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GROSS AND NET POPULATION DENSITY OF NAVOI REGION

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Abstract:

In this article, the gross and net densities of the Navoi region population are calculated for each district. According to the gross density, the regions of the region are divided into groups by geodemographic regions. The average population density of the region in 2000 and 2022 was calculated and compared. The net population density of the region was also studied in relation to the lands used in agriculture allocated to them by each district in relation to their irrigated lands. In areas with a small area, a high population density was determined.

Keywords: population, gross, net, density, location, geodemographic region, lands used in agriculture, irrigated lands.

Introduction

A special place in the socio-economic development of the regions is occupied by the territorial organization of the population. The territorial organization of the population is of great importance for the Navoi region. The reason is that the territorial organization of the population of the Navoi region affected its development today. The Navoi region has become the most industrially developed region of the republic precisely due to the correct territorial organization of the population. The population has increased, the settlement of the population has expanded in width and height. Positive changes in the dynamics of the population will necessarily affect its location.

Main part

One of the main indicators of population distribution is population density. The well-known scientist S. A. Kovalev argues that the most general and detailed idea of the location of rural settlements is given by the average density of settlements [2, p. 15].

The population density in the study area is increasing every year mainly due to natural reproduction. In 1992, the population density was 6.3 persons per 1 km^2, and in 2022 it will be 9.3 persons. According to this indicator, the region occupies the last place in the republic. In the region, the population density increased by 1.4 times in 1992-2022. The increase in density is mainly due to the fact that the territory is provided with water resources, developed from a socio-economic point of view, has large and small sizes. Therefore, the population density is not the same in the districts and cities of the region.

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The analysis shows that in 2000, among the rural districts of the region with the highest population density, Khatirchi and Karmana districts stood out, the average population density of which was 98.6 and 72.1 people, respectively.

In the region with an increase in density by 193.1% in 2022 compared to 2000, Karmana district ranks first, followed by Navbakhor (154.4%), Kyzyltepa (147.1%), Khatirchi (147.0%) %), Nurata (132.7%). This is due to such factors as the relatively small area of these areas, the availability of running water, proximity to transport routes, high natural growth and relatively developed social infrastructure.

It should be noted that in all districts there are areas where the average population density does not increase, but decreases. Compared to 2000, the average population density has decreased in Tomdi (42.9%), Konimekh (13.0%) and Uchkuduk (11.1%) districts.
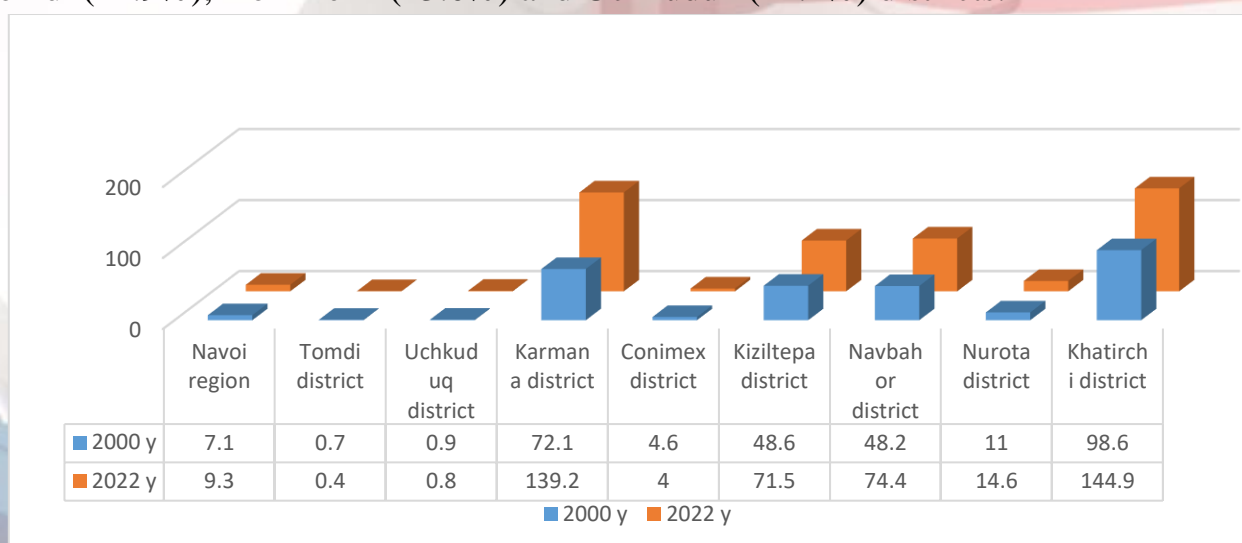

