
ANNALES
UNIVERSITATIS MARIAE CURIE-SKŁODOWSKA
LUBLIN – POLONIA

VOL. LXVII, 1

SECTIO B

2012

Maria Curie-Skłodowska University in Lublin, Faculty of Earth Sciences and Spatial Management
Department of Social-Economic Geography

ANDRZEJ MISZCZUK, MONIKA WESOŁOWSKA

Demographic and settlement transformations in peripheral regions (based on the example of eastern Poland)

Przemiany demograficzno-osadnicze regionu peryferyjnego
(na przykładzie Polski wschodniej)

ABSTRACT

The aim of this article is to show specific demographic processes and accompanied transformations of settlement structure in eastern Poland at the turn of the 21st cent. Eastern Poland, covering Lubelskie, Podkarpackie, Podlaskie, Świętokrzyskie and Warmińsko-Mazurskie voivodeships, acquired the features of peripheral area in terms of communication and socio-economic aspects as a result of long-lasting historical processes. Unfavourable demographic processes can be observed in eastern Poland. They are accompanied by changes in settlement structure. Depopulation has significant social and economic consequences. The process increases social polarization between different regions in the country and between rural and urban areas. Moreover, the outflow of young and most active population to other regions or abroad is an important barrier for economic revival in peripheral regions. Consequently, unfavourable socio-economic structure in these areas is consolidated or even strengthened. This primarily concerns Lubelskie and Podlaskie voivodeships.

Key words: eastern Poland, peripheral region, depopulation

INTRODUCTION

The phenomenon of peripherality is complex in terms of its conditions, causes and effects. They can be discussed in both spatial and socio-economic aspects. Peripheral geographic and communication location, meaning the distance from economic centres, accessibility and relatively high costs of travelling may result from the specificity of the geographic environment, but also from geopolitical aspects (particularly in border regions).

Communication peripherality is frequently one of primary causes of socio-economic peripherality that is manifested in both unfavourable processes (depopulation, society aging and “shrinking” sales markets, among others) and their reasons (old employment structure, low GDP *per capita*, etc.).

Eastern Poland, covering Lubelskie, Podkarpackie, Podlaskie, Świętokrzyskie and Warmińsko-Mazurskie voivodeships, acquired the features of peripheral area in terms of communication and socio-economic aspects as a result of long-lasting historical processes. The aim of this article is to show specific demographic processes and accompanied transformations of settlement structure in eastern Poland at the turn of the 21st century.

POPULATION CHANGES AND THEIR RESULTS

In 1990–2010 the number of people in Poland increased by only 0.6%, according to Central Statistical Office. This may be considered as stabilisation, however, a cross section of local units shows a distinctive polarization of demographic processes. They result from two phenomena, i.e. depopulation and suburbanization. While significant part of eastern Poland has a clearly depopulation character, suburbanisation concerns the areas around cities. Its range is correlated with their sizes and growth dynamics (Fig. 1)

One can notice that in the period between the last National Census of Population and Houses in 2002 up to 2009 the changes in population density distinguished eastern Poland from other parts of the country. It is only eastern Poland that registered a decrease by 1.1%, while the other two parts mentioned below showed a slight increase by 0.1% and 0.2% respectively. Consequently, the total number of people decreased by 0.1% in this period (Celińska-Janowicz et al. 2010).

The cross-section of voivodeships in eastern Poland shows differentiated demographic tendencies (Tab. 1). Two groups can be distinguished in this respect. The first includes Podkarpackie and Warmińsko-Mazurskie voivodeships, where the fall in population number in 2002–2010 period was insignificant. Additionally, these regions have positive and significant birth rate. The fall in the number of population is caused by negative migration balance, which, in case of Podkarpackie voivodeship, manifests relatively low and decreasing intensity, whereas, in Warmińsko-Mazurskie voivodeship there is an increasing trend with high nett migration outflow. In the second group, including Lubelskie, Podlaskie and Świętokrzyskie voivodeships, a decrease in the number of people was noted. These voivodeships are characterised by relatively low level of natural losses, with a decreasing trend, however, the migration balance is negative and relatively high. The trend is even higher in Lubelskie and Podlaskie voivodeships. Migrations from Lubelskie and Podlaskie voivodeships are determined by socio-economic features of these regions, as they are the least populated and urbanised parts of the

country. At the end of 2010 they were inhabited by merely 8.7% of the population of Poland, with a majority of people living in rural areas (*Regiony...*, 2011).

