

Ministry of National Economy of the Republic of Kazakhstan
Committee for construction and housing and utilities infrastructure

**NATIONAL REPORT OF THE REPUBLIC
OF KAZAKHSTAN ON HOUSING AND
SUSTAINABLE CITY DEVELOPMENT**

HABITAT III

**Astana
2016**

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Introduction

The national report of the Republic of Kazakhstan on housing and sustainable city development HABITAT III (hereafter – National report) was prepared by the Committee for construction and housing and utilities infrastructure of the Ministry of National Economy of the Republic of Kazakhstan with participation of the involved central and local executive bodies.

National report is an international initiative, one of the fundamental documents on providing sustainable city development and appropriate population housing..

A number of issues were considered in National report, relating to sustainable development of inhabited areas, including population problems of inhabited areas, town planning, environment and urbanization, legislation in the field of territory development management, urban economy and others.

National report was based on the existing statistic and other departmental, regional information.

For the period of review since 1996, there is a significant improvement of state of town and rural settlements, including their social and economic development, access to necessary engineering and transport infrastructure, housing; a number of regulatory legal acts were accepted, promoting the realization of strategic goals.

The analysis made allowed to identify the main challenges and threats and also possible of sustainable development of inhabited areas and provision of housing for long-time period.

1 Population problem of inhabited areas

The Republic of Kazakhstan is the 63rd in the list of counties with large population. As of the beginning of 2016 the total population of the country was 17 670.6 thous. of people with low population density about 6.51 people per km².

During 1996-2015 the population of Kazakhstan increased for 2190 thous. of people or by 14.1 % (Figure 1.1). For 20 years the annual rate of growth of population is average 100.6 %, for the last 10 years – 101.5 %. For the last 20 years the lowest population was registered in 2001–14 851.1 thous. of people. Population decline till 2001 is primary a result of active population migration to other countries and out migration of Russian-speaking population to ethnical native land.

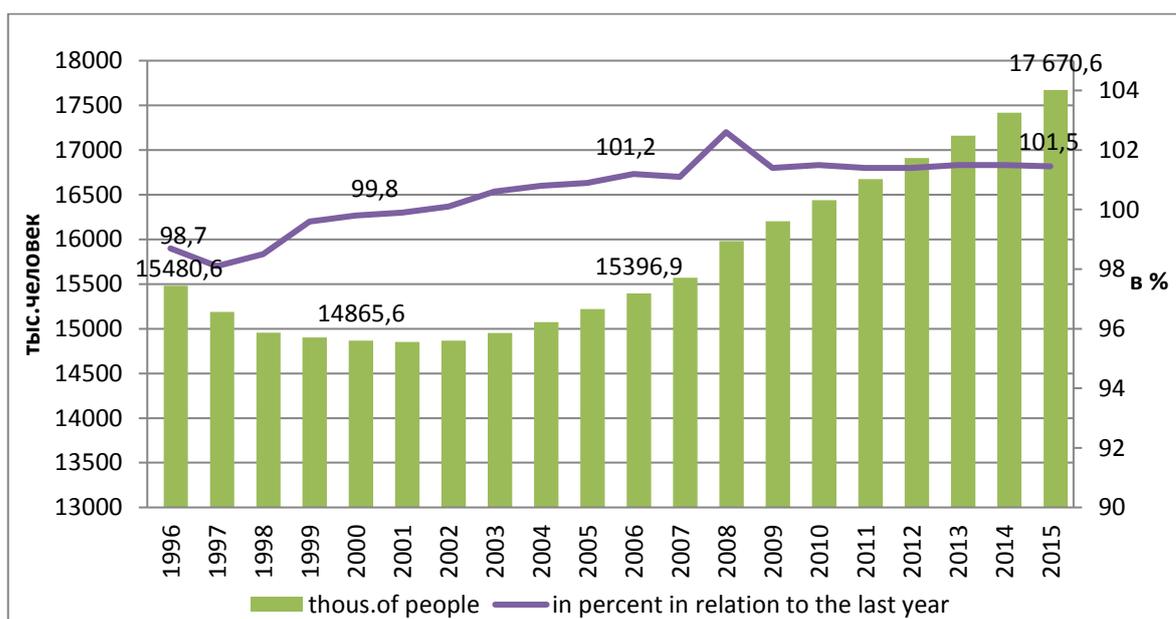


Figure 1.1 Population changes in Kazakhstan for 1996-2015 (as of the end of the year)

Source: data of the Committee on statistics of the Ministry of National Economic of the Republic of Kazakhstan

Population increase is determined by positive natural increase (Figure 1.2). For 20 years the coefficient of natural increase was enlarged from 5.6 ‰ in 1996 to 15.18 ‰ in 2015. The enlargement of coefficient of natural increase was promoted by birth rate increase in the country and reduction of death rate. For 2004-2011 the positive migration balance is observed.

Population increase in Kazakhstan will continue and for further positive natural increase, which requires simultaneous solution of the existing issues, related to access to associated infrastructure, including education, healthcare, housing provision, employment, etc.

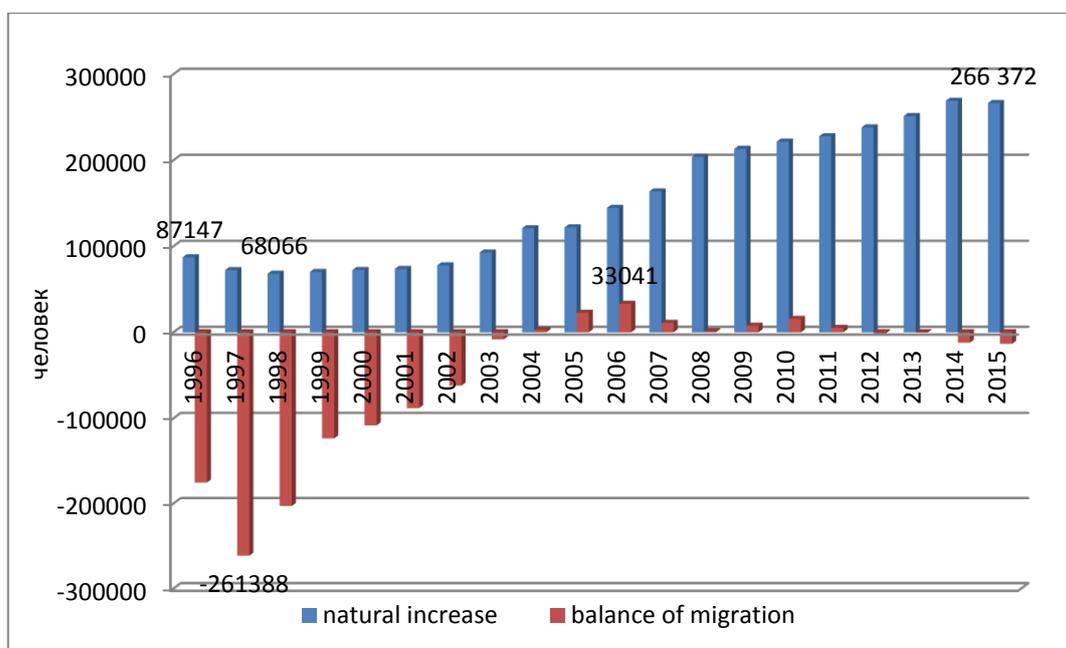


Figure 1.2 – Dynamic of key indicators of population change in Kazakhstan for 1996-2015

1.1 Rapid urbanization management

Nowadays an intensive population increase and relative density of urban population are the characteristics for Kazakhstan. On the basis of new space forms of urban population – urban agglomerations, megalopolises, the urbanization, suburbanization and education processes are extensively developing.

As of the beginning of 2016 17 670.6 thous. Of people live in the country, 10 066.5 thous. of them – urban population and 7 604.0 thous. of people – rural, there are 87 cities, 30 small towns and 6693 villages.

For 1996-2015 the level of urbanization increased from 55.8 % to 57.0%, urban population increased for 1431.3 thous. of people or by 16.6 % (Figure 1.1.1). However, due to administrative and territorial transformation of territories in 2006, urban settlements outside the territory of the subordination of city administration were transformed into rural areas, what led to a decrease in the level of urbanization in the country. Thus, in 2006-2007, the share of urban population decreased from 57.4% to 53.1%.

In terms of regional make up of Kazakhstan the level of urbanization ranges from 24.2% in Almaty region to 78.7% in Karaganda region.

The peculiarity of the formation of urban population resettlement in Kazakhstan is a large increase in population of big and large cities, thus reducing the population in the medium and small cities.

Astana, Almaty and regional centers are the points of economic growth and migrational attraction. They are centers of settlement systems of international, national, inter-regional and regional importance that unites them with transport systems and form a base space frame of the country.

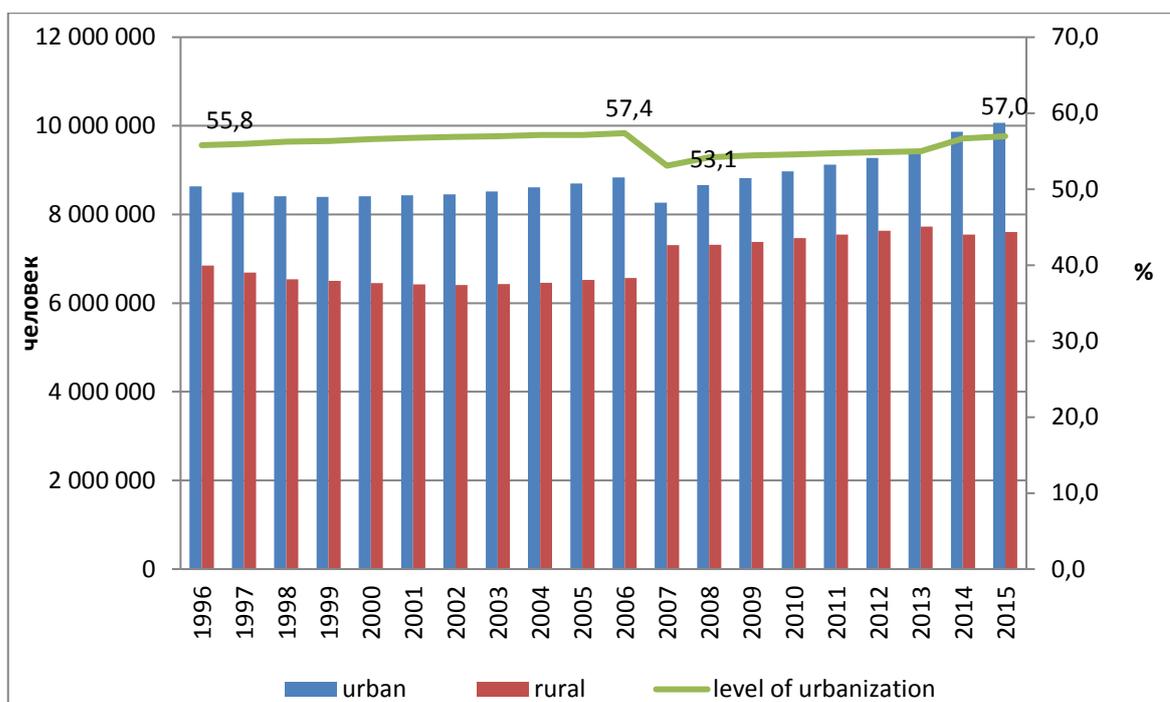


Figure 1.1.1 – Dynamics of urban and rural population change and change of the level of urbanization in Kazakhstan

1.2 Management of interrelations between city and non-urban area

Despite the administrative and territorial transformation of the territory in 2006, the urban population is growing steadily. For 20 years the average annual growth of the urban population was 100.7%. In turn, the annual growth of the rural population amounted to 100.5% for the last 20 years. The relatively high growth of urban population is mainly provided due to the rural population migration influx.

Over the period under review the state of internal migration in the country is characterized by the increased migration turnover. Thus for 1996-2015 the number of migrants increased 2-fold (Figure 1.2.1). So far (for 2015), the number of internal migrants is at the level of 455.5 thous. of people.

Cities of Almaty and Astana, Atyrau and Mangystau regions are the most attractive regions.

Migration outflow of population of village, and of small and middle towns to the capital, large and big cities is accompanied by social and economic factors.

Not regions as a whole are worldwide growth points, but individual economic centers, metropolitan area, dominating the world markets due to the high economic density, an effective transport system, high-tech industries and innovation sector (New York, London, Shanghai, Paris, etc).

Whereas as a result of population growth of large cities and suburban areas of major cities, the urban agglomerations are formed.

Modern trends in agglomeration processes development in Kazakhstan is characterized by the formation of metropolitan areas around the major and large cities of Kazakhstan - Almaty, Astana, Shymkent and Aktobe.

The key trends of forming urban agglomerations in modern Kazakhstan are characterized by their heterogeneity, related to significant natural territory zoning and settlement features inherited from the planned economy.

Forming metropolitan agglomerations concentrate over a third part of the total population of the country. Agglomerative development will provided by the increased urban development. It will be encouraged by support of agglomerations, which will focus key resources areas: financial, human, innovative, natural and environmental, cultural. Formation of agglomerations will be a key

form of territorial organization in Kazakhstan with low population density, which can provide high-quality demographic and spatial growth.

As a part of agglomerations the corresponding urban planning projects are developed for sustainable development of agglomerations, harmonized development of city center and surrounding area of the region. The schemes of Astana, Shymkent and Aktobe agglomerations are developed thus the Interregional Territorial Development scheme (hereinafter - the Interregional scheme) was approved by the decision of the Government of the Republic of Kazakhstan from May 24, 2016 № 302.

