

**The population of the Balkans at the dawn of the 21st century**

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**THE MAIN CHARACTERISTICS OF THE DEMOGRAPHIC DEVELOPMENT  
AND THE SPATIAL DISTRIBUTION OF POPULATION IN BOSNIA AND  
HERZEGOVINA**

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## **Abstract**

Purpose of the work is to present the main characteristics of demographic development in Bosnia and Herzegovina and its population territorial distribution. Since the first modern population census in Bosnia and Herzegovina (conducted in 1879), the population grows up till the 1991 census. By the census of 1991 and the then ruling methodology the number of inhabitants amounted to 4,377,033 which is on an area of 51,197 km<sup>2</sup> showed population density of 85.5 people per square kilometer. Although after World War II demographic transition in Bosnia and Herzegovina was clearly visible, the conflict that took place between 1992 and 1995, strongly affected the main demographic indicators of the country (total population, birth rate, spatial distribution, age structure, etc.). Total population of Bosnia and Herzegovina has been reduced, hundreds of thousands of residents were displaced within the country, and the spatial distribution of the population has significantly changed. After a short "compensatory" period, the annual number of live births is decreasing with time, and this is with the simultaneous increase in the number of deaths led to a constant negative natural population growth rate since 2009. Although before 1991 have already been formed distinct zones of depopulation (and zones of concentration of the population), along with such contemporary unfavorable demographic developments, of depopulation zones are becoming larger and areas with increasing population is getting smaller. Census 2013 data show that many urban areas recorded a reduction of the population (compared with the previous census), and among them most of the largest cities in the country. There are distinct areas that in the coming decades threatens to rapidly discharge and reduce the already small number of inhabitants. These parts of the country are characterized by extremely negative natural increase, a negative migration balance and the high average age of the population and the expected further worsening of the demographic situation in these areas. More detailed and more reliable observation of demographic situation in Bosnia and Herzegovina, population number, structure and allocation is aggravated by fact that the last census, with available data, was carried out 24 years ago (1991). However, data on vital and migration statistics as well as preliminary results of consensus 2013, enable identification of the main trends and characteristics of modern demographic development of Bosnia and Herzegovina and reveal possible future trends.

**Keywords:** population, depopulation, spatial distribution, population density, birth rate

Regarding the period of second half of the 20th century and beginning of the 21st century, there are certain demographic trends and phenomena (reduced fertility and birth rate, increased life expectancy and population ageing, negative migration balance, etc.) characteristic for Bosnia and Herzegovina during the entire period. However, some significant changes that had occurred in the last inter-census period, have caused variations of earlier tendencies and produced some new characteristics of demographic development (negative rate of natural increase, fall of total population and population in number of cities, etc.).

Population of Bosnia and Herzegovina may consistently be traced from the census conducted by Austria-Hungary in 1879, when there were 1 158 440 registered inhabitants, and later censuses had shown a permanent demographic growth until the 1991 census when, according to the existing methodology, the population reached the number of 4 377 033. Alongside population growth, there were ongoing processes of decreasing birth rate and fertility, increasing population life expectancy and average age, urbanization and concentration of population in certain regions and at the same time depopulation in some municipalities, mainly resulting from migrations of the population. Over time, the demographic growth had slowed down reaching the rate of 14,3% between 1961 and 1971, 10,1% in the following inter-census period (1971-1981), and 6,1% between 1981 and 1991.

Table 1: Area, number of people and households and population density by censuses in Bosnia and Herzegovina

Year of censuses	Area (km <sup>2</sup> )	Total population	Number of households	Population density
1879	51.246	1.158.440	...	22,6
1885	51.246	1.336.091	226.699	26,1
1895	51.246	1.568.092	257.493	30,6
1910	51.200	1.898.044	310.339	37,1
1921	51.200	1.890.440	...	36,9
1931	51.564	2.323.555	398.238	45,1
1948	51.189	2.564.308	498.116	50,1
1953	51.221	2.847.459	565.212	55,6
1961	51.197	3.277.948	706.107	64,0
1971	51.197	3.746.111	848.545	73,2
1981	51.197	4.124.256	1.030.689	80,6
1991	51.197	4.377.033	1.207.098	85,5
2013 <sup>1</sup>	51.197	3.791.622	1.163.387	74,1

