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DEMOGRAPHIC PROCESS IN THE LUBELSKIE VOIVODESHIP VILLAGES

Abstract: The rural areas in the Lubelskie Voivodeship have been depopulating for a number of years due to backward agriculture and the lack of job vacancies in the non-agricultural occupations. Depopulation frequently leads to the degradation and weakening of the settlement or even to the disappearance of rural building development. The article analyses the present state of the population in the villages in the Lubelskie Voivodeship and in the depopulating areas; it also indicates the phenomena in the settlement network in the peripheral rural areas.

Key words: Lubelskie Voivodeship, problem area, depopulation, village disappearance

Introduction

Demographic factors are significant for the developmental potential in every region. The areas with an unfavourable economic structure, a relatively low level of wealth or a structurally underdeveloped labour market are more vulnerable to population outflows, which concern primarily the most active and ambitious individuals. Due to its social and economic marginalization, the Lubelskie Voivodeship is frequently considered a peripheral area [*Raporty* 2009]. The voivodeship is equally often treated as a problem region. In “The updated concept of national spatial management” (2006) the voivodeship is a problem area, *i.e.* “a region where the development is permanently and structurally impaired by social and economic circumstances to such an extent that they cannot overcome the difficulties without external support”. With regards to the level of economic development, the region is placed in the final two rankings in Poland, according to the statistics. The basic cause of this situation lies in the character of the region, with the majority of people employed in agriculture, an inefficient production sector and predominantly small farms. Additional problems stem from rural overpopulation and the hidden unemployment in agriculture. The very low level of economic development is reflected in the low quality of life and financial poverty, which can be

observed in numerous places. The analyses of the voivodeship development frequently indicate the lack of prospects for the improvement of the regional development.

For these reasons, the rural areas in the Lubelskie Voivodeship are depopulating. The process is primarily caused by a negative migration balance throughout the whole post-war period. Another factor accelerating this process is a decreasing natural growth. Depopulation frequently leads to the decline and impoverishment of the rural population or even to the complete disappearance of the rural building developments.

The article presents a diagnosis of the present level of population. The author seeks the answers about the scale of depopulation and the contemporary consequences of the depopulation in rural areas for the settlement in the region.

1. The Lubelskie Voivodeship – a population problem area

The term of problem area does not have a clear definition. In literature different terms are used interchangeably, *e.g.*: underdeveloped area, marginal area, privation area, depression area and conflict area. The topic of the population in the problem areas in Poland has been the subject of Polish researchers' interests since 1980's. Zagożdżon [1988] thinks that a problem area is characterised by the presence of negative phenomena in the social, economic and technical sphere that generate certain internal abnormalities, whereas, the population problem areas are concerned with the areas of population outflow. A similar definition is given by Bański [1999], who defines a problem area as such a spatial unit that is characterised by abnormalities in one or more elements. A problem area is therefore characterised by the accumulation of negative phenomena which hinder its proper social and economic development. On the other hand, Jelonek [1986, 1988] considers the population problem areas as such areas in which there are conflicts concerning biological development, demographic and migratory structures, the conditions and distribution of population, and migrations. Analysing the criteria of problem area recognition in terms of demographic challenges, the author enumerates the areas with a long-lasting negative migration balance, with dysfunctions in population reproduction, areas with a malformed gender and age structure, the contact areas of different ethnic groups and others. Strzelecki [1995] divided the areas of "demographic deformation" into a few groups: depopulation areas (where the population number in 1981-1990 decreased by more than 5%), age structure deformation areas (population in the productive age is less than 50% of the total population), defeminisation areas (with less than 80 women per 100 men in the age group 20-29). It turned out that unfavourable population processes are concentrated in the north-east, eastern and central part of Poland. Eberhardt [1989] conducted similar research. He selected the Podlasko-Nadbużański, Janowsko-Hrubieszowski and Roztoczański regions in north-east Poland. These regions are characterised by the predominance of the agricultural function, a low level of industrialisation and a small population density. The depopulation processes in the area are long-lasting

and intensive. A detailed regional research concerning the Lubelskie voivodeship as a problem area was conducted by Szlachta [1984] and Jedut [1990].

2. Depopulation in the Lubelskie Voivodeship rural areas

Early demonstration of regressive demographic tendencies is a feature characteristic for the Lubelskie Voivodeship rural areas. Since 1950 the decrease of the population number was recorded in as many as 71% of villages. The basic factor that influences the decrease of the population number is the migration balance. Another one was the decrease of the natural growth in rural areas [Barwińska 1973; Eberhardt 1989; Flaga 2002; Miszczuk 1993]. In the literature on the subject there are numerous works on the issue, however, the works by Eberhardt [1997, 2007] are the most significant. He researched the spatial differentiation of the population structure in the east and identified the depopulating areas in the post-war period. There are also scientific discussions of the depopulation in this part of Poland in the works by Miazga [1990] and Sasinowski [2002] among others.

