DEPOPULATION IN EU COUNTRIES AND DISTRIBUTION OF SPARSELY POPULATED TERRITORIES IN LITHUANIA

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Abstract. Depopulation is a wide spread phenomenon in EU, especially in the eastern border countries. It has been causing certain negative socio-economic consequences for several decades. However the pace of depopulation and consequently arising problems are different in different places. Big international sparsely populated region is under formation in the cross border region of south-eastern Latvia, eastern Lithuania and north-eastern Poland. It even spreads outside EU border involving areas in western Belarus, Russia or Ukraine. The main aim of this paper is revelation of these processes, their reasons as well as main socio-economic consequence. The main attention is paid to the analysis of trends of changes of sparsely populated territories in Lithuania and what social and economic consequences appear.

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Introduction. Sparsely populated territories (further SPT) as the research object became relevant in Lithuania more than ten years. This report is based on the data received during the several surveys. The newest survey is still lasting and is implemented by the scientists from Lithuanian social research centre Human geography department. This research is funded by a grant (No. SIN-02/2012) received from the Research Council of Lithuania.

The SPT problem in Europe is not new and especially in Nordic countries. This fact is substantiated by the existence of the North sparsely populated territories organization (NSPA). This institution is carrying out regular monitoring of the SPT in Nordic region [4]. In Lithuania SPT is also increasingly becoming a serious challenge for society and the state. The ways to solve the problem are being sought. However, SPT is still rapidly increasing. This report is dealing with several aspects of this problem.

Depopulation in European countries. Analysis of the European demographic trends of the end of the 20th–the beginning of the 21st centuries prompts the following issue: perhaps it is high time the traditional model of demographic evolution was revised and the new fifth stage of demographic development – depopulation – recognized. Quite a while, population ageing, low and decreasing birth rates, low natural increment and even natural depopulation have been the main demographic trends in many European states. This is especially true about the Central and Eastern Europe where demographic crisis has become evident. The negative changes of population number in some European countries in the last twenty years are intimidating, especially focussing on Central and Eastern Europe (including Lithuania) [2].

The number of European population has been decreasing since 2000. The rates of population growth in other regions of the world also have been falling. The demographic trends will remain non-consoling for some time in Europe [9]. According to the moderate scenario, the population decrease will continue until 2060. If in 2000, the population number in Europe amounted to 728 million in 2050 it will amount to 632 million. The depopulation trends will be especially strong in Eastern Europe where the population may decrease from 305 to 222 million. Rates of depopulation will be slower in Southern Europe. Western Europe will preserve its population whereas slight growth of population is expected in Northern Europe. According to the data of “Eurostat”, the highest depopulation rates among the EU member states in 2010 were observed in Lithuania (0.62 %), Latvia, (0.57 %), Bulgaria (0.56 %) and Germany (0.25 %) [7].

Therefore, the number of SPT in EU is increasing. Most of them are concentrated in Northern Europe. According to “Eurostat” data, in 2000 there were 33 NUTS 3 regions with the population number lower than 15 people per km$^2$. Meanwhile, in 2010 the number reached 37 NUTS 3 regions, despite the fact the general EU population density increased from 112,3 till 116,6 people per km$^2$ [3].

Sparsely populated territories in Lithuania. The demographic situation in Lithuania does not a lot differ from other Central and Eastern European countries: low birth rate, large emigration, relevant population ageing process, etc. The country survives the demographic crisis. In the country appears depopulation as every year
we are loosing such number of residents like we would loose sizeable country’s city. In Lithuania it is one of the worst situations in European scale. However, for us as geographers is more interesting territorial dimension of this problem. Therefore, more than 10 years ago we started to concern about sparsely populated territories in Lithuania and other countries, and the spread of them. The first attempts to calculate the sparsely populated territories were implemented in 2000. At that time it was recorded 41 local units (eldership), whereas in 2006 were counted 70. Meanwhile, currently there should be around 184 such local units (or 45% of all rural LU). The large growth rate of sparsely populated territories motivated to implement the deeper and broader investigations.

In Lithuania the majority of SPT are concentrated in the forested North-eastern and Southern parts of the country, where the rural population density is less than 12.5 people per km$^2$. The area that is occupied by SPT covers 45 % of state territory (Fig. 1). Besides, SPT join into vast continuous regions that extend even the country’s border towards Latvia, Poland, Belorussia. These are the territories that might be characterized by the distinctive and usually unacceptable demographic, economic, social and other indicators. For instance, over the last decade in SPT the number of residents is decreasing more than 2 % per year and in some places even by 4 %. Even exists such local units where are no births at all during the year and the elderly amount around 50 and even more percent of all local residents.

Figure 1 – SPT in Lithuania in 2011 (where rural population density is less than 12.5 people per km$^2$).

**The peculiarities of SPT system settlements.** Lithuanian network of SPT settlements, its development distinguishes itself with some peculiarities as well. During the Soviet period a planned reorganization of settlements was implemented in Lithuania. According to the concept of unified settling system, a settlement
network was developed by joining neighbourhoods of various size and function into a territorial complex. The development of rural settlements was organized according to the collective farm development of that time. In order to facilitate settlements it was planned to develop around 250 micro regional centres (the majority of them – naturally formed towns) and to establish central and subsidiary settlement network in every neighbourhood taking local conditions into account.

The reorganization of rural settlements was essentially connected to the development of agricultural production. At the end of Soviet period there were 737 collective farms (kolkhoz) and 282 soviet farms (savchoz) [10], in which – 1086 central farming settlements (almost half of them also had functions of a district centre) and 1132 subsidiary settlements (including former central settlements, that turned into subsidiary after farm enlargement). An absolute majority of farms’ (over 90%) territories had two or more larger settlements close to a central settlement at the end of Soviet period [8].

