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Tijana Vujičić, University of Banja Luka, tijana.vujicic@aggf.unibl.org

## SHRINKING RURAL AREAS OF REPUBLIC OF SRPSKA

### *Abstract*

Globalization produced a disparity manifested through spatial polarization - growing and shrinking territories. Shrinkage is an increasingly global phenomenon that affects cities, villages, and entire regions around the world. Population loss and economic decline make these areas vulnerable - its vitality and sustainability are endangered. Starting from the assumption that the rural areas are particularly affected by shrinkage, this research addresses stagnant trends in the northwest region of Bosnia and Herzegovina. The aim of this research is to identify and assess the level of rural shrinkage in the region, as well as to underline directions for future action in response to these negative trends. The results of the research are presented cartographically using Arc GIS software.

*Keywords: shrinkage, village, population, households, dwellings, GIS*

## СТАГНАЦИЈА РУРАЛНИХ ТЕРИТОРИЈА РЕПУБЛИКЕ СРПСКЕ

### *Сажетак*

Глобализација је произвела диспаратитет и просторну поларизацију манифестовану кроз појаву полова стагнације и полова раста. Стагнација постаје све глобалнији феномен који погађа градове, села и цијеле регије. Губитак популације и економски пад чине ова подручја рањивим, а њихова виталност и одрживост су уржени. Полазећи од претпоставке да су рурална подручја посебно погођена смањењем, ово истраживање се бави стагнантним трендовима у сјеверозападној регији Босне и Херцеговине. Циљ истраживања је да се идентификује и процијени степен стагнације руралних подручја региона и да се укаже на правце будућег дјеловања. Резултати истраживања су приказани картографски коришћењем Arc GIS софтвера.

*Кључне ријечи: стагнација, село, популација, домаћинства, станови, ГИС*

## 1. INTRODUCTION

The shrinking phenomenon has been researched extensively in literature since the early 21st century. Studies show that as early as the late 1990s, the phenomenon of shrinkage, manifested in population loss and economic decline, was more pronounced than the phenomenon of urban growth and development [1]. Scientists believe that the emergence of this phenomenon was primarily caused by changes in the global economy [2] and second demographic transitions [3]. The global economic competition has resulted in spatial polarisation in which the metropolitan development areas of cities stand out, while on the other hand, a large number of cities have faced the problem of shrinkage. On the other hand, post-industrial society, by changing the way of life, which primarily implies the postponement of parenthood, indirectly causes a decline in natural population growth and aging of the population, and ultimately its decline. Although this phenomenon shows universal (global) characteristics, with multidimensional effects in the social, economic and physical domains, however, the forms of shrinkage and its dynamics largely depend on local specifics. Given that the shrinking phenomenon is relatively new, the affected countries are developing recovery strategies, where fostering social dialogue between different stakeholders (academia, businesses, local bodies, citizens, NGOs) is one of the key elements and first step toward the regeneration. The Knowledge Alliance for Social Innovation in Shrinking Villages (KINESIS) is one of the international cooperation platforms that is focused on shrinking areas since it creates an international living lab to exchange best practices and innovative ideas developed across Europe [4].

The scale of this phenomenon at the global level has been discussed in the international studies and projects from the beginning of the 21st century [5, 6], while at the local level in Bosnia and Herzegovina (B&H), only individual scientific research has been conducted [7, 8]. The focus of all these studies was primarily on the stagnation of urban areas – cities, while the analysis of the rural territory was in the background. The more recent study conducted by the European Spatial Planning Observation Network (ESPON) puts focus on the shrinking rural areas [9]. This research shows that the countries of Southeast Europe are particularly affected by rural shrinkage, but B&H and its neighboring non-EU countries are not covered by this study. Considering that Bosnia and Herzegovina is a low-urbanised country [10] with dominant rural areas, research focused on the shrinkage not only of cities but also of rural areas are essential for understanding of this phenomenon, its spatial dynamic and distribution at regional level. In order to adequately deal with the problems caused by stagnation, society primarily needs to identify and map shrinkage patterns and assess its extent.

Therefore, this paper deals with the identification and mapping of shrinkage patterns in rural areas of Bosnia and Herzegovina. It is assumed that in the period after the civil war in B&H, decline was a more dominant process than the process of growth and development and that most villages in the northwestern (NW) region were affected by shrinkage. The research polygon includes the territories of the villages of 19 municipalities in the northwestern region of Bosnia and Herzegovina, which territorially and administratively belong to the Republic of Srpska (RS) as an independent entity. The research covers movement of population, households and dwellings taken from official censuses. The results of the research were presented cartographically using ArcGIS software. The aim of the research is to identify the extent of shrinkage in rural areas and to investigate the spatial dynamic of this phenomenon. Additionally, the paper discusses the causes and consequences of stagnation and highlights limitations in research.