The statistical data base of the Central Statistical Office allows a detailed analysis of the depopulation process in the Lubelskie Voivodeship. The data is presented for individual villages in the census years (1950, 1960, 1970, 1978, 1988 and 2002) calculated for the administrative division from 1 January 1999. Another source of information for 2010 is a statistical data base called *Statystyczne Vademecum Samorządowca GUS*.

In 1950 the number of the population in the Lubelskie Voivodeship rural areas (within the borders of the present day voivodeship) was 1 278 800 people, which made up 8.5% of the total rural population in Poland. In 2010 the population was 1 149 300, which made up 7.7% of the Polish rural population. The rate of the rural population change is higher than the average for the rural areas in Poland. The rural population resources in Poland in the 1950-2010 period fell by 0.5%, whereas, in the Lubelskie Voivodeship by as much as 10% (Tab. 1)

Table 1

The change of the rural population number in the Lubelskie Voivodeship against Poland

	Changes in rural population number in:							
	1950 -1960	1960-1970	1970-1978	1978-1988	1988-2002	2002-2010	1950-2010	1950-2010
Poland	in thousand	191	378	-667	-207	-84	316	-73
	%	1,3	2,5	-4,3	-1,4	-0,6	2,2	-0,5
Lubelskie	in thousand	77,8	-31,7	-60,7	-32,4	-66,0	-18,6	-13,2
	%	6,1	-2,3	-4,6	-2,6	-5,4	-1,6	-10,3

Source: [Wesołowska 2011].

The population changes in the rural areas in the Lubelskie Voivodeship in the 1950-2010 period were territorially diversified. The analysis of the population number changes in the Lubelskie Voivodeship villages indicates that there are areas with a significant decrease or increase of population number. The increase of the population number was primarily recorded in the suburban villages, in the areas influenced by large and medium-sized urban centres: Lublin, Puławy, Zamość, Hrubieszów, Łuków, Międzyrzec Podlaski and Chełm (Fig. 1). The areas influenced by the cities had favourable conditions for development – with good communication accessibility, the inhabitants of villages could commute to the work place easily, use the city trade network, schools, culture centres, etc. These factors facilitated the population development in the areas. In other villages in the Lubelskie region, the decrease of the population number was recorded in the post-war period.

This concerned primarily the villages located southwards from the voivodeship capital (the area of Krzczonów, Żółkiewka and Krasnystaw) and in the border area (primarily, the Hrubieszów area). An increase of the population number was recorded in suburban villages, in the first place (Fig. 1). The process of village depopulation was caused by the already mentioned negative migration balances that was maintained throughout the post-war period. The scale of the population outflow from the villages to cities fluctuated, however, it was continually rated among the highest in Poland. Economic conditions and the job market breakdown in the 1990's, contributed to the significant limitation of the migration movements. Nevertheless, the factor was still a predominant one in the process of the rural areas' depopulation, especially in the peripheral areas. It is notable that the most significant decline of population number was recorded in the typically mono-functional areas. This concerns the areas of traditional agriculture [Bański 2005]. In the face of agrarian overpopulation, the outflow of the population to cities was inevitable. On a national scale, the process was desirable – the relocation of free work force resources into industry and other non-agricultural branches of the economy increased the effectiveness of the Polish national economy. The process can also have a favourable result on the land concentration in farms, which is particularly important in the Lubelskie Upland, where the average farm is too small to face the competition in the contemporary market. However, from the perspective of the region that is losing its population, the negative effects, both social and economic, outbalance the benefits. Additionally, the Lubelskie Voivodeship lost its youngest and most active people, which generated a deal of negative phenomena accompanying the depopulation process, such as the increased rate of society ageing.

Another factor accelerating the depopulation processes in rural areas was a negative natural growth. It was as early as in the 1960's that the decreasing birth rate failed to compensate the migration losses, whereas, a negative birth rate has been recorded since 1996. In 2010 birth losses were recorded in most villages in the Lubelskie Voivodeship, and in numerous cases they were higher than the migration outflow.