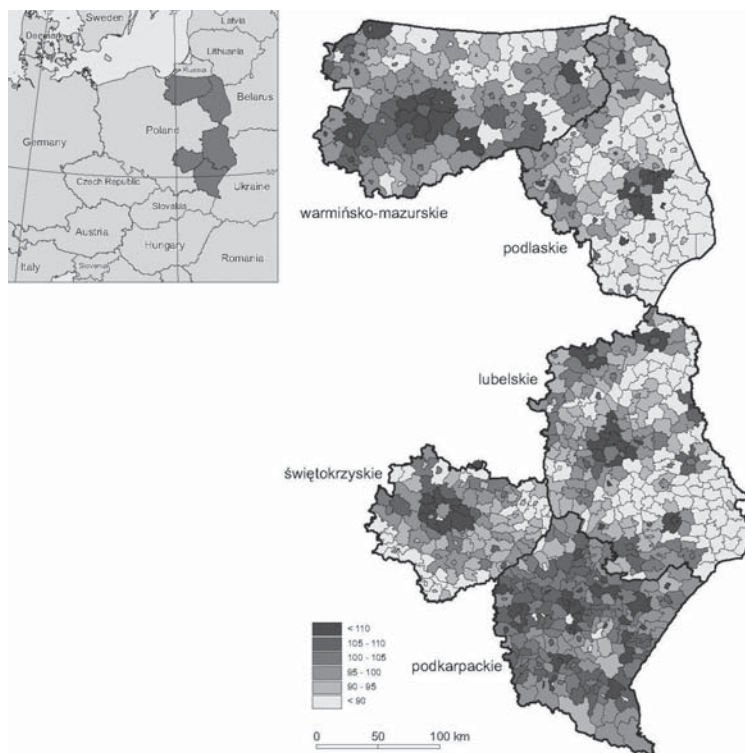


Fig. 1. Changes in population density in Polish communes (gmina) in 1990–2010

Source: Own study on the basis of statistical data from the Central Statistical Office, Bank of Local Data

Table 1. Changes in population, birth rate and migration balance in eastern Poland between 2002 and 2010

Voivodeship	Population in thousands		Birth rate (‰)		Migration balance (‰)	
	2002	2010	2002	2010	2002	2010
Lubelskie	2197.0	2151.8	-0.9	-0.2	-1.7	-2.3
Podkarpackie	2105.1	2103.5	1.6	1.8	-1.2	-0.9
Podlaskie	1207.7	1188.3	-0.1	0.1	-1.2	-1.3
Świętokrzyskie	1295.9	1266.0	-1.3	-1.2	-1.8	-2.0
Warmińsko-Mazurskie	1428.5	1427.2	2.0	2.0	-1.5	-1.9

Source: Own study on the basis of statistical data from the Central Statistical Office, Bank of Local Data

The location of voivodeships in eastern Poland, in the sphere of influence in a form of the border and high share of population that works in ineffective agriculture generate negative migration balance in the region, both country-wide and internationally. The region, however, is not homogenous with regard to migration. The highest migration lost is notable in cities (the move towards suburban zones) and the growth is primarily noted in suburban areas. This results from the outflow of population to suburban areas that is typical of Polish cities (Wesołowska 2006). The factor that played a significant role was the chance of getting employed in non-agricultural institutions. People who live in rural areas participate mainly in internal migrations that cover the capital city in the region, or they migrate to well-developed regions of Poland. The main destinations for migrants from eastern Poland are the following voivodeships:

- Mazowieckie, especially Warsaw – migrants from Lubelskie, Podlaskie and Warmińsko-Mazurskie
- Małopolskie (Cracow) – from Podkarpackie and Świętokrzyskie,
- Pomorskie (Trójmiasto) – from Warmińsko-Mazurskie.

