

Original scientific paper

911.2:504.06(497.11)

DEGRADATION PROCESSES IN RURAL BORDERLINE SETTLEMENTS IN THE REGION OF VRŠAC MOUNTAINS

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Abstract: This study deals with a few relevant indicators that clearly and consistently illustrate degradation processes in seven borderline rural settlements of the mountainous region around Vršac. The above mentioned processes tend to affect demographic phenomena and processes as well as the economic situation, i.e. the structure and functioning of agricultural production, in the first place. What is characteristic about this region is stagnation and deterioration of major branches of economy, not only due to specific natural qualities of the mountains in this region, as well as general current economic politics towards most borderline areas in Serbia, but also due to the fact that these villages cannot even find stimulating economic support in cooperation with nearby borderline region of Romania, which is actually one of the poorly developed regions of the Romanian part of Banat.

Key words: Vršac Mountains, rural settlements, demographic characteristics, economy, tourism

Introduction

Borderline rural settlements of Vršac Mountains, such as: Veliko Središte, Gudurica, Jablanka, Malo Središte, Markovac, Mesić and Sočica, are specific in its position and morphology which distinguishes them from a certain uniformity of most villages in Vojvodina. External impression about their distinctiveness becomes more versatile and profound by analyzing all the factors that reflect problems of economy and people's lives in general. Nature, history and economic politics have affected people in this area to have more complex pursuit of their own social-economic identity. These have manifested in people's isolation within their local area on the one hand, and, on the other hand, in people's decision to leave their place of origin. This is why it is necessary to undertake a studious interdisciplinary valorization of the area and find the solution of its all - purpose revitalization.

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Geographic position and major physical and geographical characteristics

Vršac Mountains, the remnants of the north part of Serbian-Macedonian mass (Zeremski, 2005) are located in southeast Banat, to the east of Vršac. In their base they stretch out in the direction of east-west, on Serbian territory, in total length of 15 km. In the direction of north-south, the greatest width is 12 km, and the least is 3.5 km. Its total area is 172 km², out of which 122 km² is in Serbia. Geomorphologically-wise these mountains have a rather asymmetrical character in the north-south direction. Thus, northern part makes the central mountainous mass, going downhill in a steep slope, across a narrow abrasive area, towards Vršac Trench; and the southern one across abrasive surfaces erosive in their origin, and then it gradually moves into the valley, which consists of abrasive accumulative surfaces. The central massif represents rocky blocks differentiated by faulting, the highest one being Gudurički vrh (641m) (Zeremski, 2005).

There are seven settlements on the mountain – on the northern slopes there are Veliko Središte, Malo Središte, Gudurica and Markovac; and on the southern ones there are Mesić, Sočica and Jablanka. All the settlements are situated on sub mountainous accumulative surfaces, by upper streams of Mesić, Markovac, Malo Središte, Fizeš and Guzajna creek. This position was affected by the fact that accumulative surfaces are mainly mild and more convenient for agriculture, as opposed to the central mountainous mass that has steep slopes and is mostly covered in forest. Besides that, stream valleys have made water supply easier and provided good base for building roads that have been linked to the major traffic arteries in places where stream valleys meet low lying, accessible slopes or river valleys. However, more often than not, during spring showers, floods inflict damage to most of the settlements, thus pointing to a complex discrepancy in the location characteristics.

Villages belong to the east part of the Municipality of Vršac, with the total area of 157.12 km², i.e. 19.64% out of this territory. Rumanian border is between 2 and 10 km far. They are linked to Vršac by roads and Veliko Središte is linked by a railroad. Former roads that used to link them to the neighboring Romanian settlements have been out of function since the border formation, after the First World War. The morphology of this region has contributed to the fact that apart from Veliko Središte, settlements have the characteristics of mountainous and mountainous-pannonian type.

The distinctive character of this region is mainly influenced by natural predisposition for agricultural production. In the like manner, beside relief, pedological composition of soil had a significant role.

