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Territorial characteristics of social and environmental problems in the location of the population of Uzbekis

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Abstract---Nowadays, one of the significant tasks facing the people of Uzbekistan with a large demographic potential, is to protect the environment, treat nature wisely, preserve the flora and fauna, and prevent the global environmental crisis. The main goal of the research is to scientifically substantiate the fact that the comprehensive approach of the growing number and share of population of a country to natural resources and the assimilation of the surrounding environment, no matter how important it is for society, it is creating a number of problems that are complex to solve in the life of people, the process of reestablishment. Therefore, the article aims to explore issues such as loss of natural resources, lack of drinking water, the growth, migration and settlement of population associated with the emergence of various diseases, reduction of land areas, increase or decrease in density, environmental pollution.

Keywords---population density, demographic capacity, ecological situation, climate.

Introduction

The population locates and develops in accordance with favorable natural conditions, economic geographical location, climate, relief, socio-economic

development and demographic situation. As a result, populated areas will become increasingly centralized and will form complex systems. In all periods, the location of the population was determined by natural factors. Especially, the emergence of settlements of various sizes, the complexity of the transport system occurred on the basis of extensive use of land, water, forest, mineral, energy and other natural resources for production, health care, cultural- aesthetic, scientific and other purposes.

The problems arising between the growth of the number of population and the environment have been studied since the beginning of 1990 years in Uzbekistan. Population growth has a negative impact on the environment through other factors, for instance, age content, level of urbanization, changes in the average size of the family. Growth in the economy, development, decline in demographic processes, scientific and technological progress all exacerbate environmental problems. The process of depopulation is taking place in European countries, at the same time; the demographic explosion in some countries is still going on. The demographic explosion is not primarily an economic problem, but a geo-ecological problem [10]. At this point, it is not expedient to link all the problems with population growth. Because, "In the United States, which accounts for a quarter of India's population, 15.7 million tons of carbon are released into the atmosphere each year, compared to 4.9 million tons in India." [11]. There are also indicators in other countries.

The methods of research

The methods of statistical observation, statistical groupings, mathematical, comparative analysis indexing are effectively used in this article.

- *Statistical observation* is a massive systematic observation (carried out according to a developed plan, which includes questions of methodology, organization of collection and control of information reliability), systematic scientifically organized observation of the phenomena and processes of socio-economic life, which consists in the collection and registration of individual characteristics from each unit of the population.
- *Statistical groupings*, the grouping method, a method of processing and analyzing statistical data, in which the studied set of phenomena is divided into groups and subgroups that are homogeneous by individual characteristics, and each of them is characterized by a system of statistical indicators.
- *Mathematical methods* are the most important tool for the analysis of economic phenomena and processes, the construction of theoretical models that allow to display the existing connections in economic life, to predict the behavior of economic entities and economic dynamics.
- *Comparative analysis* is the basis for evaluating a company's performance. The indicators of the current year are compared with the previous period, the actual values are compared with the planned or normative ones, and the data of a particular enterprise are compared with the industry average values. In this article, we will consider examples of the application of comparative analysis.

The Republic of Uzbekistan is a country with an average demographic potential worldwide in terms of the number of population. Its population, according to the data of January 1, 2020, was 34.3 million of people. In this regard, it ranks the third among the CIS countries after Russia and Ukraine and the first among Central Asian countries. The demographic history of a country is characterized by the fact that its population has grown at different rates at different times. In particular, according to the All-Russian population census held in 1897, the territory of present-day Uzbekistan was home to 3,948,000 people, and by 1913, that is, 15 years later, the number had risen to 4,331,000. The results of the 1926 population census, on the other hand, recorded 4,629,000 people here, and the population has increased by an average of 2,100 a year over the past period. During the last census in the former Soviet Union (1989 year), 19,780,000 people lived in Uzbekistan [15]. During the years of 1979-1989, the population of the republic increased by 4391 thousand people and the average annual growth was 2.55%. It means that this is 0.45% less than in the previous period.

The population of Uzbekistan has grown and continues to grow; mainly as a result of natural increase. The role of this factor has always been high. In recent years, however, it has become the sole source of population growth. However, in the 90s, there were significant changes in the process of population regeneration, that is, the high rate of birth or natural reproduction in the republic began to lose its status. In particular, the birth coefficient among the population was 33.7 per mille in 1990, while in 1999 it fell sharply to 22.3 per mille, or by 11.4 points or 1.5 times. In 2020, this figure rose slightly, that is, to 24.6 per mille of births relative to per thousands of people, 4.6 per mille of deaths[16] and 20.0 per mille of natural increase[17]. In the absence of abrupt changes in mortality, the natural increase of the population remains largely dependent on its birth rate.

