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ҚАЗАҚ ҰЛТТЫҚ УНИВЕРСИТЕТІ

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УНИВЕРСИТЕТ имени АЛЬ-ФАРАБИ

AL-FARABI KAZAKH  
NATIONAL UNIVERSITY

# ХАБАРШЫ

ЭКОЛОГИЯ СЕРИЯСЫ

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# ҚазҰУ ХАБАРШЫСЫ

Экология сериясы

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КАЗАХСКИЙ НАЦИОНАЛЬНЫЙ УНИВЕРСИТЕТ имени АЛЬ-ФАРАБИ

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Серия экологическая

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## **Dynamics of indicators of natural population movement of the Republic of Kazakhstan**

This article consider the dynamics the main indicators of the natural movement of the population of Kazakhstan during the years of independence. The changes in the population according to the census in the Republic of Kazakhstan. The indicators of infant mortality - one of the basic statistics of the demographic situation in the country.

**Keywords:** natural movement of population, census, the infant mortality, the demographic situation.

Г. Нюсупова, Г. Кайранбаева, Д. Тажиева

**Динамика основных показателей естественного движения населения  
Республики Казахстан**

В данной статье рассмотрена динамика основных показателей естественного движения населения Республики Казахстан за годы его независимости. Проанализированы изменения численности населения по данным переписей населения на территории Республики Казахстан. Рассмотрены показатели младенческой смертности – одного из базовых статистических показателей демографического положения в стране.

**Ключевые слова:** естественное движение населения, перепись населения, младенческая смертность, демографическая ситуация.

Г. Нюсупова, Г. Кайранбаева, Д. Тажиева

**Қазақстан Республикасы**

**халықтың табиғи қозғалысының негізгі көрсеткіштерінің серпіні**

Бұл мақалада Қазақстан Республикасының тәуелсіздік жылдарындағы халықтың табиғи қозғалысының негізгі көрсеткіштерінің серпіні қарастырылған. Қазақстан Республикасының аумағында жүргізілген халық санактарының мәліметтері негізінде халық санының өзгеруіне талдау жасалды. Елдегі демографиялық жағдайдың негізгі статистикалық көрсеткіштерінің бірі – сәби өлім-жітімінің көрсеткіштері қарастырылды.

**Түйін сөздер:** халықтың табиғи қозғалысы, халық санағы, сәби өлім-жітімі, демографиялық жағдай.

Regularities of development the population as objectively determined processes reflect the global changes occurring in the life of the country in its economic, political, environmental and other areas.

The problems of the social nature of population growth and development is currently get increasingly important. They are included in the United Nations list of 13 global problems of our time, the solution of which depends the fate of all mankind. In terms of

importance of issues of demographic development are on third place after the problem of war and peace, the environment.

In this context, in many countries the socio-demographic characteristics are considered as determining the level and potential for development, and therefore, the security of the state. Accordingly, the provision of population growth is one of the key priorities of the Strategy "Kazakhstan-2050".

Real demographic characteristics can be obtained by the census, which is conducted by UN resolution, about every 10 years. Ongoing assessment of demographic processes at affordable their parameters is carried according to the data of state statistics agencies and departmental officials, who keep records of separate phenomena in life of the population in coordination of the former.

The first census in Kazakhstan was held in 1897, when Kazakhstan was part of the Russian Empire. According to this census, the population of the Kazakh region totaled 4,333 thousand, of which 303 thousand (7%) were living in small towns and urban areas (picture 1). At that time in Kazakhstan, there were 22 urban settlements /1/.

In the recent past, on demographic measures, the number of the population has tended to increase. However, from the mid 80's and especially in the 90 years of the new trends in the demographic development of the country.

From 1989 to 1999 year the total population decreased by more than 1.2 million people (7.5%).

The crisis phenomena in socio-economic development of the Republic of Kazakhstan in 90 years have affected the demographic situation. Since 1992, due to excessive migration losses of natural growth trend established common population decline.

