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Country Profile on the Housing Sector of Kazakhstan

Note by the Secretariat

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2. The secretariat wishes to express their gratitude to the Russian Federation, the United Kingdom, the Netherlands, Kazakhstan, UN Habitat and UNDP-Kazakhstan for their financial and in kind support.
3. The Committee is invited to take note of this information.

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

Country Profile on the Housing Sector

Kazakhstan



UNITED NATIONS

Advance Unedited Version

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

COUNTRY PROFILE ON THE HOUSING SECTOR

KAZAKHSTAN



UNITED NATIONS
New York and Geneva, 2017

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PREFACE

This Country Profile on the housing sector of Kazakhstan was requested by the Government of the Republic of Kazakhstan through its Ministry of Regional Development. The Review began in July 2016 with the preparatory mission by the UNECE secretariat, during which the final structure of the Country Profile was established. A fact-finding mission by the international expert team was carried out in September 2016.

This Country Profile and other related publications are available on the UNECE website (<http://www.unece.org/housing.html>).

Advance Unedited Version

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| Republic Association of Cooperatives of Homeowners | Astana Association of Cooperatives of Homeowners |

ABBREVIATIONS, ACRONYMS, SYMBOLS AND CURRENCY CONVERSION

ABBREVIATIONS AND ACRONYMS

| | |
|----------|---|
| CCHCS | Committee on Construction, Housing and Communal Services |
| CHO | co-operative of homeowners |
| FDI | foreign direct investment |
| GDP | gross domestic product |
| GEF | Global Environment Facility |
| GHG | greenhouse gas emission |
| HAI | housing affordability index |
| HCSB | Housing Construction Savings Bank |
| HGF | Housing Guarantee Fund |
| ICT | information and communication technology |
| IT | information technology |
| ITU | International Telecommunications Union |
| JSC | Joint-stock company |
| LEA | local executive authority |
| LED | light-emitting diode |
| KMC | Kazakhstan Mortgage Company |
| KPI | key performance indicator |
| KZT | Kazakhstani tenge |
| MFO | micro-finance organization |
| MoNE | Ministry of National Economy |
| NBRK | National Bank of the Republic of Kazakhstan |
| OECD | Organisation for Economic Co-operation and Development |
| PPP | public-private partnership |
| R&D | research and development |
| RSE | Republican State Enterprise |
| SHPP | small hydro power plant |
| SIDA | Swedish International Development Cooperation Agency |
| SPAID | State Programme for Accelerated Industrial Innovative Development |
| STB | second-tier bank |
| TNC | transnational corporation |
| UNDP | United Nations Development Programme |
| UNDP-GEF | UNDP-Global Environmental Facility |
| U4SSC | United for Smart Sustainable Cities |
| USD | United States dollar |

SYMBOLS

| | |
|-----------------|------------------|
| Gcal | gigacalorie |
| km | kilometre |
| km ² | square kilometre |
| kW | kilowatt |
| kWh | kilowatt-hour |
| m ² | square metre |
| mm | millimetre |

CURRENCY CONVERSION

Exchange rate (September 2016)

1 Kazakhstani tenge (KZT) = United States dollar (USD)

1 USD = 341.50 KZT

1 Euro (EUR) = 381.12 KZT

EXECUTIVE SUMMARY and POLICY RECOMMENDATIONS

This summary provides an overview of the housing and urban development sectors in Kazakhstan and policy recommendations in these areas.

General situation

Kazakhstan is the largest landlocked country in the world. In terms of surface area, it is the world's ninth largest and 99.1 per cent of it is land. Kazakhstan's population density is relatively low at 6.6 persons per square kilometre.

Kazakhstan's economy is largely based on oil and its commodities. While this has boosted growth, lack of diversity of the economic activities makes it highly vulnerable to change in demand for and prices of oil commodities. The commodity price boom in the 2000s, along with government economic reforms, has triggered strong growth; in the late 2000s, however, this growth was slowed by impacts of the global economic and financial crises and the drastic decrease in commodity prices.