In view of the population growth, the breaking point occurred in the first half of the 1990s with conflicts in the region, causing substantial demographic losses (displaced persons, deceased, reduced birth rate due to war...) so the population had decreased considerably in those years. With the end of conflicts certain number of refugee population gradually returned to Bosnia and Herzegovina, causing a population growth, particularly in the first couple of years after the war. At the same time, part of internally displaced persons returned to their homes while the rest of the population remained in their new places of residence. Such trends have affected not just the total population but also its distribution within the country.

According to preliminary results of Census in Bosnia and Herzegovina 2013, total number of 3 791 622 persons was recorded, out of which in Federation of Bosnia and Herzegovina 2 371 603 persons, in Republic of Srpska 1 326 991 persons and in Brcko District of Bosnia and Herzegovina 93 028 persons.<sup>2</sup> In relation to the number of population under the census 1991 the number of registered persons in Bosnia and Herzegovina is less by 13.4%, in Federation of Bosnia and Herzegovina by 12.8%, in Republic of Srpska by 15.4%, and in Brcko District is higher by 6.2%. The largest decrease in cantons

<sup>1</sup> First results – total enumerated persons

<sup>2</sup> Final results will show lower number of usual population pertaining to census data

of Federation of Bosnia and Herzegovina was registered on territory of Bosnia-Drina Canton (37%), Canton 10 (21.6), Zenica – Doboј Canton (19.4%) and Posavina Canton (19.4%). Increase was registered only in West Herzegovina Canton (10%).

Table 2: Population 1991 and number of enumerated persons in 2013

Territory		Population 1991	Enumerated persons in 2013	Change (%)
<b>Bosnia and Herzegovina</b>		<b>4377033</b>	<b>3791622</b>	<b>-13,4</b>
<b>Federation of Bosnia and Herzegovina</b>		<b>2720074</b>	<b>2371603</b>	<b>-12,8</b>
Cantons	Unsko-sanski	343317	299343	-12,8
	Canton Posavski	59478	48089	-19,1
	Tuzlanski	493887	477278	-3,4
	Zenicko-dobojski	477868	385067	-19,4
	Bosansko-podrinjski	40205	25336	-37,0
	Srednjobosanski	340072	273149	-19,7
	Hercegovačko-neretvanski	267590	236278	-11,7
	Zapadno-hercegovački	88992	97893	10,0
	Canton Sarajevo	492983	438443	-11,1
	Canton 10	115682	90727	-21,6
<b>Republic of Srpska</b>		<b>1569332</b>	<b>1326991</b>	<b>-15,4</b>
<b>Brcko District</b>		<b>87627</b>	<b>93028</b>	<b>6,2</b>

Changes are even more different among certain municipalities. Comparing the number of population under the census from 1991 with number of registered persons under census from 2013 in 142 municipalities/towns in Bosnia and Herzegovina the growth has been recorded only in 33 of them. Out of 109 municipalities/towns with recorded decrease, in 9 municipalities decrease exceeded 50% and in 34 municipalities it ranged from 30% to 49.9%, in 46 municipalities from 10% to 29.9 and finally in 20 municipalities up to 10%. Allocation of population is changed significantly in this way and population potential in series of municipalities drastically reduced.

The above mentioned population growth is a result of the positive rate of natural increase which was higher than the negative migration balance. For example, in the period between 1981 and 1991 the rate of natural increase was positive by 423 984 persons as a result of 712 536 newborns and 288 552 deceased persons. Since the number of people in the inter-census period 1981-1991 increased by 252 777 it means that negative migration balance reached around 171 000 only in that decade. Along with the demographic transition process, fertility and birth rate gradually decline, so the annual number of newborns and natural increase have continued to fall.