First National Census of the Republic in 1999, fixed 14,953.1 thousand. of permanent residents, of

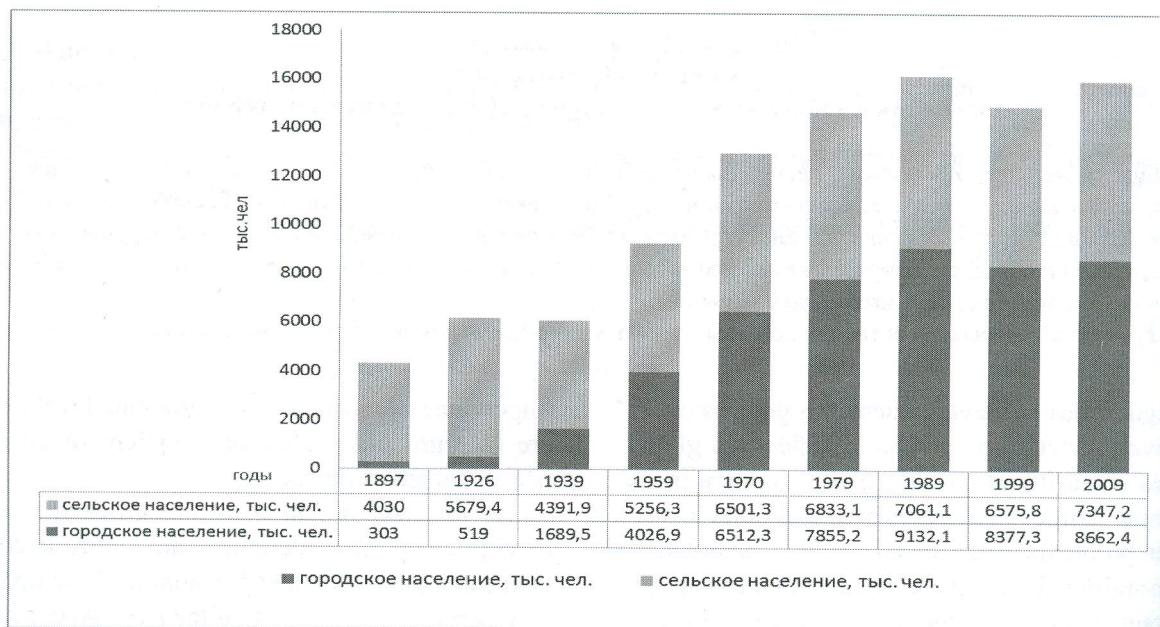
which 8376.8 thousand people (56%) - urban and 6576.3 thousand people (44%) - in rural areas. As compared to the 1989 census, the total population declined by 1246.03 thousand.

Determining role in the negative dynamics of population of Kazakhstan in the period 1990-1999 was migration. During this period, as a result of emigration of various nationalities of the country has decreased the number of Russian - at 1582 thousand, Ukrainians - 328 thousand, Belarusians - 66 thousand. As a result, the share of Kazakhs increased from 40.1% to 53.4% /2/.

On the results of the census of 2009 number of population of the Republic of Kazakhstan was 16004.8 thousand people and in the last 50 years has grown by 6.7 million people, compared to the previous (1999) census – for 1022.9 thousand people or 6.8%.

The change in the general population, primarily influence the natural increase, which is formed influenced by changes in fertility and mortality.

A sharp drop in fertility during the 90-ies. Kazakhstan has created two opposing points of view: 1) The main reason for this was the economic and political crisis in the country during this period, and 2) reducing the fertility in the following years - the continuation of the objective process of evolution. At this historical stage the intensity of the process of modernization of reproductive behavior of the population actually accelerated by modern



**Picture 1 – Dynamics of the population of the Republic of Kazakhstan according to the data Census**

crisis since the formation of installation fecundity, research has shown that a considerable influence the living conditions of the family, and the socio-economic situation is assessed subjectively by the family.

Since the late 80's - early 90's as a result of the deepening crisis in the economy and the living standard of the population in demographic indicators have deteriorated natural reproduction. The analysis showed that the total fertility rate in the country declined from 22 per thousand in 1991 to 15‰ - in 1999 with the decline in fertility occurred in all areas. It was only in 2008 it increased and reached a level of 1991 was 22 per thousand (table 1).

In the whole country the birth rate has a tendency moderate growth in 2011 the total fertility rate for the country was 22 births per 1000 people.

One of the main indicators of the demographic situation in the country is the mortality rate. Mortality even more directly than the birth rate depends on the level of socio-economic development, material welfare and health care of population. In 1990-1999 in the Republic of Kazakhstan died 1511.8 thousand people. It should be noted that the "peak" of deaths occur in 1995 (168.7 thousand.) From 1996 is in the

process of decline and in 1999 the number of deaths amounted to 145.9 thousand. The number of deaths in 1999 compared to 1990 increased by 1.1 times. The increase in mortality occurred throughout the country.

The most important problem is the decline in the quality of generations that have come into effect, condition of their physical development, the level of resilience. The weak generation, passed down from generation to generation increasingly affects the quality of population health, thus contributing to the reduction in life expectancy /3/.