Economic diversification and sustainable growth remain key challenges for Kazakhstan. Understanding their importance, various strategies and programmes were developed to address them. In particular, the five-year "State Programme of Accelerated Industrial and Innovative Development of Kazakhstan" (hereinafter, SPAIID) was adopted in 2010. The SPAIID contains the key tasks to achieve the goal of guaranteeing a stable and well-balanced economic growth by means of diversification and improving the competitiveness of the economy.

Significant economic growth since 2002 has brought down poverty incidence from 46.7 percent level in 2001 to 2.7 per cent in 2015. However, the urban-rural poverty gap is still high. In 2006, Kazakhstan has gained upper-middle-income status.

With growth slowing down since 2011 and the global economy remaining volatile, Kazakhstan launched an ambitious programme "100 Concrete Steps, a Modern State for All" in May 2015, to implement institutional and structural reforms. The programme specifies five institutional reforms and outlines the approaches on how to implement them. Despite progress made on the implementation of short and long-term initiatives and reforms, a number of challenges remain, such as attraction of private investment and completion of reforms in all economic sectors.

Problems stemming from the post-communist transition were aggravated by the long-term effects of the 1988 Spitak earthquake. Lots of infrastructure, including housing, was lost as a result; some of it has never been reconstructed due to a lack of resources.

Housing legislation and policies

The Constitution of Kazakhstan states that the right to housing is inviolable and that citizens in need of housing should be provided with housing at an affordable price from the State housing funds in accordance with the norms stipulated by law. Kazakhstan has a number of laws and regulatory acts on housing issues. The 1997 Law "on Housing Relations" is the main regulatory instrument in the field of housing. The Law on Housing Relations was revised several times since its adoption.

The country's housing policy is aimed at creating conditions for the provision of affordable housing. Housing construction is one of the priority directions of Kazakhstan's "Strategy for Development until 2030" (hereinafter, Strategy 2030). A number of state programmes for housing construction and for financial support of lower income population aimed at increasing housing affordability were elaborated by the government. Since 2005, Kazakhstan has adopted housing construction programmes in line with the strategy, although with differing priorities. This included state bi-annual programmes for housing construction (separate programmes for years 2005–2007, 2008–2010 and 2011–2014); the programme on the development of the regions until 2020 (which included a specific objective on construction of affordable housing); the programme of housing construction "Nurly Zher" was adopted at the end of 2016. The Nurly Zher Housing Construction Programme (hereinafter, Nurly Zher) is

therefore the latest initiative of the government to address housing affordability. It combines the housing-related objectives of two other programmes – the Regional Development Programme 2020 and the Nurly Zhol Infrastructure Development Programme for 2015-2019.

The Ministry of National Economy is the executive body managing regional and local development, including development of the housing and communal services sector. It is responsible for implementing the country's housing policy. The ministry has a wide range of tasks and responsibilities over the housing sector. A number of tasks on housing development were delegated in Kazakhstan to regional and local authorities. There are also a number of companies established by the Government which support housing construction. For instance, the holding "Baiterek" was established as a national management company for financing of housing construction for those people registered to purchase housing through municipalities. A company "Kazakhstan Center for modernization and development of housing sector", established in 2009, is responsible for promoting sustainable housing through research and training on housing management.

While the institutional framework for the housing sector is diverse, including the national, regional and local organisations working on affordable and decent housing, it is important to ensure effective coordination between different agencies, especially the vertical coordination – between organisations working at municipal and national levels.