## 2. METHODOLOGY

The research of the shrinking phenomenon includes the analysis of census statistics for rural areas of 19 municipalities in the northwestern region of Republic of Srpska – Bosnia and Herzegovina: Banja Luka, Brod, Gradiška, Derventa, Doboje, Kneževci, Kozarska Dubica, Kotor Varoš, Laktaši, Modriča, Mrkonjić Grad, Novi Grad, Prijedor, Prnjavor, Srbač, Teslić, Čelinac, Šamac and Šipovo. The research addresses the identification, assessment and mapping of stagnant trends, as well as the typological classification of municipalities affected by rural shrinkage. The analytical framework of rural shrinkage research is defined by determining: 1) criteria relevant for assessing rural stagnation, 2) shrinking indicators, 3) thresholds for selected criteria in relation to which rural decline or growth is identified and 4) time frame reference for identified problem. The criterion of data availability is set as an additional criterion that accompanies the analysis according to the previous elements.

The key criteria for conducting the research are population size, number of households and number of dwellings, monitored through official census statistics [11, 12, 13]. The population includes citizens of Bosnia and Herzegovina i.e. people whose place of residence have been in municipalities

of NW region of Republic of Srpska from 1953 to 2013. The household implies a family or a single-person household, who occupies the entire dwelling unit or its part. The dwelling is a self-contained construction unit intended for housing.

Data by certain criteria for rural areas are obtained through parameters that are defined for the corresponding census year as the difference between the total value for the municipality and the value for the city. More precisely, this difference represents the total value for a certain parameter for all villages of one municipality for a certain census year – in summary. For example, the population of the villages of Banja Luka in 2013 was 44 994 inhabitants, which is the difference between the total population of the municipality (180 053) and the population of the city (135 059). In order to gain a clearer picture of the phenomenon, its characteristics, as well as to understand the changes and basic dynamic patterns it is preferable to monitor the growth-decline flows of the village in extensive time periods. Therefore, a sixty-year period (1953-2013), with three timeline in the years of official censuses (1953, 1991 and 2013), was defined as a broader time frame for monitoring total trends according to all criteria. Observing the growth-decline flows as dynamic nonlinear processes, it is very important to define tipping points in the evolutionary flow of the village. The civil war 1992-1995 is indisputably an important tipping point in the area of B&H and RS. Therefore, the research draws parallels and defines changes in relation to the period before and after the war in all aspects important to the topic. Based on preliminary research on this phenomenon, it is assumed that the key stagnant changes occurred after the civil war in B&H, i.e. after the 1991 census. Hence, this 22-year period from 1991 to 2013 is chosen as a reference time frame for indicating shrinkage and testing the hypothesis. The key indicator of rural shrinkage is defined as a decline by any criterion greater than 0.15% per annum in the period 1991-2013, or decline higher than 3% in the total period of twenty-two years (the time between two censuses). In addition to stagnant trends, villages can record stable trends from -0.15% to + 0.15% per annum, and increasing trends  $> + 0.15\%$  per annum. Observed in the total period from 1991 to 2013, changes ranging from -3% to + 3% indicate stable states, and those over 3% indicate growth trends.

In international studies dealing with the shrinking cities (CIRES and Shrinking Cities), the main criterion for their classification was the level of population decline [5, 6]. Following the example of the previously mentioned studies, this research classifies municipalities according to the level of shrinkage of their rural territories. Specifically, municipalities are classified based on the percentage decline of the rural population for the total 22-year period according to the following model:

- 3% - 10% - rural areas with a very low level of decline
- 10% - 25% - rural areas with a medium level of decline
- 25% - 50% - rural areas with a high level of decline
- 50% - 75% - rural areas with a very high level of decline
- Over 75% - extinction of village

The classification of growth trends is carried out by analogy with the classes defined for decline. Additional (sub)classifications of declining villages can be made on the basis of two other criteria – the number of households and the number of dwellings. These two criteria help to better understand the spatial consequences of shrinkage and assess the level of use of the existing housing stock. The results of the research are presented cartographically using ArcGIS Pro software.

### 3. RESULTS

According to the proposed model, the research was conducted, which is presented in the text below separately for each of the criterion. Key relations and comparisons of results are based on two time periods, 1953-1991 (38 years) and 1991-2013 (22 years). Due to the lack of official statistics for dwellings in the 1953 census year, the analysis according to this criterion was performed on the basis of the 1971 census. Each of the cartographic representations incorporates the classification of municipalities according to a previously defined key.

### 3.1. POPULATION

The results of the conducted research show that the population of rural areas in the region in the period 1953-1991 increased by a slight 2%, while in the period 1991-2013 it decreased by 37%, i.e. the villages of the region lost a total of 231 836 inhabitants. In the period 1953-1991, the decline in population was most pronounced in the municipalities of Mrkonjić Grad (34%) and Šipovo (31%), while the most pronounced growth was recorded in the municipalities of Kotor Varoš (34%) and Teslić (44%). However, it is evident that in most municipalities in the region there has been a more pronounced decline in rural population than its growth in this period – 10 municipalities recorded a decline in population, in one of which population is stable, while 8 municipalities recorded growth (Figure 1). In the period 1991-2013, four municipalities faced a decline in population in rural areas in the range of 50-75%, eight of them with a decline of 25-50%, and four with a decline of 10-25%. Only Laktaši recorded a rural population growth of 10%. The average annual decline of the total rural population of the region in this 22-year period is 2%.