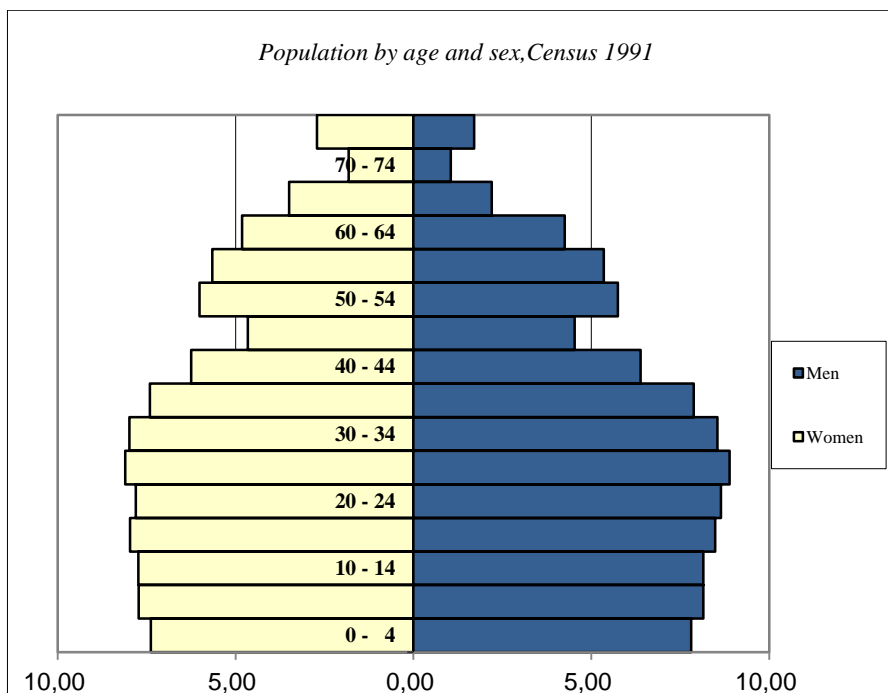
The demographic transition process in Bosnia and Herzegovina in the second half of the 20th century reflects, among other things, fall of the birth and fertility rates. The birth decreased from 32,8 ‰ in 1961 to 22,0‰ in 1971, 17,2‰ in 1981 and 14,9‰ in 1991. Declining birth rate lead to a reduced rate of natural increase, falling from 23,9‰ in 1961 to 15,4‰ in 1971, 10,8‰ in 1981 and 7,8‰ in 1991. The rate of total fertility decreased from 5,1 in 1950 to 1,9 in 1980 and 1,7 in 1990.

Table 3: Natural population growth in Bosnia and Herzegovina, 1971-2014 (selected years)

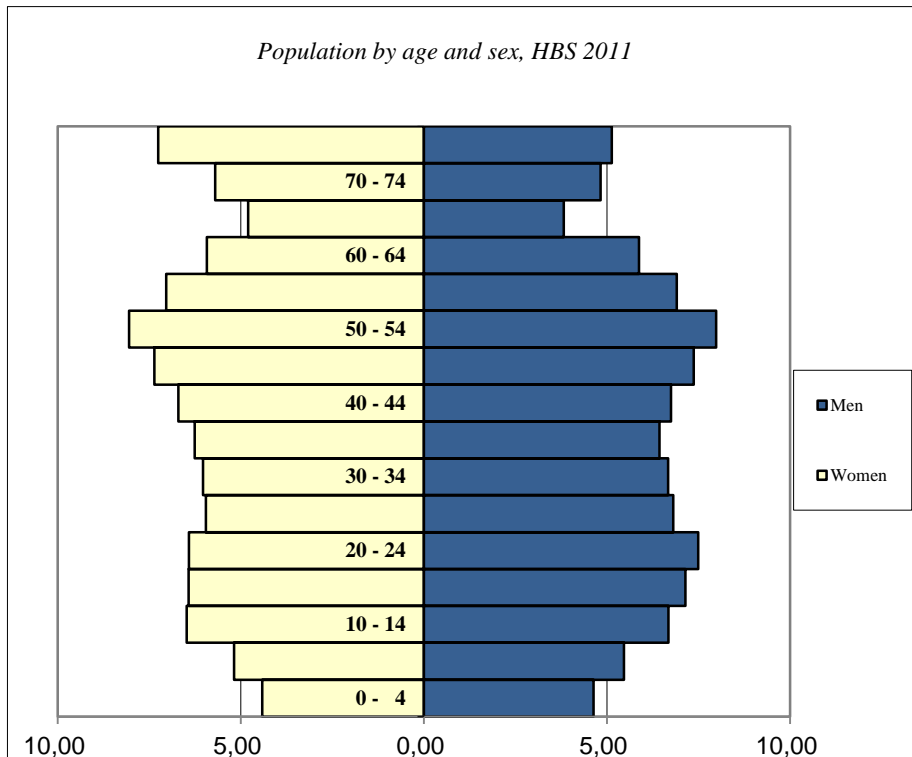
Year	Live births	Deaths	Natural increase
1971	82694	24915	57779
1976	79061	25178	53883
1981	71031	26222	44809
1986	71203	29127	42076
1991	65430	31411	34019
1996	46594	25152	21442
2001	37717	30325	7392
2006	34033	33221	812
2011	31811	35028	-3217
2013	30684	35662	-4978

