution of drinking water, sewerage system and gas network, constructions housing.

The physical infrastructure includes also post and fixed / mobile network. The specific of the rural area is the form of infrastructure regarding the stock of tractors and machines that serve this area.

In the wider context of the strategy of regional infrastructure development, its specific objectives are: to improve road access within the region by improving the county roads and utilities, including their territorial density increase; investments to less developed areas; improved quality of life especially in areas with social and economic problems by connecting them to the regional and national eliminating the infrastructure; problems conditions caused by traffic in community; eliminating factors restricting the development potential of the region; stop active population migration from the rural communities [3]:

#### Transport infrastructure

The transport infrastructure in the context of the work relates to road, rail and river transport, vital ways of the economic activity of the country and of the region, enabling the mobility of labour, raw materials and commercial products. The road density is 34.6 km/100 sq km and railway density is 45.2 km/1,000 sq km. The quality of roads and railways is low, much part of the road network (50%) should be modernized and a large part of the railway network (over 2.3) should be electrified. There is a long term governmental strategy, aimed at rehabilitation of national roads by the year 2020. In the next 20 years it is also aimed at construction of several highways.

In terms of technical condition, most of them are inadequate, which determines the access to the national road network of some rural population in some communities (especially in the South of the region) to be difficult. The quantitative and qualitative improvement of the county and commune public roads

network in the rural area benefited of EU subsidies in 2002-2008, under SAPARD Programme, Measure 2.1. "Development and improvement of the rural infrastructure".

The region has no civil airport for air transport for goods and passengers, but it has access to two airports in Bucharest namely Henri Coanda and Aurel Vlaicu.

The region's rail network is well developed lines in use had at the end of 2011, a length of 1.251 km, the region in this regard is on the sixth place in the country.

In 2011, from total county and commune roads, the share of modernized roads at the region level is of 15,5%, being exceeded by the share at national level. The network of county and commune public roads in 2011 has a length of 9916km, having 78.0% of total public roads network as it is shown in table 1 and table 2.

Tabel 1. The structure of the public roads in Romania and in South Muntenia Region, year 2011

Development	Public roads – total	National roads		
region/county	km	km	%	
Romania	83703	16690	100,0	
South - Muntenia	12707	2791	16,7	
Argeş	3476	585	3,5	
Călărași	1320	500	3,0	
Dâmboviţa	1868	361	2,2	
Giurgiu	1159	311	1,9	
Ialomiţa	1155	352	2,1	
Prahova	2205	293	1,8	
Teleorman	1524	389	2,3	

Processed according to Romania Statistical Yearbook, 2012

Table 2. The structure of the modernized roads in Romania and in South Muntenia Region, year 2011

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Development	Commune and county roads		Modernized roads				
region/county	km	%	km	%			
Romania	67013	100,0	11412	100,0			
South - Muntenia	9916	14,8	1537	13,5			
Argeş	2891	4,3	85	0,7			
Călărași	820	1,2	38	0,3			
Dâmboviţa	1507	2,2	156	1,4			
Giurgiu	848	1,3	377	3,3			
Ialomiţa	803	1,2	138	1,2			
Prahova	1912	2,9	234	2,1			
Teleorman	1135	1,7	509	4,5			

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Maritime Transport

The Danube River is the only waterway, the hydrographical network of the region not allowing maritime transport. The trade with the neighbouring countries bordering the Danube river ports is made through Giurgiu Oltenita, Calarasi, Zimnicea and Turnu Magurele ports, located on the main route of the European navigation, with a development potential of the rural area through export of agricultural products, through this way of transport. The technological facilities is poor and physically obsolete and the river ports reduce gradually their activity, are factors that contributed to reduce the use of existing transport potential, with unfavourable influence on the communes and villages adjacent to the port centres.

# Communication Infrastructure

Communications are represented by the postal and telephone services, fixed and mobile telephony and electronic communications -Internet:

Characterized by a positive trend during the last few years both in terms of coverage and in terms of quality, the regional telecommunications system now provides better and faster access of the region inhabitants to the national and international telecommunications network. In 2011, the total number of connections in the South Muntenia Region is 10.8% of the country, the largest share being registered by Prahova County, with 3.7%, followed by 2.7% Arges and Dâmbovita 1.2%.