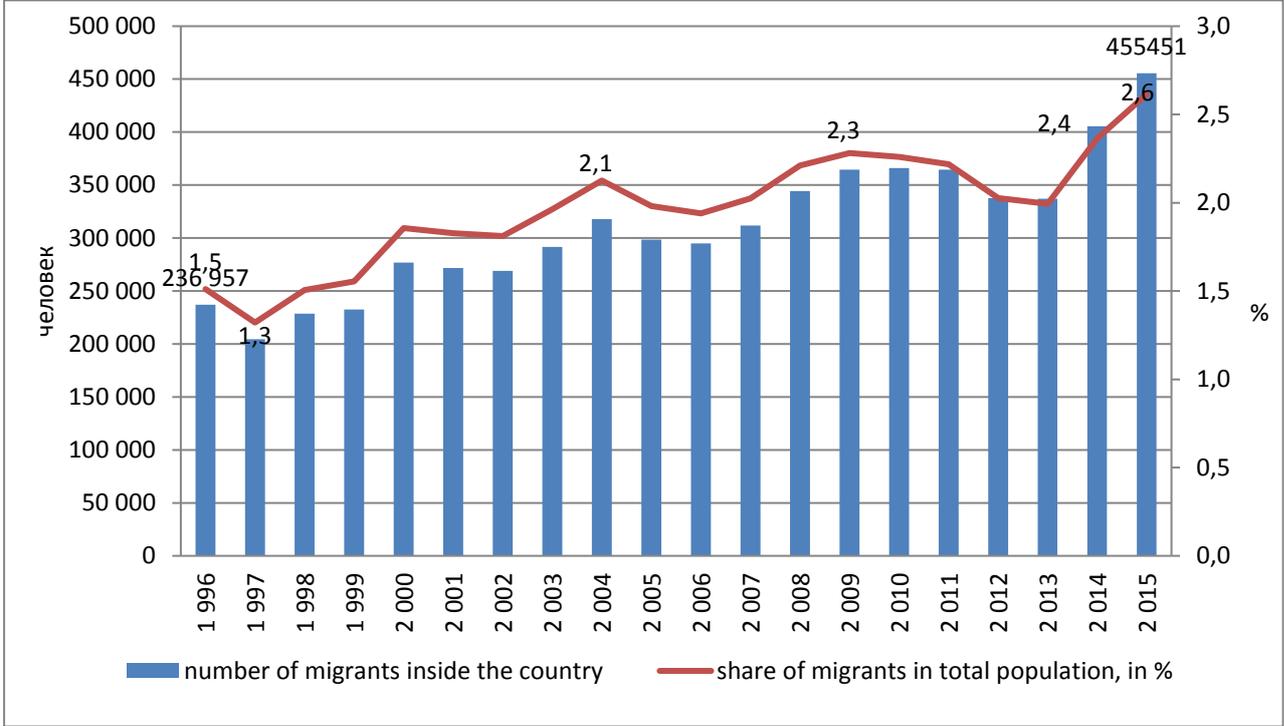


Figure 1.2.1 – Dynamics of change of migrants’ number inside the country and share of migrants in the total population of Kazakhstan

The country already takes measures to regulate migration flows and to provide labor-scarce regions with human resources. Thus, according to the decision of the Government of the Republic of Kazakhstan dated February 18, 2016 № 82 "On establishment of the regional quota for reception of repatriates and emigrants for 2016" regional quota for reception of repatriates for 2016 amounted to 1 259 families, the regional quota for admission of emigrants for 2016 - 463 families.

Social project «Serpyn-2050» is realized in Kazakhstan, which aims to the training and employment of the young from labor-surplus regions (Almaty, South Kazakhstan, Zhambyl, Kyzylorda and Mangystau oblasts) to labor-scarce eastern, northern and western regions. Under this program, 9 areas of the northern, eastern and western regions - Akmola, Aktobe, North Kazakhstan, East Kazakhstan, Kostanai, Atyrau, West Kazakhstan, Pavlodar, Karaganda region are the receiving parties of applicants. These areas involve 19 universities and 36 colleges. The amount of the grants to higher education institutions in 2015 amounted to 5000, in colleges - 1200. In 2016 there were 3162 grants for 22 high school, 1115 grants were for 32 colleges in 30 specialties.

1.3 Needs’ satisfaction of population of different age groups

The population growth is accompanied by increase in load on infrastructure. Within the context, ensuring the needs of the population in social and other supporting infrastructure is an important indicator of sustainable development of the country.

Over the past 20 years gender and age structure of the population in Kazakhstan is characterized by certain fluctuations in indicators of major age groups. During 1997-2015, the share of children in the population decreased from 31.2% to 28.4%, but over the past 10 years growth rate is observed.

State Programme for the Development of Education and Science of the Republic of Kazakhstan for 2016-2019 years, approved by the Decree of the President of the Republic of Kazakhstan from March 1, 2016 № 205 is realized in Kazakhstan, including measures for the development of all levels of education.

The increase in the number of preschool children due to birth rate is accompanied by the necessity to open new pre-school organizations, updating of the material and technical base of the existing buildings and providing kindergartens with teachers.

The development of education in Kazakhstan, including pre-school education and training, is one of the priorities of state policy. For 25 years, 6 state programs are realized, aimed at the development and modernization of the educational system of the country: state program of the President of the Republic of Kazakhstan of information system of secondary education of the Republic of Kazakhstan, State Programme "Education", State Program of Education Development in the Republic of Kazakhstan for 2005-2010, State Program of development of technical and vocational education in the Republic of Kazakhstan for 2008-2012, State program of development of education of the Republic of Kazakhstan for 2011-2020, program on providing children with preschool education and training "Balapan" for 2010-2014.

Only within program "Balapan" for 2010-2014 in 2015 in comparison with 2013 the net of pre-school organizations increased for 965 units.

Public-private partnership also got active development in the field of pre-school education and raining. For 2010-2015 the number of private pre-school organizations increased for 1428 units. Only in 2013-2015 state educational order was placed in 655 private kindergartens (2013 – 898, 2014 – 1261, 2015 – 1553).

Development of pre-school organizations net encouraged growth of pedagogical staff for 2013-2015 for 13.9 thous. of people (2013 – 66.9 thous. of people, 2015 – 80.8 thous. of people).

Within State program of education and science development of the Republic of Kazakhstan for 2016-2019 there was set a goal to achieve 100% coverage of children at age 3-6 with pre-school education by 2019.

Education is an important element in modern society, which form basis knowledge and skills of a child. During five years, from 5th to 9th form, pupils go to main (basic) school. The main high school course gives basic knowledge of the main fields of sciences.

In 2011-2015, infrastructural development was one of the priorities of school education in Kazakhstan. Putting into operation of 521 schools for five years helped to reduce the number of emergency to 1%, three-shift - up to 1.2%. In 2015, the construction of another 34 schools started at the expense of the National Fund of the Republic of Kazakhstan/

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According to data of the Committee of statistics of Ministry of National Economy of the Republic of Kazakhstan in 2014 gross coverage with high education was 103.55%, that is 3.01% bigger than in 2010 (100.54%).

Statistics in the field of education shows significant increase of coefficient of coverage with main (basic) education from 88.9 % in 1999 to 104.0 % in 2015 (Table 1.3.1).

The number of the young in Kazakhstan of age 14-28 from 1998 to 2015 increased by 8.6%, with a slight decline of its share in total population from 25.9% to 24.1%. The decline is determined by small population, born in 90-ties, entrance in the specified age group.

Table 1.3.1 – Dynamics of coefficient of population coverage with main (basic) education in Kazakhstan for 1999-2015

Name	1999/2000	2003/2004	2005/2006	2010/2011	2014/2015	2015/2016
Number those, studying in 5-9 forms, people	1439067	1478905	1443841	1194522	1180470	1237484
Number of children at age of 10-14, people	1618863	1509213	1413013	1169439	1142469	1189815
Coefficient of population coverage with main (basic) education, in % ¹	88,9	98,0	102,2	102,1	103,3	104,0

The reduction of the unemployment rate among young people (15-28 years old) is a positive trend. So for 2001-2015 this figure fell from 16.6% to 4.3%.

Therewith the number of Internet users is increasing annually. The main user is the young. During 2005-2015, the indicator increased from 4% to 72.9%.

The country pays special attention to pension provision.

The share of the population older than working age (older than 63 years for men and 58 years for women) fell from 11.8% to 10.8% over the last 20 years.

According to the scale of demographic aging of J.Bojeux-E.Rosset Kazakhstan is on the threshold of old age. Over the period under review the number of pensioners in the country increased by 5.5%. Reducing the number of pensioners in the early 2000s is related to the entry into retirement age of generation born during the Great Patriotic War. For the time being the number of pensioners in the country is at the level of 1980.8 thous. of people.

For the period under review the average scale of pension increased 11.9 times in nominal terms and in 2015 was 38933 tenge. The average scale of pension in 2015 towards average nominal wage was 31.1 %, whereas in 1996 the indicator was at the level of 48.0 %.

1.4 Provision of gender equality in urban development

Over the past 20 years the realization of gender policy in Kazakhstan is characterized by a certain progress: conditions for equal manifestations of both men and women in working activities, business, politics and public administration, the formation of women's equal access to quality education and health care, as well as the comprehensive protection of motherhood.

An integrated institutional system of gender, family and demographic policy was formed in Kazakhstan; a serious legal base was created. The "Strategy of gender equality in the Republic of Kazakhstan for 2006-2016" was approved by Decree of the President of the Republic of Kazakhstan dated November 29, 2005 №1677 in order to implement the principles of gender equality in all spheres of society.

The terms of gender for 1996-2015 years, no significant changes occurred: the share of women in total population amounted to 51.7%, while the share of men is 48.3%.

Life expectancy is the most important performance indicators, characterizing the health and overall quality of life of the population.

During 1996-2015 the dynamic of life expectancy in Kazakhstan (hereafter – LE) was not stable. In 2015 LE was 72.0 year total in the country and with comparison to 1996 it increased for 8.4 years (Table 1.5.1).

LE during birth in gender terms shows a significant difference between male and female population. If in 1996 LE during birth of men was 58.0 years, women – 69.7 years, difference – 11.7 years, then by 2015 – men 67.5 years, women – 76.9 years, difference – 9,4 years accordingly.

¹Calculated on the basis of data of the Committee of statistics of MNE of RK

Despite the decline of difference in LE in gender terms, a big difference between male and female indicators still exist. It is connected with high level of premature mortality in working age.

It should be noted that the presence of women in the representative bodies is increasing. Thus for 1996-2014 the proportion of seats held by women in Parliament increased from 11.3% to 20.1%, including the Mazhilis of the Parliament - from 10.4% to 26.2%. However, there is only 6.4% of women in the composition of deputies of Parliament Senate of the Republic of Kazakhstan.

In local maslikhats the share of women-deputies is 19.6%, in urban maslikhats– 21.8%, and in regiona – 12,4%.

World experience shows that women make their own special contribution to public life. If less than 10% of the seats in legislative body belong to women, it is difficult to adopt social laws, besides if 20-30% of the seats in the executive and representative bodies will belong to women, we can hope for faster and more real program enforcement, reflecting the interests of family, women and children. Thus in the present conditions the issues of gender equality are particularly relevant and refer to the most important social problems.

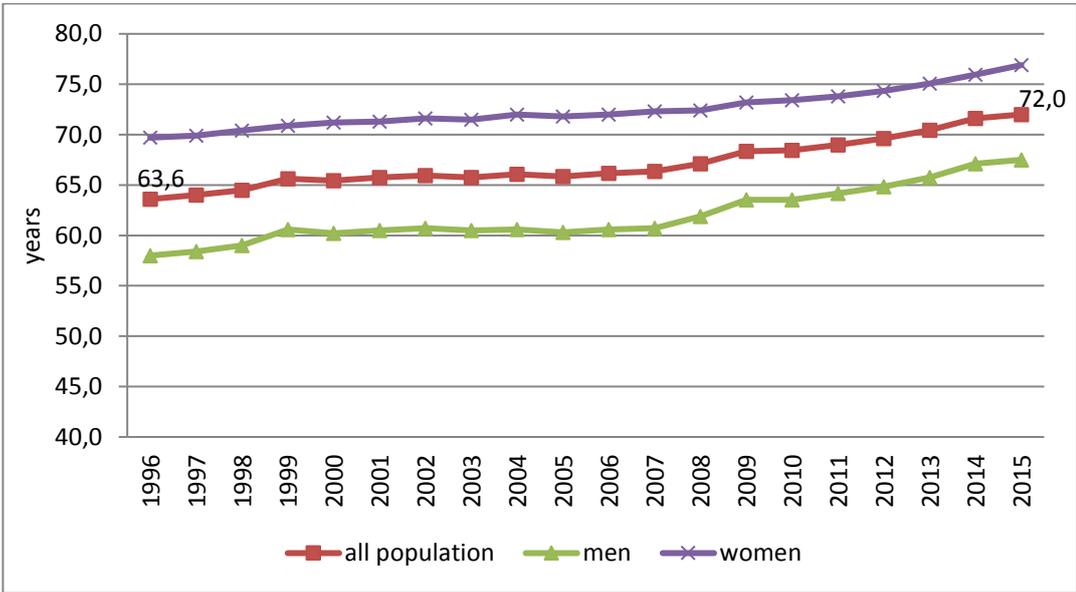


Figure 1.4.1 – Dynamics of life expectancy at birth

Challenges and threats

Current demographic trends define a number of issues the solution of which is necessary to achieve sustainable social and economic development of the country.

The migration outflow of population from village, as well as from small and medium-sized cities to the capital, large and big cities is accompanied by a desire to find work and to ensure a certain level of income.

Due to the current situation and outlined demographic trends it is necessary to move towards the principles of sustainable spatial development: the growth of cities instead of expanding their territory; division of labor and specializations between city center agglomeration and its suburbs; modification of agglomerations into cities-regions and others. There is a need of a new approach to agglomerations development planning both special interrelated subnational entities, providing the complexity and balance of social and economic town-planning urban development and its agglomerative surroundings.

Prospective goals of spatial development of the country are:

- strengthening the role of the economy not of individual regions and cities, but settlements systems, macro-regions;
- creating natural conditions for the formation and development of industrial clusters and strengthening inter-regional relations;

the formation and development of compact social and engineering systems, efficient use of populated areas;

provision of coverage of social infrastructure to the level of developed countries.

Measures taken to redirect the migration flow of population of working age in the southern part of northern and eastern regions of the country will contribute to more equal distribution of migration flows, reduction of high migratory flow to cities of Almaty and Astana.

The future of Kazakhstan is depended on the development and role of Kazakh young in the society, their integration into society. The main aspects that require attention today is the position of Kazakh young in the labor market.

In order to solve the above mentioned problems the measures on training and employment of Kazakhstan young are taken. The solution of problems of social and economic adaptation of young people to a qualitatively new situation is a priority task of the state.

Kazakhstan adopted the Concept of State Youth Policy until 2020 "Kazakhstan 2020: The Path to the Future", approved by the Government of the Republic of Kazakhstan from February 27, 2013 № 191.

The main directions of youth policy realization are provision of accessible and quality education, forming a healthy lifestyle, improvement of legal culture and the formation of respect to fundamental values of the state from the young, creating conditions for employment of young people, development of affordable housing systems for young people.

The main priorities of the youth policy are reflected in strategy "Kazakhstan - 2050", initiated by the President of Kazakhstan N.A. Nazarbayev and other strategic documents, a great hope and responsibility are put on the young as a basic resource of forming Kazakhstan.

2 Land and town planning

2.1 Provision of stable town planning and design

Existence of national and local level programs aimed at improving the urban environment

A number of programs of various levels are accepted in the Republic of Kazakhstan, aimed at improving the urban environment.

On a nationwide scale «Regional Development Program till 2020" approved by the decree of the Government of the Republic of Kazakhstan from June 28, 2014 №728 is functioning. The program is one of the mechanisms for the modernization of regional development system on modern principles.

A strategy of sustainable development is proposed as a basic ideology of regional policy, based on a rational balance of priority development of promising centers of economic growth and maintenance of regions (different types of populated areas systems) with low economic potential to the minimum required level of life standards quality.