Along with reduced fertility and birth rates, as well as extended average life expectancy, the population aging process was also in progress. The population of 0-14 years of age decreased participation in total population from 34,4% in 1971 to 23,5% in 1991, and, according to the assessment, this category makes only 16,4% of total population in 2011. At the same time, the share of people over 65 had increased from 4,7% in 1971 to 6,5% in 1991 and estimated 15,8% in 2011. The average age of female population had increased from 30,5 years in 1981 to 40,8 in 2011, and males average age from 28,7 to 38,6 years.

Map 1: Population pyramid of Bosnia and Herzegovina 1991



Map 2: Population pyramid of Bosnia and Herzegovina 2011



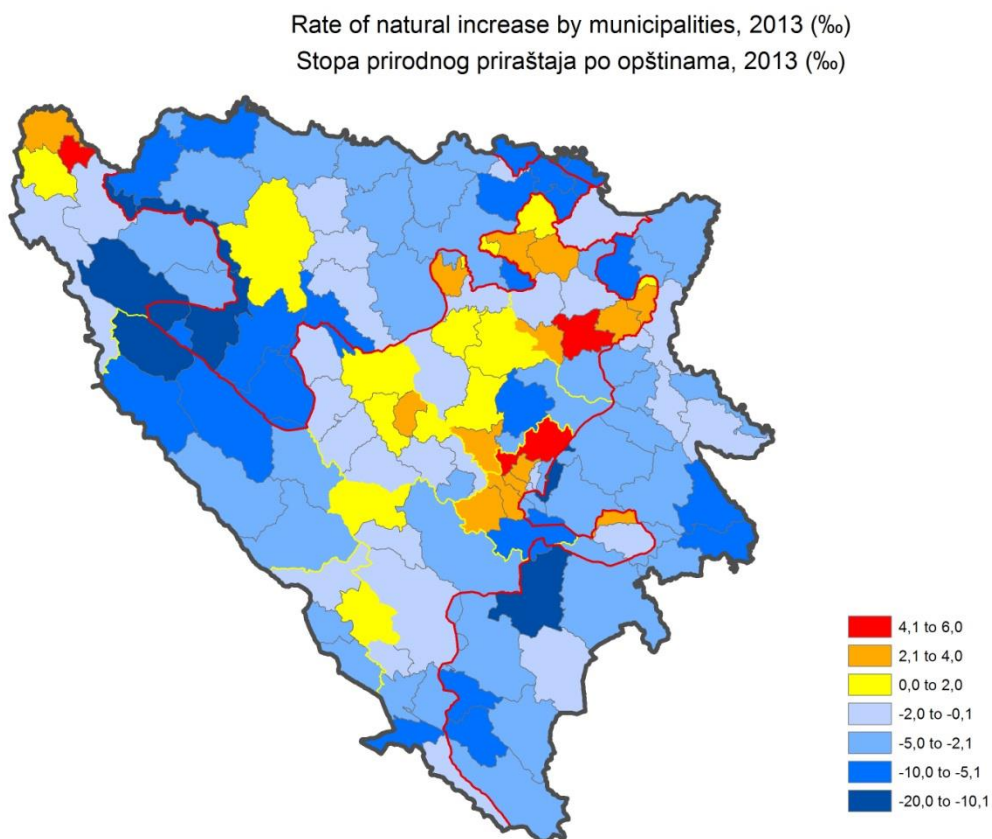
Second half of the 1990s also brings a certain compensation period in sense of natural trends, so 46 594 newborns were registered in the first year after the war, which together with 25 152 deceased persons gives the rate of natural increase of 21 442 people. Between 1996 and 2000 the rate of natural increase was 81 200 persons. The rate of returning refugees as well as the rate of natural increase had significantly declined at the beginning of the 21st century. The fall of annual birth rate has continued, along with gradual increase in number of deceased persons, so the registered number of the deceased was higher than the number of newborns in 2007, and since 2009 the rate of natural increase has been permanently negative. Only 30 684 newborns and 35 662 deceased persons were registered in 2013 (negative natural increase by 4 978 persons).