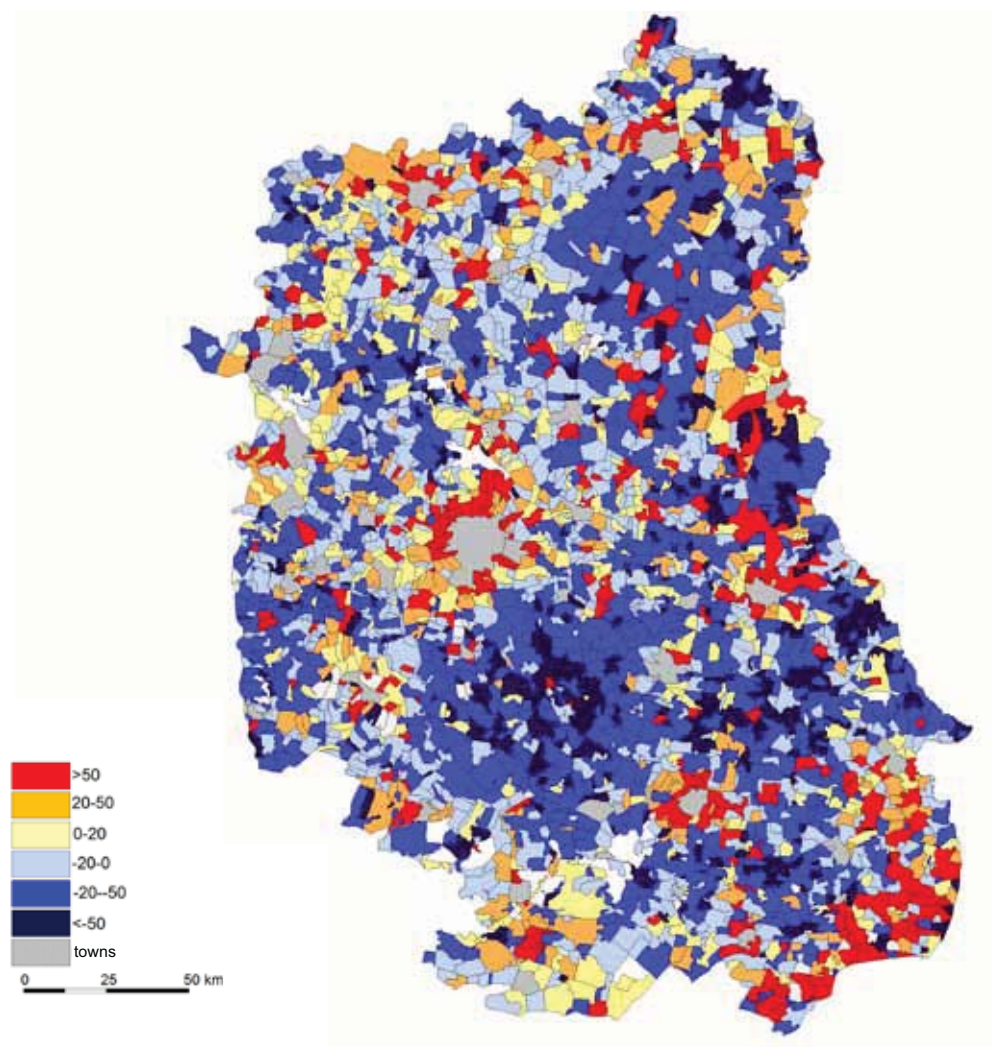


Figure 1. Population changes in rural areas in the Lubelskie Voivodeship in the 1950-2010 period (%)

Source: Own elaboration on the basis of statistical data from Central Statistical Office.

3. The changes in the real population number – Ward's method

In 2011 the author attempted to make a classification of the Lubelskie Voivodeship villages in terms of the real population number changes. For this purpose, Ward's method of agglomeration was used. The effect of the project included the maps of the distribution of each group of villages (Fig. 2).

The first 3 groups of the concentration were characterised by population losses. Group III featured the largest changes. Concentrations IV and V contain the villages with a positive population growth. Average values of the operational features for each concentration are presented in Table 2.

Table 2

Average values of the operational features for the concentrations

Type of concentration	I	II	III	IV	V
Number of units in concentration	242	2411	577	266	36
Average decreases/increases between years (%)					
1950-1960	31,1	2,2	1,2	11,4	26,1
1960-1970	5,2	-3,3	-10,1	9,8	13,2
1970-1978	-5,9	-5,0	-11,0	6,1	16,4
1978-1988	-2,3	-4,4	-8,4	8,3	17,5
1988-2002	-8,9	-6,1	-13,4	9,6	3,2

Source: [Wesółowska 2011].

The first group, of *ca.* 7% villages, included the locations characterised by significant population growths until 1970 and then turned into a population fall which intensified after the transformation into the market economy. Group I covers the villages in the south-east part of the voivodeship – in the Hrubieszowki County, the southern part of Biłgorajski and the eastern part of the voivodeship (Bialski and Włodawski Counties). One should pay special attention to the villages in the Hrubieszowki County. Due to war time losses, the activities of the Ukrainian Insurgent Army, the repatriations and relocations of the Ukrainian population in the framework of the “Wisła” action, the region was depopulated right after the war. Consequently, with a very low “initial level”, a relatively low absolute increase in further years (especially in the 1955-1965 period) was marked as a notable absolute increase. However, even with the maximum population level in the first half of the 1960’s, most villages in the Bug valley did not reach the population level of 1939.