The program is aimed at improving the quality of life (development of life-support infrastructure - power and heat sources, gas, heat, electricity, water supply and water disposal systems), development of the economic potential of the regions, as well as at regions development in accordance with their functional typology and economic potential, it also defines the measures of administrative, legal and economic nature, promoting their transition to the internal consolidation, self-organization and self-development on market principles.

The territory programs are developed for 5 years for efficiency and rational use of the territory in the regions of the Republic of Kazakhstan in accordance with the Decree of the President dated June 18, 2009 №827 «On state planning system in the Republic of Kazakhstan".

The main goal of the program is: formation of competitive specialization of the region, ensuring the sustainable growth of the economy; creation of conditions for increasing the yields of agricultural production; active development of small and medium enterprises; improving the quality and accessibility of education, health, sports for children and young people, services of culture and tourism fields; development of the construction industry, providing consumers with utilities; improving transport accessibility; conservation of natural resources and improvement of the environment, efficient use of land resources; development of supporting rural settlements and border areas; improving the quality and accessibility of public services, etc.

Urban gardening

Creation of a "green" frame of urban areas is an important component of sustainable urban planning, encouraging the improvement of population life quality, the development of environmentally friendly settlements.

It is necessary to provide continuous system of green areas and other open spaces according to SNiP RK 3.01-01-2008 "Urban planning. Planning and building of urban and rural communities" in urban and rural areas of the country. Relative density of green areas of different purposes within the urban development (the level of building areas greening) should be at least 40%, and within the boundaries of residential area should be not less than 25% (including the total area of green space of surroundings).

Square of green areas of common use - parks, gardens, squares, boulevards, placed on the territory of urban and rural communities are recommended to accept in accordance with table 2.1.2. The existing massifs of urban forests in the largest, large and big cities should be modified into urban forest parks, and they should be additionally referred to green spaces of common use calculated on the basis of not more than 5 m²/person specified in table 2.1.2.

Thus Kisho Kurokawa put urban planning doctrine in the basis of general layout of Astana development, the essence of which comes down to the idea of thinking by environmental categories through symbiosis with the environment and advanced technology.

Table 2.1.2– Square of green areas of common use

Green areas of common use	Square of green areas, m ² /pers.			
	largest, large and big cities	middle towns	small towns	rural settlements
Citywide	10	7	8 (10)	12
Residential areas	6	6	-	-
<p>* There are examples of small cities with population up to 20 thous. people in brackets</p> <p>1. For resort towns the standards of citywide green areas of common use should be increased, but by not more than 50%.</p> <p>2. The area of green areas of common use in settlements is permitted to be reduced by 20-30% in semi-desert and deserts areas, and to be increased by 10-20% in the steppe and forest steppe.</p> <p>3. In middle, small towns and settlements, situated among forests or in coastal areas of large rivers and ponds, the square of green areas of common use can be reduced by not more than 20%</p>				

During the realization of the general layout of Astana city, Kurokawa concept was reflected in the development of urban planning measures, ensuring balanced development of the city and its surrounding ecosystem. In particular, in creation of "green belt" of Astana project area of 171.8 thous. ha, and along riverbeds eco-corridors of Esil river, creeks of Akbulak and Sarybulak as water protection zones, as well as a belt park with width of 300 meters to ensure the protection of Astana city from summer dry winds, winter storms and hurricanes.

The program of creation of heavy parkland "green corridor" around the city was initiated by the Decree of the President of the Republic of Kazakhstan with a view to connect it with Shchuchinsk-Borovoye resort area. This green corridor is a recreational framework that includes all artificial and natural forests, which is harmoniously interconnected with water and green frame of the city of Astana. The area of the recreational green corridor in the direction of Astana-Burabay will occupy 137.0 thous. ha.

2.2 Territory management and control of urban growth

Existence of urban planning documentation, development strategies, governing the development of the country territory

Best international experience shows the necessity of comprehensive urban planning basic of the territory, considering its peculiarities and long-term national development strategies.

Thus a unified system of urban development projects, providing organization and planning of sustainable development of the territory at different levels is formed in the republic of Kazakhstan (Figure 2.2.1).

In the hierarchy of urban planning documents of the country the General scheme of the Republic of Kazakhstan (hereinafter - the General Scheme) is the main urban planning project, containing the basic design decisions for long-term development of the country as a whole within a sustainable development (Figure 2.2.2).

The General Scheme, the main provisions of which are approved by Resolution of the Government of the Republic of Kazakhstan from December 30, 2013 №1434 is the main town-planning tool to support decision-making management of state and business structures in the country as a whole, including the development of production, population distribution, engineering, transport, social and recreational infrastructure of national significance, environmental conservation and territory functional zoning.

During the current year the corrective of the General Scheme with regard to Strategy "Kazakhstan-2050" is expected.



Figure 2.2.1 – Urban planning projects of the Republic of Kazakhstan in the hierarchy of urban planning documents

Detailization of project decisions of the General Scheme is carried out within the Inter-regional territorial development schemes (hereinafter - the Interregional scheme) of regions and agglomerations. Interregional schemes of Central, Southern and Western regions of the country (with a term of development until 2017) are at the stage of development, containing the project decisions of improvement of territory organization of macro-regions, considering the overall economic specialization, characteristics and necessity of building interregional cooperation of regions.

The development of macro-regions is an important issue, designated by the head of state, in terms of necessity of building interregional cooperation of macro-regions, development of production and population settlement system, definition of long-term requirement in infrastructure, encouraging regional connectivity.

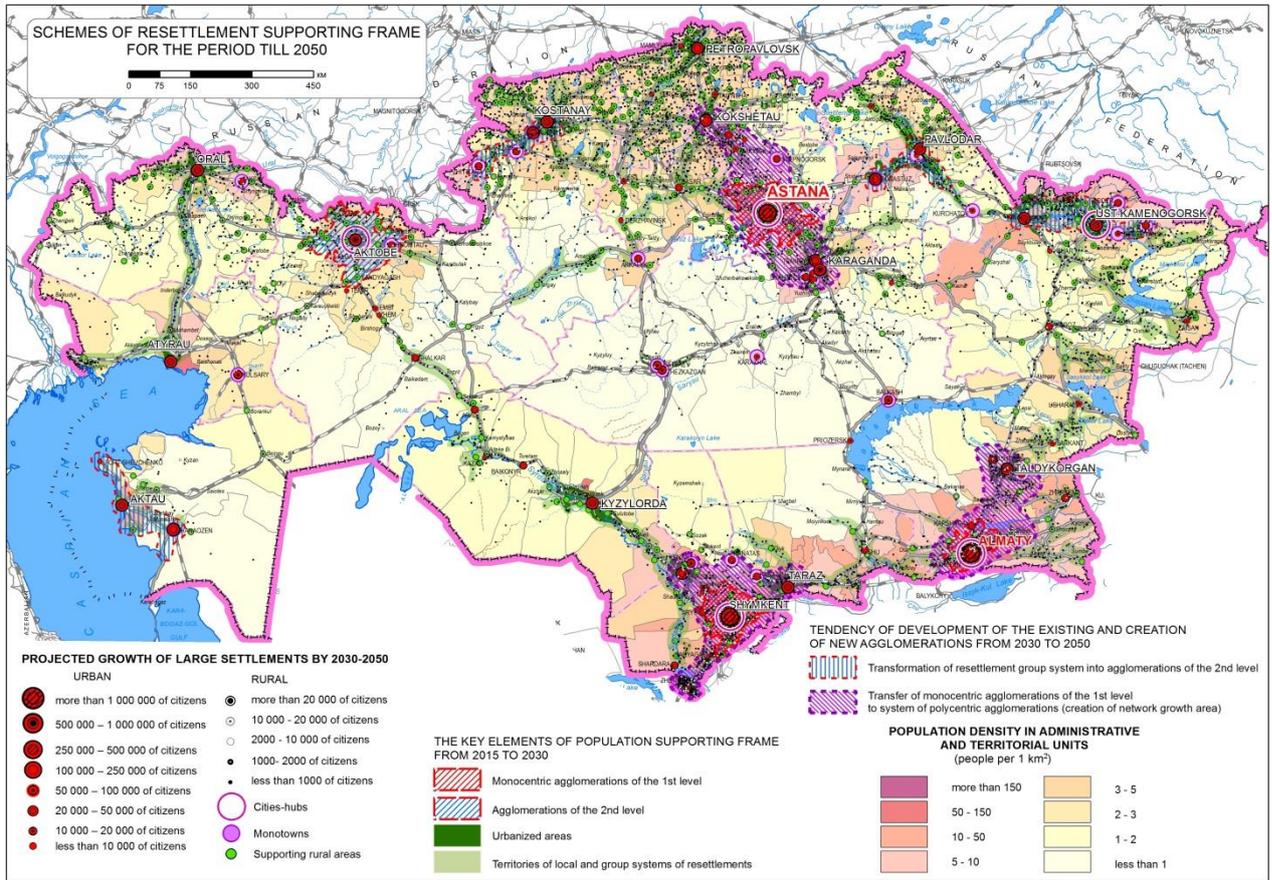


Figure 2.2.2 – Project vision of long-term development of settlement system of Kazakhstan

Prospective development of agglomerations are presented in the Interregional schemes of corresponding regions.

Thus, the Interregional scheme of Almaty agglomeration was approved by the decision of the Government on May 24, 2016 № 302.

The project helped to identify a balanced development of the city of Almaty and surrounding territory of the region for effective development, considering the necessity of solution of the existing critical issues, "unloading" of agglomeration center (Figure 2.2.3).

The creation of cities-contramagnets on main directions of population push-pull migration on the experience of the Paris conurbation will help to "unload" Almaty from over-population and retract the external population flows.

Cities-contramagnets were identified according to the main transport corridors in northern, eastern and western areas based on Kapchagay city, villages Uzynagash and Shelek.

Alongside the proposed multi-modal transport system, active development of high-speed passenger transport will help to link the core-city with cities-contramagnets and satellites, encouraging free movement in the territory of the agglomeration.

For the time being the projects of the Interregional schemes of agglomerations with centers in Astana, Shymkent and Aktobe are under development.

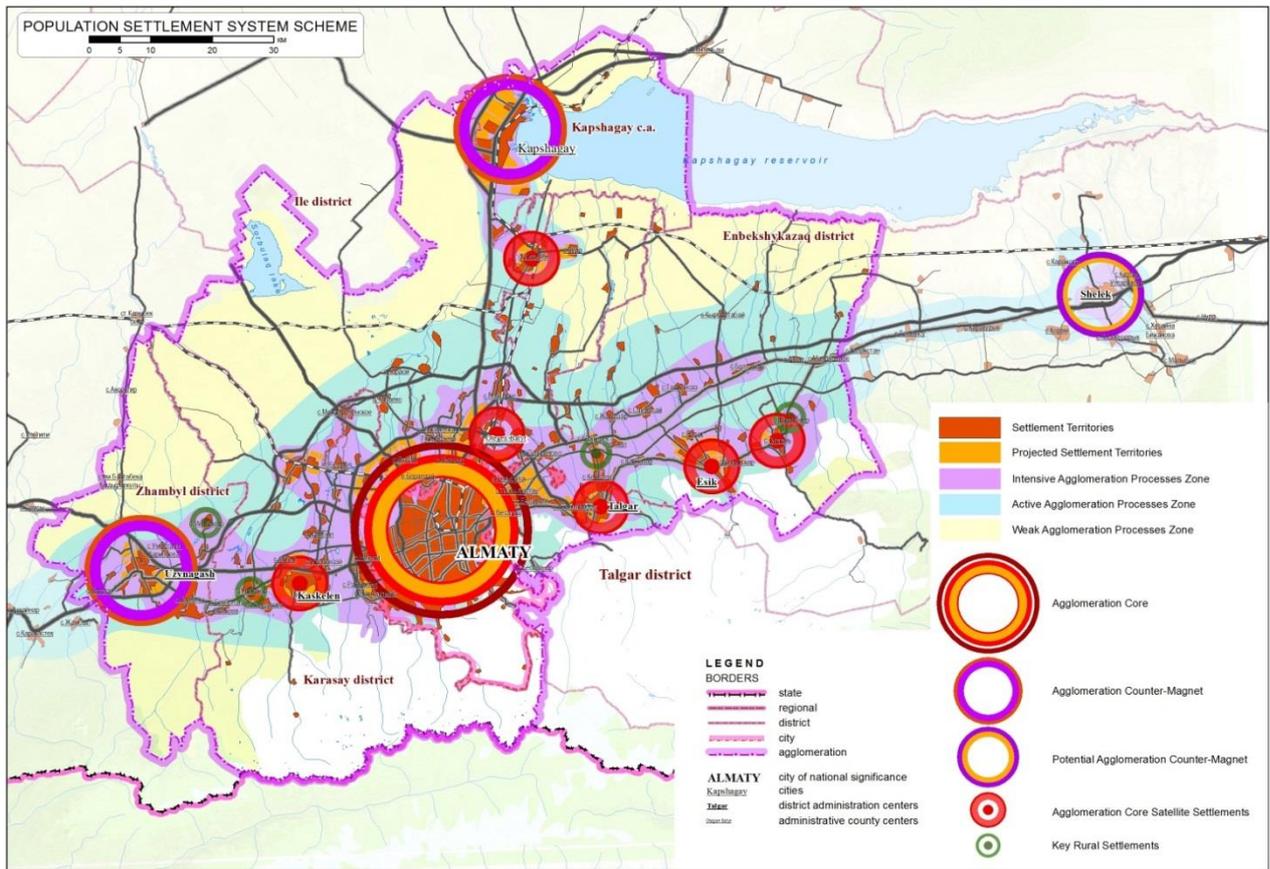


Figure 2.2.3 – Scheme of population settlement in Almaty agglomerations

Integrated urban development of the region's territory is governed by complex schemes of urban planning (hereinafter - the integrated schemes). For the time being the integrated schemes of Akmola, Aktobe and Mangistau regions are under development.

Development and building of settlements territory in accordance with Article 47 of the Law of the Republic of Kazakhstan from July 16, 2001 "On Architectural, Town Planning and Construction Activities in the Republic of Kazakhstan" is carried out on the basis of the approved general layouts of settlements. All 87 cities in the country are covered by the relevant general layouts, including 14 regional centers, cities of Astana and Almaty.

Alongside with that in terms of dynamic city growth the schemes of populated areas are subject to correction with regard to adaptation to changing realias, social and economic situation and necessity of forming comfortable urban environment.

Urban planning projects are aimed at forming sustainable and competitive economy with a reliable engineering and transport infrastructure, provision of steady and integrated balance, improvement of the existing and creation settlement territorial planning organization on the rebuilding lands.

The functional purposes, regulations and intensity of use of each planning territorial unit are defined with regard to planning constraints and modern use of territories approved in general layouts of settlements.

Building density of residential, public and business and mixed areas for cities is accepted with regard to the established territory zoning, type of building and number of storeys, differentiation of territories on urban values, environmental state, climatic and other local conditions. The maximum building density is observed in the major cities, including the city of national significance of Astana and Almaty.