Policy recommendations:

- A long term comprehensive housing policy at national level should be elaborated. It is further recommended to synchronize all ongoing and planned government programmes, initiatives and reforms related to housing;
- Further, it is necessary to delineate responsibilities and functions of authorities working with housing programmes at the national, regional and local level. The role and functions of municipal authorities in the implementation of the specific housing programmes should be strengthened;
- One central public government authority responsible for housing policy and housing and communal services should assume responsibility for coordination of the development and implementation of the long term housing policy;
- Further, it is necessary to delineate responsibilities and functions of authorities working with housing programmes at the national, regional and local level. The role and functions of municipal authorities in the implementation of the specific housing programmes should be strengthened;
- A bottom up approach for the identification of people's housing needs should be established. It is recommended to organise regular surveys of the population's needs in housing as the basis for the formulation of specific objectives, instruments and target groups of government housing assistance programmes. Such surveys will allow developing more targeted programmes tailored to the actual housing needs. For instance, the ECE studies based on the sustainable livelihood approach provide an analysis of how housing conditions influence the ability of disadvantaged groups of population to achieve sustainable livelihood. Government programmes could be developed to assist those disadvantaged groups in gaining access to affordable decent housing. These and other methodologies could be applied to regularly monitor needs of the population for government assistance to affordable housing.

Housing demand

After gaining independence in 1991 from the Soviet Union, housing construction in Kazakhstan significantly decreased. This is due to the disruption of the country's close economic links with other ex-Soviet republics, and especially Russia, after the dissolution of the Soviet Union. This low level of housing construction was followed by a strong growth in the mid-2000s. This was largely due to the easing of mortgage regulations and introduction of several housing construction programmes since 2005 with the active participation of private developers and individuals. The trend was halted by the 2008 global economic and financial crisis, but the Government's support has prevented the housing construction industry from collapsing totally. The government housing construction programmes, and first of all the Nurly Zher programme, aims to increase housing availability for the population through the construction of rental housing and housing for members of the housing construction savings system.

Despite positive results in the implementation of housing construction programmes, Kazakhstan is still experiencing housing shortages, and affordability is still an issue. The ongoing population growth and migration to cities due to the urbanization process necessitate finding new innovative solutions to existing housing affordability challenges.

Rental housing, also through the Nurly Zher programme, is recognized as a promising area in housing construction. The current government housing policy allows a provision of temporal rental housing where, after a period of time, inhabitants must buy out their apartments. This does not resolve the problem of those people who are not entitled to social housing and are not able or not willing to purchase ownership of housing. The lack of affordable rental housing has a negative impact on labour mobility. In addition, the conversion of multi-family rental houses into condominium objects following their redemption by tenants, reproduces the problems of management of such items of immovable property characteristic of condominium objects that emerged as a result of privatization. Rental housing needs to be made affordable and long-term.

Definition of target groups of government support to affordable housing provision needs further discussion. The state housing policy is today mainly aimed at solving housing problems of few specific socially vulnerable categories of the population, such as, military staff or government employees. The lower middle class population which does not fit these requirements, cannot afford to purchase housing and in the context of the absence of a developed market of rental housing in Kazakhstan, this large group of population has a very limited access to affordable decent housing.

In Kazakhstan, social housing is housing from the municipal (public) stock, and the right to it is not always associated with low income of households. The number of people requesting public housing, including those with higher incomes, is growing; and as of 2015, more than three hundred thousand people are registered on the waiting lists of local executive authorities (hereinafter, LEAs) of regions (akimats). The international practice today demonstrates that the 2008 economic crisis has made housing unaffordable for many low-income as well as middle-class households.

Policy recommendations:

- The Government could consider to develop an affordable and social rental housing sector to improve the housing conditions of households that are not able to purchase their own housing on the market. It is advisable for the Government to develop a plan for the establishment of a non-profit rental housing sector based on the experience of European countries (Denmark, Netherlands) and to begin its implementation in cities with significant migratory influx of population. According to the international experience, non-government owners of affordable rental housing, in addition to management and maintenance of residential complexes, can also carry out social activities and organize special social services for certain categories of citizens with the support of the government and municipalities. The large-scale construction of non-profit rental housing, where some homes can be provided for social rent, should include special measures to ensure the government support of non-commercial customers and developers, and reduce their costs for the construction of rental housing affordable for the majority of the population: tax benefits, free or subsidized provision of land parcels, access to municipal infrastructure, subsidies for the construction, and subsidized construction loans;
- To address the affordability of housing to the middle-income population, it is also recommended to revise and expand the definition of vulnerable groups eligible for government support in the provision of affordable decent housing needs in relevant legal acts.