Transnational migrations are less frequent and are typically temporary. However, for the voivodeships in eastern Poland the scale of migration may be larger due to its traditional outflow character. One should remember that official statistics does not reflect the real scale of the problem as migrants frequently do not meet registration obligations, especially in case of temporary migrations lasting over three months.

Using two elements that shape the number of population, i.e. birth rate (BR) and migration balance (MB), the following types may be named, on the basis of modified J.W. Webb's methodology, after Celińska-Janowicz et al. (2010):

- increasing type, i.e. the combination of BR and MB that guarantees increase in population number,
- stabilising type, i.e. stabilised number of people in a given period,
- depopulation type I (traditional), whose major factor that limits population number is negative MB,
- depopulation type II (new), in which the major factor that limits population number is the natural loss (negative BR).

The most frequent type in eastern Poland is a traditional depopulation type. The rising type covers a group of counties (powiat), administrative units around Rzeszów and suburban counties around voivodeship capital cities (Białystok, Kielce, Lublin, Olsztyn). In mid-eastern part of Lubelskie voivodeship there appears a new, more dangerous type of depopulation, from demographic and socio-economic point of view, that is related to natural losses.

Due to the above-mentioned processes the area is losing its population. The perspectives concerning the population of eastern Poland until 2035 are presented in Table 2. According to the estimations by the Central Statistical Office, the re-

gion will have lost about 10% of the population by 2035. The largest decreases are going to be recorded in Lubelskie and Świętokrzyskie.

Table 2. The present and forecast number of people in eastern Poland in 2035

Voivodeship	Population (in thousands)				Population loss	
	2010	2020	2030	2035	thousands	%
Lubelskie	2151.8	2063.1	1946.6	1871.1	280.7	13.0
Podkarpackie	2103.5	2085.8	2037.4	1992.7	110.8	5.3
Podlaskie	1188.3	1153.5	1105.6	1072.3	116.0	9.8
Świętokrzyskie	1266.0	1202.6	1125.2	1076.9	189.1	14.9
Warmińsko-Mazurskie	1427.2	1400.6	1348.0	1309.4	117.8	8.3
Eastern Poland	8137.0	7887.6	7562.8	7322.4	814.6	10.0

Source: Own study on the basis of statistical data from the Central Statistical Office, Bank of Local Data, and *Prognoza demograficzna...*, 2009.

Negative phenomena that accompany depopulation processes include significant acceleration of aging processes (the dynamics of the increase of population number at post-productive age was 109.6 in 2002–2010). Presently, elderly people (over 60 years of age) constitute 16.8% of the whole population in eastern Poland (Tab. 3). The communes from Świętokrzyskie, Lubelskie and Podkarpackie are characterised by a significantly higher level of demographic aging (Fig. 2).

Table 3. The population in pre-productive, productive and post-productive age in eastern Poland in 2002 and 2010 (in %)

Voivodeship	Population in (%)					
	pre-productive age		productive age		post-productive age	
	2002	2010	2002	2010	2002	2010
Lubelskie	23.8	19.2	60.0	63.2	16.2	17.7
Podkarpackie	25.6	19.9	59.8	64.1	14.5	16.0
Podlaskie	24.1	18.8	59.5	63.6	16.3	17.6
Świętokrzyskie	22.7	18.2	60.6	63.6	16.7	18.3
Warmińsko-Mazurskie	25.0	20.0	61.9	65.2	13.1	14.8
Eastern Poland	24.4	19.3	60.3	63.9	15.3	16.8

Source: Own study on the basis of statistical data from the Central Statistical Office, Bank of Local Data

Due to aging processes and other demographic processes, e.g. excessive and long-lasting population flow, problems with reproduction, unfavourable sex structure, the area of eastern Poland is considered by numerous authors as a problematic area (Jelonek 1988; Gawryszewski 1989; Bański 2008).