The development of the town-planning field in Kazakhstan involves the formation of a unified urban policy and the hierarchy of urban development projects of all levels.

Public debates on issues of the planning, improvement of the urban environment

A society in the Republic of Kazakhstan has a right to participate in matters of planning and improving of urban environmental. In general, there is a trend of increasing interest of the population in changes of inhabited settlements development.

Thus, in accordance with paragraphs 2 and 3 of Article 13 of the Law of the Republic of Kazakhstan from July 16, 2001 "On Architectural, Town Planning and Construction Activities in the Republic of Kazakhstan", informing of individuals and entities on the status of their habitats and livelihoods, as well as on the on building intentions (replanning) of the territory is carried out by local authorities of regions (cities) through the media or through public debates, expositions and exhibitions.

Prior to the approval of urban planning, architectural and construction documentation, individuals and legal entities have the right to take part in discussions, make proposals for change of decisions that affect public or private interests.

2.3 Productivity enhancement in cities and suburban areas

The efficiency of production in urban and suburban areas is dependent on a number of factors, including investment in fixed assets, level of development of science and innovation, development of entrepreneurship, small and medium-sized enterprises.

Investment in fixed assets, including investments in production and services

Cities remain centers of economic potential of the countries of Kazakhstan. However, during the period under review their economic base has changed dramatically. The decline of share of production in the traditional industries of the primary sector of the economy was the general trend. At the same time the service sector was growing rapidly.

According to data of Committee on statistics of the Ministry of National Economy of the Republic of Kazakhstan for 2005-2014 there was an average growth of investment value in fixed assets by 72.4%².

In general, production occupies the largest share of investment value in fixed assets. In 2014 it was 53.2% in comparison with 47.0% in 2005.

A significant volume of investments is forwarded for transport and warehousing development and operations on real estate. Relative density of investments, completed in these fields, was 18.1% and 10% of total investment volume in fixed assets accordingly against 11.8% and 13.2% in 2005.

Cities are increasingly becoming multi-functional centers, their appearance is likely determined by service and infrastructure opportunities. In addition to the industrial potential modern cities are also centers of science and education, place of concentration of creative class - the main supplier of innovative solutions.

Efficiency of urban products growth management mainly includes the following components:
effectiveness of management of goods and services production development;
level of science and innovation development in cities, aimed at improving the efficiency of production of goods and services;
promoting of non-state enterprises development.

In 2014 investments in production were at level of 55.9% of total investment volume in fixed assets. Alongside for the period under review investments in services amounted to 44.1%, as at 2005 the proportion amounted to 49.0% and 51.0%.

For the main centers of Kazakhstan – cities of Astana and Almaty, the specified indicators are approximately equal.

Thus in 2014 the interrelation of investment volume in production and services fields in Astana amounted to 17.5% and 82.5%. It is related to the fact that Astana in a center of administrative and business, cultural and educating, financial and economic areas, trade and other fields of business and service, including the international ones.

²www.stat.gov.kz

In Almaty – center of high science and educating potential with developed innovative technologies, technoparks, the interrelation of investment volume in production and services fields amounted to 17.7% and 82.3%.

Level of science and innovations development

The level of science and innovation development is an important part of stimulating social and economic development of settlements.

In relation to 2005, the number of organizations, performing research and development in all regions of the Republic of Kazakhstan in 2015 remained at the level of 2005 - 390 organizations, while, until 2012 there was an increase to 412 units, in 2012 there was a sharp reduction in the number of scientific organizations for 67 units, gradually increasing, amounted to 390 units in 2015. Most of research and development centers are concentrated in the cities of Astana (53) and Almaty (152). At the end of 2014 the country had 8 industrial parks, 4 design offices and 3 centers of technology transfer. In 2015 internal costs on RAD in Kazakhstan in relation to 2005 increased by 3.2 times.

Development of entrepreneurial initiative, small and medium enterprises

The strategy "Kazakhstan-2050" set a goal of Kazakhstan becoming one of the 30 most developed countries of the world. In Nation Address "Kazakhstan's way - 2050: Common goal, common interests, common future" the Head of State called the OECD countries' indicators the basic guidelines for entry into the top 30 of the developed countries. The way to achieve this goal requires firm measures on the part of the state and high productivity from the business community. The development of entrepreneurship and private initiative was a key condition for the transition from a planned to a market economy in Kazakhstan.

Special legal acts and programs are gradually adopted; they are aimed at creating favorable conditions for the formation and activities of economic entities. There is competent public authority in Kazakhstan, responsible for state policy in relation to the development and support of business - Ministry of National Economy of the Republic of Kazakhstan. In state and municipal programs different forms of financial support for small and medium-sized enterprises (SMEs) are combined with measures of creation objects of infrastructure to their support (training centers, business centers, business incubators, etc.), realization of special education programs, advocacy entrepreneurship.

SME's contribution to the economy, completion of budget revenues at different levels, creation of new work places became one of the governing factors of urban development in Kazakhstan. Subjects of small and medium-sized enterprises encourage a competitive environment in settlements, and strengthen economic development at local level.

The main government programs aimed at the development of entrepreneurship, small business, are such as "Road Map of Business-2020", "Productivity 2020", "Agrobusiness 2020", "Sybaga" and others.

"National Agency for Technological Development" JSC is performing its activity in Kazakhstan. It was established for cooperation in provision of coordination innovative development processes and provision of measures of State support (innovative grants, project financing, financing through venture funds, etc.). "Astana Innovations" JSC is also functioning under akimat of Astana. Its key fields of activities are realization of Concept "Smart Astana" and program "Safe city", technological business- incubation, and development of the potential of 3D-technologies in th capital. "Center of technologies' commercialization" is working under the Ministry of Education and Science of the Republic of Kazakhstan. Its main fields of activities are development and realization of innovative grants program, performance of technological audit of scientific and technological assets of the country, development of regulatory base in the field of technologies' commercialization and knowledge distribution in the field of technologies' commercialization.

2.4 City mobility

Growth of passenger cars quantity

The rapid growth of population security with passenger cars in Kazakhstan (Figure 2.4.1), which occurred over the last decade, is a sign of growth in living standards. However, the growth of the vehicles in main cities of Kazakhstan, especially in Almaty, led to corresponding transport problems.

During the period under review the population security with passenger cars of all regions of the Republic increased in 3 times (Figure 2.4.2). Security achieved the highest rates in the North-Kazakhstan and Mangystau region, and also in Astana and Almaty cities.

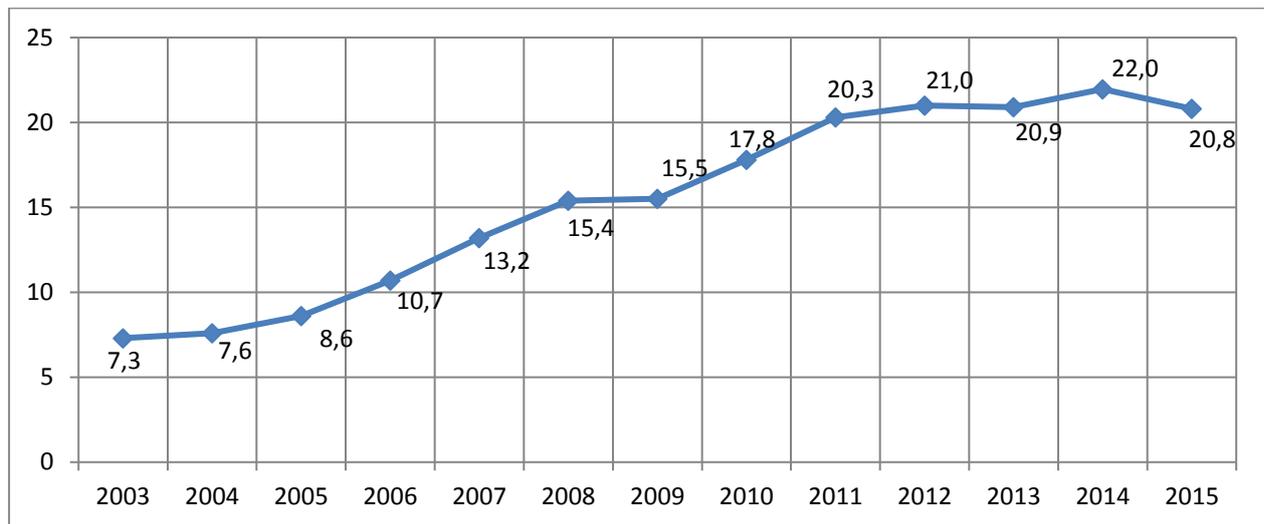


Figure 2.4.1– Population security with passenger cars in private ownership, units for 100 people of residential population

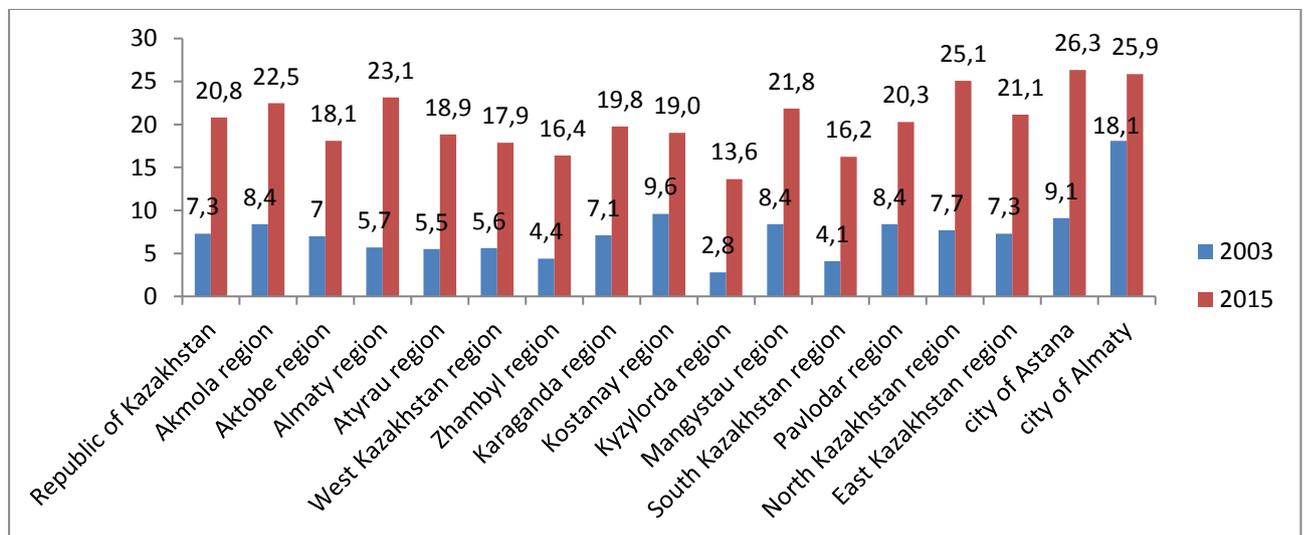


Figure 2.4.2– Population security with passenger cars in private ownership in regional terms, units for 100 people of residential population

Public transport development

In connection with the improvement of living standards the possibility of acquiring vehicles out of public transport increased, thereby increasing population level of motorization.

Alongside the availability of administrative, medical, educational and cultural institutions, trade centers and other services are dependent on the quality of vehicle work. In the coming years urbanization of cities will grow steadily, requiring more efficient and sustainable urban mobility policies.

More attention is paid to the necessity of public transport development. Buses of some intracity lines are equipped with navigational facilities GPS, what allows to perform remote control of their work. Besides transportation organizations use system of GPS-monitoring, which provides information on intracity lines, stops, current location of a vehicle in on-line mode. This application allows to optimize the waiting time of transport at the bus stop.

Average time, spent for work travel on public transport varies from 10 to 30 minutes depending on the size of settlement. Average headway of intracity lines is 5-15 minutes, suburban from 30 to 45 minutes. Average waiting time of public transport for work/home travel amounts to 5-10 minutes.

In 2015 the coverage of settlements with regular services amounted to 79% (from 6 623 settlements with population more than 100 people - 5 230 settlements).

A steady growth of vehicles leads to necessity of active promotion of public transport.

The development of rental housing sector or new housing supply, designed for rent

The development of rental housing also encourages the development of urban mobility.

In November 2014 as part of message "Nurly Zhol - Path to the Future" the Head of State emphasized that one of the promising areas of housing is rental housing.

Rental housing with and without redemption is realized according to the direction of housing construction of Regional Development Program till 2020, approved by the Government of the Republic of Kazakhstan from June 28, 2014 № 728.

At appropriate level of income housing is realized for program participant:

- 1) on ownership or lease with redemption in directions of "Housing for all categories of the population" in HCSB line and "Housing of "Real Estate Fund "Samruk-Kazyna" JSC;
- 2) on lease with redemption in direction "Housing for young families" in HCSB line;
- 3) on lease with and redemption in direction «Housing «JSC «IO «KMC»».

2.5 Improvement of technological capacity of planning and urban management

Increase of technical capacity in planning and management of cities contributes to the development of a network of modern universities and specialized institutions, the availability of cadastral services, specialized government agencies responsible for settlements development.

Existence of higher education institutions involved in training and retraining of personnel in the field of human settlements management

55 higher educational institutions in the country are engaged in training and retraining of personnel in the management of human settlements in specialty "State and local management". Objects of professional activity of graduates of the above specialties are: Establishment and Administration of the President of the Republic of Kazakhstan, Establishment of the Parliament of the Republic of Kazakhstan, various structural units of the Government of the Republic of Kazakhstan, economics and financial management bodies (ministries, departments and agencies), local governing bodies (akimat districts, cities, regions) and establishment of the executive bodies, national public and private companies, concerns, corporations and others.

Existence of cadastral service

The improvement of urban services and land inventories in the country contributes to increase of technical capacity in cities planning and management.

State town-planning cadastre is a state system of quantitative and qualitative indicators, including town planning regulations, cartographic, statistical and textual information that characterizes the area of urban planning, architectural and construction activity.

Urban cadastre system contains a complete list of approved town planning regulations in the territory of settlement, as well as general layouts, detailed planning projects, etc.

For the period of 2011-2012 the State Town Planning Cadaster of republican level was created. Geoinformation thematic data bases were developed, covering the main directions of economy fields (electricity supply, transport infrastructure, industrial and innovative projects, mineral resources, agricultural production, water resources, ecological environment, industries).

Alongside with that it is necessary to perform a significant work on forming regional and basic levels of state urban cadaster in the country.

Vision of urban planning cadaster development consists in forming a unite system, covering all of the levels.

State Land Cadastre is also created in the country. It is primary a system of data on natural and domestic state of Kazakhstan lands, location, targeted use, size and borders of land areas, their quality characteristic, account on land use and cadastral value of land areas and other necessary information.

Land cadaster covers the whole territory of the country, contains information on state and use of land areas and serves for problem solving by bodies of land sources management.