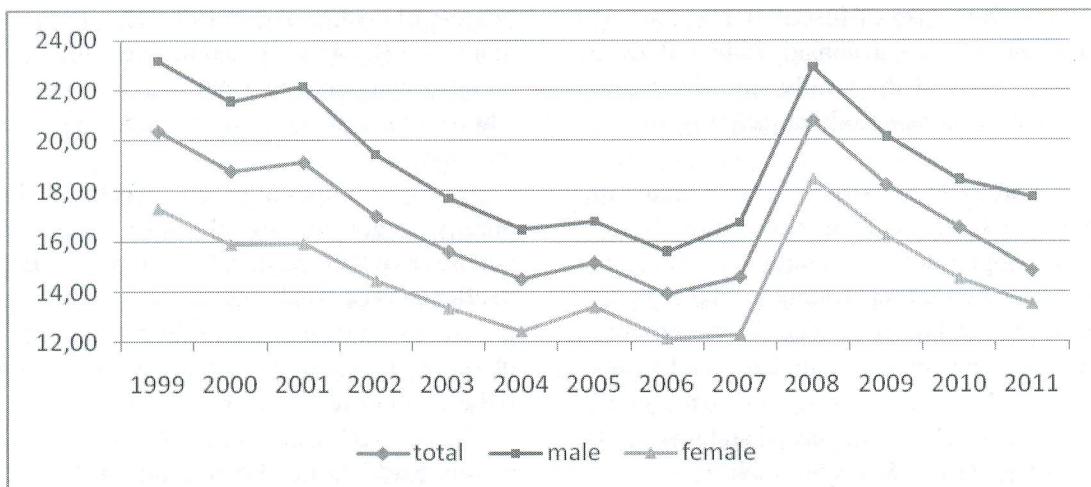
In 1997-2001 in the Republic of 756.8 thousand people dead. The number of deaths in 2001 compared to 1997 decreased by 11.5 thousand., Or 1.1 times. It should be noted that in the whole country, the process of reducing mortality, particularly from 1996 to 2009. The rate in 2011 for the whole country was 8.7 deaths per 1,000 people.

Infant mortality - one of the basic statistics and demographics is an important characteristic of the overall health and quality of life of the population. Since the mid-20th century, in the classification of of the living standard of the population infant mortality is used as one of the important factors.

**Table 1** – Natural population movement of the Republic of Kazakhstan for 1990-2011 years.

Year	Births		Deaths		Natural increase	
	person	per 1000 population	person	per 1000 population	person	per 1000 population
1	2	3	4	5	6	7
1990	362081	22,2	128576	7,9	233505	14,3
1991	353174	21,5	134324	8,2	218850	13,2
1992	337174	20,5	137518	8,4	200094	12,1
1993	315482	19,3	156070	9,5	159412	9,8
1994	305624	18,9	160339	9,9	145285	9,0
1995	276125	17,5	168656	10,7	107469	6,8
1996	253125	16,3	166028	10,7	87147	5,6
1997	232356	15,2	160138	10,4	72218	4,8
1998	222380	14,8	154314	10,2	68066	4,6
1999	217578	14,6	147416	9,9	70162	4,7
2000	222054	14,9	149778	10,1	72276	4,9
2001	221487	14,9	147876	10,0	73611	5,0
2002	227171	15,3	149381	10,1	77790	5,2
2003	247946	16,6	155277	10,4	92669	6,2
2004	273028	18,2	152250	10,1	120778	8,1
2005	278977	18,4	157121	10,4	121856	8,1
2006	301756	19,7	157210	10,3	144546	9,4
2007	321963	20,8	158297	10,2	163666	10,6
2008	356575	22,8	152706	9,7	203869	13,0
2009	357552	22,0	142780	8,0	214772	13,0
2010	367710	22,5	145798	8,9	221913	13,4
2011	372521	22,5	144122	8,7	228278	13,8

Note - The data of the Statistical Yearbook "Kazakhstan in 2011." - Astana, 2012. - 496 pages



**Picture 2 – The dynamics of the infant mortality rate in the Republic of Kazakhstan for the years 1999-2011 (in promille)**