The second largest group of villages covers 68% of the settlements. The depopulation process started quite early in this case. In the villages located in Roztocze, the fall of the population number took place as early as in the 1960’s. At the beginning of the 1970’s the depopulation process covered virtually whole Lubelskie Upland, Roztocze and the northern part of the voivodeship. The group is characterised by a slow decrease of the population number since the 1960’s.

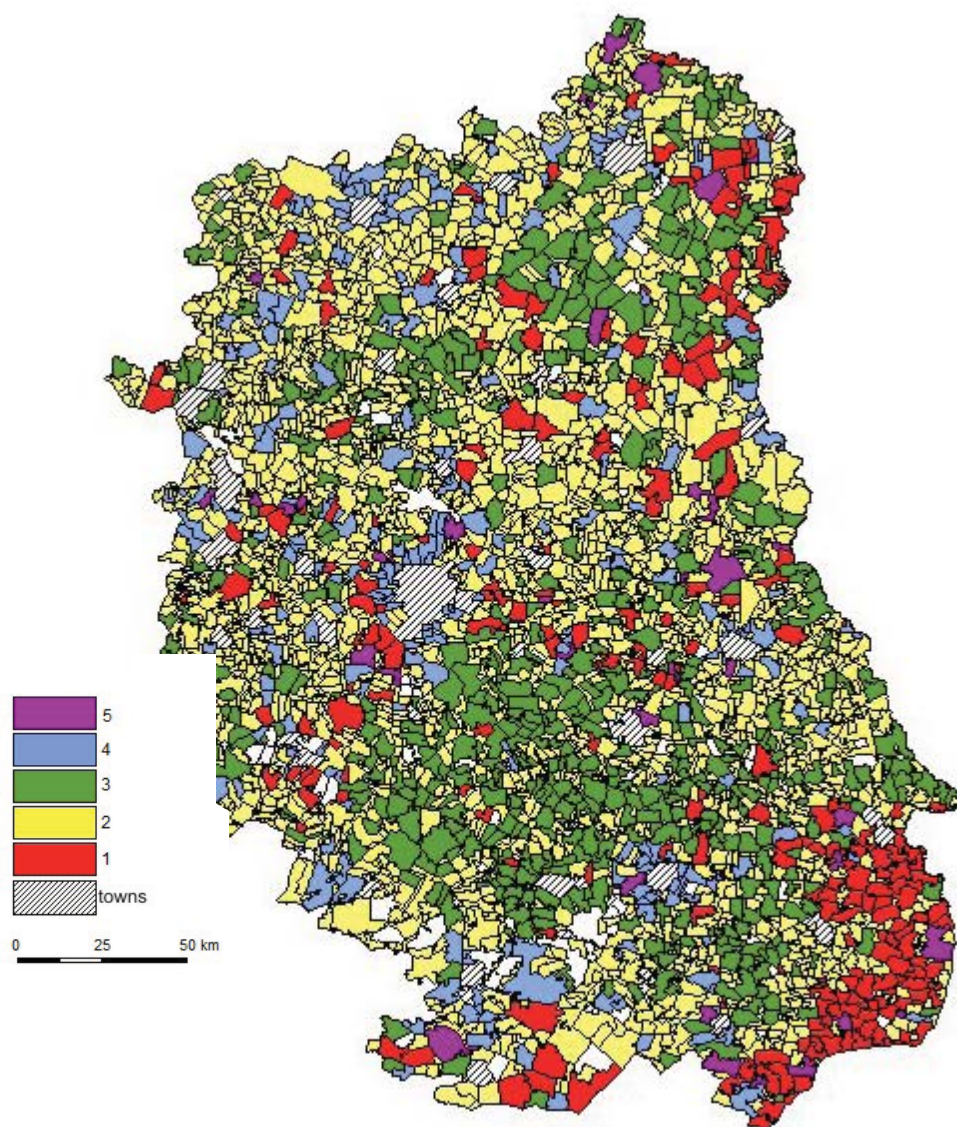


Figure 2. Groups of villages in the Lubelskie Voivodeship in terms of the increase/decrease of the population number

increase of the population number: 1- a decline in the population of the 70., 2- a moderate rate of population decline, 3- a type of extreme depopulation; a decrease of the population number: 4- suburban type, 5- other villages with a population growth (excluding suburbs)

Source: [Wesołowska 2011].

The villages classified in the third group (16%) may be referred to as totally depopulated. These are, however, spatially dense concentrations. They are located in two regions: southwards from Lublin near Janów, Krasnystaw and Hrubieszów, and in the border part of Polesie, mainly in the Parczewski County. In the late 1970's the number of people in this group of villages fell to the level from 1950. The depopulation process in these villages was caused by a negative migration balance for the whole post-war period.