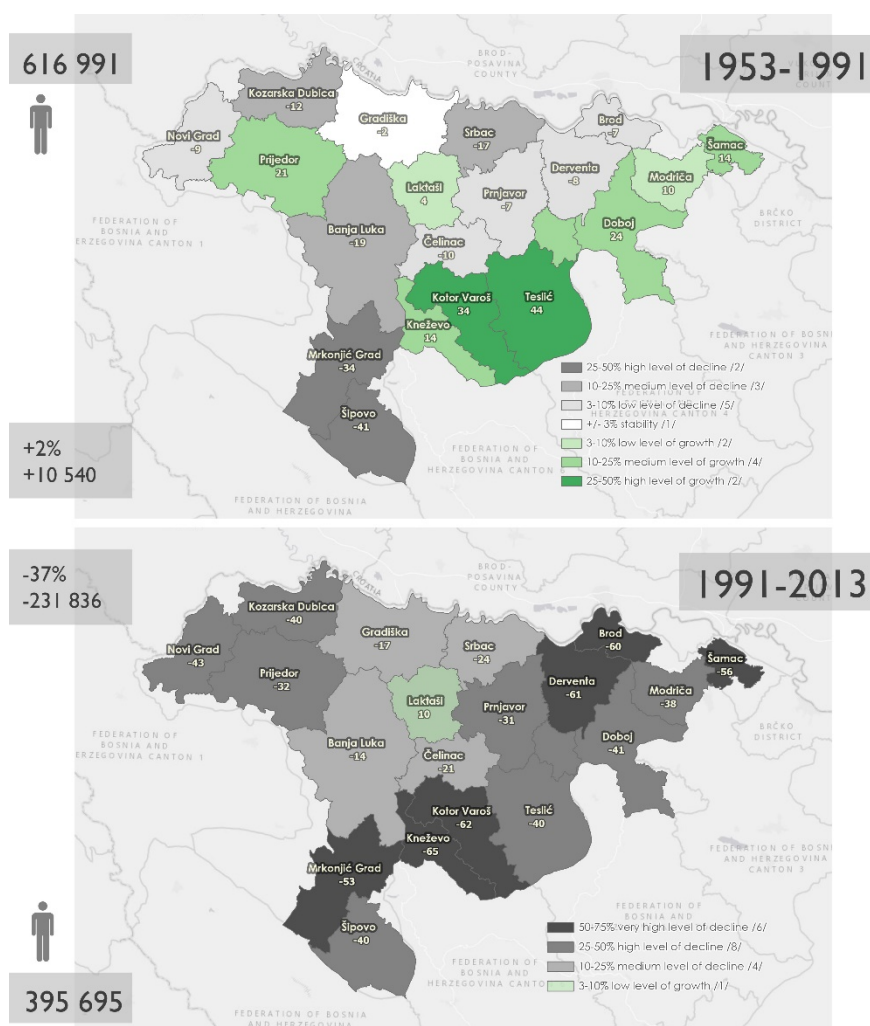


Figure 1. Population growth and decline trends per villages of NW region of RS 1953-2013

Considering the total population movements at the level of villages and cities in both reference time series, it is noticed that in the period 1953-1991 the urban population grew, while in the period 1991-2013 there was a decline in population at both levels (Figure 2). However, the B-chart shows a much more radical decline in the rural population compared to cities in the same period. In the period 1953-1991, the total population of the region, both urban and rural, increased by 34% (+ 250 229), while in the period 1991-2013 an evident decline of 29% (281 261) was recorded.