Existence of specialized design institutions in the field of urban planning

A special subordinate enterprise in the field of state urban planning cadaster and planning of country's regions "State Urban Planning Cadaster" RSE ("Gosgradcadastr") is functioning in the Republic of Kazakhstan. It is a subordinate enterprise of the Committee on construction and housing and utilities infrastructure of the Ministry of National Economy of the Republic of Kazakhstan.

The main goal of "Gosgradcadastr" RSE is development and performance of the most important urban planning projects for the long-term period, and formation of a unite system of State Town Planning Cadaster of the Republic of Kazakhstan.

"Astana genplan" R&D Institute is performing the development of general layout of Astana and other settlements.

Besides a number of private urban planning organizations are functioning in the country, mainly developing urban planning projects of local significance.

Existence of specialized bodies in bodies of local government responsible for planning

There are specialized institutions on architecture and town planning management in structure of executive bodies, responsible for performance of architectural and town planning activities in the territory of administrative-territorial units. The goal of such institutions' functioning is performance of state policy in the field of architecture, town planning and construction activities, provision of the development of administrative-territorial units with quality environment, developed infrastructure and original architecture.

Special bodies are functioning in local executive bodies. They are responsible for planning of populated areas territories according to regulatory acts of the Republic of Kazakhstan in the field of architecture and town planning— departments of architecture and town planning, in certain cases united departments of architecture, town planning and construction.

The main goals of such bodies are consideration, approval and reapproval of town planning and other design (design and estimate) documentation for objects construction (building development) of local significance, development and realization of regional programs of housing construction development and seismic retrofit, development and reconstruction of objects of social and cultural, administrative and housing and utility significance.

In addition, these structural units held state architectural and town-planning policy and coordination in the area of observing town planning discipline and regulations, order of projects examination procedure, rules of passage of licensing procedures for construction, acceptance of objects in operation, coordination of realization of complex scheme of town and country planning approved general layouts of settlements in the territory of a region, including general layouts for cities of regional importance.

Specialized administrations of economy and budget planning are responsible for social and economic development and regional budget planning.

Special websites are operating to increase public awareness and the provision of public services. The multimedia information on the current state and prospects of region development (region, districts, settlements), information on structure of local executive body, the list of rendering public services, news and social and economic development of administrative-territorial unit are placed there.

Accounts in social networks are created to accompany Internet-resource. The average share of requests received in electronic format usually does not exceed 10%. Low share of electronic requests is connected with the requirement of EDS (electronic digital signature).

Challenges and threats

In order to achieve sustainable urban planning it is necessary to build a unified vertical system of urban planning and inventory. Moreover it is necessary to carry out activities for the observance of the rules of land use, correctness of the land cadastre and land management, and implementation of measures for rational use and protection of land.

With regard to preparation of well-qualified personnel it is necessary:

to continue work on provision of economic fields with competitive staff.

to implement new approaches of grant and program targeted financing of science programs, aimed at solving state important issues, needs of State program of industrial and innovative development and commercialization of results of science research by co-financing on the part of business.

Whereas the increase in number of cars in personal property of the population leads to the following problems:

- 1) increase of atmospheric pollutant emissions;
- 2) lack of parking spaces in residential micro-regions of the city.

To improve public transport operation it is necessary to renew transportation set, provision of stopping points with necessary facilities, the issue of transferring to eco-friendly type of fuel (gas) is under consideration.

The following measures are proposed to develop city mobility of Kazakhstan:

to enlarge networks of public spaces through development of new formats of leisure activity and reconstruction of parks and squares;

to improve parameters of housing quality and to solve problem of spontaneous informal housing;

to provide the diversity of forms of residential construction, different price affordability in different regions of the city.

to create new pedestrian areas, to perform works on enlarging foot paths and improvement of accessibility for pedestrians;

to raise the priority and prestige of public transport, implementation of BRT system, to provide a separate line for buses;

it is necessary to create integrated system of mass urban transport in large cities of the country, where all types of public transport– underground, city and suburban buses, suburban lines of railways will be integrated with comfortable connection hub, agreed with schedule and through rates.

to implement «smart-technologies», covering of all fields of urban economy and infrastructure, to enlarge internet connectivity;

to expand networks of modern formats of office real estate (coworking spaces, time- coffee-room, fablabs, hackspaces, creative spaces).

3 Environment and urbanization

3.1 Urban contribution to climate change

Climate change is a problem of global scale, and it presents a serious potential threat to the environment of Kazakhstan. It is reflected observing trend of increasing recurrence of dangerous and extreme weather events (high water, floods, avalanches, mudslides, hurricanes, etc.) and an increase of unfavourable and sudden weather changes, which leads to an enormous social and economic damage.

In 2013 in Kazakhstan the total specific emission of greenhouse gases in CO²-equivalent per capita amounted to 18.57 tons. In 1995 and 2006 this coefficient amounted 16.52 and 17.19 tons accordingly.

The energy sector makes the greatest share of contribution to the total emissions of greenhouse gases in Kazakhstan over the years (for all these years the coefficient amounted 81 %). The relative share of agriculture's contribution is significantly lower and in average is of 11%. Sectors "Industrial processes and use of products" and "Wastes" have 5% and 2%.

The significant share of the contribution of the energy sector in the total volume of greenhouse gas emissions in Kazakhstan is mainly associated with the growth of population and businesses and increase of energy consumption accordingly.

Kazakhstan goals to increase the share of alternative and renewable power to 50% by 2050, reduce the GDP energy intensity by 25% by 2020 in comparison with levels of 2008, reduction of CO₂ equivalent emissions in power sector by 15% by 2030 and by 40% by 2050 in comparison with 2012, as well as to reduce economy-wide greenhouse gas emissions by 15% by 2030 in comparison with level of the base 1990, declared by Kazakhstan to Paris climate agreement will reduce greenhouse gas emissions and climate impact. Reduced power consumption leads to a reduction of CO₂ equivalent emissions and other contaminants.

Investments aimed at environment conservation is growing annually. Thus in 2012 they amounted to 75 148 706 thous. tenge in the republic, and in 2013 and 2014 this indicator amounted to 77 500 390 and 103 492 239 thous. tenge accordingly (Table 3.1.1).

Table 3.1.1– Investments aimed at environment conservation in Kazakhstan in 2014, thous. tenge

Region, city	Total	in % by 2013
Republic of Kazakhstan	103 492 239	128,2
Akmola region	1 297 414	20,7
Aktobe region	1 216 752	28,8
Almaty region	35 738	3,0
Atyrau region	47 453 365	194,5
West Kazakhstan region	2 992 317	69,3
Zhambyl region	922 046	52,6
Karaganda region	10 196 214	351,6
Kostanay region	1 977 000	161,6
Kyzylorda region	3 514 154	149,3
Mangystau region	4 473 686	68,0
South Kazakhstan region	449 850	57,8
Pavlodar region	12 408 206	139,1
North Kazakhstan region	1 033 825	31,6
East Kazakhstan region	6 601 925	76,9
city of Astana	5 572 947	230,1
city of Almaty	3 346 800	219,6

In accordance with the Concept of transition of the Republic of Kazakhstan to the "green economy", an important task involves improvement of management system of municipal solid waste (hereinafter - MSW) in urban and rural areas of the Republic of Kazakhstan, aimed at

improving the efficiency, safety, environmental and social acceptability of the complex services for the collection, transportation, disposal and recycling of solid waste disposal. Strategic directions for management of solid waste involves bringing the share of waste recycled up to 40% by 2030 and to 50% by 2050.

Existence of programs of national and local significance, aimed at environment conservation

Environmental Code of the Republic of Kazakhstan adopted in 2007 is the main regulatory document in the Republic of Kazakhstan regulating relations in the field of safety, restoration and conservation of the environment, use and reproduction of natural resources while realization of economic and other activities related to use of natural resources and impact on the environment within the territory of the Republic of Kazakhstan.

The concept of the transition of the Republic of Kazakhstan to the "green" economy, approved by the Decree of the President of the Republic of Kazakhstan from May 30, 2013 № 577 is one of the most important public policy documents aimed at sustainable development.

In accordance with new Strategy "Kazakhstan-2050" and the Concept of transition to "green economy", the actual reform of the entire management structure in the Republic of Kazakhstan and the significant adjustment of the state, branch and regional programs for the development and approval of new programs is taking place. New state program "Kazakhstan National Water Management Programme", branch program "Agrobusiness-2020" and "Energy saving 2020" detalize the main areas of environmental infrastructure development at regional and local levels.

A national system for monitoring and reporting of greenhouse gas emissions was created in the country, state register of carbon units is forming, the National Allocation Plan for greenhouse gas emissions quota for 2013, 2014-2015 and 2016-2020 were adopted. There were changes and additions to the Environmental Code of the Republic of Kazakhstan on regulation improvement of emission and absorption of greenhouse gases, as well as the emissions trading system for greenhouse gas emissions with starting date on January 1, 2018.

A number of documents with the basic legislative acts will have a significant role in environmental protection and fight against climate change in Kazakhstan, including:

Law "On Support of Harnessing of Renewable Resources";

Law "On Energy Conservation and Raise of Energy Efficiency ";

Action Plan for the development of alternative and renewable energy in Kazakhstan for 2013 - 2020.

A number of programs are accepted at local level in each region, aimed at environmental conservation. Moreover the territory development plans for the future, where the target indicators and indicators on environmental conservation are put, are developed for each region of the Republic of Kazakhstan and nationwide cities.

3.2 Disaster Risk Reduction

Based on a number of UN Resolutions and other international decisions, in 2005, in Hyogo (Japan), the second World Conference on Natural Disaster Reduction took place, in the course of which the Hyogo Framework for Action had been adopted for 2005-2015 on "Building of capacity of disaster resilience at the states and communities level" (HFA), which determines the following:

Strategic mission:

integration of the disaster risk reduction into the policy of sustainable development and planning; development and strengthening of capabilities of institutions, mechanisms, and skills of disaster resilience; systematic introduction of approaches on the disaster risk reduction into the programs of disaster preparations, response, and recovery;

Priorities: establishment of a national institutional base for the disaster risk reduction; monitoring, revealing, evaluation, and reduction of disaster risk factors; increase of disaster preparedness for effective response at all levels.

In the line of *the first priority*, inclusion of measurements on emergency prevention into fundamental documents of the national planning system has been triggered.

The significant stage of improvement of legal framework was adoption of the consolidated Act “On Civil Protection” dated April 11, 2014, which legislatively incorporated all the provisions in the sphere of natural and man-made disasters prevention and response with the subsequent repeal of acts “On Natural and Man-made Disasters”, “On Fire Safety”, “On Emergency Rescue Services and Lifeguards Status”, “On Civil Defense”, “On National Material Reserve”, and “On Industrial Safety of Hazardous Production Facilities”.

Within the frameworks of implementation of Act "On Civil Protection" (hereinafter – the Act) the following regulatory instruments were adopted:

The Decree of the President of the Republic of Kazakhstan;

20 Decrees of the Government of the Republic of Kazakhstan;

57 Orders of the authorized body on civil protection.

Into the Act implementation, legal acts of individual application are approved, prior regulations are brought into accord with modern challenges and threats in the sphere of emergency, and a number of new approaches to life-saving safety is provided.

In the line of the *second priority*, in accordance with the principles and tasks of the Concept of transition of Kazakhstan to sustainable development for 2007-2024 by the risks assessment and management in the Republic, steady monitoring of the focuses, sites and zones, which are dangerous in natural disasters is performed.

For the purpose of improvement of the system of early warning, a project has been developed in Kazakhstan, which is to replace all the facilities with the modern ones, based on new technology solutions, and able to interface to any systems of visualization of information, intercept digital TV and radio broadcasting, and notify population by means of SMS.

Since 2009, free common emergency number "112" has been functioning throughout the country.

In the line of the *third priority*, the following preparation is made:

rescue divisions receive training on recovery operations of high complexity;

the senior executives of the state authorities receive training at the specialized educational and methodical center of Civil protection, where the representatives of the central and local executive bodies complete training annually;

the senior executives and senior commanders of the governing bodies and specialists in Civil defense receive training at the Departments of Emergency Services in situ.

Together with the UNDP, Project "Strengthening of the National Capacity of Risks Assessment, Prevention, and Response to Natural Disasters" is implemented allowing to perform risks assessment, to develop modern approaches on participation of local communities in the activities for prevention and liquidation, and to mitigate possible consequences of natural disasters.

Together with the United Nations Children's Fund (UNICEF), Project "Support on Disaster Risk Reduction to the Organizations and Vulnerable Communities in Kazakhstan" has been implemented, within which researches on studying knowledge, relations, practices, and skills on disaster risk reduction at the pilot schools and preschool institutions of Almaty, the East Kazakhstan, the South Kazakhstan and the Almaty Regions were conducted.

In the line of the *fourth priority* two innovative, strategically important and unique by their engineering structure projects have been commissioned:

The Koksaray counter regulator facilitating a solution to the problem of the Aral Sea;

The complex of antiflood protection of Astana preventing flooding of suburbs and the left bank of the capital.

One more large infrastructure project is construction of antimud and antiflood structures on the near-border with China river Horgos for ensuring protection of the International center of cross-border cooperation "Horgos".

In the line of the *fifth priority*, in 2013, the Agreement between the Government of the Republic of Kazakhstan and the Government of the Kyrgyz Republic on establishment of the Center for emergency situations and disaster risk reduction was signed.

The Center is established on a bilateral basis with the subsequent integration of other countries. The Islamic Republic of Afghanistan and the Republic of Tajikistan expressed their readiness to accede to this Center. Some

foreign countries and international organizations expressed their readiness to support the Center activities by joint projects implementation and grants award after official actual establishment of the Center.

Besides, in 2015 in Sendai (Japan), the third World conference on disaster risks reduction took place, at which by the results and experience of HFA in 2005-2015 the "Sendai Program of Disaster Risk Reduction 2015-2030" was adopted. Basic provisions and determined priority areas of the Program offer the immediate urgent tasks on disaster risk reduction in the near and long term at the global and regional levels.

The Program is developed on the elements, which provide succession with the work done within HFA and formulates a number of new accents: strengthening of the system of disaster risk management on the basis of national platforms on disaster risk reduction; increase in responsibility for quality of disaster risk management and non-admission (prevention) of creation of new risks; ensuring stability of infrastructure of health care, cultural heritage and jobs preservation in case of disasters; strengthening of international cooperation and global partnership; increase in knowledge of donors about the urgent problems.

Kazakhstan during the period from 2005 to 2014 has provided official humanitarian aid to the following countries, which suffered from emergencies: Kyrgyzstan, the USA, Indonesia, Tajikistan, Pakistan, Bulgaria, Palestine, Lebanon, Afghanistan, China, Russia, Ukraine, Moldova, Georgia, Cuba, Italy, American Samoa, Haiti, Mongolia, Japan, Somalia, Turkey, Guatemala, Sri Lanka, Philippines, Saint Lucia and Saint Vincent and Grenadines, Serbia, Bosnia and Herzegovina for the amount more than 71 mln. US dollars in money and commodity and material equivalent.