Eberhardt [1989] mentioned these areas in his research. Apart from the excessive and long-lasting population outflow, such areas are characterised by an unfavourable gender structure, an unbalanced age structure as well as the economic and social passiveness.

The fourth group (7%) is characterised by a population number increase. They include suburban areas. Suburban villages encountered very favourable conditions in the post-war period. The factors that determined their attractiveness included the neighbourhood of a large city and its infrastructure, a higher standard of living (better living conditions) and the situation in the labour market.

The fifth group includes only 36 villages. This group covers the commune centres (*e.g.* Kurów, Końskowola), villages with well-developed industry (*e.g.* Werbkowice, Milejów) or leisure centres (*e.g.* Rogóżno, Lubicza Królewska). In these villages the increase of the population number is significant (over 10%) which is related to population labour migrations in non-agricultural occupations. However, due to industry restructuring and the shortage of new job vacancies in the 1990's, the development rate in these villages is slower (Wesołowska 2011).

4. The results of Lubelskie village depopulation

The population outflow from the typically rural areas is a long-lasting process. Negative phenomena accompanying the depopulation include the higher rate of village population aging, which results from selective migrations (the rural areas lose a young and resourceful population). Whereas, in the 1950's elderly people (above 60 years of age) made up only 10% of the population, in the 1970's their percentage rose to 16% and now to as much as 20%. The Lubelskie Voivodeship is a specific example of an aging area. This phenomenon has been observed for a long time [Eberhardt 1989, Gawryszewski 1989, Jelonek 1986]. Three large, "old demographic" areas can be selected in the region: Pojezierze Łęczyńsko-Włodawskie, Polesie Lubelskie and Wyżyna Lubelska with Roztocze.

The villages located in the Krasnostawski, Chełmski, Włodawski and Parczewski Counties are characterised by a particularly high demographic age (over 50% of the total population is beyond retirement age) (Fig. 3).