Geological, morphological and microclimatic features influenced formation of mainly low lying, poorly productive soils with a heavy composition. The most common types are smonitza soil, generated on the abrasive accumulative surfaces, on a base of pontian clay. Although potentially being highly productive, they make a poor base regarding the amount of humus. Thus, plants which are not too delicate as far as type of soil is concerned, but are microclimatic and hydrologically dependable, are the best choice for this region. In the narrow passage in the north and north-east part of the central mountainous mass, on a base of gneiss, acid-brown soils were formed. The terrain morphology and high acidity makes it inconvenient for arable plants, so that they are covered in beech and oak woods and acidic meadow grass. In the stream valleys there are alluvial and talus soil carbon. Although having good qualities, they are mostly covered in meadows and pastures, due to the threat of flooding (Miljković, 1996). Thus, natural potential of this region is, among other things, conditioned by terrain fragmentation and existence of poor productive soils, making conditions for agriculture, especially arable farming for Vojvodinian circumstances, far more inconvenient. They demand special redirection in order to achieve optimal results. However, so far, these conditions have not been used in an adequate way, especially in postwar period, yet the emphasis has been put on classic plants. Bearing in mind the circumstances, they require far greater investment, since they lead to a poor yield otherwise. Nevertheless, material base and production organization is unsatisfactory, since, as far as production function is concerned; more attention has been placed in the plain area of soil, where the profit from investment is more certain.

Demographic characteristics of rural settlements

Borderline settlements of Vršac Mountains are, with an average size of 566 inhabitants, much smaller than the rural ones, whose average number of inhabitants is 1264. Limited in space, they today experience a constant decrease of their population.

Apart from Gudurica and Veliko Središte, other settlements experience decrease of the population since the beginning of the last century. Starting from the first census in 1869, the decrease was caused initially by emigrations which resulted from latent crises in viticulture and later by the emigration of German population just after the World War II. While Gudurica and Veliko Središte attracted newcomers, other settlements, where the number of emigrants was rather insignificant, received no newcomers thus making the tendency of the fall in the number of inhabitants

progress. However, the negative tendency became as well obvious in these two settlements in 1960s. For example, between two post-war censuses (1948-2002) the total number of inhabitants was smaller for 52.75%, while in the settlements in the plain areas of the municipality, which are not near the border, it was smaller for 20.9%. The situation is the most obvious in Sočica (74.01%), Malo Središte (72.48%), Markovac (70.76%), and Jablanica (66.94%), then in Mesić (53.67%), Veliko Središte (34.64%) and Gudurica (9.86). Consequently, the settlements with unfavourable structure of agricultural areas, relatively more expressed isolation compared to Vršac and almost on the very border with Romania experience the greatest decrease in the number of inhabitants.

Table 1. Inhabitants of Vršac and rural settlements of Vršac Mountains from 1836 to 2002

Year.	Veliko Središte	Gudurica	Jablanica	Malo Središte	Markovac	Mesić	Sočica	Basal index	Chain index
1836.	1136	–	626	1480	640	842	6276	–	–
1850.	1798	1538	1374	623	1414	718	845	132,4	132,4
1857.	1908	1688	1405	684	1501	804	929	142,3	107,3
1869.	1983	2038	1445	711	1572	747	1026	151,6	106,7
1880.	1735	2012	1449	650	1400	807	935	144,0	95,0
1890.	1820	1812	1198	625	1491	762	854	135,8	94,4
1900.	2046	1999	1233	647	1527	747	875	144,6	106,4
1910.	2287	2042	1269	633	1438	726	925	148,5	102,7
1921.	2958	2097	1077	–	1323	647	815	142,5	95,7
1931.	2298	1829	1036	522	1282	621	761	133,0	93,3
1948.	2050	1417	850	436	1125	490	654	112,8	84,8
1953.	2044	2024	789	435	1129	477	618	119,8	106,2
1961.	2120	2105	760	405	1042	470	595	119,5	99,9
1971.	1815	1560	633	295	817	431	470	95,9	80,3
1981.	1698	1448	536	223	717	392	340	85,3	85,3
1991.	1584	1338	459	161	570	347	291	75,7	88,7
2002.	1340	1267	281	120	329	227	170	55,5	78,6

Source: A. Hegediš, K. Čobanović, 1991, a Magvar Szent Korona orszaganik 1910, Evi 1912
Census results, Statistical Office of the Republic of Serbia

The decrease in the number of inhabitants is caused by three reasons: a) negative or passive population growth, b) village-town migration and c) leaving village in order to temporarily live and work abroad. Negative population growth is characteristic for five of these seven settlements, especially for those with the majority of Romanian population and which experienced this phenomenon as early in the 19th century and caused by, according to B. Bukurov, the wish to preserve the continuity of the household by having small number of children and by high mortality of female population (Bukurov, 1947).