3.3 Road congestion reduction

Availability of programs of national and local level aimed at the development of the system of public transport

In the Republic of Kazakhstan, a number of documents were adopted regulating development of transport in general, including Law of the Republic of Kazakhstan of September 21, 1994 "On Transport in the Republic of Kazakhstan", Law of the Republic of Kazakhstan of July 4, 2003 "On Automobile Transport".

At the local level, since recently, programs are developed and implemented for development of public transport. So, in Almaty, project Steady Transport of Almaty is being implemented.

In general, need of development of public transport increases that shall be in the picture of the appropriate programs at the national and local levels.

Development of alternative transport

Annually, in the cities of Kazakhstan, the number of automobile transport increases approximately by 9 per cent, which is considered rather high rate. At the same time, this indicator affects increase in jams on the roads of the country and especially in Astana and Almaty.

In the context of dynamically developing metropolis, it is necessary to take measures for restriction of level of automobile use and promoting of public transport.

So, for example, now in the capital of the country Astana, projects on decrease in load of street network are implemented, which will influence the reduction of number of sites with transport jams.

An integrated approach is applied to relieve the streets from traffic jams. At the initial stage, transfer of the beginning of working hours at the state bodies and organizations is supposed. Implementation of one-way traffic on several streets of Astana became the following stage.

According to the preliminary data, implementation of this innovation will allow to solve the following problems:

the average speed of transport flow will increase to 33 per cent;

the traffic capacity will increase to 25 per cent;

delays at road-crossings will decrease to 27 – 29 per cent.

Work on implementation of the Intelligent transportation system in Astana is continued, including control of traffic lights for optimization of traffic and decrease in transport delays;

equipment of the city passenger buses with the onboard system of traffic control, video surveillance, calculation of passengers, LCD displays and TFT monitors with active matrix for informing the passengers; implementation of the system of video surveillance at the road-crossings.

In 2014, in Astana, "Astana LRT" LLP put the first stage of ITS into operation. During operation, the ITS system showed its efficiency in management of transport flows, having increased the traffic capacity of the street network and speed of movement of transport flows in the specified streets to 21 per cent on average.

At the same time, in the capital of the country, it is supposed to execute the project on development of the high-speed public transport "New Transport System of Astana – Light Rail Transport" (LRT).

Taking into account the transition of the country to "green economy", the new transport system is capable to solve a number of such problems as increase of mobility of the population, traffic congestion, improvement of ecological state.

The program for development of a steady transport system is implemented in the largest metropolis of the country – the city of Almaty.

On October 1st, 2015, the Automated System of Accounting and Payment of Transportation (hereinafter - ASAPT) by the public transport of Almaty was started up. Implementation of this system will allow obtaining exact data for correct and effective distribution of passenger traffic, optimization and development of a convenient for population route network, forming of a schedule and a time-table of public transport of the city.

The ASAPT objective is improvement of the process of public transport management, increase of quality of services provided in public transport, acceleration of economic development of the city without negative impact on ecology.

In general, investments into transport infrastructure in the country are constantly growing, and amount to 285,500 million Tenges in 2005, 320,166 million Tenges in 2006, 1,138,572 million Tenges in 2015.

3.4 Air pollution in settlements

Air pollution index in tendency

Pollution of atmospheric air remains one of the leading factors of negative impact on the environment.

Quality of atmospheric air in the large cities of Kazakhstan remains low. As a rule, crowding of industrial enterprises, clusters of cars, and considerable share of private sector in the period of heating season plays a major role in the mode of pollution of the cities. For the cities of Kazakhstan, the considerable share in the mode of pollution is rendered also by orographical conditions, it is also true of such cities as Almaty, Shymkent, Ust-Kamenogorsk and others.

In 2013, nine cities were designated as the polluted cities of Kazakhstan ($API5 \geq 5$), including six cities with high level of air pollution ($API5 \geq 7$): Almaty, Kyzylorda, Shymkent, Ust-Kamenogorsk, Taraz, Karaganda. The highest level of air pollution in 2013 was observed in the city of Almaty ($API5 = 11.5$).

The results of monitoring of the air condition over the regional centers and large settlements of Kazakhstan from 2010 till 2014 are stated in table 3.4.1.

The cities of the eastern (Ust-Kamenogorsk and Ridder), southern (Almaty, Shymkent, Kyzylorda, and Taraz), and central (Karaganda, Temirtau, Zhezkazgan) regions are included into the priority list of the cities of Kazakhstan with the largest level of pollution, where the largest entities of metallurgy, chemistry and petrochemistry, and the heat power entities (Table 3.4.1) are located.

Monitoring of the air condition in the territory of the Republic of Kazakhstan is carried out in forty seven settlements of the Republic at one hundred and thirty nine observation posts, including fifty six fixed ones.

Monitoring of the environment status according to the Plans of observations is performed by Republican State Enterprise "Kazgidromet". At the same time, the local Departments of Ecology of

the Ministry of Energy in cooperation with the traffic police subdivisions annually exercise control of emissions of motor vehicles in the cities of Kazakhstan as regards the excess of exhaust emission standards.

Provision of environmental monitoring of the atmospheric air in the Republic in 2014 came to 46 per cent, in 2013 – 42 per cent, in 2012 – 32 per cent.

Table 3.4.1 - The Air Pollution Index (API) in settlements of the Republic of Kazakhstan from 2010 to 2014

No.	Settlements	Years				
		2010	2011	2012	2013	2014
1	Aktau	3.0	2.6	3.0	3.7	2.9
2	Aktobe	7.6	6.9	6.4	4.2	5
3	Almaty	11.7	9.1	10.5	11.5	10
4	Astana	5.5	3.1	3.8	2.9	3.7
5	Atyrau	5.0	3.8	5.3	4.8	5.6
6	Zhezkazgan	7.0	7.1	7.5	6.5	7.3
7	Karaganda	7.2	7.8	7.4	7.0	7.7
8	Kokshetau	0.8	0.7	0.6	0.3	1.9
9	Kostanay	3.1	2.6	2.4	2.0	1.7
10	Kyzylorda	5.1	5.1	10.0	11.4	4.1
11	Lissakovsk	-	-	-	-	9.9
12	Pavlodar	2.5	2.7	2.7	2.4	6.2
13	Petropavlovsk	4.1	4.0	4.0	4.0	4.5
14	Ridder	6.3	6.9	6.0	5.2	5.7
15	Semey	4.5	4.4	3.7	3.8	4.0
16	Taraz	7.6	7.6	7.7	7.4	6.9
17	Taldykorgan	1.4	1.3	1.2	2.2	3.3
18	Temirtau	9.3	10.2	9.3	6.9	8.1
19	Uralsk	-	-	-	-	3.5
20	Ust-Kamenogorsk	7.2	8.4	7.9	7.6	10.4
21	Shymkent	11.4	13.3	10.0	8.6	10.7
22	Ekibastuz	1.2	1.3	2.1	1.8	3.9

Challenges and threats

A number of regions in the country are high developed in the industrial sector of economy that necessitates a wide range of environmental problems.

For the purpose of improvement and stabilization of environment, nature protection measures are annually planned and implemented at the expense of the regional, local budget and own funds of users of nature.

Posts of chemical control of the main hazardous substances polluting the atmosphere, meteorological posts, water level control devices work day and night.

Works aimed at the environment protection are conducted together with the ecological funds and the entities of the cities.

To find the way out of the current negative situation connected with bad atmospheric air, it is necessary to:

carry out a package of measures for improvement of ecological condition of regions;

hold actions for gardening of sanitary protection zones of entities of the industrial hubs and entities located within the city;

switch public and private transport to alternative fuel.

Besides, under the conditions of dynamically developing economy of Kazakhstan, the problems of development of the cities, their infrastructures, and social problems connected with this turn actual, and their solving becomes a key factor of balanced development of economy in general.

Rapid pace of urbanization of the large cities requires introduction of essential changes into the methods of development of strategy and management of city development, as well as significant increase in the state and private investments into development of city infrastructure and service trades.

In the cities, investments into infrastructure, renewable energy resources, alternative transport, construction and increase of efficiency of use of the electric power and water supply are extremely important.

The Sendai framework program on disaster risk reduction for 2015–2030 states that within the last decade, as a result of natural disasters, more than 700 thousand people died, over 1.4 million people sustained injuries, and about 23 million people lost their houses. In total, as a result of disasters, more than 1.5 billion people suffered. General economic damage exceeded 1.3 trillion US dollars.

In turn, in Kazakhstan for the same period (2005 - 2014), more than 210 thousand emergency situations of natural and technogenic nature took place, as a result of which the number of victims exceeded 68 thousand people, the number of dead people – 15 thousand people.

In this regard, for further extension, it is provided to consider the issue of strengthening of prevention of emergency situations. Besides, it is necessary to discuss practical situations and follow-up actions for expansion of the countries opportunities, as well as application of positive experience, systems and standards, which shall form information base at the development of strategy and programs.

4 Management and legislation

4.1 Improvement of the city legislation

Transition to the market economy, systematic development of the state required forming of the national legal system regulating issues of city development.

So, in 2001, the main document regulating architectural, town-planning and construction activities in the country – Law of the Republic of Kazakhstan "On Architectural, Town-Planning and Construction Activities in the Republic of Kazakhstan" was adopted. According to this law, a number of normative legal documents aimed at improvement of the city legislation and urbanistic environment is adopted.

The period of independence of Kazakhstan is the period of transformation and development of land relations and realization of land reform. All this also required development of a wide range of drafts of legal acts, standard implementing guidances, and carrying out of considerable volumes of scientific, land-estimative, cadastral and land management works. Rational use and protection of land resources are among the major state problems.

4.2 Decentralization and consolidation of the role of local authorities

Levels of management, authorities and competence of the local authorities and autonomous bodies

Process of decentralization of authorities is understandable as the result of democratization of society, transformation of the state authority, separation of authorities, acquisition of political rights and freedoms by citizens, introduction of private property.

Till 2001, in Kazakhstan, Law "On Local Representative and Executive Bodies" adopted on December 10, 1993 by the Supreme Soviet was in force.

For the last 15 years, the regional policy in Kazakhstan was conducted towards independence to regions and strengthening of powers of regional authorities on solution of issues of local value at simultaneous strengthening of degree of their responsibility to the President and the Government for implementation of the state policy in the territory of administrative and territorial units.

For the purpose of expansion of powers in local self-government, the above-mentioned Law was amended regarding citizen participation in local self-government in 2009; the bases of

participation of citizens in local self-government, the rights and obligations of members of local community, carrying out of meetings of local community, responsibilities of local government bodies, relations of state bodies with local self-governing bodies, responsibility of local self-governing bodies were determined.

In 2012, the Decree of the President of the Republic of Kazakhstan approved the Concept of development of local self-government in the Republic of Kazakhstan; in January, 2013, the plan of action on implementation of the concept for 2013-2020 was approved.

At the present stage, there are certain prerequisites in political, economic, social and cultural spheres of life of the Kazakhstan society, which may form a basis for decentralization of authorities.

In most democratic states, local authorities resolve daily, most important public issues. It conditions rather high managerial interest and active participation of citizens in activities of local authorities.

In this regard, for the purpose of the Concept provisions, in August, 2013, the first elections of heads of local authorities in the history of independent Kazakhstan took place.

Since April, 2015, four types of taxes were transferred to local self-government, receipts of which would be directed to financing of expenses of the regional budget.

Starting from 2018, the independent rural budget will be implemented, where each rural district approves and precises the budget, provides the report on its execution at the district Maslikhat. Mechanisms of participation of citizens in discussion of drafts of the relevant budgets will function.

4.3 Promotion of participation in the process of city development

In May of the last year, the Head of the State Nursultan Nazarbayev specified a hundred of specific steps on implementation of five institutional reforms for inclusion of Kazakhstan in the list of thirty developed countries of the world. The last ten steps are aimed at implementation of reform on "Forming of a reporting state".

In particular, the 94th step designates the task of implementation of the Open government, and the 96th step designates online availability of statistical databases of the central state bodies.

The purpose of the "Open government" is to create a transparent reporting state, expand the rights and opportunities of citizens in government of state, strengthen the anticorruption efforts, and use the new technologies to increase the efficiency of public administration.

On November 16, 2015, Law "On Access to Information" was adopted, in which provisions on posting of public information on portals of the Open government were settled.

The Open government consists of five components: open data, open NGOs, open dialogue, open budgets, and evaluation of efficiency of the authorities' activity.

4.4 Enhancement of safety in the cities

Availability of legislation and documents on improvement of crime situation in the cities

The main objectives of improvement of the crime situation in the country stem from Strategy "Kazakhstan – 2050", other program documents on maintenance of stable condition of legality, law and order and social and political situation in Kazakhstan. Work on improvement of the Criminal and the Criminal Procedure Codes, the law-enforcement system, the counteraction to religious extremism and terrorism is constantly carried out.

Challenges and threats

Development of settlements requires parallel enhancement of the legal framework in the sphere of management and development of the cities.

In general, in recent years in Kazakhstan, the certain experience of regulation of the land and property relations, redistributions of lands for the benefit of society has been accumulated. Practical application of regulations of the Land Code and other legal acts of the Republic of Kazakhstan shows that their separate regulations and provisions require refinement and adjustment or adoption of new regulations for land relations.

Also, for enhancement of architectural, town-planning and construction activities in the country for the future periods, it is necessary to consider feasibility of development and approval of the Town Planning Code.

Under the conditions of a new town-planning paradigm, the growing urbanization, development of agglomerations and points of the country growth, it is necessary to enhance constantly more effective and flexible city management systems, including those at the legislative level.

5. Urban economy

5.1 Improvement of municipal/local financing

Volume of investments into the fixed capital per capita

The state provides certain financial guarantees necessary for ensuring effective activities to the local self-governing bodies of settlements, i.e. creates the income of municipalities and the order of their distribution and control of their application.

The timeliness of salary payment, supply of electricity, water and heat to houses, i.e., actually, all questions of the population life support, and, finally, social stability depends on how effective the financial administration at the level of local self-government of settlements is.

The Kazakhstan national average volume of investment into the fixed capital per capita in 2014 came to 381.2 thousand Tenges. At the same time, the largest volumes of investments per capita are registered in: Shalkar of the Aktyubinsk Region, in Atyrau, Ekibastuz of the Pavlodar Region, in Ereymentau of the Akmolinsk Region.

The share of investments from the Republic budget in the total volume of investments into the fixed capital of a city/city administration in the country averages 25 per cent, at the same time, the minimum share makes 1 per cent (Temirtau of the Karaganda Region), maximum – 84 per cent (Priozersk). The national average of investments share from the local budget in the total volume of investments into the fixed capital of a city/city administration makes 10 per cent. The minimum share makes 1 per cent (Atbasar, Makinsk of the Akmolinsk Region, Shalkar of the Aktyubinsk Region, Uralsk of the West-Kazakhstan Region, Shakhtinsk of the Karaganda Region, Rudny of the Kostanay Region), maximum – 84 per cent (Temir of the Aktyubinsk Region).