**Table 2 – Structure of death causes of children deaths under of 1 year**

№ n/n	Region	States occurring in the perinatal period	Congenital anomalies	Respiratory disease	Infectious and parasitic diseases	Accidents, poisoning and injuries
1	Republic of Kazakhstan	64%	19%	10%	3%	4%
2	Akmola oblast	59%	18%	10%	3%	9%
3	Aktobe oblast	57%	23%	10%	7%	3%
4	Almaty oblast	56%	19%	16%	3%	6%
5	Atyrau oblast	63%	22%	9%	2%	4%
6	West-Kazakhstan oblast	41%	33%	19%	2%	5%
7	Zhambyl oblast	55%	26%	9%	6%	4%
8	Karagandy oblast	57%	27%	6%	5%	6%
9	Kostanai oblast	60%	21%	8%	7%	5%
10	Kyzylorda oblast	64%	18%	11%	5%	3%
11	Mangystau oblast	62%	10%	6%	2%	19%
12	South-Kazakhstan oblast	73%	11%	12%	4%	1%
13	Pavlodar oblast	67%	24%	2%	2%	5%
14	North-Kazakhstan oblast	46%	25%	5%	5%	20%
15	East-Kazakhstan oblast	62%	26%	9%	1%	2%
16	Astana city	52%	28%	14%	2%	5%
17	Almaty city	82%	14%	3%	0%	0%

The following diagram shows the dynamics in the infant mortality rates as a whole on Kazakhstan for 1999-2011 years (picture 2).

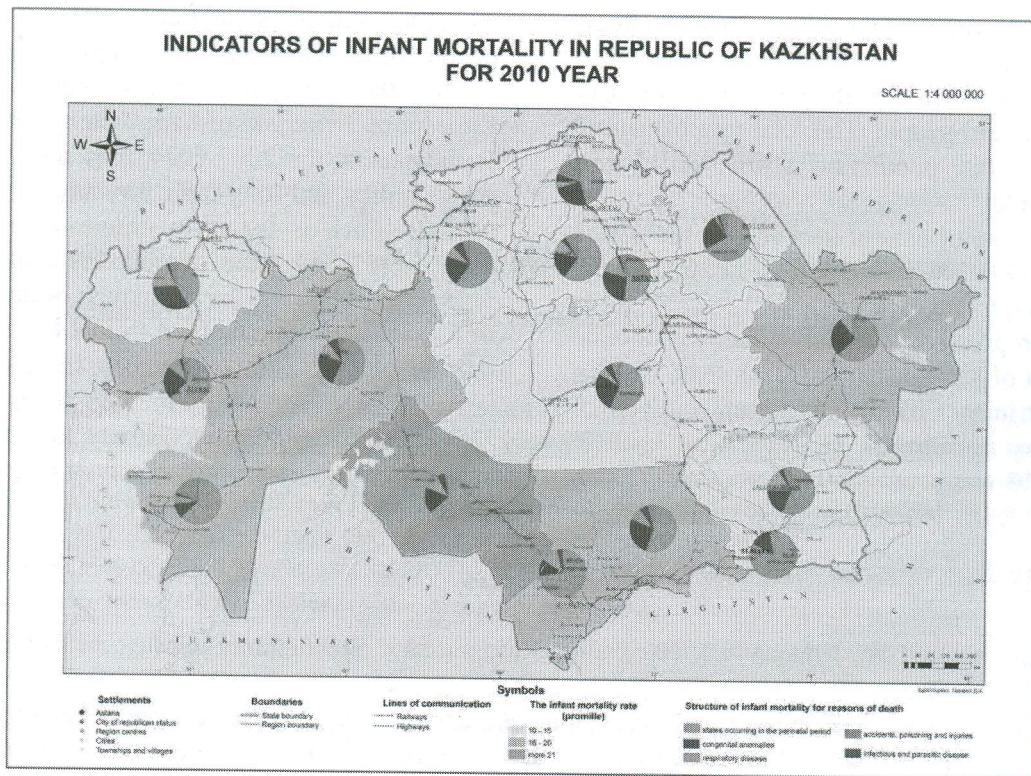
The graph shows that infant mortality in the Republic of Kazakhstan has a steady downward trend, except for the period of transition to the new system of registration of neonatal deaths, as recommended by World health organization (2008).

The comparison graphs as in the case of perinatal mortality, infant mortality rates for girls on average 24% lower infant mortality rates of boys, although the dynamics of the coefficients is almost identical /4/.