The 2014 rate of natural increase was negative in Bosnia and Herzegovina, both of its entities and the Brcko District, with huge differences in natural increase. Accordingly, the 2014 vital index was 98,97 for the Federation of Bosnia and Herzegovina, 91,9 for the Brcko District and just 64,78 for the Republic of Srpska.

Table 4: Natural movement of of the population in 2014 (entities, cantons, district)

Territory		Live births	Deaths	Natural change
<b>Federation of Bosnia and Herzegovina</b>		<b>19 823</b>	<b>20 030</b>	<b>-207</b>
Cantons	Unsko-sanski	2 154	2 103	51
	Canton Posavski	212	505	-293
	Tuzlanski	4 069	3 503	566
	Zenicko-dobojski	3 394	3 356	38
	Bosansko-podrinjski	268	322	-54
	Srednjobosanski	2 090	2 198	-108
	Hercegovačko-neretvanski	1 824	2 164	-340
	Zapadnohercegovački	816	863	-47
	Canton Sarajevo	4 566	4 215	351
	Canton 10	433	801	-368
<b>Republic of Srpska</b>		<b>9 335</b>	<b>14 409</b>	<b>-5 074</b>
<b>Brcko District</b>		<b>919</b>	<b>1000</b>	<b>-81</b>

Map 3: Rate of natural increase by municipalities in Bosnia and Herzegovina 2013



From 1991 to 2013, an area covered by municipalities with positive natural increase is multiple reduced. Only 3 municipalities (of 109 at the time) in 1991 had negative natural rate. These municipalities comprised 0.7% of population and 3.8% of the Bosnia and Herzegovina territory, and if this is observed on the municipal level the positive natural increase was on area of 96.2%. In 2013, out of total 142 municipalities/towns the positive natural increase had 30 of them (out of which 29 in Federation of Bosnia and Herzegovina and just one in Republic of Srpska – Banja Luka). Municipalities with positive natural increase comprised 8068,7 km<sup>2</sup> or 15,8% of state area and 1258 687 registered persons or 33,2% of total number. These municipalities had 12193 newborns or 40% of total number of newborns in that year. These data indicate that the concentration of population potentials could be expected at smaller area while the rest of territory will fall demographically behind.

Together with reduction of the rate of natural increase and slow down in Bosnia and Herzegovina population development, intensive migrations took place as well, towards other former republics of the ex-Socialist Federative Republic of Yugoslavia and abroad but also inter-municipal and migrations from rural to urban areas of Bosnia and Herzegovina. That way, the areas of population concentration have formed gradually, as well as the zones of demographic decline that have started to lose their population.

In the period from 1981 to 1991, in 75 of the then 109 municipalities the population has increased, and in the remaining 34 municipalities the population has decreased. All the settlements functioning as municipal centers had registered a growth in population caused not just by higher rate of natural increase but also by migrations from rural areas during the industrialization and urbanization process. Municipalities with depopulated areas in this inter-census period, had an area of 20,113 km<sup>2</sup> and 792,880 inhabitants in 1991 (a decrease of 5.6% compared to the census of 1981). The population density of this area was 39.4 people per square kilometer. On the other side, municipalities which had population growth in this inter-census period encompassed 31,084 km<sup>2</sup> (60.7% of the territory of Bosnia and Herzegovina) and 3,584,153 inhabitants (an increase of 9.1% compared to the previous census) which shows the population density of 115.3 people per square kilometer. Thus, the area with increasing population had almost 3 times greater density compared to the depopulation area.