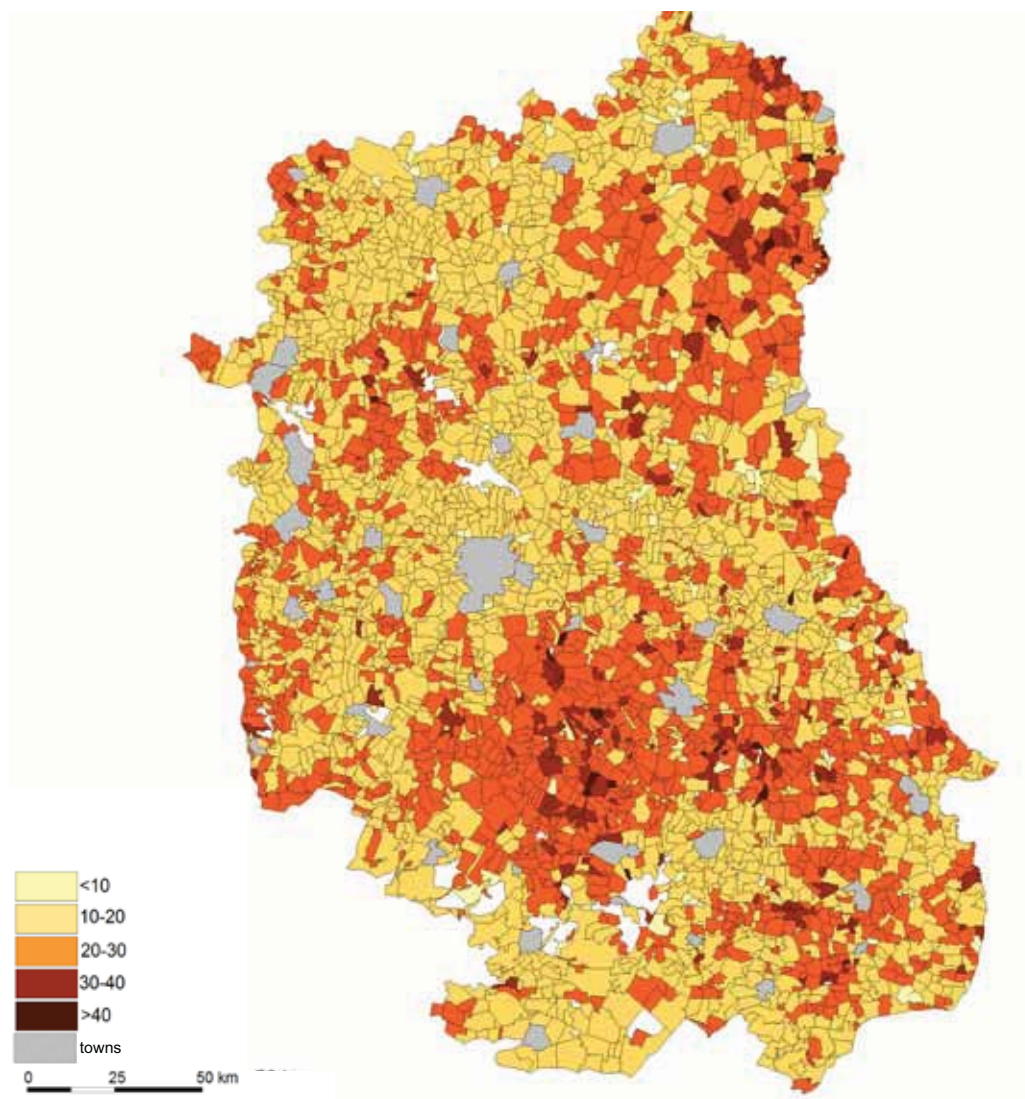


Figure 3. The population beyond retirement age in the villages in the Lubelskie Voivodeship (% of the total population)

Source: Own elaboration on the basis of statistical data from Central Statistical Office.

A consequence of population ageing is the increase of the productive population burden. It is presently among the highest in Poland and reaches 58.3 for the whole voivodeship [*Regiony ... 2011*].

The direct results of the depopulation of rural areas include also the changes in the settlement network [Wesołowska 2011]. Over 40% of the villages in the Lubelskie

Voivodeship (1378 villages) recorded a real decrease in the number of houses since 1950. The largest fall was noted in the Chelski and Kraśnicki Counties (Fig. 4).

While in the towns located near cities, one may expect the settlement to be “rebuilt” (according to new, urban models), in marginal areas with difficult communication accessibility the settlement is expected to decline, which will result in the disappearance of other villages.

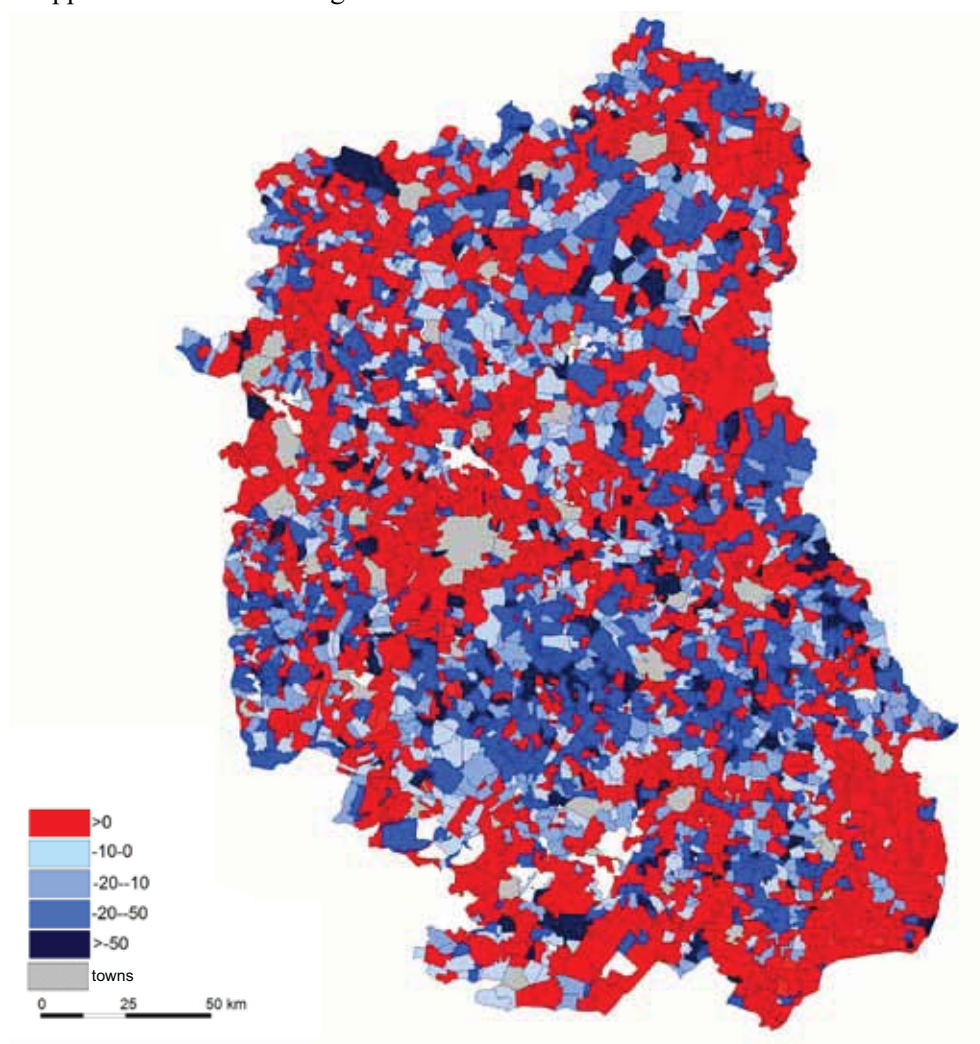


Figure 4. The changes in the number of houses in the villages in the Lubelskie Voivodeship in the 1950-2010 period (%)

Source: Own elaboration on the basis of statistical data from Central Statistical Office.