In the last period between two censuses, 472 people moved primary either to Vršac or Pančevo: Veliko Središte – 105, Gudurica – 98, Jablanka – 81, Markovac – 73, Malo Središte – 65, Mesić – 32 and Sočica 18. Moreover, a number of farmers, trying to escape the rough conditions, left the village and went to live and work abroad. This group makes 16% of the total number of inhabitants. This number in other municipalities is 7% (Vojvodina 2.96%). This phenomenon is most expressed in Sočica (22.37%) and Markovac (18.2%), and least expressed in Veliko Središte (9.39%) and Gudurica (10.9%). It was noticed also that Romanian population showed the greatest tendency towards this kind of population movement. That is why there is an unfavourable presence of certain population categories that represent the criterion of its biological self-preservation and labour potential. The contingent of children up to 14 years of age represents 14.89% of the total number of inhabitants, which is below the level in the municipality itself (17.95%), and especially in Vojvodina (19.30%). Similar situation is when the young population is concerned (population between 15 and 27 years of age), where, with the percentage of 13.09%, the area is behindhand with the municipality for 3.44% and with the Province for 4.88%. The lowest percentage of the entire young population is in Sočica and Markovac and the highest in Veliko Središte and Gudurica. The worst condition is when labour capable population is concerned. It includes only 48.27% of the entire population while in the municipality it is 61.06% and in Vojvodina 63.99%. On the other hand, older than 65 years of age make 36.84% of the entire population while in comparative units that number is 11.69% and 11.30%.

Vital degradation of population has obviously taken a rather full swing. It will continue further, apart from others, due to a small number of female fertile contingents, which usually represents the factor of birth-rate. Its percentage is only 14.46% compared to 22.56% in the municipality and 24.42% in Vojvodina. Moreover, this number is smaller than in other settlements in the municipality (18.71%). This situation is, just as in other population structures, the most critical in Sočica (9.70%) and Malo Središte (10.36%). The best situation is in Gudurica - 20.33%. Although this group also includes female population born during the war when the depopulation was the most expressed, the increase of this contingent cannot be expected because the tendency of the decrease of population will inevitably cause its stagnation or fall.

The percentage of active population (43.38%) is higher than in the municipality (40.08%) and other rural settlements in the region (41.38%). This is the result of the small number of the youngest category and the fact that the old population takes part in agricultural works, thus declaring themselves as active population

although their activity is rather periodical and very often not necessary. The smallest percentage is in Markovac (28.31%) and Gudurica (35.79%) which both have the high percentage of the supported population (in Markovac that is the old population while in Gudurica that is the youngest population).

The share of agricultural population compared to the total number is 47.28% which approximately reflects the situation in all the villages in the municipality. However, the agricultural function of these villages is particularly noticeable in the high percentage of active agricultural population compared to the total active population (76.06% compared to 66.08% in all settlements). It is understandable that the greatest part of this category performs work in their own households (83.86%) and that is where the situation resembles the situation in those settlements outside the Mountain region.

The number of people with incomes (7.03%) is less than in the municipality (11.78%), which is understandable due to the presence of urban population but does not significantly differ from other villages (7.90%). This percentage is the highest in Veliko Središte (11.92%) and Gudurica (11.45%) and smallest in Sočica (2.06%). The first two settlements have traditionally large number of the employed population in Vršac which at the same time means that they have the larger number of the retired. On the other hand, Sočica has the most expressed agricultural function which enables the population make living from this activity up to the old age.

The analysis of the education shows that the majority of population only has primary education (45.56%) which resembles the situation in other settlements in the municipality. The second place belongs to the group of the population with secondary school education (35.46%). Even 10.26% of population did not finish any level of formal education. This is the population that is primary involved with agriculture. However, with finished secondary school (7.11%) these settlements fall behind with the others (11.64%). The population with some sort of higher education is the highest in Veliko Središte (1.57%) and Gudurica (1.23%) while in other settlements this number is negligible. The last two categories commute to Vršac and represent, according to the results of the poll, potential inhabitants of that town. Apart from Veliko Središte and Gudurica, settlements have four-year primary education organized in Romanian language. After the first four years, children continue education in their mother language in Vršac. Teaching is performed despite the drastic fall in the number of children. For example, Mesić had 36 pupils in 1970 while today there are only 9, Malo Središte had 20 and today 7 etc.