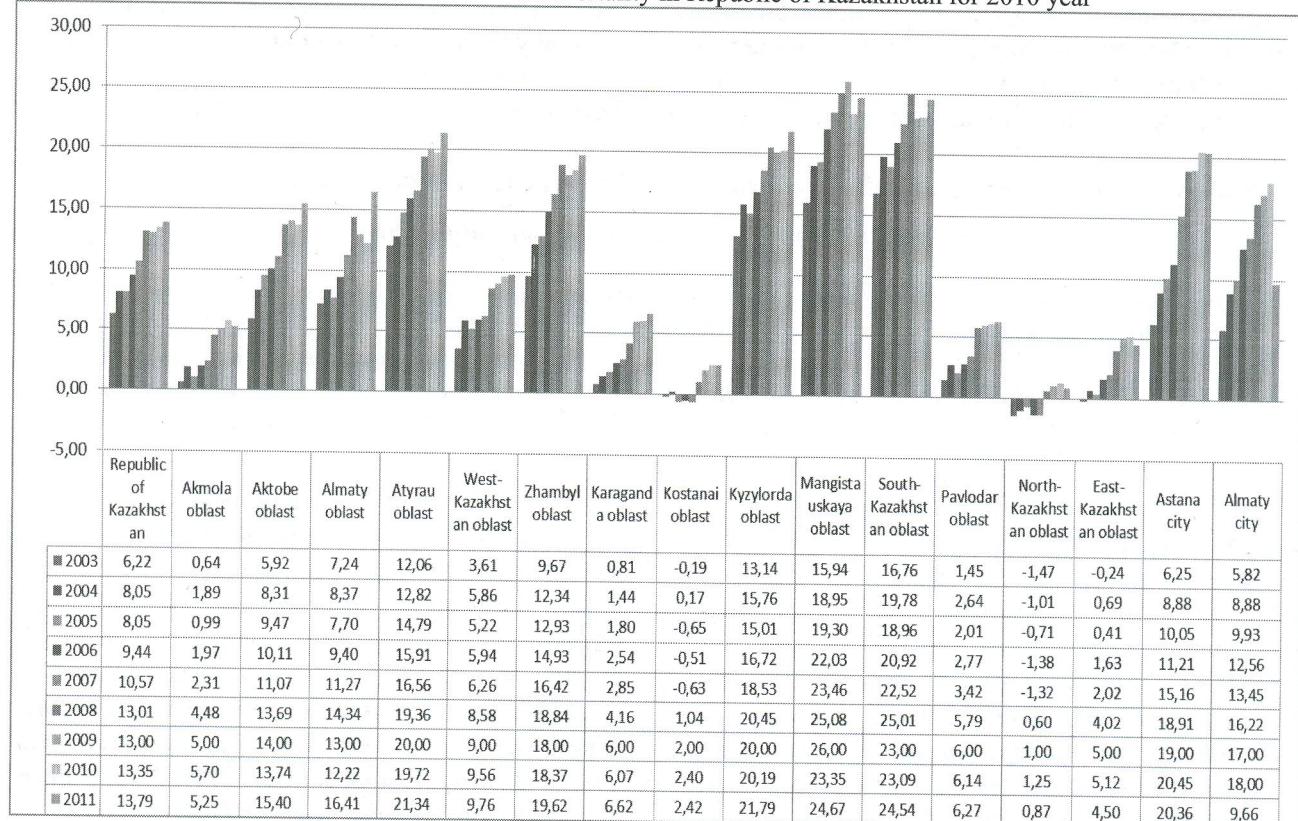
For the analysis of the causes of infant mortality consider structure of causes of regions' infant mortality (table 2).

As the table shows, the largest proportion of perinatal mortality observed in Almaty (82%) and South-Kazakhstan oblast (73%) and the lowest proportion of West-Kazakhstan (41%) and South-Kazakhstan (46%) oblast.

Also necessary to note that compared with other regions the excessively high share mortality from accidents, poisoning and injuries in Mangistau and North Kazakhstan oblast (picture 3). A feature of these causes of death is that they are more



Picture 3 – Indicators of infant mortality in Republic of Kazakhstan for 2010 year



Picture 4 – The natural increase of population of the Republic of Kazakhstan for 2003-2011 years (per 1000 population) /5/

determined behavioral factors, the attitude of parents and medical staff to the health of children.

The natural increase of the population for 2011 was 228 thousand people. The total rate of natural increase per 1,000 population at 01.01.2012 was equal 14 people.

The total rate of natural increase for the period 1999-2011 was 14 % in 1990, 6 % in 2003 and in 2011 - 14 % (picture 4).

The progressive social and economic development of Kazakhstan in recent years has had a significant impact on the demographic situation in the country. Number of population the republic on 01.01.2013 was equal 16911.9 thousand people,

including urban population - 9264.9 thousand people, rural - 7647 thousand people.

In the Strategy "Kazakhstan-2050", the Concept of Transition of Kazakhstan to Sustainable Development for 2007-2024 formulated a strong social policy and long-term investments in human capital, which is the main criterion for the high standard of living of the Republic of Kazakhstan. So, for the past 15 years, the population of the Republic of Kazakhstan has increased from 14 million to 17 million people. Life expectancy increased to 70 years. The average age in the country is 35 years. This gives us a great opportunity to preserve our human potential to achieve social sustainability.

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