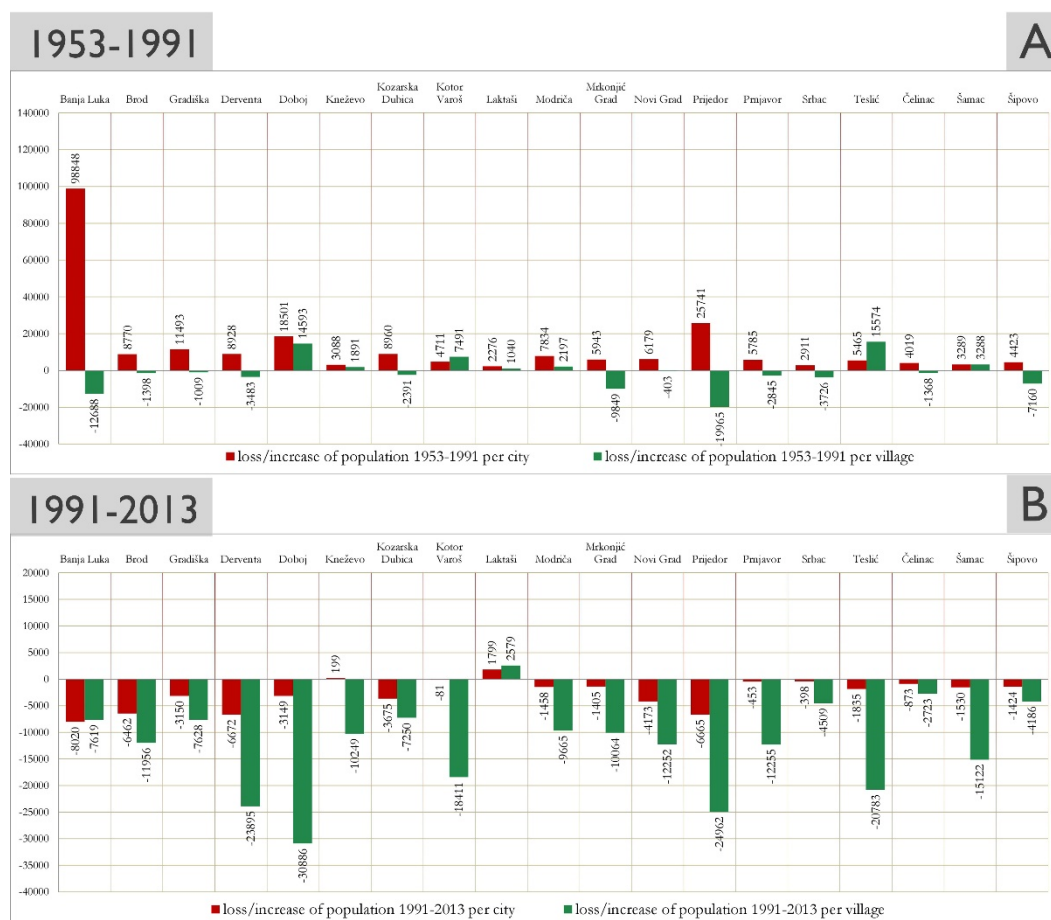


Figure 2. Growth / decline of urban and rural population for the periods 1953-1991, 1991-2013.

### 3.2. HOUSEHOLDS

Statistics for households show slightly different trends in relation to population movements, especially in the period 1953-1991. Namely, in this period the number of households in rural areas of the region increased by 51% (+ 57 750 households), while in the period 1991-2013 a total decrease of 19% was registered (-32 491) (Figure 3).

In the pre-war period, the number of households in all municipalities in the region increased to a smaller or higher percentage. Teslić had the highest growth in the number of households of 141%, while Kneževo (77%), Kotor Varoš (99%) and Doboj (91%) recorded extremely high growth. The lowest growth was registered in Kozarska Dubica (7%) and Šipovo (4%). In the period 1991-2013, 16 municipalities in the region recorded a decline in the number of households. Derвента and Brod had the most pronounced decline of 50%, Gradiška moved within stable limits, and Banja Luka (8%) and Laktaši (26%) had pronounced development trends and an increase in the number of households. The region lost 1 477 rural households each year in the 22-year period, and the average annual decline in the total number of rural households in the region is 0.87%. Household size has changed radically over the entire 60-year period. The average rural household had 5.5 members in 1953, 3.7 in 1991, and 2.9 members in 2013. At the same time, the size of the average household in urban areas was 3.9 members in 1953, 3.2 members in 1991, and 2.7 in 2013.