The national structure in the region is quite complex. Settlements showed the same character in the past as well. The majority represents Serbian population (42.05%). Serbian population represents majority in Gudurica (54.89%) and Veliko Središte (71.08%). The second place belongs to Romanian population with 34.98%. They represent the majority in smaller settlements – Jablanka (65.99%), Malo Središte (84.23%), Markovac (74.96%), Mesić (93.48%) and Sočica (96.18%). A rather small percentage belongs to Hungarians (5.87%), Macedonians (3.78%), Slovenians (1.1%), Croatians (1.30%) etc.

The beginnings of such complex ethnic structure ate back to the mid 18th century, in the time of the prosperity of viticulture, when Austrians colonized population from other parts of the Monarchy, Rhein region and Bavaria. This fact caused that just after the World War I, Germans represented the majority of population (43.50%). However, after the emigration of Germans, Veliko Središte and Gudurica were colonized by domestic population, which makes these settlements have the most complex ethnic structure. Romanians were most intensely colonized in the period 1641 and 1646. However, their number, due to already mentioned reasons, experiences constant decrease. For example, in 1869 there were 4.051, in 1948 – 2.073 and in 1981 only 1871 members of this national minority (Statistical annuals of the Republic of Serbia).

To conclude, Veliko Središte and Gudurica show the most favourable demographic structure. The greatest part of Veliko Središte territory is covered in plain and pedologically favourable terrain while at the same time the indicators showing the level of agricultural intensity are the best. On the other hand, Gudurica has the majority of colonized population. This population, although quite nationally heterogeneous, showed full compatibility with the new surrounding and expressed its aspiration towards healthy biological and economic self-preservation. The part of the population in this village overcame all unfavourable consequences of economic policies by finding employment in Vršac and yet, accustomed to life in similar environment, still continuing to live in the parent settlement.

Economic and geographical problems of settlements and revitalization possibilities

All indicators of the local people's field of work refer to agriculture. This is why the greatest attention is going to be paid to the problems of this kind of production. Agricultural areas on the territory of these settlements make 10086 ha, which is 18.65% of agricultural area in the municipality, or average 1715 ha per settlement. Yet, the size of agricultural area varies greatly – from 437 ha in Malo Središte,

to 3.831 ha in Veliko Središte. Arable areas make 6600 ha, which is 66.46% of agricultural areas. They are mainly in private property (83.32%), thus reflecting the general situation in the Province.

Table 2. Structure of agricultural areas according to the usage category presented in ha (situation in 2003)

Cadastral municipality	Arable land and gardens	Orchards	Vineyards	Meadows	Pastures	Total
V.Središte	3226	3	199	123	280	3831
Gudurica	737	48	610	60	250	1705
Jablanka	1211	2	8	93	204	1518
Markovac	194	1	23	81	148	447
Mesić	277	7	18	24	389	715
M.Središte	183	1	35	76	142	437
Sočica	772	9	59	18	415	1433
Total	6600	71	952	485	1828	10086

Source: Information from cadastral office on the structure of agricultural area in the settlements of Vršac Mountains, Vršac municipality

Agricultural areas of this region make 15.47% of municipal agricultural areas, while the whole area makes 19.64% municipality, which illustrates weak agricultural utilisation of the area. This is understandable, bearing in mind the mountainous character of the area, mainly covered in woods. The structure of agricultural areas shows a number of specific features compared to the plain area of the municipality. Thus arable areas make 59.21% (municipality 78.35% and Vojvodina 72.51%). This situation obviously reflects a poor arable orientation of the area. On the other hand, vineyards participate with 8.89% (municipality 3.06% and Vojvodina 0.65%). The fact that a great part is covered in vineyards is influenced by pedological and microclimatic factors as well as tradition. However, despite a considerable local appeal for viticulture and the possibility of producing quality, strong wines, these local advantages have been neglected by inadequate economic politics. In the like manner, compared to 1884 when viticulture was in full swing, these areas have so far been reduced by 67.20%.