For the purpose of improvement of municipal/local financing and effective management of finance, control and auditing bodies are necessary engaged in check of expenditure of budgetary funds by the relevant budget organs and reliability and accuracy of data provided by the bodies of financial planning.

During the Republic budget generation for 2017-2019, in 2016, complete audit of the national and local budget programs will be carried out with optimization of budget expenses through exception of inefficient expenses and expenses, which may be financed by the private sector.

Besides, it is necessary that managerial powers of local authorities were supported with the appropriate financial resources with observance of correspondence of the expenditure powers to profitable opportunities of local budgets for the purpose of exception of dependence of local budgets on subsidies and growth of assignments of the national budget.

Since 2017, financing of all local investment projects from the target transfers of the Republic budget will be completely transferred to the local level.

It is also necessary to solve a problem of financial and budget dependence of local territorial structures on administrative organs of higher level.

Practice of long-term and mid-term financial planning will positively affect predictability and feasibility of planning of any activities of state bodies including local authorities.

5.2 Ensuring access to the housing finance

Housing finance grows in the Republic of Kazakhstan annually; mechanisms of increase of availability of housing financing are implemented.

In 2005-2016, target transfers in the amount of 129,492.2 million Tenges from the Republic budget were allocated for construction of municipal housing for people from the waiting list of the

local executive bodies, 1,801.0 thousand sq.m of municipal housing or 28.2 thousand apartments were constructed.

In 2012-2016, target transfers in the amount of 49,047.2 million Tenges from the Republic budget were allocated for construction of housing for young families, 443.4 thousand sq.m of housing or 7.7 thousand apartments were constructed.

In 2005-2016, 322,208.0 million Tenges from the Republic budget and the National fund were allocated for construction of credit housing, 4,099.1 thousand sq.m of credit housing or 53.8 thousand apartments were put into operation. Until the end of 2016, putting of 113.3 thousand sq.m of credit housing into operation is expected. Since 2016, for stimulation of construction of housing, additional resources from the National fund of the Republic of Kazakhstan have been allocated, including those for development of rent, credit and commercial housing.

Since 2013, the national company has been financing construction of rent housing. At the moment, 507 thousand sq.m of housing (8,680 apartments) have already been put into operation, until the end of 2016, putting of 244.5 more sq.m of housing (3,954 apartments) into operation is expected.

For the purpose of the investors' risk minimization, since 2016, the legislation on shared housing construction was improved with introduction of new mechanisms of attraction of the population finances to housing construction, including the mechanism of guaranteeing. At the same time, mechanisms of organization of shared housing construction provide obligatory completion of construction of an apartment house and transfer of his or her share to an investor.

For the purpose of complex resolution of the problem of development of individual housing construction, work on enhancement of procedures of provision of land lots and providing areas of housing building with engineering and communication infrastructure is carried out in the Republic.

In general, despite the difficult economic situation and decrease of indicators in many industries of economy, positive results are achieved in the sphere of housing construction. Due to the measures and steps made within housing development programs, in 2012-2016, the growth of rates of housing construction was seen, conditions increasing appeal of housing construction to investments were created, mechanism of crediting of local executive bodies for construction of affordable housing with subsequent implementation using tools of the system of housing construction savings was created, construction of municipal housing was continued.

5.3 Support for the local economic development

Development of small and medium-sized enterprises

Small and medium entrepreneurship influences the development of the national economy, solution of social problems, and increase in number of busy workers. Small and medium-sized businesses play the leading role in certain regions by the number of employees, by the volume of produced and sold goods, performed works and services.

Forming of the domestic private entrepreneurship in Kazakhstan began from the first years of independence of the country. State-owned property prevailed in the economy. Legal framework for development of market relations was fully lacking.

Forming of regulatory and legislative and institutional basis of support for development of private entrepreneurship happened step by step and began in the period of the market relations in 1997-2000. For the last 15 years, problems of the state support for entrepreneurship were solved at the legislative level, a number of measures promoting development of small and medium business were accepted, and mechanisms of the state support for entrepreneurship were developed.

According to Program "Road Map of Business – 2020", the support is given in four directions:

- support of new business initiatives of entrepreneurs of monotowns, small cities and rural settlements;

- industry support of entrepreneurs performing activities in priority sectors of economy and processing industry;

- decrease in currency risks of entrepreneurs;

provision of non-financial measures of support for entrepreneurship.

Support is given to the subjects of small and medium business within Program “Road Map of Employment – 2020” through assistance to development of entrepreneurship in village due to support for the private entrepreneurial initiative. The Program provides stimulation of entrepreneurship and increase in economic activity through the organization or expansion of own business.

Due to introduction of mechanisms of support at the legislative level, the number of subjects of small and medium business annually grows.

Growth of number of small and medium entities is observed countrywide.

One of strategic objectives of economy of Kazakhstan for a long term according to Strategy “Kazakhstan-2050” is production of at least 50 per cent of GDP by small and medium business by 2050.

Five institutional reforms are developed for achievement of the objective and giving of an impulse to strengthening of middle class, the state support of small and medium business is constantly provided, large-scale privatization is carried out.

In 2015, the World Bank recognized Kazakhstan as the leading reformer in the world in this area who took forty one places in rating "Doing Business".

By 2021, Kazakhstan should be included into the TOP-25 of rating "Doing Business" and raise the today's 25 per cent of SME share to 30 per cent of GDP taking into account decrease of share of the state participation in economy.

Rate of growth of the number of employed people in the small entrepreneurship constituted 23 per cent in 2014 in comparison with 2013, which is significantly higher than rates of growth of GDP of the country for the same years. In general, for more than 10 years, fixed growth of the number of people employed in small business of Kazakhstan in all regions is seen.

The small entrepreneurship makes growing contribution to production. And rates of growth of its gross production indicators grow, advancing general rates of growth of the gross product of Kazakhstan significantly. General production in the considered sector of economy increased in 2014 against 2013 more than 2.7 times.

In 2014, small business of Astana, which produced for 2.37 trillion Tenges became the absolute leader in production. In Almaty, small business produced for 1.8 trillion Tenges, and the West Kazakhstan Region ranked third where gross production made over 1 trillion Tenges. More than 50 per cent of all products made by small business fell to the share of the specified three regions.

5.4 Providing of worthy work places and standard of wage

According to the Committee of Statistics of the Ministry of National Economy of the Republic of Kazakhstan, the total number of the unemployed in Kazakhstan constituted 451,121 persons in 2015 or 5.0 per cent of the number of economically active population of the country. Against 2005, the level of unemployment decreased by 3.1 per cent.

The level of unemployment among women constitutes 5.7 per cent, and among men – 4.3 per cent. In the total number of unemployed, the share of young people at the age of 15-24 years constituted 4.1 per cent, 15-28 years – 4.3 per cent in 2015. However the indicators of officially registered unemployment are much below the level, determined by the data of inspections of labor power, as a considerable part of unemployed seeks employment independently, without being registered by the employment offices. To some extent, it is caused by complexity of registration of unemployed citizens, insignificant amounts of unemployment benefits, delay of their payment, and other reasons.

In Kazakhstan, for the purpose of expansion of employment opportunities, professional training and retraining of unemployed, and creation of paid social jobs, which do not require any special training is carried out.

The average monthly salary varies depending on the region and its specialization.

5.5 Integration of urban economy into the national development policy

The capital, the administrative centers and the large cities of Kazakhstan play the leading role in national economy. They attract up to 80 per cent of all investments coming from outside or made by the entities and other investors, which are in the territory of the country. The cities perform at the average 30 per cent more total worth of paid services, retail trade and civil engineering per 1,000 residents.

The cities remain the main centers of science and higher education, health care and culture. State in the cities turns to be rather safe. This is connected not only with high concentration of economic, social and infrastructure potential, but also with slow crisis recovery of the other settlements.

On the way of sustainable economic development, one of the main problems is insufficient integration of economy of Kazakhstan into global processes. The main problem is laid as integration, as the basis for entering to the global economy is competitiveness, flexibility, and the capability to response to the market situation. The most difficult is transition from the economic growth, oriented to resources and depending on cheap labor power and capital, to growth based on high performance and innovations. It calls for investments into infrastructure and education.

Now, the fundamental document aimed at search of mutually acceptable solutions of all range of economic problems is Strategy "Kazakhstan – 2050". Within this Strategy, the main objective is implementation of a number of principles and standards of OECD in Kazakhstan:

- achievement of annual GDP growth not lower than 4 per cent;
- increase in volume of investment from 18 per cent to 30 per cent of GDP volume;
- implementation of knowledge-intensive model of economy;
- increase of share of non-resource products in the export potential up to 70%;
- growth of science funding to the level not lower than 3 per cent of GDP;
- decrease in energy consumption of gross domestic product twice;
- production at least 50 per cent of GDP by small and medium business;
- improvement of workforce productivity by 5 times - from 24.5 thousand to 126 thousand dollars;
- increase in GDP per capita volume indicator by 4.5 times - from 13 thousand dollars to 60 thousand dollars, etc.

Within the Strategy implementation, in 2014, the following indicators of GDP and GRP per capita were reached (Table 5.5.1-5.5.2).

Table 5.5.1 – Dynamics of growth of gross domestic product of Kazakhstan for 2005-2014

	2005	2014
GDP, mln Tenges	7,590,593.5	40,754,832.5
GDP, per cent against the previous year	109.7	104.1
GDP per capita, Tenges	501,127.5	2,357,239.0

Table 5.5.2 – Dynamics of growth of gross regional product of Kazakhstan for 2005-2014 by regions, thousand Tenges

	2005	2014
The Republic of Kazakhstan	501.1	2,357.2
The Akmolinsk Region	263.4	1,494.4
The Aktyubinsk Region	604.9	2,400.4
The Almaty Region	202.1	1,049.5
The Atyrau Region	1,727.3	7,229.4
The West-Kazakhstan Region	659.8	3,183.0
The Zhambyl Region	169.1	939.2
The Karaganda Region	509.9	2,208.9

	2005	2014
The Kostanay Region	356.5	1,656.8
The Kyzylorda Region	394.0	1,842.7
The Mangystau Region	1,174.2	3,984.4
The South-Kazakhstan Region	161.7	907.0
The Pavlodar Region	516.6	2,423.7
The North-Kazakhstan Region	277.9	1,451.1
The East-Kazakhstan Region	325.4	1,712.5
Astana	1,318.0	5,038.1
Almaty	1,218.6	5,247.9

So, for the last decade, the gross domestic product per capita has increased by 1,856,111.5 Tenges or 4.7 times.

Challenges and threats

The development strategy chosen by Kazakhstan shall completely meet the realities of the new century, based on an unconditional priority of the long-term national-state interests of the country.

Under the conditions of unstable macroeconomic situation, the restraining factor of sustainable development of the cities in the territory of Kazakhstan is the insufficient level of fiscal capacity. In many respects, this factor causes lack of fixed and complete financing of the development of the cities infrastructure.

One of threats at the local level is also the growth of costs for maintenance of quickly aging infrastructure facilities and housing at lack of resources for investments into technological re-equipment, greening, energy saving, and human capital. Monotowns with old productions and city-forming industrial entities, low entrepreneurial activity in the absence of incentives and mechanisms of its increase are exposed to the greatest risks.

Under the conditions of shift of industry structure of urban economics towards development of service sectors of economy when reducing real sector, the decrease in number of industrial enterprises which were the main consumers of labor force earlier constitute a threat.

Under the conditions of decrease in production volumes and deterioration in economic expectations, the probability of reduction of costs for work from the economic entities is high, that will be followed by release of workers along with decrease in ratio of labor to output and growth of productivity of work at large and medium-sized enterprises. More and more entities will be forced to refuse the prevailing model of part-time employment. Especially strong it will be shown at the entities of the manufacturing sector. Growth of employment in other sectors of economy, first of all, those concerned with rendering services to population, will be observed at the same time.

The state shall guarantee to citizens the minimum social standard which shall directly depend on growth of economy and budget. It is necessary to determine the volumes of budget financing for all social sphere. This will increase transparency of the budget processes and will increase targeting of funds allocated by the state.

It is necessary to determine the accurate training and retraining programs for the unemployed coordinated to the requirements of the labor market. The state should give social support to the unemployed provided that a person who gets to this category masters a new profession and goes to be retrained. It is necessary to modernize policy of employment and labor compensation.

For preserving further historical prospect, Kazakhstan will need profound high-quality changes in industry and technological structure of the real sector of economy, which are possible only in case of adequate changes in the human potential of the Kazakhstan society. These changes assume implementation of large-scale investment projects, realization of which lies outside the time frames of short-term and medium-term programs.

Further development of the energy sector of economy of Kazakhstan will also remain the priority task.

6. Housing and core services

6.1 Increase of housing affordability level

One of the most important tasks of nationwide scope is housing construction. It is recognized as one of the priority directions of the Kazakhstan development Strategy until 2030.

The main purpose of the state housing policy in the new stage of Kazakhstan development is creation of conditions for providing citizens with affordable housing.

Currently, housing affordability is provided by the following state support measures:

- 1) allocation of prepared land plots, in accordance with the General plans and projects of detailed planning;
- 2) purposeful summarizing of the planned construction areas - engineering and communication infrastructure;
- 3) industrialization of construction, which will provide volumes growth and reduction of construction time, net cost reduction through the application of advanced technologies.

Purposeful state policy on providing housing to the citizens of our country has yielded significant results and allowed to provide according to statistics for the period of 25 years (from 1991 to 2015), construction of 107.1 million m² of housing using all sources of funding, improved the living conditions of more than 1.0 million households.

The period from 1991 to 2015 is characterized by a significant increase in the volume of investments. Investments in this sector have increased from 0.01 billion tenge in 1991 to 740,0 billion tenge in 2015.

If from 1991 to 1999 a significant decrease of housing construction productivity was noted because of the crisis and sharp reduction of state participation in financing of housing; since 2000 there is some stabilization and housing construction volume growth at the expense of increase of investments of private developers and individual housing construction.

The largest growth in housing construction can be observed since 2005, when the Government of the Republic of Kazakhstan has adopted a number of state and sectoral programs aimed at construction of affordable housing for the population.

5 state programs aimed at the construction of rental and credit housing have been accepted from 2005 to 2015 in the Republic of Kazakhstan:

The state program of development of housing construction in the Republic of Kazakhstan for 2005-2007;

The state program of housing construction in the Republic of Kazakhstan for 2008-2010;

The program of housing construction in the Republic of Kazakhstan for 2011 - 2014;

The program “Affordable housing – 2020”;

The regions development program until 2020.

From 2016 the stimulation of housing construction is additionally carried out in the framework of the State program of infrastructure development “Nurlyzhol” for 2015 – 2019.