Drinking water supply network.

Most localities in the region are supplied with centralized water, the supply sources are surface water and groundwater.

Infrastructure of heat distribution network

The distribution of heat in a centralized system, presents mainly in the urban areas and is declining in the recent years due to high production and transport costs, it tends to be replaced by smaller, efficient and effective systems.

An important aspect for the development of the region, including of the rural area, is the social infrastructure with respect to house constructions, education and health system. The house construction consists of residential constructions (residential population) and residential buildings for the communities. The house construction in the rural area, including some of the household annexes, which have double role: living and/or employment. The house construction is privately owned or majority owned by the state.

*Infrastructure for education* 

The educational system, both at national level and at the level of South-Muntenia Region, education. includes infrastructure for represented by buildings in which education operates, respectively kindergartens, schools, colleges, universities and vocational education and special locations. It can be mentioned that the school infrastructure is well represented in the region and thus it can support the development in good conditions of education, noting that in the rural area, this of social infrastructure may type considered inappropriate to the development process, requiring a restructuring of the school structures and investment projects correlated with the local needs and requirements.

Table 3. The structure, on counties, of the education units in South-Muntenia Region, year 2011

Developm ent region	Kinderg artens	Schools	High schools	Post high schools	Facu ltati
/county	no	no	no	no	No
Romania	1367	4022	1615	86	108
South- Muntenia Region	145	684	210	12	4
Argeş	25	128	45	2	2
Călărași	16	65	17	1	-
Dâmboviţa	18	106	31	-	1
Giurgiu	6	66	13	1	-
Ialomiţa	20	75	27	1	-
Prahova	41	137	54	6	1
Teleorman	19	107	23	1	-

Processed according to Romania Statistical Yearbook, 2012

# Health infrastructure

Health infrastructure is represented by units of care and health care, respectively hospitals, clinics, diagnostic and treatment centres, medical and rural health centres, and other public and private health units.

Medical assistance infrastructure, recorded in

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South-Muntenia Region in 2010, a share of 14.19% of the national level for the equipment of the hospitals and a share of 16.65% for the general medicine offices, while for polyclinics the share was only 7.06% and a relatively low share of 10.55% was recorded for other hospitals. The highest values of the number of units of health profile on counties were achieved in the Northern counties: Prahova, Arges, Dâmbovita. South Muntenia Region had the least developed medical system (4.8 hospital beds per 1,000 inhabitants by the end of 2010 to 6.4 hospital beds per 1,000 population - the national average), large variations recording from one county to another.

#### **CONCLUSIONS**

From the analysis of the main features of the South Muntenia region's infrastructure, the following conclusions result:

- The road transport had an ascendant trend, while registering a decline the rail transport; the public roads in the region increased slightly while increasing the modernization and their density relative to the territorial units. Regarding these aspects, better results were achieved in the counties in the North part;
- The railway network was very well developed and facilitated links with important areas and urban centres of the country: by the total length of railways, the region held 6th place in the country; the communications infrastructure developed in the rural area, but the gap remains significant.
- The network of post units provided a low volume of the counties in the North part developed a more intense activity;
- The telecommunications system facilitated increased access of the citizens to the national and international network. The number of telephone and television subscriptions and television increased significantly;
- The water supply network expanded continuously, including in 2011, 385 villages;
- The sewerage network in the rural area of the region had an average degree of coverage, respectively 96 localities

- It is noted that most localities in the rural area with sewerage network were in the counties in the North part;
- The natural gas distribution network in the area comprised 158 localities in 2011, with a share of 15% compared to the national level;
- The infrastructure of house construction had a higher share in the rural area of the region, numbering 783,670 (60.2% of the total) which 99.32% is in private ownership;
- -The infrastructure of education was appropriate at the regional level but for the rural area it did not provided the needs, therefore it is required a restructuring of the school infrastructure and implementation of investment projects in correlation with the local needs;
- The health infrastructure was characterized by an underdeveloped health system compared to the national level and in the rural area it was extremely poor. A more favorable situation was recorded in the counties in the North part.

With the help of the rural infrastructure strategy the rural area in the region can be developed properly. This needs the efforts of the local authorities to access funds and to attract investments in the region.

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