An increased balance of productive population with the post-productive population is a direct economic effect of the process. Presently (2010) the value of the factor is one of the highest in Poland, ranging from 53.4 in Warmińsko-Mazurskie and 58.3 in Lubelskie (*Regiony...*, 2011).

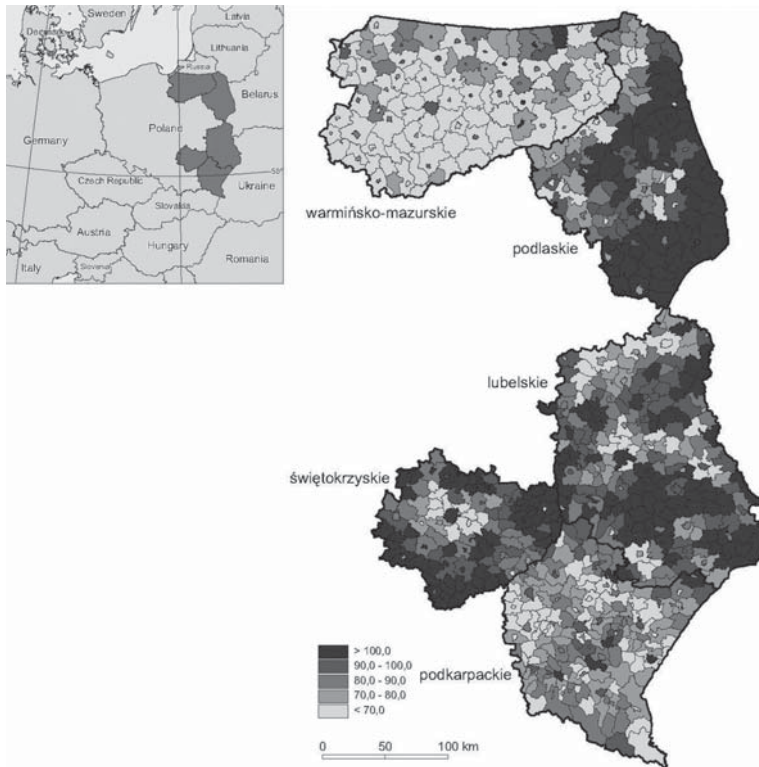


Fig. 2. The old age index in Eastern Poland communes (2010)

Source: Own study on the basis of statistical data from the Central Statistical Office, Bank of Local Data

SETTLEMENT TRANSFORMATIONS

In traditional landscape of eastern Poland most morphogenetic types of villages are represented (Szulc, 1995). Warmińsko-Mazurskie, north part of Lubelskie and Świętokrzyskie are characterised by thin settlement network, with predominant road and linear type. In Podlaskie and north-east part of Lubelskie, lonely villages interlace with linear villages and in the central part of Lubelskie there is a dense network of residential districts with characteristic linear villages stretching for a few kilometres along communication traits. Eastern Poland is also characterised by numerous hamlets, which, according to E. Duszyńska (1947),

can be attributed to physical and geographical conditions – diversified postglacial landscape is not favourable to build larger settlements. Still, these traditional spatial rural settlements undergo certain transformations.

The directions of changes in rural areas depend on a number of factors including the size of settlement, its accessibility and demographic structure, among others. Generally, in eastern Poland and in other parts of the country the process of settlement concentration was observed. It was manifested in a decreasing number of towns and increasing of their average size. Undoubtedly, the prospects for socio-economic development are larger for bigger settlements, which are concentrated, have lower range of dispersion, and are morphologically more complex. On the other hand, small rural settlements with loose and simple morphological arrangements do not favour such processes (Heffner, 2000). However, it is specific for eastern Poland that even though the number of people decreases, the fall in the number of settlements is slower, and the increase in average population is at the minimum level. In some regions – Lubelskie and Świętokrzyskie, the decrease of settlement size can be observed (Tab. 4).