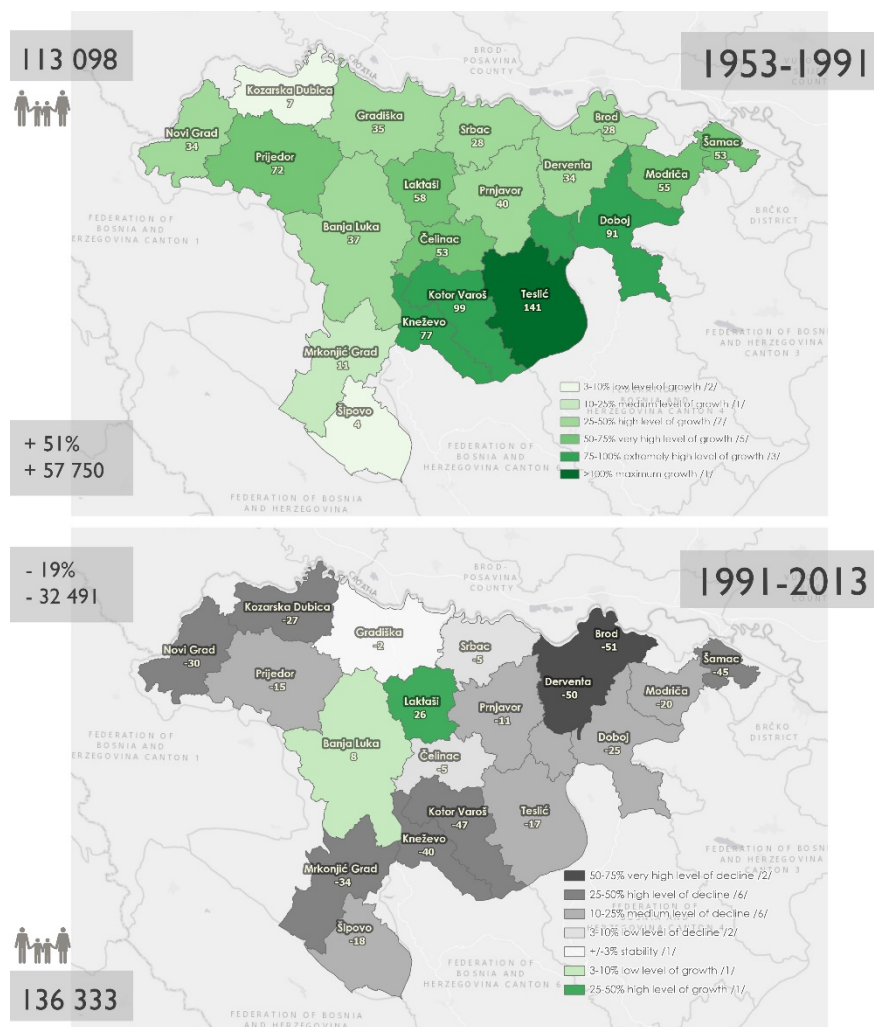


Figure 3. Growth and decline of number of households per villages of NW region of RS 1971-2013

### 3.3. DWELLINGS

Regarding the census statistics for dwellings, data are available for the census years 1971 and 1991, which are classified at the level of municipalities and settlements, as the lowest units of statistical analysis. For 1953, there are no records on the number of dwellings on either of these two levels, so it is not possible to consistently apply the proposed methodological approach. However, based on available data, an analysis and assessment of growth-decline trends for the 20-year period 1971-1991 was carried out, with the aim of gaining certain insights into the spatial dynamics of housing construction in rural areas in the pre-war period.

Concerning the trends in the number of dwellings, it is evident that in the period 1971-1991, all municipalities were in the phase of intensive housing construction, not only in urban but also in rural areas. During this period, all municipalities recorded an increase in the number of dwellings in rural areas. The villages of the region then received 49 069 new dwellings, i.e. an increase of 35% (Figure 4). Construction was dominant in the villages of Laktaši, Čelinac, Kotor Varoš and Šipovo, where the growth in the number of dwellings is over 50%. In the period 1991-2013, in 11 municipalities there was an increase in the number of dwellings, 7 municipalities have a pronounced decline, while one municipality has been moving within a stable framework. However, in the end, the region was richer by 15 619 dwellings in 2013, i.e. the number of dwellings increased by 8%. According to available statistics, it is concluded that the average number of tenants / persons per housing unit in rural areas of the NW region of the RS in 1971 was 4.8, in 1991 the number was 3.3, while in 2013 it was 1.9.

Given that the reference time frame for the analysis of pre-war dwellings is significantly shorter than the time frame used for the analysis of population and household movements (18 years shorter), it is obvious that there are discrepancies in the results and that certain indicators are significantly

lower. More precisely, it is not possible to produce direct analogies and comparisons, and to draw conclusions between different criteria.