Support the provision of housing is carried out by implementing the following directions:

- 1) rental (municipal) housing for local executive bodies on waiting list;
- 2) credit housing of housing construction savings system of local executive bodies;
- 3) rental housing for young families with realization through the system of housing construction savings;
- 4) JSC “KMC” rental housing;
- 5) JSC “Baiterekdevelopment” rental and credit housing;
- 6) JSC “Samruk-Kazyna” housing

Considering the sales price of housing per 1 square meter, the housing is constructed mainly in regional centers and large cities. Housing construction for the executive bodies on the waiting list (municipal housing) are mainly in regional centers and rural settlements.

The Ministry of National Economy of the Republic of Kazakhstan jointly with the Ministry for Investment and Development of the Republic of Kazakhstan is working on the download of house-building factories (hereinafter - HBF).

In the framework of the Single program of support and development of business “Business road map – 2020” and the Program of regional development until 2020 is working on the implementation of projects on construction of factories of industrial housing in the regions.

Overall, the total area of housing fund in Kazakhstan is 336.9 mln. m² and increased in comparison with 1991 by 98.3 square meters or 41.3%. (Figure 6.1.1).

4.3 mln. m² of housing annually introducing on average in 25 years, with the highest rates of construction in Astana and Almaty.

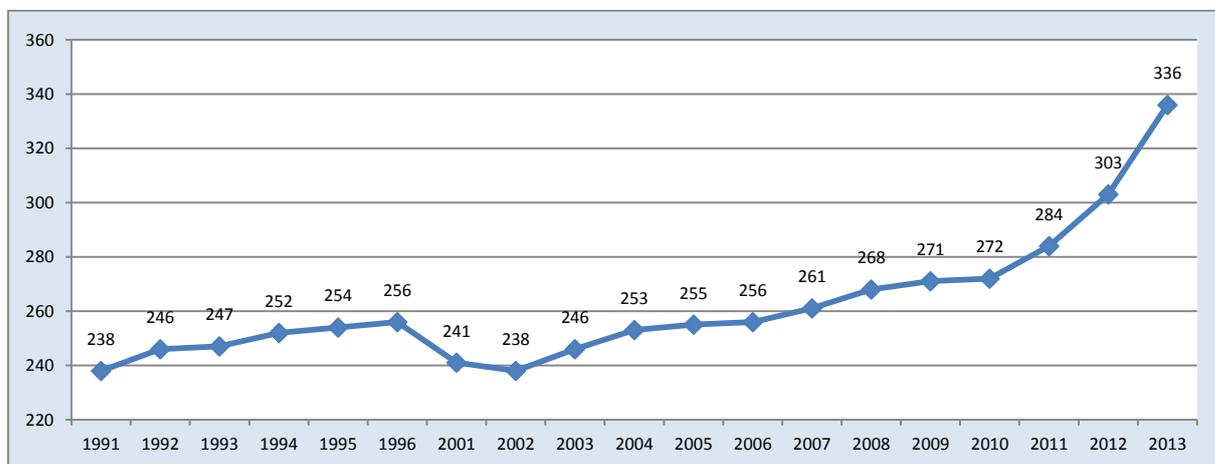


Figure 6.1.1 – Dynamics of development of housing fund in the Republic of Kazakhstan, (mln.m²).

During independence of Kazakhstan, housing construction has become one of the priority directions of strategy of development of the country and is one of the most important national tasks.

The main focus of housing policy is to ensure sustainable growth of affordable housing for the General population by reducing its cost, increase in terms of housing credits, lower down payment and crediting rates.

By the end of 2020, the housing fund of Kazakhstan will increase by 403787 thousand m², with an average provision of housing will be 22 m² per person.

Construction of social housing, including for large families

According to paragraph 2 of article 25 of the Constitution of the Republic of Kazakhstan, the country providing conditions for ensuring the housing for citizens.

One of the main directions of housing policy is the construction of social housing for local executive bodies on waiting list.

This housing is provided to veterans of the great Patriotic War, children-orphan, socially vulnerable groups of the population, workers of budgetary organizations and citizens, the only housing of which is recognized as substandard, including large families.

During the period of implementation between 2005 and 2015 for the construction of rental housing for the people on waiting list, 129 492,2 million tenge allocated from the Republican budget. 1 801,0 thousand m² of apartments have been commissioned, resulting in improved living conditions of 28 thousand families.

In 2016 for the completion of construction of rental housing for people on the waiting list have been allocated 4.8 billion tenge, which is planned to build 52,1 thousand square meters (754 flats).

Every year a number of people on the waiting list who have received housing from municipal housing Fund on priority and vulnerable group of people is growing (Table 6.1.1).

Table 6.1.1 – Information on the number of people on the waiting list who have received housing from municipal housing fund, units

Social categories	Number of people on waiting list			
	2012	2013	2014	2015
Disabled people and participants of the Great Patriotic War	101	203	139	224
Orphans, children left without parental care	records were not kept	348	752	1224
Socially vulnerable layers of the population	1089	2166	1611	1884
Public officers, employees of budgetary organizations	1076	1639	1225	1978
Citizens of the Republic of Kazakhstan, the only housing of which is substandard	14	113	121	99
Total	2280	4469	3848	5409

Development of engineering and communication infrastructure

In order to solve complex problems of the development of individual housing construction, the country takes measures aimed at improving the procedures of granting land plots and providing housing development areas of engineering and communication infrastructure (hereinafter - ECI).

Construction of ECI is a key contributor to the timely commissioning of housing under construction and will include provision of networks of heat, water, gas and electricity, telephones and sanitation for the planned zones of development.

In 2006-2016, targeted transfers in the amount of 478.8 billion tenge was allocated for the development of ECI from the Republican Budget and National Fund to budgets of local executive bodies. Thus, there is a constant growth of the relevant targeted transfers. 87.0 billion tenge was allocated from the Republican budget for the development of ECI in 2016.

6.2 Provision of sustainable access to safe drinking water, basic sanitation and sewage

Over the past two decades, Kazakhstan has done considerable work to improve water services and sanitation, set ambitious targets and adopted sound policies of tariff setting for water supply and sanitation and invested significant amounts of public funds in the reconstruction and development of related infrastructure.

Initially the work was carried out in the framework of the state program “Drinking water” (2001-2010), and then continued in the framework of the program “AK Bulak” (now a Program of regional development).

In the period of 2011-2015 about 400.0 billion tenge was allocated for these purposes, over 16.0 thousand km of networks of water supply and sanitation have been constructed and reconstructed.

By the end of 2015, the planned indicators of the program are fully achieved; provision of population in the cities with centralized water supply was 87%, in the villages of 51.5% (Table 6.2.1).

Table 6.2.1 – Provision of access to centralized water supply and water disposal

№	Outcome index	2011 plan/actual	2012 plan/actual	2013 plan/actual	2014 plan/actual	2015 plan/actual
In cities						
1	Access to centralized water supply, %	82/82	84/84	85/85	86/86	87/87
2	Access to centralized sewerage, %	73/73	75/75	78/78	81/81	82/82
In rural areas						

3	Access to centralized water supply, %	42,5/42,5	43/43	45/47,7	50/50,3	51,5/51,5
4	Access to centralized sewerage, %	8,8/8,8	9/9	10/10	11/11	11/11

In cities the provision of centralized sewerage was 82%, in the villages of 11%. A small figure in the villages is due to the fact that the housing fund of the country's largest privately owned buildings, low-rise, inlet to which the central sewerage is not economically feasible.

Household expenditures on water supply services and sanitation accounted for less than 4% of disposable income, which fully meets the criteria of affordability.

Ensuring coverage of population with water meters by the plan of 74.6% in 2015 was 79%, 88% of population in cities is provided with individual water metering instruments, in villages – 71%. The level of losses in water supply networks planned reduced to 19%.

The quality of drinking water for several years is maintained at a stable level. Laboratory control covers all drinking water sources, water supply systems, as well as decentralized sources (wells, springs) used for drinking purposes by the population.

In addition, public utilities serving the water distribution network are in constant production control of water quality.

Sanitary-epidemiological service conducted studies for compliance with microbiological, sanitary-chemical, toxicological, and radiological indicators to requirements of sanitary rules and hygienic standards, as well as additional studies on the presence in water of antigen of hepatitis A, enterovirus.

According to water-management design performed in the framework of the development of the General scheme for the territory of the Republic of Kazakhstan, the specific water consumption for communal needs will be 54 m³ per person by 2020.

In the framework of the state program on water resources management of Kazakhstan, approved by Presidential Decree of the Republic of Kazakhstan dated 4 April 2014 No. 786 set an ambitious target of ensuring at least 80% of the rural population and at least 100% of the urban population with centralized water supply services by 2020.

6.3 Improvement of access to eco-friendly local energy resources

The presence of programs of the national and local levels aimed at promoting and development of eco-friendly local energy, resource conservation

On July 4, 2009, the Republic of Kazakhstan adopted the Law “On support of usage of renewable energy sources” (hereinafter - Law).

For successful development and increase of investment appeal of sector of renewable energy sources (RES) in the framework of the Law of the Republic of Kazakhstan “On amendments and additions to some legislative acts of the Republic of Kazakhstan on issues of transition of Kazakhstan to "green economy” dated April 26, 2016 corresponding changes and additions have been made into the Law.

Electric power generation by renewable energy facilities in 2015 amounted to 704 million kW/h.

As of January 1, 2016 there are 48 companies in the country that use renewable energy sources, amounting to a total 251,5 MW (hydroelectric power plant (HPP) – 122,32; wind power station (WPS) – 71,755; solar power plant (SPP) – 57,0656; biogas plants – 0,35).

Currently, the List of energy producing organisations that use renewable energy sources included 75 projects with total capacity of about 2057 MW, about 21 of these RES projects are put on production with total capacity of 155 MW, the rest is planned to be introduced in 2020..

Forecast data of installed capacity in 2030 amounts to 4.6 GW for wind power stations and 0.5 GW for solar. To achieve the planned targets the implementation of projects in the field of renewable energy will be required.

In accordance with the Concept on transition of Kazakhstan to “green economy”, there are the

following targets for renewable energy:

achieving a 3% share of RES in total electricity production by 2020;

achieving 10% share of renewables in total electricity production by 2030.

achieving a 50% share of alternative and renewable sources of energy, including wind, solar, hydro, and nuclear power plants in the total electricity production by 2050.

Much work is being done in the field of information support. “Information guide for investors” is developed for the purpose of informing investors in the preparation and negotiation of renewable energy projects. In addition, Kazakhstan is a full member of renewable energy agency “IRENA”.

Also, the authorized state body in the field of architecture, urban planning and construction carried out significant work to promote the resource in the construction of the project of the Government of the Republic of Kazakhstan/UNDP/GEF “Energy efficient design and construction of residential buildings”.

Standard series of typical residential buildings in industrial frame and panel construction for the climatic sub-areas with normal geological conditions of Kazakhstan have been approved, as well as the model projects 9-storey residential buildings, 3 class of comfort and 5-storey houses - 4 class of comfort.

In addition, one of the most important initiatives to promote renewable energy, green manufacturing, alternative forms of transportation, etc. is the International specialized exhibition EXPO-2017 in Astana. Currently there is an active construction of the whole exhibition area with the introduction of new approaches to sustainable urban development, in accordance with the theme of “Future Energy”.

The presence of building regulations binding on increase energy efficiency

The rational use of energy resources with the aspects of energy conservation, energy efficiency and, accordingly, environmental issues are becoming increasingly important, and their solution has become a strategic task for many countries in the world.

Until the early 2000-ies, the construction projects in Kazakhstan were designed according to construction norms and rules of the USSR (SNIIP II-3-79* “Construction heat engineering”), which thermal indicators of walling were significantly lower than with current standards.

In 2003-2005, with the participation of leading Russian research institutions were developed and adopted: SNIIP RK 2.04-03-2002 “Building heat engineering”, CH RK 2.04-21-2004* “Energy consumption and thermal protection of civil buildings”, MSN 2.04-02-2004 “Thermal protection of buildings”.

In new construction regulations:

requirements for the regulated energy efficiency indicators and their numerical values are tightened;

set:

design methods according to the established indicators of efficiency;

methods to verify compliance with design values of the normalized indicators of energy efficiency (energy passports);

methods for determination of air permeability of the frame structures in the natural environment;

method of determination of specific consumption of thermal energy for heating;

introduction of rationing of energy consumption of the building as a whole;

development of calculation methods of determining the level of thermal performance of buildings for energy indicators;

introduction a system of classification of buildings for energy efficiency.

The Law of the Republic of Kazakhstan “On energy saving and energy efficiency” was adopted in 2012, which established the mandatory use of energy-saving materials, installation of metering devices of energy and water resources, automated systems of heat consumption control in the

construction objects consuming energy and water resources.

Also, the implementation of this Law approved the Concept of transition of Kazakhstan to “green economy” and the Program “Energy Saving 2020”.

In recent years, in order to improve the efficiency of the revised existing and developed new building standards for the design of buildings taking into account energy saving measures and alternative and renewable sources of energy.

Also, there are changes and additions to a number of building regulations on energy saving.

During the development of design-estimate documentation provides for the completion of energy passport of the project indicating the specific energy consumption and energy efficiency class.

By order of the acting Minister for Investments and Development of the Republic of Kazakhstan dated November 26, 2015 No. 1106 the form of the marking of buildings and structures by class of efficiency is approved.

Also, the Law “On energy saving and energy efficiency” was introduced a phased ban on incandescent bulbs, switch to energy efficient bulbs.

However, the idea of the “green construction” is actively promoting. National standard draft for evaluating buildings according to the criteria of “green construction” is developed. The number of objects in Astana and Almaty claimed for certification according to international standards of LEED and BREEAM, such as: multifunctional complex "Abu Dhabi Plaza" and "Talan Towers", residential complex "Green quarter", the objects of Expo-2017, Universiade and more.

Challenges and threats, and ways for their solution

The new tools of enhancement of availability, including the public-private partnership, should be implemented to provide residential property for the future taking into account the population growth.

At the same time, the housing sector of Kazakhstan is the biggest heat and electric power consumer, and is the least power-efficient. Rise of power efficiency in the housing sector is one of the priorities in the Republic.

The main problem of power efficiency is the high-rise apartment buildings constructed in 1960s and later. Wear of the existing networks and constructions results in increase of the number of incidents and failures of engineering networks, as well as loss of energy sources.

At the same time, legacy of the centralized planning offers a number of opportunities putting many former socialist countries at an advantage over the other UNECE-countries. Availability of a large number of standard apartment houses allows using similar methods of increase in power efficiency that provides economy of scale. Strong traditions of centralized district heat supply in the large cities of the CIS countries are a good institutional technical basis for organization of effective heating and chilling of structures in the future: in particular, positive experience is wide use of combined heat and power plants.

To solve the problem of decrease in depreciation of electric, heat, and gas supply, as well as repair and replacement of heat-producing capacities, a range of measures for upgrade (reconstruction and construction) of housing-and-municipal sector will be assumed.

Statements of reasons of investments into development of heat supply systems are developed for this purpose; and priority of projects implementation in the regions is determined by criteria of projects selection.