Table 4. Changes in number and size of settlements in eastern Poland in 2002–2010

Voivodeship	Number of settlements		Average size	
	2002	2010	2002	2010
Lubelskie	4214	4293	521	501
Podkarpackie	2208	1752	953	1201
Podlaskie	3981	3842	303	309
Świętokrzyskie	2861	2852	453	444
Warmińsko-Mazurskie	3914	3952	365	361
Eastern Poland	17178	16691	479	488

Source: Own study on the basis of statistical data from the Central Statistical Office, Bank of Local Data

Rural constructions are more resistant and react to demographic processes with delay. The appearance of desolate residential buildings in eastern Poland is the consequence of depopulation processes. Certain peripheral areas, with predominantly agricultural function, are less attractive in terms of their environment and investments for different groups of people. Therefore, the trend to possess a “weekend house” or a “second home” in the countryside is limited in these areas (Kowalczyk, 1994). According to the National Census of Population and Houses in 2002, there were 350,000 uninhabited houses in rural areas (8.4% of all rural houses). In the settlements in eastern Poland the percentage was diversified and ranged from 6.7% of the total number of houses in Warmińsko-Mazurskie voivodeship to 13.5% in Podlaskie (*Mieszkania niezamieszkałe*, 2002). However, one should remember that

a large number of inhabited houses (38.8%) was made up by the houses intended for permanent residence. These were houses in transition during the change of resident, new, not yet inhabited houses, houses under reconstruction and renovation.

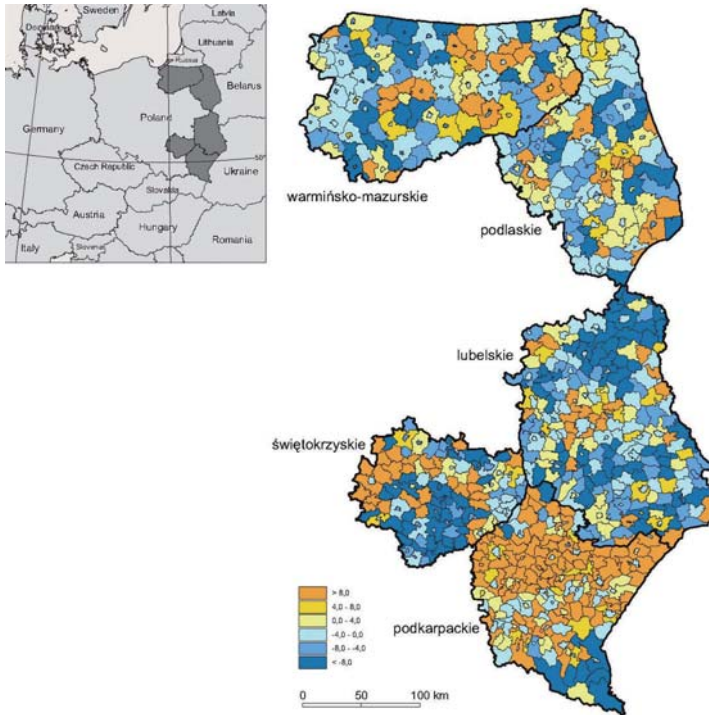


Fig. 3. The dynamics of changes in average size of settlements (towns) in communes in eastern Poland in 2002–2010 (in %)

Source: Own study on the basis of statistical data from the Central Statistical Office, Bank of Local Data

The transformations in settlement in eastern Poland result from depopulation and are of qualitative and quantitative character. In the former case, the population decline in a settlement decreases its rank in the local settlement system. Yet, quantitative changes are based on shrinking and disappearing of certain settlements (or their connecting to larger towns). The process of village disappearance is of various speed. The research conducted in Lubelskie voivodeship shows that in 1950–2002, a real decline concerned over half of villages in the voivodeship (Wesołowska, 2011). In aging villages there are no attempts to modernise buildings. The settlement matter is frequently degraded. The number of small and very small villages is increasing, which results from the above-mentioned processes. The phenomena of village disappearance suggest that next years are going to dilute the network of rural settlements in the region.