Having in mind that yield of arable cultures in areas of former vineyards are poor and that capacity of wineries in Vršac go beyond raw material production of the gravitational area, it is necessary to benefit from these genuine advantages in order to revitalize economy. This would, by all means, contribute to improving unfavorable age structure of vine in these vineyards. The greatest problem is a slow payability of investment in viticulture. However, if it is analyzed in a long term, the area would establish its position in economic orientation and it would end drifting around a real economic strategy.

Apart from this it is necessary to say that meadows and pastures take up even 21.61% of the area (Vršac Municipality 3.05% and Vojvodina 0.65%). This fact shows a considerable potential of the area for the development of extensive-commercial cattle-breeding production. Yet, this advantage has been abandoned due to uneconomic, cyclic, and lately even long-term crisis in cattle-breeding, thus representing one of the major factors of stagnation and deterioration of the area. On the other hand, it has been realised that based on an estimated vegetation mass on pastures it is possible to raise approximately 16.000 cattle, having in mind that they are put to pasture from May till October. This would make an increase amounting to thirteen times more cattle than there is today. Apart from that, based on the agricultural structure of the area in borderline region of Romania (mostly meadows and pastures) and the fact that Vršac is the largest urban center in the entire region, it can be said that the existing potentials could be used for considerable improvement of slaughterhouse-processing industry in this town. Communicational conditions can be realised with minor investment, considering the previous existence of traffic arteries Varadia – Jablanka and Žamul Mere – Veliko Središte.

Table 3. Areas of different structures according to agricultural areas in %

Cadastral municipality	Arable land and gardens	Orchards	Vineyards	Meadows	Pastures
V.Središte	84,21	0,08	5,19	3,21	7,31
Gudurica	43,22	2,81	35,78	3,52	14,66
Jablanka	79,78	0,13	0,53	6,13	13,44
Markovac	41,30	0,21	7,98	17,20	31,89
Mesić	38,74	0,98	2,52	3,36	54,41
M.Središte	41,88	0,23	8,01	17,39	32,49
Sočica	53,87	0,63	4,12	1,26	28,96
Total	59,21	0,78	8,89	6,38	21,61

Source: Calculated according to the previous Table 2.

The above mentioned structure of agricultural areas reflects on a low percentage of intensive utilisation of agricultural area, at 67.58% (municipality 81.59%). The degree of intensity is lowest in the highest settlements, such as Mesić (42.25%) and Malo Središte (47.16%), being the largest areas covered in pastures where there is the greatest unused cattle breeding potential. Due to the relief character and microclimatic features, this region is characterised by a considerable percentage of area covered in woods, compared to the entire area of land (29.00%). It is the greatest in the area of Gudurica (55.96%) and Mesić (52.20%), and the least in Veliko Središte (5.18%). This fact was a reason why the local people of the highest settlements were mainly engaged in woodcutting business. This state of

woods is not only naturally predisposed, but also purposeful, since its function is to prevent denudation and river erosion. Participation of the private sector prevails and the specific character of the terrain causes a great fragmentation of property, i.e. a great number of smaller parcels, since most parameters have shown that the situation is the least favourable in this sector, while the empiric data prove that limiting factors of intensive production are more distinguished if the property is more fragmented.

Table 4. Number of parcels in agricultural areas according to utilisation categories presented in ha (situation in 2002)

Cadastral municipality	Arable land and gardens	Orchards	Vineyards	Meadows	Pastures	Total
V.Središte	4682	17	328	70	176	5278
Gudurica	2287	60	1495	103	289	4234
Jablanka	2073	10	35	258	40	2416
Markovac	689	13	134	133	30	999
Mesić	790	50	90	105	908	1944
M.Središte	699	12	136	137	31	1015
Sočica	2134	6	117	129	522	2908

Source: Calculated according to the previous table

An average size of agricultural parcels reflects a relatively distinguished terrain fragmentation compared to the other parts of the plain area, outside of Vršac Mountains. An average size of the entire parcel makes 0.53 ha. Inspection of certain categories of agricultural areas shows that the average largest size of a parcel is covered in pastures (2.55 ha), having in mind that they are mainly public property and that they make relatively vast continual areas because of the nature of their utilisation, especially in the area of Jablanka (5.10 ha), Malo Središte (4.80 ha), as well as Veliko Središte (1.59 ha). The smallest size is the parcel covered in orchards (0.43 ha), which is mostly the result of their maintenance in private plots and in houses for rest and relaxation (weekend houses). Other categories of agricultural land (arable land and gardens, meadows and vineyards) take up approximately over a half of hectare on average.