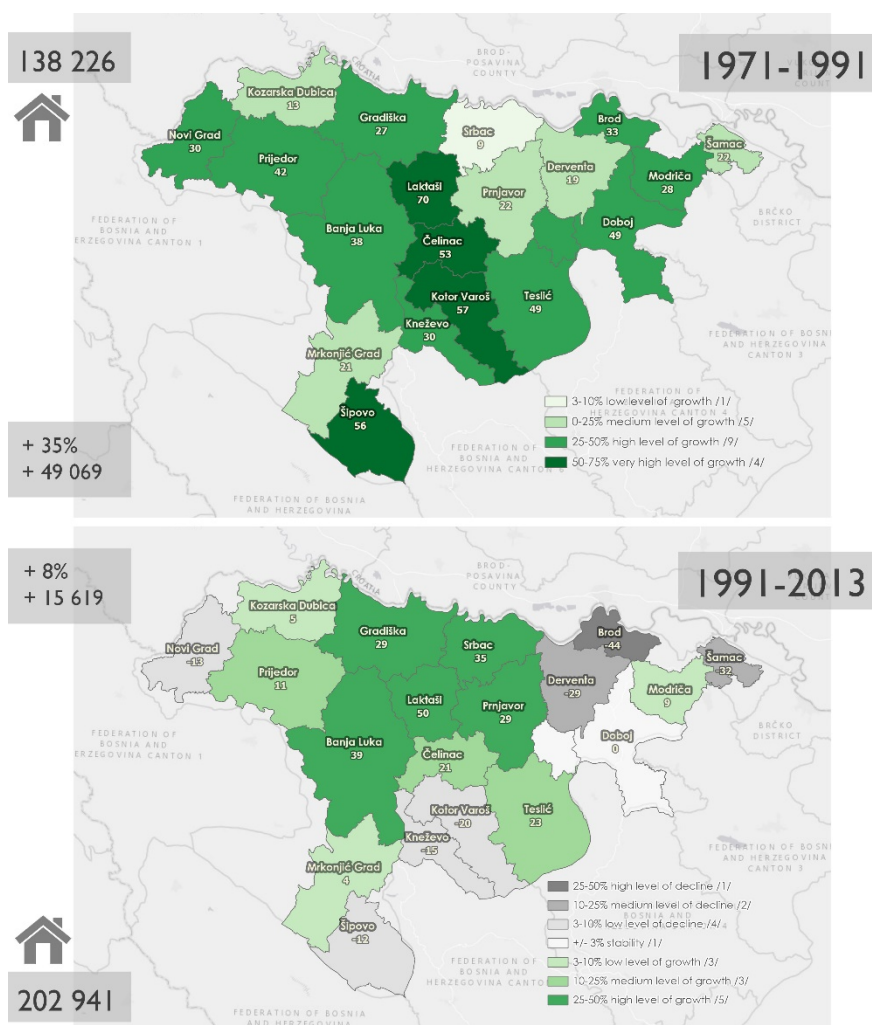


Figure 4. Growth and decline of number of dwellings per villages of NW region of RS 1971-2013

#### 4. DISCUSSION

Based on the proposed methodological approach and the conducted analysis, key trends are summarised and the elements important for understanding of shrinking phenomenon in rural areas in the NW region of RS are underlined in the following. The conducted analysis of growth-decline trends in rural areas of the region shows two key patterns classified by periods: 1953-1991 and 1991-2013.

Although in the period 1953-1991 the total population of rural areas was within stable limits (+ 2%), the research findings show an uneven distribution of decline and growth in the region. Namely, 10 out of 19 municipalities recorded a decline in population in this period, in 8 municipalities the population grew, while in one it remained stable. At the same time, in all municipalities in the region there was an increase in the number of rural households (+ 51%) and dwellings (+ 35%). Intensive urbanisation and rural-urban migration are one of the key factors in population decline. In search of jobs and better living conditions, young people left rural households, went to cities and started separate families there. On the other hand, the splitting of large family communities also took place in the villages themselves, as indicated by data about the growth of the number of dwellings in rural areas of 35%. Furthermore, the fact that the average rural household in 1953 had 5.5 members, and in 1991 3.7 indicates trends in the division of households and justifies the growth of their number. The need for a separate life of the younger generations shows that, even then, the villages were slowly entering the second demographic transition [3]. This demographic dynamic has caused both, a decline in natural population growth and an aging rural population. In the context of housing construction, the question is: how the growth of the region's rural population of 2% (1953-1991) can

produce a 35% increase in the number of dwellings for a significantly shorter reference period (1971-1991)? The explanation for this can be found in the fact that the urban population still had strong ties with the rural hinterland, where they built cottages or summer houses, i.e. their second apartment. On the other hand, the division of large households while reducing the number of household members produces the need for more dwellings.

The civil war in Bosnia and Herzegovina in the period 1992-1995 represents a key tipping point in terms of demographic and spatial trends in the region and the most important factor due to which most municipalities in the region fell into a very difficult situation. Although it lasted only three years, the war produced enormous damage: death and displacement of a large number of people, downturn and destruction of a large number of economic enterprises, as well as devastation of the built environment. Research shows that in the period 1991-2013, the region lost a total of 281 261 inhabitants, of which 231 836 went to rural areas (Figure 2). This data shows that rural areas are radically affected by shrinkage than cities. Figure 1 shows that in this period, 18 out of the 19 municipalities in the region faced a decline in rural population. The war was followed by an attempt to recover, and the changes that took place led to a further decline in almost all areas of society. What marked the shrinkage after the war was: a decline in population growth rate, population aging, negative external migration trends and a decline in economic activity [8]. It is assumed that migration to developed western countries is one of the key causes of post-war stagnation not only in villages but also in cities. The exact number of persons who emigrated to other countries is not known, nor is it monitored by B&H institutions. The data about the number of emigrants from B&H are provided from migration statistics of host countries [8]. Nowadays the worrying trend is the relocation of entire families instead of previous, when only male members of the household went to work abroad. Such trends can radically affect the vitality of municipalities, cities and villages in the region, and lead to manifold negative consequences.

Although population decline is a key indicator of shrinkage, it is necessary to look at trends by the other two criteria. Namely, in the period 1991-2013, there was a radical decline in the number of rural households. More precisely, in 15 municipalities there was a decline, which for the overall region is 19%. The households further decreased, from 3.7 members in 1991 to 2.9 in 2013. This indicates the sequel of the second demographic transition which is manifested through: negative marriage rate, increased divorce rates, higher median marriage ages for both men and women, a higher average age of first childbirths, and a negative fertility rate [7]. Such trends ultimately produce a decline in natural population growth and an overall aging of an already small rural population.

However, regarding the number of dwellings in rural areas, an unexpected increase of 8% was recorded in the period 1991-2013. The question is, what produced this growth? In order to draw valid conclusions, it is necessary to conduct further research, related to the 2013 census statistics. Namely, the dwellings were only monitored in much more detail at the census 2013. In addition to the number, statistics classify dwellings by use, area, structure, year of construction, etc. [14]. Although data on dwellings are processed only at the municipal level, they can still be very indicative for understanding the dominant housing models, their spatial distribution, housing construction dynamics, housing standards, etc. The statistics on the number of empty dwellings, as well as holiday houses, are especially important for deepening the research. For example, statistics on the number of vacant dwellings show that in Republic of Srpska, out of 584 261 dwellings, a quarter (26%) are vacant (RZS-RS, 2017).