	Navoi region	Tomdi district	Uchkuduq district	Karmana district	Conimex district	Kiziltepa district	Navbahor district	Nurota district	Khatirchi district
2000 y	7.1	0.7	0.9	72.1	4.6	48.6	48.2	11	98.6
2022 y	9.3	0.4	0.8	139.2	4	71.5	74.4	14.6	144.9

Figure 1. Average population density of the Navoi region in 2000 and 2022 per 1 km², person

The average density of the population of Navoi region in 2000 and 2022 is 1 kv.km.
person
Based on the data of the Department of statistics of Navoi region
compiled by the author

The decrease in the average population density in these areas is associated with unfavorable natural conditions, low birth rates, and also with the fact that part of the population moved to the city of Zarafshan. Thus, in terms of population density, the city of Zarafshan ranked first in the region, the population density was 4190 people. In general, the population density in the region is quite low. Especially in the northern part, the average density does not even reach 1 person. Since the main part of this territory is desert, the lack of running water, the unfavorable climate, the lack of fertile soil and the size of the territory create a lot of inconvenience in the resettlement of the population.

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When dividing the districts of the region into groups according to population density, the total population of 4 districts belonging to both geodemographic regions corresponded to the grouping with the lowest average density, that is, up to 29 people, and the remaining 4 districts of the region corresponded to a grouping of 30.2 people and more. There are no districts belonging to other middle groups in the region. This indicates that the Tomdi and Uchkuduk regions are typical desert regions, the Konimekh region also represents most of the desert, and the Nurata region represents part of the desert and most of the mountains, so the territory is large and the population is small. All other districts have a high average density due to their advantageous geographical position.

Table 1 Grouping of districts of the Navoi region according to the average level of population density (2022)

Population density groups	Number of districts	Population, thousand people	Percentage of total population	Average population density (1 km^2, people)	Districts included in the groups
Northern geodemographic region					
up to 29	2	54,9	6,8	0,5	Tomdi, Uchkuduk,
Southern geodemographic region					
up to 29	2	125,3	15,6	9,4	Konimekh, Nurata
29,0-29,4	-	-	-	-	-
29,4-29,8	-	-	-	-	-
29,8-30,2	-	-	-	-	-
Over 30.2	4	623,5	77,6	109,7	Kiziltepa, Navbakhor, Karmana, Khatirchi,
Total for the region	**8**	**803,7**	**100**	**57,4**	

The table was compiled by the author on the basis of data from the Department of Statistics of the Navoi region.

Between Tomdi, where the average population density is the lowest, and Khatirchi, where it is the highest, the density differs by more than 369 times. In fact, the above average population density corresponds to the "gross" density indicator.

A.S. Soliev said that the "gross" indicator applies to all districts of the administrative region (regardless of whether the population lives or not, it also includes desert or mountainous regions). Therefore, the determination of population density at the level of rural gatherings of citizens gives good results. In this case, if the density is calculated in relation to the lands used in agriculture, the analysis will be deeper and more accurate [4, p. 14]. Georgian scientist V.Sh. Jaoshvili also noted. O.R. Rakhmatullaev developed a standard for the "land capacity" of the population for the large oases of Uzbekistan.