Based on the above given data, the area of Vršac Mountains is more diverse compared to the situation in Vojvodina. It is caused by its complex geological and morphological characteristics which have influenced other natural factors. Its consequence is a greater focus, after arable farming, on viticulture as well. Also, there is a considerable natural potential for development of certain branches of cattle breeding, yet, as it has already been mentioned, it is not properly utilized.

Table 5. Average size of agricultural parcels according to utilisation categories presented in ha (situation in 2002)

Cadastral municipality	Arable land and gardens	Orchards	Vineyards	Meadows	Pastures	Total
V.Središte	0,69	0,18	0,61	1,76	1,59	0,72
Gudurica	0,33	0,80	0,41	0,58	0,86	0,40
Jablanka	0,58	0,20	0,23	0,36	5,10	0,63
Markovac	0,28	0,08	0,17	0,61	4,80	0,42
Mesić	0,35	0,14	0,20	0,23	0,43	0,37
M.Središte	0,26	0,08	0,26	0,55	4,80	0,43
Sočica	0,36	1,50	0,50	0,14	0,80	0,49
Average	0,50	0,43	0,59	0,62	2,55	0,53

Source: Calculated according to the previous table

Factors of agricultural intensification

The important factor of the intensification process of agricultural production represents the level of the implementation of agro technical measures. We presented the usage of mechanization in the individual sector with a number of tractors per 100 ha. According to data from 2002, the number of 3.65 tractors per 100 ha is rather unfavorable compared to the average of Vršac municipality (9 tractors/100 ha) and Vojvodina (9 tractors/100 ha). Situation is the worst in Mesić (1.33 tractors/100 ha) and Veliko Središte (2 tractors/100 ha), while the best situation is in Malo Središte (6.95 tractors/100 ha). The most frequent owners of tractors are households whose members work temporarily abroad and who, no matter the often crises in our country, have enough amount of money to buy new mechanization. They cultivate land unsystematically and motivated not by income but only by inertia and their fields seem rather neglected.

Mountainous characteristics of this area, summer showers cause the appearance of surface and linear erosions on the slopes outside the forest belt. Erosion is the most intensive in the catchments basin of Malo Središte brook. It is presented in the form of denudation and linear erosion. Denudation is to be seen mostly on the slopes with greater energy while linear erosion is characteristic for more gentle sides. As the result there is an appearance of furrows and gullies. This form of linear erosive phenomena as well as brook beds become centers of flash floods when showers thus causing quite a damage to agricultural areas and most of the settlements of Vršac mountains. They require the building of landfill and consolidation barriers. The first one would have a task of water accumulation while the consolidation barriers should strengthen the bank. A new system of canals is being built, although not systematically, in order to direct water into the

canal network of Vršac trench for the purpose of directing and removing surface running waters. Moreover, it is necessary to reconstruct the existing canals since they are covered in thick bushes and plants and are full of waste disposal. In order to activate large neglected arable lands owned by old households and framers who work temporarily abroad, it is necessary to plough the fields on the bias with the slope. Furthermore, there is a need for fragmented foresting on those places where they would have a protective role from winds and water erosion. Other agrotechnical measures such as fertilizers, chemical substances used for plant protection, mechanization etc. are as well applied on arable lands.

Chemisation represents one of the most important factors of the intensification of agricultural production. The result of economic crisis, smaller economic power of farmers, and at the same time almost no investments in agricultural production, was the decrease in the usage of fertilizers (and other chemical substances), which in 195 was four times smaller than in 1991. With certain variations used not to be characteristic, the usage of fertilizers grows in the second half of the 1990s. However, that tendency does not represent a sufficient argument for the foreseeing of future movements.