In order to understand the overall picture of stagnation of rural areas in the period 1991-2013, a typology of municipalities was created, which represents the synthesis of all three criteria (population, households, dwellings) and the classification of municipalities based on most significant differences. Although the typology focuses on stagnant patterns, the analysis does not exclude municipalities that are recording growth or remain within stable limits. Based on that, municipalities are typologically classified according to the following rules:

- Type A - municipalities with a decline in all three criteria
- Type B - municipalities with a decline in population and number of households
- Type C - municipalities that record only a decline in population
- Type D - municipalities in which growth was identified by all three criteria

The research findings show that in 7 municipalities there was a decline in all three criteria (type A), in 9 there was a decline in population and number of households (type B), 2 municipalities lost only the population (type C), while in one of them a growth in all criteria was identified (type D). The central municipalities of the region (Banja Luka, Gradiška and Laktaši) are the least affected by the shrinking processes, and as such they form the development axis of the region. On the other hand,



the peripheral municipalities of the region do not show such development patterns, on the contrary, they face a lower or higher decline and stagnation.

This extent of stagnation in the rural areas of the NW region of RS indicates the need for defining a clear point of view of local and national governing bodies in terms of mitigating the negative trends that arise as a result of the shrinkage. Also, the question is: how should planning respond to these negative changes and how should the community adequately manage them in the future? Is persistent advocacy of the growth paradigm justified in the shrinking conditions of the region?

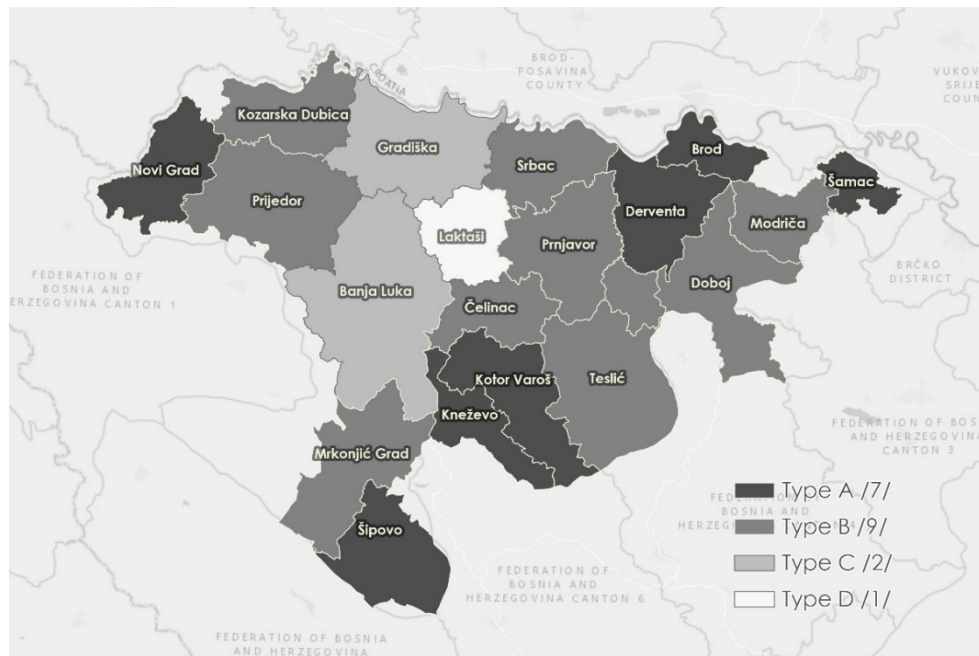


Figure 5. Typology of municipalities according to shrinking/growing trends in rural areas

In an attempt to partially answer these questions, the key issues are identified below and recommendations for further action are defined. Among the many problems, the following stand out:

- Insufficient awareness of national and local authorities, and planners about the problem, its scale and the damages produced in the local context/community.
- Preference of growth and development topics by authorities and planners, while ignoring the problem of shrinkage – if the perception of shrinkage does exist, responses of planning do not offer clear solutions to this problem.
- Insufficient research on shrinkage and impacts of such socio-economic changes in space - lack of information on the number of abandoned / vacant buildings and its characteristics.
- Insufficient public (national and local) instruments and tools for monitoring and managing these negative changes in space.
- Lack of housing policies both at the RS level and at the municipal level.