Census 2013 data and demographic statistics show that the depopulation area significantly more spacious than before, and that many urban areas recorded a reduction of the population (compared with the previous census), and among them most of the largest cities in the country. Only 31 municipalities (out of 142 current municipality) recorded an increase in population. Their surface is only 9103.7 square kilometers or 17.8% of the total land area.

After decades of intensive urbanization, the inter-census period of 1991-2013 brought the fall in total population of Bosnia and Herzegovina. Even the largest urban centers could not avoid decrease in population, so (according to the 2013 census) 7 out of 10 largest settlements had registered a decreased number of inhabitants compared to the previous census. In absolute numbers, the largest population decrease happened in Sarajevo (around 47 000), and in relative numbers in Zenica (23% reduction).

Table 5: 20 largest urban settlements (preliminary results of Census 2013)

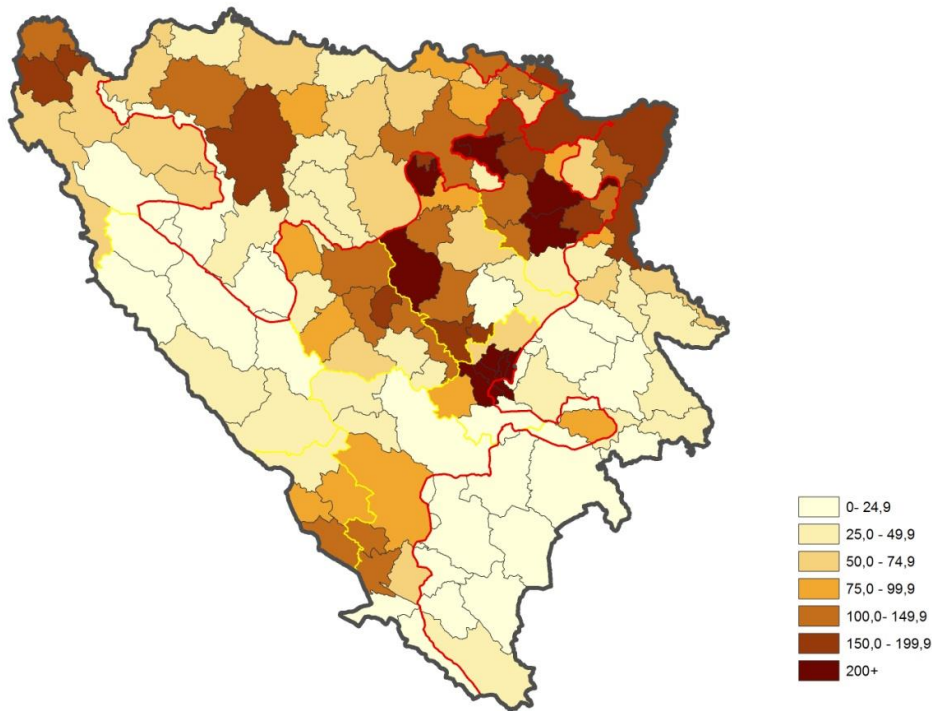


Settlement	Population		Change (%)
	1991	2013	
Sarajevo (FBH&RS)	416497	369534	-11.3
Banja Luka (RS)	143079	150997	5.5
Tuzla (FBH)	83770	80570	-3.8
Zenica (FBH)	96027	73751	-23.2
Mostar (FBH)	75865	65286	-13.9
Bijeljina (RS)	36414	45291	24.4
Brčko (BD)	41406	43859	5.9
Bihać (FBH)	45553	43007	-5.6
Prijedor (RS)	34635	32342	-6.6
Doboj (RS)	27498	26987	-1.9
Trebinje (RS)	21870	25589	17
Sanski Most (FBH)	17144	19745	15.2
Živinice (FBH)	11947	17495	46.4
Bugojno (FBH)	22641	17202	-24
Travnik (FBH)	19041	16534	-13.2
Gradiška (RS)	16841	16106	-4.4
Cazin (FBH)	12203	14387	17.9
Pale (RS)	7384	13883	88
Gradačac (FBH)	12868	13474	4.7
Gračanica (FBH)	12712	13400	5.4