Village settlement in the Lubelskie Voivodeship is characterised by a high diversity of land development intensity. Gorzym-Wilkowski [2011] designed a map that illustrates the intensity with a simple indicator – the number of houses per 1 ha of land in a county (without forest areas) (Fig. 5). The average value for the rural areas in the Lubelskie Voivodeship is 0.19 house per 1 ha. The highest pressure is exerted in the suburban areas (related to the advancing suburbanization). The intensity of the housing development is most clearly noticeable in the east-west axis. The eastern part, a few dozen km from the country border, is far less developed than other areas. This is a clear manifestation of low settlement attractiveness in the Bug valley and the advancing degradation of these areas. The decline of the areas is also noticeable in demographic indicators (related to the population outflow) and financial (in technical decline of the residential buildings).

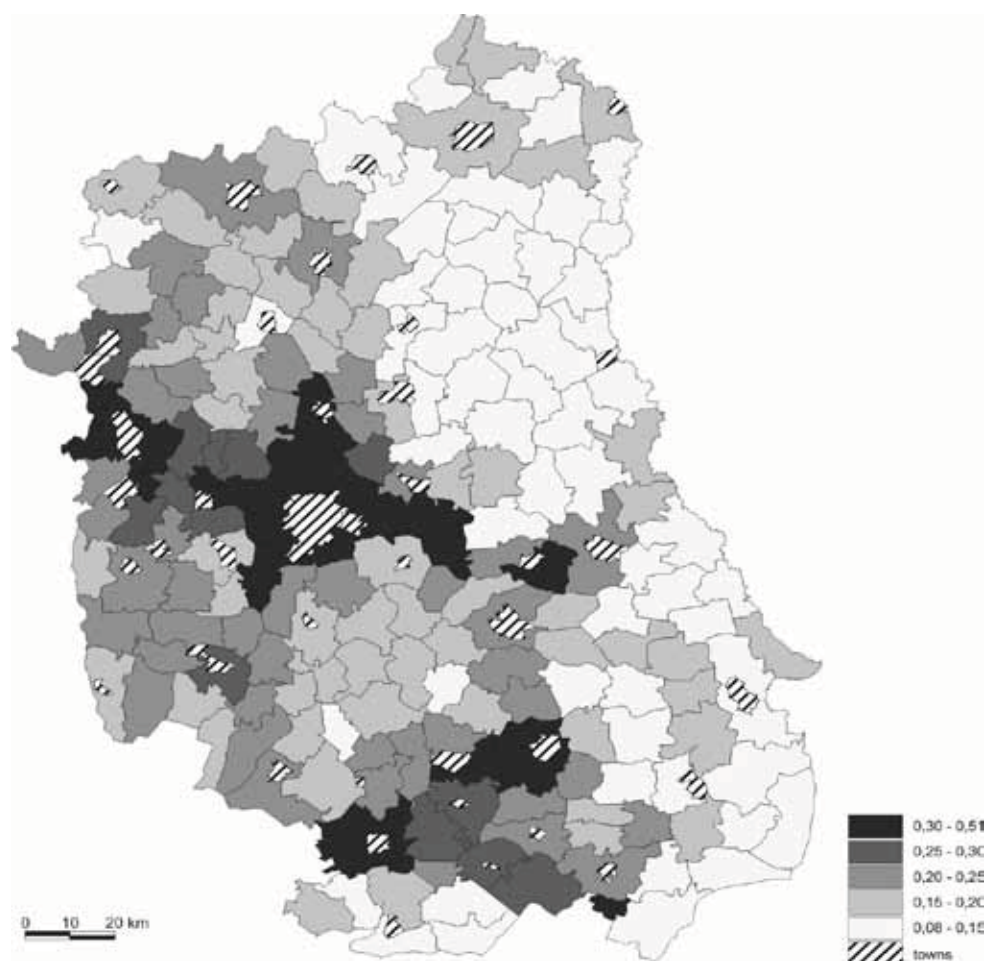


Figure 5. The number of houses per 1 ha of county land, excluding forests

Source: [Gorzym-Wilkowski 2011].