Z.N. Tozhieva used the demographic potential of the region in her research. The demographic capacity of a territory is a variable. Since the demographic capacity of regions with a large

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territory and a small population is sometimes low, on the contrary, a small area can feed and accommodate several times more people. It is usually based on an analysis of the most important natural components for everyday life, which determine the demographic capacity of a territory. For example, these include the provision of housing for the population, the availability of land suitable for the construction of industrial enterprises, water resources, recreational resources, the organization of food supplies, and so on. [5, p.21].

Based on these sources, the population density in this study was calculated as the number of inhabitants of regional districts in relation to the land allocated to them, used for agriculture. Accordingly, the districts with high population density are the districts of Karman, Khatirchi, Kiziltepa and Navbakhor, respectively 197; 186.2; 159.2 and 90.7 people (2023). Conversely, the density index is very low in Konimekh (3.0), Uchkuduk (1.1) and Tomdi (0.5) districts.

The districts of Uchkuduk, Tomdi and Konimekh have large areas of land used for agriculture and consist mainly of pastures. At the same time, the population density in these areas is very low. In the districts of Uchkuduk and Tomdi, there is almost no irrigated land, only in small areas in and around cities where water pipelines run. Irrigated land exists only in the remote southern part of the Konimeh district, isolated from the main part.

Khatyrchi, Kyzyltepa, Karmana and Navbakhor districts have less land used for agriculture, but these districts have a high proportion of irrigated land in the region. In this regard, the main population of the region also lives in these areas. Irrigated land is the most expensive, and at the same time it is the land with the most dense and densely populated area.

Table 2 The composition of agricultural land in the districts of Navoi region

№	Rural areas	Area, thousand ha	Area of land used in agriculture, thousand ha	Including area of irrigated land, thousand ha	Population, thousand people	Population density in relation to the lands used in agriculture, per 1 km², pers.
			Northern geodemographic region			
1	Tomdi	3577,6 32,9	3111,2 34,7	0,2 0,2	15,8 2,0	0,5
2	Uchkuduk	4501,2 41,4	3699,1 41,2	0,1 0,1	39,1 4,9	1,1
			Southern geodemographic region			
1	Karmana	94,2 0,9	68,9 0,8	14,9 16,4	135,7 16,9	197,0
2	Konimekh	1595,6 14,7	1245,7 13,9	4,7 5,2	37,3 4,6	3,0
3	Navbakhor	157,1 1,4	131,1 1,5	19,1 21,0	118,8 14,8	90,7
4	Nurata	593,6 5,5	444,3 5,0	3,3 3,6	88,0 10,9	19,8
5	Khatyrchi	141,8 1.3	112,7 1,3	25,8 28,4	209,8 26,1	186,2

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6	Kyzyltepa	218,5	160,8	22,7	159,2	99,0
		2,0	1,8	25,0	19,8	
	Total	10879,6	8973,7	90,8	597,1	**597,1**
		100	100	100	100	

The table was compiled by the author on the basis of data from the Department of Statistics of the Navoi region

Note: The fraction rate is an absolute value, and the denominator is a relative indicator.

The Zeravshan River is of incomparable importance in the formation of local settlements. The river flows through a certain part of the districts located in the south of the region. Therefore, settlements are located depending on the direction of the river. For example, since the river flows through the southern part of the Khatyrchi region, the northwestern part of the Kyzyltepa region, the northern part of the Karmana region, and the southern part of the Navbakhor region, the settlements are very dense in these areas.

Conclusion

Gross and net population density indicators are very low in Tomdi, Uchkuduk and Konimekh districts of Navoi region. Because the territory is very large, and the population is small. From important indicators of population distribution, gross and net densities were calculated for geodemographic regions, districts and cities. The difference in population density between 2000 and 2022 has been studied.

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