Table 6. Index of the consumption of fertilizers in the area of Vršac Mountains

Year	Total	nitrogen	calium	complex and mixed
1991.	100	100	0	100
1993.	70	75	100	49
1995.	30	32	100	24
1997.	62	59	100	45
1998.	53	52	100	62
1999.	51	50	100	60
2000.	48	47	100	59
2001.	50	50	100	59
2003.	51	51	100	60

Source: Data obtained from Vršac municipality administartion, 2008

The process of the downfall of agricultural organizations, which much more applied the contemporary achievements of chemisation than private agricultural households, had a lot of effects on the level of the use of fertilizers. Public agricultural institutions as well Vršac municipality possess data on the usage of fertilizers as a rather important component of the intensification of plant production. These data are, due to dated official statistics, relatively old but still quite reliable when the comparison of the situation in Vojvodina and Vršac is in question.

The analysis of the next table shows us that, in the period between 1983 and 2002, the average usage both on arable areas (567 kg/ha) and plough fields (469 kg/ha) is well below the Vojvodinian average (567 kg/ha, i.e. 594 kg/ha). This condition, together with a rather poor quality of arable land in Vršac municipality, has quite a harmful influence upon the level of crops; the fact which will be documented, especially in the part dedicated to agricultural production.

Table 7. Usage of fertilizers per hectare of arable land in Vojvodina and Vršac municipality in the period between 1983 and 2000

Year	Arable areas		Plough fields	
	Vojvodina	Vršac municipality	Vojvodina	Vršac municipality
1983.	551	397	577	457
1984.	569	484	596	588
1985.	602	349	634	420
1990.	579	392	604	474
2000.	534	355	558	406

Source: Statistical annual of the municipalities in Southern Banat, Department of Province Statistical Bureau, Pančevo

However, after the analyses of the conditions in seven rural settlements of Vršac Mountains, it is noticeable that the situation is much more unfavourable. The average level of the usage of fertilizers is here four times smaller than on the level of municipality and five times smaller than on the level of the Province and has experienced constant fall since 1984. Moreover, it was noticed that only one type of fertilizer is used, although the poor quality of soil and the specific conditions require much more complex treatment.

Tourism as a possible factor in the process of revitalization in the region of Vršac Mountains

Vršac Mountains, in the context of the plain area of Vojvodina, represent uncommon and attractive region favourable for the development of tourism. Vršac Mountains, with its height and forest complex, enable the development of tourism, from the point of hygienic and medical conditions, primary because of air circulation i.e. cleaner air when compared to plain areas of Vojvodina. The vicinity of city agglomeration, good distribution of relatively quality roads and accessible gradient give these Mountains recreational and functional tourist orientation. However, ecologically fertile localities have experienced firstly planned and later unplanned building of houses for rest and recreation thus giving the Mountains the character of secondary residence. Low price of land rent caused such objects

to be used for dwelling. However, according to the suggestions made by tourist and space planners, these areas need to be protected from such anarchy and provided with suitable quality contents. Moreover, a number of objects require reconstruction: Mesić monastery (16th century), neglected but renovated castles, wine cellars in Gudurica and Veliko Središte (18th and 19th century), refuge hut etc. Moreover, a lot should be done in order to conserve and use a number of ethnographic values that are especially well-preserved in those settlements with the majority of Romanian population.

Conclusion

On the base of the above mentioned it can be concluded that contemporary problems of borderline settlements in the region of Vršac Mountains are rather specific and quite complex. Nature, history and poor economic strategy influenced the appearance of degradation tendencies both from the demographic and economic-geographic aspect. With an aim to revitalize these settlements we suggest, apart from the other, the following interventions in the area of agriculture:

- It is necessary to provide unique elements of economic policy on a unique area of the Republic of Serbia and take advantage of neighbouring Romania being part of European Union.
- A problem of fragmented parcels and the process of commasation must be solved.
- Remove all the faults connected with production, manufacture, purchase of agricultural products etc.
- Cattle breeding must have a long-term development programme, economic stability, and market production.
- Take advantage of favours that almost all settlements, and especially Gudurica, Mesić and Malo Središte have for the introduction and development of rural tourism.

Manuscript submitted in December 2009; accepted in April 2010

Acknowledgements:

This paper is the result of the research within the projects number: 146 019 and 146 011, funded by the Ministry of Science and Technological Development of the Republic of Serbia.

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