At a time when the population continues to grow steadily, humanity's all-encompassing attitude towards natural resources is leading to the assimilation of the environment that surrounds it. No matter how important the results of this work are for society, they pose a number of challenges to humanity. These include the loss of natural resources associated with population growth and settlement, the lack of drinking water, the emergence of various diseases, the reduction of land area, the increase in density, and environmental pollution. Rapid population growth is leading to an increase in the density of settlements, the expansion of rural and urban areas due to arable land, the loss of natural resources. In addition, due to environmental pollution, poisoning, allergic, endocrine, genetic, poisoning, dangerous tumors are on the rise. The negative attitude of people towards nature, i.e. the excessive release of chemicals into the air, land, water, is causing more than 80 percent of cancers. Inhalation of various pollutants and radiation poisoning also affects the demographic development of the population, its distribution along the settlements. Socio-economic development, the development of science and technology are eliminating harmful, unpleasant situations in such a natural environment. As a result, today man suffers several times more than the anthropogenic, artificial environment he created.

According to V.A. Sitarov, V.V. Pustovoytov, the higher the population and its density, the worse their general health, the more dangerous the consequences of pandemics and epidemics [5]. Population health is one of the most difficult and

complex renewable resources, which is a criterion for determining the socio-economic development of the country. The fact that more than half of the population of Uzbekistan lives in rural areas, in the mountains, slopes, oases, valleys, where environmental problems are less acute, has allowed to consume environmentally friendly products. However, such areas are formed and developed on the basis of resources, natural resources. As a result, these settlements differ from urban settlements by their specific ecological function, situation and problem.

Rural areas, in addition to performing important environmental and recreational functions, are also a “warehouse” of domestic and industrial waste from cities. This is because most urban wastes are dumped outside the city, ie in rural areas, which pollutes the air, water and flora of those lands. At the same time, given the fact that nature reserves, holiday homes, sanatoriums and the cultivation of quality food are specific to rural areas, the impact of these wastes can be clearly understood.

The main source of production for rural areas is the cultivation and processing of agricultural products. Consequently, this network activity is a major cause of environmental problems for rural areas. In addition, the use of chemical fertilizers in agriculture, salinization of lands, livestock waste in animal husbandry are leading factors in environmental pollution. In agriculture, not only in agriculture, but also in animal husbandry, “a 100,000-head pig farm is capable of disrupting an urban ecology with a population of 1 million” [6], requiring special attention in locating it relative to residential areas. Therefore, this network should be located at a certain distance from the population and residential areas, “that is, the sanitary protection zone of such complexes should not be less than 5 km” [3]. In addition to livestock, the use of various chemical fertilizers in agriculture, in addition to poisoning the soil, water and air, has a negative impact on the health of the population. V.A.Krasilov highlights and explains the five negative consequences of global population growth. Among them are the increase in demand for material needs, the growth of urban agglomeration, environmental pollution, declining living standards, changes in the composition of the population [4].

Statistical analysis

The main sources of air pollution are the activities of the population in industrial production and the transport system. As a result of their activities, air pollution, environmental pollution, loss of ability to work, cough, dizziness, various lung diseases, eye, general poisoning of the body occur. The incidence rate of this type of disease in the population of Namangan, Navoi, Bukhara, Fergana and Tashkent regions, where the ecological situation is difficult, is higher than the national average. It is worth noting that the incidence of tuberculosis in the Republic of Karakalpakstan, Kashkadarya, Surkhandarya regions and Tashkent is relatively high, depending on the socio-economic and environmental situation of the population [2]. In addition, the incidence rate of the population by major diseases in 1999-2019 in Navoi, Bukhara and Khorezm regions increased by 1.1 times.

Natural conditions, climate, population development and its health are among the factors that play an important role. However, problems of natural-climatic classification, which are of global importance, are much more difficult to solve than problems of socio-economic and political significance. Natural and climatic problems in Uzbekistan include environmental problems associated with the decline of the Aral Sea. This ecological catastrophe is directly observed not only in the territory of the Republic of Uzbekistan, but also in the north-eastern part of Turkmenistan, in particular in the Dashoguz region and its environs, as well as in the south-western regions of the Republic of Kazakhstan. Also, rising salt from the dry lands of the sea and the rise in the air of chemicals once used in agriculture are creating sandstorms, which are aggravating the living conditions of the population and creating an ecological crisis. This environmental situation has become one of the main factors affecting the mortality rate and life expectancy of the population living in these areas. As a result, the health of the population of the Aral Sea region and related problems determine the demographic behavior, thinking, development and situation of the population of these regions.