In view of the preliminary 2013 census results, population density in Bosnia and Herzegovina was 74 persons per square kilometer. Population density was considerably higher in the Brcko District (189 people/km<sup>2</sup>) and the Federation of Bosnia and Herzegovina (91 people/km<sup>2</sup>) than in the Republic of Srpska (54 people/km<sup>2</sup>). Altogether, south-east and south-west parts of the country are rarely inhabited.

#### Map 4: Population density by municipalities in Bosnia and Herzegovina 2013

Population density by municipalities, 2013 (Total number of enumerated persons per square kilometer)  
 Gustina naseljenosti po opštinama, 2013 (Ukupno popisane osobe po kvadratnom kilometru)



The differences are even more evident when we compare municipalities. The group of 10 most rarely inhabited municipalities cover the area of 4015,9 km<sup>2</sup> and have registered 20 120 people, which gives a population density of 5 inhabitants per square kilometer. This group of municipalities covers 7,8% of the entire territory of the country and makes only 0,5% of its registered population.

Table 6: The municipalities with the lowest population density (2013)

Municipality	Total number of enumerated persons in 2013	Surface (km <sup>2</sup> )	Population density
Istočni Drvar	109	75.3	1.4
Petrovac	367	154.9	2.4
Istočni Mostar	280	85.24	3.3
Kalinovik	2240	681.15	3.3
Glamoč	4038	1033.6	3.9
Bosansko Grahovo	3091	780	4.0
Trnovo FBiH	1830	338.4	5.4
Kupres RS	320	47.8	6.7
Berkovići	2272	249.69	9.1
Kupres FBiH	5573	569.8	9.8
Ukupno	20120	4015.88	5.0

On the other side, the group of municipalities with the highest population density covers the area of 723,4 with 542 690 registered persons and population density of 750 inhabitants per km<sup>2</sup>, representing 1,4% of the territory and 14,3% of registered persons.

Table 7: The municipalities with the highest population density (2013)

Municipality	Total number of enumerated persons in 2013	Surface (km <sup>2</sup> )	Population density
Novo Sarajevo	68802	9.9	6949.7
Novi Grad Sarajevo	124471	47.2	2637.1
Centar Sarajevo	59238	33	1795.1
Stari Grad Sarajevo	38911	51.4	757.0
Istočna Ilidža	15233	27.9	546.0
Ilidža	71892	143.4	501.3
Doboj-Jug	4409	10.2	432.3
Tuzla	120441	294	409.7
Vogošća	27816	71.7	387.9
Istočno Novo Sarajevo	11477	34.69	330.8
Ukupno	542690	723.39	750.2

Apart from small number of inhabitants, such municipalities usually have a very negative rate of natural increase and imbalanced age-gender structure, falling progressively behind other areas in demographic sense. For instance, municipality of Glamoc covers 4% of the Federation of Bosnia and Herzegovina territory, makes 0,2% of its population and 0,12% of newborns (2013). Municipality of Kalinovik covers 2,8% of the Republic of Srpska territory, makes 0,2% of its population and 0,13% newborns.

## Conclusions

After decades of population growth, Bosnia and Herzegovina became depopulation area. Considering increasing values of negative birth rate and negative migration balance, depopulation will continue in future period. Low fertility and birth rates will lead to further reduction of population potentials. Population's average age will continue to grow, as well as participation of old people in total population. It is expected that the area affected by negative birth rate will continue to spread in coming period which shall, in combination with negative migration balance, extend depopulation zones. After decades, the population growth has been brought to an end in many cities. Rarely populated municipalities with extremely unfavorable natural increase and negative balance characterized by distinctly old population will be in exceptionally difficult situation. More detailed image of demographic situation and more precise forecast of demographic future will be possible after publishing of census results from 2013.

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