Building activities are an indicator of transformations in settlement network. Socio-economic processes observed for a number of years indicate clearly the changes in two major areas: in suburban spheres of larger cities and in the regions with significant tourist attractions (Wesołowska, 2006). The communes with very high building activity index are located near urban centres. The influence of voivodeship capital cities is particularly high. Their influence for residential architecture is noticeable in rural areas in the first and second circle of communes surrounding the city (Fig. 4). The spread of cities undoubtedly results from multiple socio-economic powers in local spaces. The interests of individual users of the spaces are predominant. Free market is a natural factor that deteriorates spatial order, including the order in the vicinity of the cities. The landscape that had not been diversified until recently is being gradually modified and is degraded by implementing strange buildings into traditional rural settlement (Bański, Wesołowska 2010). Despite the increasing number of houses in suburban areas, the patterns and indicators of rural character of areas tend to disappear.

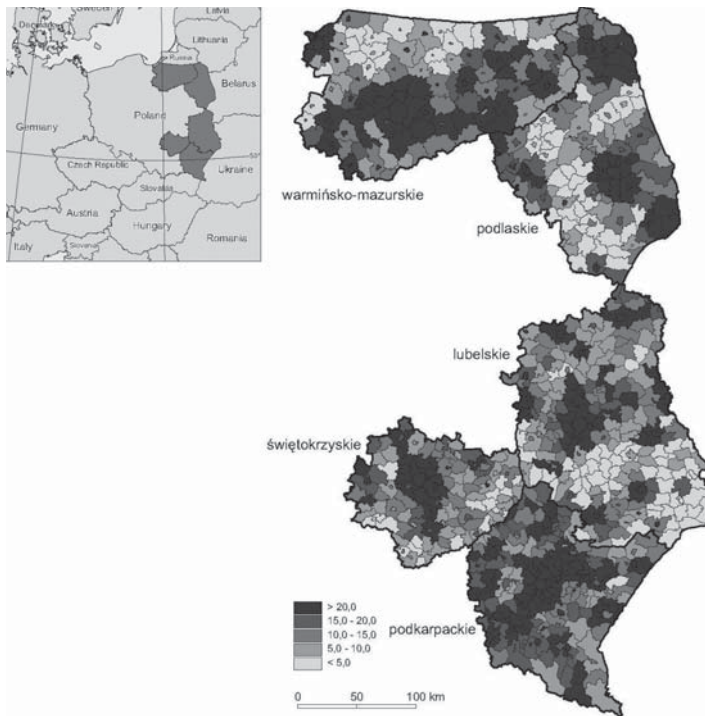


Fig. 4. Houses handed over to users in 2002–2010 (per 1,000 people)

Source: Own study on the basis of statistical data from the Central Statistical Office, Bank of Local Data

CONCLUSION

Unfavourable demographic processes can be observed in eastern Poland. They are accompanied by changes in the settlement structure. Depopulation has significant social and economic consequences. The process increases social polarization between different regions in the country and between rural and urban areas. Moreover, the outflow of young and most active population to other regions or abroad is an important barrier for economic revival in peripheral regions. Consequently, unfavourable socio-economic structure in these areas is consolidated or even strengthened. This primarily concerns Lubelskie and Podlaskie voivodeships.

The transformations of settlement can also be observed. Suburban areas, especially around capital cities of voivodeships, are places of extensive construction works, while in rural peripheral areas the settlement networks are being diluted. The process has different speed, yet wherever the population declines, the degradation of settlement can be expected. Consequently, many villages are going to disappear.