The increase in the population of the Lower Amudarya region has led to a 1.3-fold increase in the density of its location. The relatively large land area of the Republic of Karakalpakstan requires a very sparse population. It can also be seen that the average population density of Moynak, Takhtakor, Kungrad districts in this republic is the lowest in the country, is around 1-3 people. However, if we take into account that the area of each of these districts is equal to the area of one or two regions of Uzbekistan, the peculiarity of the location of the population in the region becomes even clearer. In this economic region, the incidence of water-related diseases, especially in the limbs, is 3-4 times higher than in the country, and the population of the region suffers the most from respiratory diseases. Increasing population density in Uzbekistan is already causing problems in some areas due to land shortages and lack of drinking water. In particular, the lack of land for the population of the Fergana Valley has already become a problem of national importance. However, currently the increase in population density in Khorezm, Tashkent, Syrdarya, Surkhandarya, Kashkadarya, Jizzakh regions by 1.5-1.8 times during the survey period creates social and environmental problems related to demogeographic capacity.

In all the same regions there are deserts, hills, mountainous areas, from which the desert lands have already been developed, and the mountains and foothills are occupied by the population and settlements. The intensity of such settlement has further intensified the man-made and anthropogenic impact on nature. Despite the fact that the population of the Republic of Karakalpakstan, Khorezm, Navoi and Bukhara regions is sparse, from the last census so far their population density is 130.1; 146.1; Increased by 127.5 and 135.8 percent, respectively. This creates an opportunity for the development of neglected lands and desert areas. However, the environmental problems associated with the Aral Sea region in these areas cause problems such as salinization of lands, provision of the population with quality drinking water and food. At the same time, such a severe environmental situation is leading to an intensification of mechanical movement of the population, ie an increase in the number of migrants, a decrease in natural mobility, the spread of disease and illness. For example, "In the 1960s, there were

100,000 people living in the Muynak district, but now that number has dropped to 29,000.

As a result of environmental problems and ecological disaster zones, more than 100,000 Karakalpaks were displaced in the 1980s and 1990s. Initially, they changed their habitat due to the closure of the Moynak fish industry, but the terrible drought and lack of water in 2000-2002 further increased the number of migrants from these lands [7]. Similarly, between 2005 and 2007, the absolute population of Muynak district decreased by 300 people, the population of Khojayli district - by 2,200 people, and the population of Shumanay district - by 1,000 people. The critical ecological situation in the Aral Sea region has a negative impact on the health of the entire population of the region, especially the Republic of Karakalpakstan and Khorezm region. The high morbidity of the Aral Sea population is largely due to the pollution of the air with salt and harmful substances that migrate from the dried bottom of the Aral Sea with dust, as well as an adequate supply of quality drinking water [8]. The nosogeographical situation in this geodemographic region leads to a high rate of morbidity and mortality among the population. In contrast to the Republic of Karakalpakstan, the existence and development of industrial enterprises in Navoi region is one of the main factors in the emergence of environmental problems. In addition, the attitude of the population to nature, water, land, the development of the agricultural sector, the impact of the Aral Sea crisis is high.

Population growth, the development of agricultural sectors, the increase in the number of industrial enterprises, the development of agriculture will not only increase the demand for water, but also create problems with it. The inflow of wastewater from various industrial enterprises and collectors-drains into the Zarafshan River, which is directly used by the population and farms of Navoi, Bukhara and Samarkand, partly Jizzakh regions, complicates the ecological situation in the areas where it is used. Another area in Uzbekistan where environmental problems affect the location and development of the population are acute is the Tursunzoda aluminum plant, built in the southern part of the neighboring Republic of Tajikistan. The gas emitted from the plant not only pollutes the air in the surrounding areas, but also leads to the poisoning of flora and fauna in Sariosiya, Uzun and Denau districts of Surkhandarya region of Uzbekistan, an increase in morbidity and the loss of many crops. It was found that "the population around the Tajik aluminum plant" appeals to the respiratory organs, stomach, endocrine system, blood and circulatory system and similar diseases. In addition, in Tursunzoda (1.6) and Sariosiya district (1.8) the incidence of congenital anomalies in child development was found to be higher than in the control areas [8].

Result and Conclusions

Based on the results of the study, it can be concluded that the industrial use of natural resources in the country, the composition of large cities, the type of transport, the increase in traffic, the location of the population contribute to its socio-demographic development. This is especially evident in the demographic development of the population. From the analysis of population location and environmental problems, it can be seen that industrial production is concentrated

in densely populated areas, where the environment is highly polluted. In the same areas, morbidity, decreased ability to work, cough, dizziness, various lung diseases, general intoxication of the eye, mortality rates are relatively high.

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