Housing maintenance and management

Pursuant to Article 6 of the Law “on Housing Relations”, the homeowners shall manage the housing stock directly or through appointed (elected) authorities. A cooperative of homeowners (hereinafter, CHO), or homeowners association, is a non-profit organization established by homeowners to manage and maintain common areas. The law does not prohibit CHOs to manage more than one apartment building. CHOs managing multiple multi-apartment buildings are predominant in Kazakhstan. CHOs involve themselves both in the management and maintenance of apartment buildings although the law requires separation of these functions. There are problems in management, maintenance and refurbishment of multi-family houses because CHOs, dominating this sphere, do not have professionally trained staff in common property management. There is no system of training of professional managers of multiapartment buildings.

The fee for the maintenance of the common property of condominiums is not enough to ensure all activities required for maintenance of an adequate condition of apartment buildings, energy retrofitting, and refurbishment. There is no practical enforcement of requirements of the Law on Housing Relations with regard to the employment contracting organizations by CHOs for the maintenance of condominium objects, and payment of mandatory contributions for refurbishment by homeowners.

The government-supported refurbishment of apartment buildings is carried out based on available state budget, not on market-based mechanisms. As a result, there is a lack of funds to ensure good condition of apartment buildings, lack of participation of homeowners in decision-making concerning the maintenance of their apartments, etc.

Policy recommendations:

- The Government should consider developing measures to improve the condominium management and maintenance through the use of market-based mechanisms, including providing targeted subsidies (housing assistance) to low-income homeowners in condominium objects to pay for the costs of common property maintenance, refurbishment and energy efficiency improvements; and transferring to a market-based mechanism of refurbishment of condominium objects (refurbishment should not be limited to a single service provider);
- it is also recommended to improve legislation regulating condominium management, to enhance the role of the homeowners in community property management and to simplify the decision-making process for homeowners;
- the Government should also implement measures to raise the awareness of homeowners in apartment buildings about professional services of apartment buildings management and maintenance as well as to develop a framework for the development of professional condominium management services.

Energy efficiency and energy saving in the residential sector

In Kazakhstan, the residential sector is the largest consumer of heat and electric power. Residential buildings consume about 13.6 per cent of electric power and 40 per cent of heat power. The majority of the country's housing stock consists of apartment buildings built in the period 1950-1985, and because of age and lack of maintenance, they are not energy efficient. The low energy efficiency in the residential sector is also due to the absence of the working mechanisms in managing multi-apartment buildings, as described above. Most of the apartment buildings in the existing housing stock use district heating and energy supply systems. A mass energy audit conducted in 2010-2013 showed that heat energy consumption of apartment buildings in Kazakhstan is 240 kW per m² every year, which far exceeds heat consumption of countries like Sweden, Germany, France, and England.

The government of Kazakhstan established energy efficiency and energy saving as its top priorities. The political will of the country to promote energy efficiency is expressed in a number of strategic documents adopted by the Government such as the "Concept for the Transition to a Green Economy" and "Strategy 2050", and in programmes like "Nurly Zhol", "100 Concrete Steps", "Energy Efficiency 2020", etc.

Providing legislative support to the country's efforts to improve energy efficiency and energy saving is the Law "on Energy Saving and Energy Efficiency Improvement" (hereinafter, Law on Energy Efficiency), which was adopted in 2012 to serve as the central document in the field of energy efficiency. The Law on Energy Efficiency has introduced thermal modernization as an activity to improve the thermal and technical specifications of buildings that will in turn reduce heat losses. This law set a requirement to indicate the energy efficiency class of a constructed object in the technical sheet of the constructed property during registration of rights. For existing buildings, an energy audit will be conducted to determine their energy efficiency class. Customers and contractors will be more interested in investing if the energy efficiency requirements (by specifying the energy efficiency class of a building) are set prior to construction. A State-appointed authority should monitor every stage of construction to ensure that the requirements are implemented and met.