REFERENCES

- Bański J., 2008: *Wiejskie obszary problemów demograficznych*, [in:] *Wybrane zagadnienia systemów informacji przestrzennej i obszarów problemowych rolnictwa w Polsce*, Studia i Raporty IUNG-PIB, 12, Program Wieloletni 2005–2010, IUNG, Puławy, 93–102.
- Bański J., Wesołowska M., (eds.), 2010: *Transformations in housing construction in rural areas of Poland's Lublin region – Influence on the spatial settlement structure and landscape aesthetics*, Landscape and Urban Planning, 94 (2010), Elsevier, 116–126.
- Celińska-Janowicz D., Miszczuk A., Płoszaj A., Smętkowski M., 2010: *Aktualne problemy demograficzne regionu Polski wschodniej*, „Raporty i Analizy EUROREG”, no 5.
- Duszyńska E., 1947: *Kształty osiedli wiejskich w woj. lubelskim*, [in:] *Planowanie Przestrzenne, Region Lubelski I*, Wydawnictwo Ministerstwa Odbudowy, no 7, Główny Urząd Planowania Przestrzennego, Warszawa, 43–45.
- Gawryszewski A., 1989: *Wiejskie obszary wyludniające się*, [in:] *Współczesne przemiany regionalnych systemów osadniczych w Polsce*, P. Korcelli, A. Gawryszewski (eds), Prace Geograficzne, 152, IGiPZ PAN, Warszawa, 91–106.
- Heffner K., 2000: *Typologia gmin wiejskich w Polsce pod kątem widzenia układów osadniczych*, [in:] *Lokalne bariery rozwoju obszarów wiejskich*, A. Rosner (ed.), Fundacja Programów Pomocy dla Rolnictwa (FAPA), Warszawa, 65–85.
- Jelonek A., 1988: *Obszary problemowe w zakresie zagrożeń demograficznych w Polsce*, [in:] *Problemy geografii osadnictwa i ludności*, Seria Geografia, 42, UAM, Poznań, 67–77.
- Kowalczyk A., 1994: *Geograficzno-społeczne problemy zjawiska „drugich domów”*. Wydział Geografii i Studiów Regionalnych UW, Warszawa, 178.
- Mieszkania niezamieszkałe 2002*, GUS, NSP 2002, Warszawa 2003.
- Prognoza demograficzna ludności Polski na lata 2008–2035*, GUS, Warszawa 2009.
- Regiony Polski*, 2011: Główny Urząd Statystyczny, Warszawa.
- Szulc H., 1995: *Morfogeneza osiedli wiejskich w Polsce*, Prace Geograficzne, 163, IGiPZ PAN, Warszawa.

Wesołowska M., 2006: *Rozwój budownictwa mieszkaniowego a przemiany przestrzenne wsi województwa lubelskiego*, Studia Obszarów Wiejskich, vol. X, Warszawa.

Wesołowska M., 2011: *Mieszkania niezamieszkałe na obszarach peryferyjnych Lubelszczyzny*, [in:] *Wiejskie obszary peryferyjne – uwarunkowania i czynniki aktywizacji*, Studia Obszarów Wiejskich, vol. XXVI, Warszawa, 175–187.

STRESZCZENIE

Celem artykułu jest próba ukazania specyfiki procesów demograficznych oraz towarzyszących im zmian w strukturze osadniczej peryferyjnego obszaru Polski wschodniej na przełomie XX i XXI wieku. Polska wschodnia, obejmująca swym zasięgiem województwa: lubelskie, podkarpackie, podlaskie, świętokrzyskie, warmińsko-mazurskie, w wyniku długotrwałych procesów historycznych nabrała cech obszaru peryferyjnego, zarówno w aspekcie komunikacyjnym, jak i społeczno-ekonomicznym. Na obszarze Polski wschodniej mamy do czynienia z niekorzystnymi procesami demograficznymi, którym towarzyszą zmiany w strukturze osadniczej. Depopulacja ma wyraźne konsekwencje społeczne i ekonomiczne. Proces ten pogłębia polaryzację społeczną pomiędzy regionami kraju oraz między miastami i obszarami wiejskimi. Ponadto, odpływ ludności młodej i najbardziej aktywnej do innych regionów w kraju lub za granicę staje się poważną barierą dla ożywienia ekonomicznego obszarów peryferyjnych. W rezultacie, dotychczasowa niekorzystna struktura społeczno-gospodarcza tych terenów nie tylko się utrwała, ale nawet może się pogłębiać.

Słowa kluczowe: Polska wschodnia, region peryferyjny, depopulacja