In order to react to the identified problems, it is necessary to raise the awareness first and foremost of political representatives, but also the scientific and professional community. Media exposure (TV, web, social network), professional seminars and professional-scientific conferences are just some of the ways to reach that goal. Only if these key actors truly accept shrinkage as the state we are in, is it possible to initiate management of negative changes. Such management should include: 1) identification and assessment of shrinkage across the region, 2) defining integrated and cross-sectoral planning solutions focused on solving problems caused by shrinkage (policies, strategies, programs, plans, projects, measures, activities), 3) implementation of planned activities, 4) monitoring and evaluation (M&E) of implemented activities and finally 5) adaptation of plans based on M&E feedbacks [8]. Planning and managing in such a system should be based on a communicative and collaborative approach that implies involvement and partnership among all stakeholders [15]. The model of continuous participation is a mechanism for learning by doing, where through negotiation and decision-making new knowledge is gained, perceptions and value systems are changed, approaches are corrected, i.e. overall knowledge is improved [16, 17, 8]. In this context, the involvement and role of the scientific community is especially important.

Experimenting in such a management system plays a significant role. Conducting experimental trials (e.g. pilot projects) enables rapid learning. Good practices are identified and developed, while bad ones are abandoned – one can learn from both of them.

## 5. CONCLUSION

Nowadays, many regions of the world are facing the problem of shrinkage, manifested through demographic decline, economic loss and dysfunction of the built stock. An increasing number of international and national studies show that the phenomenon is gaining a global character. However, although the topic of shrinkage is increasingly becoming a part of the international scientific agenda, its presence in the public, media and political agenda in Bosnia and Herzegovina is not enough. Political actors do not benefit from accepting shrinkage as an indicator of the state of the region and municipalities, which is why the topic of shrinkage is rather avoided. Yet it is undeniable that the problem exists and that its scale is significant.

The conducted research shows that the shrinkage is much more pronounced and rapid in rural areas of the northwestern region of RS than in urban areas. Namely, 18 out of 19 municipalities of the research polygon were affected by shrinkage (Figure 5). The results show that in the period 1991-2013 the total population of the region decreased by 281 261 inhabitants, where 82% (231 836) of this loss represent a decline in the rural population (Figure 2). The extent of the shrinkage of the village is best shown by the analogy according to which, the region in rural areas lost the population of almost 2 cities in size of today's Banja Luka (135 059) or 10 municipalities in size of Modriča (24 490) in this 22-year period.

Simultaneously, with the decline of the population in certain municipalities, there was a decline in the number of households and dwellings. Thus, in 9 municipalities, in addition to the decline in population, there was a decline in the number of households, and in 7 of them there was a simultaneous decline in all parameters (population, households and dwellings).

In the context of the applied methodology, it is necessary to point out that the research of shrinking phenomena in the spatial domain is limited, primarily due to insufficient development of the statistical apparatus in the field of collecting data on dwellings in pre-war census years. The methodology for collecting data on dwellings was significantly improved in the 2013 census, which opens the possibility for further research related to the number and distribution of vacant dwellings, as well as some other determinants relevant to the topic. The findings of such research can guide housing policies and future housing construction. Given that vacant dwellings make up a quarter of the total number of dwellings in the Republic of Srpska, and population movements show negative trends, the creation of housing policies at the national level is an imperative. Their development should be accompanied by local housing policies as strategic documents that guide future action in this area. In addition to the strategic approach, in the conditions of shrinkage, uncertainty, complexity and contradictions, it is especially important to develop various experimental programs, projects and measures that will enable changes at the operational level. Conducting such pilot projects enables learning about change, which ultimately should lead to management of shrinkage – uncertainty.

In addition to the shrinkage theory, developed by human geographers and demographers, which is in the focus of this research, a new *shrinking world theory* has simultaneously appeared with the development of information and communication technologies (ICT). The cross-linking of these two theories can be very useful for future research in the field of spatial development. According to Kirsch, “the popular conception of the world shrinking to a global village is generally seen as the product of technological advances in telecommunications, transportation, and information” [18, p. 529]. This time-space compression enables the relativisation of places, which can be a chance for villages to recover. Although globalisation in the economic domain has produced enormous damage and shrinkage at the local level [2], on the other hand it has produced new values in the ICT domain that villages need to take advantage of. The development of alternative housing (and work) models, based on the premises advocated by this theory, is a chance and possible path for regeneration of villages. Vujičić and Simonović see this recovery in the implementation of the so-called e-co model, which is a focused strategic approach based on the eco-friendly design and lifestyle, e-lance economy, and community cohesion [19]. Criticising the hectic urban lifestyle, they advocate a return to rural life, where the target group is the urban population of young, (IT) educated people who are dissatisfied with life in developed urban centres and who are looking for alternative lifestyles. In the context of such assumptions, further research on official statistics on information literacy of the population, the number, structure and distribution of employees in the ICT sector or other related sectors as well as data on the self-employed would be useful.

Uncertainty regarding the future demographic and spatial dynamics set new requirements for planners. Redefining of planning approaches is necessary if society seeks to achieve sustainability and resilience in both rural and urban areas. This implies a change of planning approach in which socio-spatial dynamics is not seen as a linear process of constant growth and prosperity of regions, but rather as a process of facing complex, multidimensional challenges of today, which increasingly imply stagnation and decline. Such planning will produce (positive) changes only if it is accompanied by effective management models not only of rural space but also of entire rural system.

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