The Law on Energy Efficiency contains provisions for the possibility to assist and support the owners of residential buildings for the activities promoting energy saving and improving energy efficiency in line with the Law on

Housing Relations. There is also a provision indicating the consumer tariffs for heat energy supply, depending on the availability of heat metering devices.

Energy efficiency issues are within the competence of different government bodies, in particular, the Committee on Construction, Housing and Communal Services of the Ministry of National Economy and the Committee on Industrial Development and Industrial Safety of the Ministry for Investments and Development. These government bodies are the competent authorities in the field of architecture, town planning and construction, and in the field of energy saving and energy efficiency, respectively.

The international community takes part in improving energy efficiency in Kazakhstan. Since 2007, the United Nations Development Programme (hereinafter, UNDP), with the support of the Government and other donors, has been implementing energy efficiency and energy saving projects. UNDP also supported the drafting of the Law on Energy Efficiency.

Issues of energy efficiency of residential buildings are therefore related to the implementation of the already existing government policy priorities on energy efficiency and further development of the regulatory framework for energy efficiency in managing multiapartment buildings.

Policy recommendations:

- a State-appointed authority should monitor every stage of construction to ensure that the energy efficiency requirements are implemented and met. Setting energy efficiency requirements for buildings to be constructed at the stage of issuance of a construction permit and establishing a regular system of monitoring of energy efficiency standards compliance during the buildings operation, could improve energy efficiency of residential buildings;
- there is also a need to raise awareness among home owners about importance of energy efficiency of buildings. The energy efficiency indicators should be provided in places available for viewing by buildings' inhabitants to solve this problem, e.g. a board on a building face. For this purpose, it is necessary to establish the requirements to the customers and building owners on the building energy efficiency labeling to visualize information and facilitate a process of changing the minds of people and promote a market towards energy efficiency;
- it is necessary to determine an achieved actual level of energy efficiency of the buildings put in commission after completion of construction or thermal modernization. This will ensure a feedback between a desired picture and an actual one, an expected performance and a level achieved in the buildings to be operated;
- constructing an energy-efficient building is not enough. A competent monitoring operation shall be arranged as well. It is necessary to set a period for energy audit, inspection of technical condition, thermal and power equipment, and a responsibility for implementation of the measures to be provided after audit of a building. During operation, an operating entity, based on an Energy Data Sheet, builds its relations with a resource supplying organization, testing the qualitative and quantitative parameters of heat-, water- and energy resources. In compliance with the specified period, the operating entity shall monitor the actual heat and power indicators of a building, conduct an energy audit of a facility, and implement the energy efficiency measures recommended.

Financial framework of the housing sector

Trends in the housing market

With the transition to a market economy after gaining independence, the housing finance policy of Kazakhstan has changed. There was a shift from distribution of public housing stock where the State was the main source of financing, to acquisition of housing at people's own expense. In 1993, in line with the Presidential Decree "on New Housing Policy", a State programme to reform the housing sector and its finance systems defined the new role of the State in the housing sector. The programme envisaged reducing the State's role in this sector to indirect management through development of a system of fiscal and economic instruments, and establishment of basic housing market institutions and their legislative regulation.

Mortgage lending was first introduced in 1995 but the lending conditions were not favourable to the public. From 1995-2000, the Government, together with the National Bank of the Republic of Kazakhstan (hereinafter, NBRK), has worked on forming the necessary legislative base and infrastructure for mortgage lending. In 2000, the Law “on Housing Constructions Savings” was adopted and the joint-stock company Kazakhstan Mortgage Company (hereinafter, KMC) was founded. The KMC was tasked to refinance mortgage loans issued by banks to increase affordability of housing for the population. The KMC is the primary implementing institution of public housing programmes.

In 2001, the mortgage market started to develop although mortgage lending was still not affordable to the majority of households. The Government developed a State programme for 2005-2007, which aimed to construct affordable houses and, subsequently, sell them to people belonging to low income and socially protected groups at preferential mortgage rates. This has resulted in a high level of activity in the construction sector.