The trends of the rural area changes depend on a number of factors, including the size of the settlement, communication accessibility and the demographic structure of the population. For the last several dozen years, one could observe a process of settlement concentration manifested in the fall of the number of villages and the increase of their average size. Undoubtedly, the potential socio-economic growth is higher for large, dense settlements with only a small range of scattering but a large level of morphological complexity. Whereas, small rural settlements, with simple morphological structures and scattered villages are not vulnerable to such processes [Heffner 2000]. However, the specificity of the Lubelskie Voivodeship makes the reduction of the village number slower, despite the decrease in the population number. Therefore, one may speak about the decrease of the village size (in 2002 the average size of a settlement unit was 521 people, in 2010 – 501 people).

The above mentioned decapitalization of housing substance concerns the different morphogenetic types of villages, yet is concentrated in the area eastwards and southwards from Lublin and is characteristic for small villages, especially the small linear villages, scattered villages and hamlets. Most morphogenetic types of villages are represented in the Lubelskie landscape (Fig. 6). The Lubelskie Upland is characterised by the domination of compact and dense rural settlements. In the area there is a dense network of settlement with characteristic *waldhufendorfs* running for a few kilometres along communication routes. In *Roztocze*, where the settlement network is thinner, the compact row type of village is predominant. In the south east part of the voivodeship near Tomaszów Lubelski, there are numerous disorganised forked villages. Southwards from Biała Podlaska in Polesie Lubelskie, lonely villages are predominant; they intertwine with the row type of villages. In the north-west part of the voivodeship, between Łuków and Lubartów, linear villages can be seen, and near Łuków, they are accompanied by hamlets. According to Duszyńska [1947], the presence of numerous hamlets in this areas can be attributed to physical-geographic conditions – the diversified postglacial landscape does not favour the creation of larger settlements.

Lubelskie Voivodeship is characterised by the significant dispersion of the village settlements. Over 82% of all villages in Lubelskie have fewer than 500 people (as many as 15.5% are the units with fewer than 100 inhabitants). Large villages with more than 2000 people are populated by 0.7% of the total Lubelskie population (Fig. 7). The share of small villages decreases yearly, which may be caused by the above mentioned processes. One may anticipate the coming years will bring further scatter of the settlement network.



Figure 6. The distribution of village shapes in the Lubelskie Voivodeship
1- circular, 2 - oval, 3 - multi-road disorganised type, 4 - slotting, 5 - linear villages, 6 - waldhufendorfs, 7 - line villages, 8 - row villages, 9 - multi-road type, 10 - scattered villages
11 - hamlets

Source: [Duszyńska 1947].

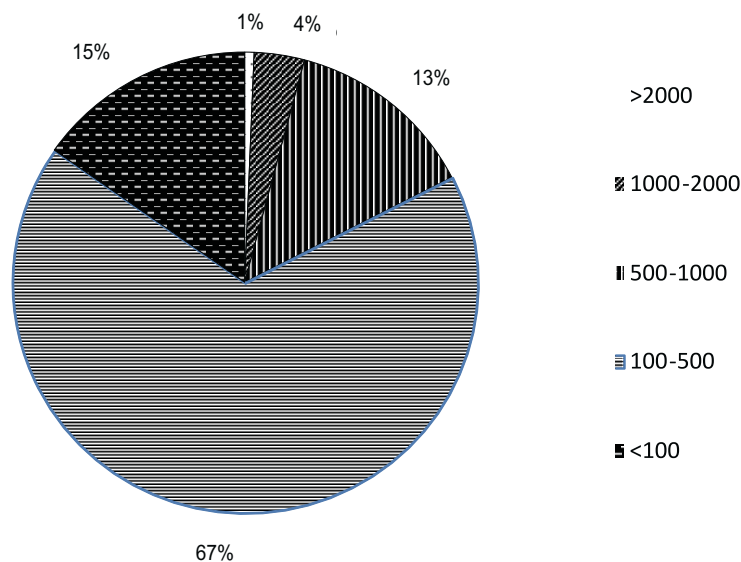


Figure 7. Village population in the Lubelskie Voivodeship in 2002 (in %)
Source: Own elaboration on the basis of statistical data from Central Statistical Office.

Conclusions

The population number changes in rural areas in the Lubelskie Voivodeship in the post-war period were characterised by large territorial differentiation. The increase in the number of people was recorded in only 27% of the villages in the voivodeship. They concentrated primarily in the suburban areas and the centres offering jobs in non-agricultural occupations. The area southwards from Lublin is clearly distinguished due to the largest population number decrease.

In the area of the Lubelskie Voivodeship, one may observe unfavourable demographic processes accompanied by changes in the settlement structure. The process of village disappearance has various rates, yet since 1950 over 50% of villages recorded not only a fall in the number of inhabitants, but also the number of houses. One may anticipate that the areas characterised by a high rate of population loss will experience a degradation of the settlement networks and, consequently, the villages will disappear. Even today the scatter of the rural settlement network is observed.

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