During the Soviet period individual farms were being destroyed and residents moved to central settlements (they grew rapidly), however, an overall number of residents in rural areas decreased; traditional villages with approximately 50-200 residents decreased the most (number of residents decreased 3-4 times). The decrease of rural residents’ number influenced the formation and development of SPT.

After the reestablishment of independence depopulation process continues in rural areas of Lithuania: from 2001 to 2012 residents’ number in rural areas decreased by 13.3 % [5]. According to our calculations SPT occupied 27% of all territory of Lithuania in 2001, and in 2011 – already 45% of the territory. A similar part of all rural settlements in Lithuania is concentrated in SPT (in 2011 – around 45%), but only around 26% of all rural residents of Lithuania live there. In 2011 an average village size in Lithuania was 60 residents, and 35 in SPT. As a result, SPT mainly differs not only by more sparse population of the territory, but also by smaller settlements: the biggest part (around a half) of SPT constitutes from small villages with 1-9 residents, while villages with over 500 residents are in only every forth SPT local unit. In general, SPT distinguishes themselves by distribution tendencies in the smallest and largest rural settlements in the context of Lithuania’s rural areas. More than half (55%) of all small villages (1-9 residents) of Lithuania are situated in SPT, in which around 6 % of SPT residents live, while in other rural areas of Lithuania the part of all their residents does not reach 2% (i.e. 3 times less than in SPT). In general, a direct correlation is witnessed in Lithuania: increasing a rural category (according to a number of residents), a common number of people living in this type of villages increases (the part as well). However, it is a bit different in SPT: most people live in villages with 200-499 residents (33,7%), and only around 10,5% of SPT residents live in villages with over 500 residents, meanwhile in other rural areas in Lithuania around 39% of rural residents live in such settlements, i.e. a part of people living in these villages is around 4 times bigger than in SPT.

Lately the tendencies of decreasing number of residents in rural territories of Lithuania are increasing in all Lithuanian regions, except the big city areas, due to...
emigration and negative natural growth (because of residents’ old age). If during Soviet period individual farms and villages with approximately 50-200 residents were depopulated the greatest, so during the last two decades the number of residents has been reducing in villages of all categories. While the number of residents is reducing, the number of settlements is reducing as well because the number of villages without residents is growing: in 2011 there were 4200 settlements without residents in Lithuania, more than half of them – 2520 – in SPT.

**Abandoned agricultural land in SPT.** After Lithuania regained independence in 1990, after starting land reform and conducting land restitution, agricultural recession began, which considerably increased the area of abandoned agricultural land. This process had clear regional differences: the appearance of abandoned land was temporal in territories with favourable agricultural conditions and after a few years there was practically no land of this category left, however, the abandoned land area in territories with unfavourable agricultural conditions was increasing up to joining EU in 2004, and only later began to reduce. This process especially affected Eastern Lithuania, which is distinguished by landscape with hilly land, sandy plains, lakes and forests. In the end of the Soviet period abandoned agricultural land occupied around 1% of the territory, but at the moment it consists of around 20% of the territory in Eastern Lithuania, and in some especially unfavourable territories – even more [1]. It is a tendency that the areas of SPT location and less favourable agricultural territories essentially correlate.

Abandoned agricultural land area in Lithuania has reduced from 1,01 million ha to 0,9 million ha from 2007 till 2010 [6]. It especially manifested itself in Eastern Lithuania, where there were the most of this type of land. At the moment it is beneficial to declare and work on agricultural land even without gaining any profit because of the EU support. As a result in some districts’ municipalities abandoned land area had reduced almost double from 2003 to 2011 (Utena, Varėna, Ignalina).

Unfavourable agricultural conditions, not the lack of people, mainly hampers farming: low crop capacity of the soil, complicated landscape, big plot division, condition of melioration systems and old land owners’ age. Our latest research (of 2012) showed that agricultural activities as the main source of income is relevant to only 27% of Eastern Lithuanian farmers, but pension and other social payments – to more than a half of farmers participating it the research. It would be possible to plant a forest on a part of abandoned land because it would little change the income of rural residents, however more than 60 % of respondents’ would not want to do so.

**Increase in territorial divide.** Depopulation processes, decline of a rural settlements network, a spread of less favourable agricultural land and abandoned land are increasing social and territorial residents’ divide. It reduces economic, social and cultural development opportunities. These processes are especially well seen when analyzing the decline in educational institutions’ and other social function institutions’ network. In sparsely populated rural districts of Lithuania the school was and will be one of the most important institutions, assuring the base of community’s life. However, educational institutions’ network is declining because of a rapid decline in number of residents and students. In 2000-2011 student number in Lithuania reduced down to 35 %, in recent years – by 5-6 % every year. It is
natural and inevitable that the common education school network is rapidly declining. During the last ten years almost 1045 schools (44%) were closed in Lithuania, and over 300 schools are about to be closed in a few upcoming years. The school network in SPT is declining especially fast.

Other necessary institutions, such as cultural centres, kindergartens, libraries, health care institutions, post and bank offices, stores are also declining. The possibilities to use public transport are also reducing. It decreases meeting the most necessary needs, availability of service companies, worsens living conditions, activities and work possibilities, increases social tension, destroys an expectation of improving demographic situation. Even people’s consciousness is changing, more and more they think of themselves as residents of periphery, forgotten by the state, left on their own. The massive renovation of schools, roads and other public service institutions is not helping either.

REFERENCES