The profound effect of the global crisis on the mortgage market put a stop to a large number of construction projects. In order to stabilize it and help those citizens who invested in the frozen construction projects, the Government invested a significant amount of financial resources to facilitate the completion of the projects, refinanced foreign currency mortgage borrowings through second-tier banks, and adopted some measures to ensure social and economic stability, including a devaluation of its currency. The mortgage market slowly recovered during 2011-2014, along with the housing construction market. Kazakhstan experienced again a financial crisis at the end of 2014, and a more serious devaluation of the national currency took place. The latest crisis has caused a significant reduction in demand in the real estate market and sharp decline in the volume of mortgage lending and financing of housing construction.

Access to housing finance

The Government has been implementing various mechanisms to increase the availability of housing finance and improve lending conditions. A large amount of the State budget is invested in the housing sector but its share in the total funding is less than 10 per cent. The Government has been implementing different State programmes to ensure access to affordable housing. Despite the achievements of these State housing programmes, housing is still inaccessible for most households. According to Ministry of National Economy, around 71.4 per cent of the economically active population could not afford to buy housing on market terms. At the same time, the number of people on housing waiting lists continues to grow.

Currently, long-term investment in the economy to develop housing finance does not exist. Foreign and private investments are on a short-term basis. There is also a shortage of long-term liquidity sources in the national currency. Credit institutions remain the main channel of stimulating financial resources for the economy. At the same time, 68 per cent of the banking sector's funding base comes from deposits, of which about 60 per cent is in foreign currency. The securities market of the country also doesn't serve as a channel of attraction of long-term debt financing and the domestic securities market and institutional investors also needs development. In particular, the market of mortgage-backed securities is not developed due to lack of investors in long-term assets.

According to Doing Business 2017, Kazakhstan was in a good position on the ease of doing business at 35th place. On the indicator "Dealing with Construction Permits", it ranked 22nd and is one of the top-three performers among the former Soviet countries (Estonia and Lithuania ranked 9th and 16th, respectively). However, in terms of the indicator "Getting electricity", the country occupied the 75th place, suggesting a potential need to increase the attractiveness of the electric utility industry for domestic and foreign investors.

The housing construction sector in Kazakhstan is characterized by low competition, high administrative barriers, high risks and low transparency of lending, and dependence on direct investment of the population.

State Housing programmes are mainly focused on increasing housing affordability in urban areas. The new housing programme “Nurly Zher” will shift financing of housing construction from budgetary to extra-budgetary.

The government recognizes the micro-finance industry as an important element of development. Micro-finance organizations are now under the control of the NBRK and, therefore, are required to register with them. Currently, microfinance is used mainly for lending to business activities in private farming and housing renovations for energy efficiency improvement. However, the loan amount that micro-finance organizations could provide is limited.

Policy recommendations:

- The Government should develop a comprehensive policy framework for housing which will also allow establish more effective long term management of the housing finance sector and housing utilities services;
- The Government should ensure a stable inflow of external long-term investment in the economy to develop housing finance. The Government needs to provide incentives to local private companies involved in the implementation of large-scale long term projects in the housing sector. In order to increase investment attractiveness, the Government should take steps to improve the position of the country in various investment ratings and in particular, in the “Doing Business” ranking;
- It is important to ensure a provision for long-term funding for mortgage lending in conjunction with the implementation of risk mitigation measures. This will contribute to reduction in mortgage rates, which will increase the affordability of mortgages for the population. Good performance ratings of Kazakhstan’s stock market in major international rating agencies also helps to attract foreign investors.

Urban development

Kazakhstan has experienced population decline after its independence, especially in the urban areas. However, since 2001, urban population has been growing. Economic growth in big cities and regional centres has been attracting people from the rural areas and small and medium-sized cities seeking better job opportunities and, therefore, better income. This has caused the population of cities like Almaty, Shymkent and Astana to grow rapidly and, in turn, the formation of urban agglomerations. In 2016, Kazakhstan’s urbanization level has reached 57 per cent although the process is still considered slow. Kazakhstan aims to achieve an urbanization level of 70 per cent and to become one of the 30 most developed countries by 2050.

Cities are drivers of economic growth in Kazakhstan, highlighting the need for more efficient and sustainable urban development policies in the urbanization process.

Policy recommendations:

- The government should address the challenges of urbanization like housing affordability, poor utilities infrastructure and urban sprawl, among others, in line with key policy documents such as the New urban Agenda, Sustainable Development Goals (hereinafter, SDGs) and the Geneva UN Charter for Sustainable Housing.
- According to an urban policy review published by the Organization for Economic Co-operation and Development, Kazakhstan needs to invest in the quality of its urbanization if it is to achieve the development objectives in its “Kazakhstan 2050” strategy.

Fostering innovation for sustainable development: Smart and Sustainable City

With global urban population forecasted to reach five billion by 2030, the need for smart and sustainable urban conglomerates has become more urgent. Making cities sustainable is a target of SDG 11 and SDG 9 calls for fostering innovation. Seeking to promote smart and sustainable cities comes with challenges. For countries with economies in transition, ECE research on innovation policies has identified barriers such as low level of entrepreneurship, insufficient access to stable sources of funding, cutting-edge technologies and knowledge, and human capital deficits. The absence of universally agreed standards and indicators that could be used to measure smart sustainability is another challenge. Together with the International Telecommunications Union (ITU), the ECE has initiated activities to help address the challenges of measuring smart sustainability through the “ECE-ITU Smart Sustainable Cities Indicators”.¹

As part of the smart cities agenda in Kazakhstan, the brand “Smart Astana” was advertised to represent the capital’s smart and sustainable development aspirations. This policy initiative became official with the adoption

¹ The “ECE-ITU Smart Sustainable Cities Indicators” was endorsed, forming the basis for the ITU-T (ITU - Telecommunication Standardization Sector) recommendations on key performance indicators (KPIs) on smart sustainable cities to address the achievement of SDG 11.

in 2013 of a road map on the need to develop an action plan for including Astana in the list of 50 smart cities of the world. The Astana Smart City initiative was inspired by the success in this area of other medium-size cities like Amsterdam, Boston and Oulu.

The development process of Smart Astana has three phases: 1) improving city management; 2) adopting new management technologies; and 3) involving the active participation of citizens.

Another important objective of the initiative is to assist Astana authorities in the introduction of innovations that could create spillovers all over Kazakhstan and contribute to economic diversification. The Astana Innovations JSC, fully owned by Astana municipality (akimat), is a key actor in the implementation of the Astana Smart City initiative and plays a significant role in coordinating all state mechanisms of innovations support. The Government Fund for the Development of Entrepreneurship or “Damu” gives support to all kinds of research and development activities on innovation, including marketing.

International cooperation, foreign direct investment and public-private partnership (hereinafter, PPP) play a significant and crucial role on innovative activities in Astana. In particular, authorities highlight PPPs as mechanisms to make up for possible shortfalls in public spending. In support of PPPs, the Government has enacted a law in 2015 containing new concepts and mechanisms for various PPP implementation schemes, which were based on international experiences.

Policy recommendations:

- engage national partners in the design of municipal innovation strategies;
- Astana city authorities need to strengthen cooperation with the national government and relevant international partners in order to support and nurture effective bottom-up initiatives for innovation. The authorities of Astana Innovations should monitor that the rolling out of the 3 phases of Astana concept is in line with national priorities and reflected in relevant legal frameworks;
- engage international partners in the measuring and monitoring of “smart” and “sustainable” innovations;
- consider joining international initiatives for the measurement of innovation at the city level, including the ECE “United Smart Cities” project, and adopting the Key Performance Indicators (KPIs) on smart sustainable cities jointly elaborated by ECE and ITU;
- seek engagement in global Smart City networks and other international initiatives;
- taking part of initiatives by global expert networks -such as Metrolab, Cities Alliance, among others- could help enhance the knowledge-base of academia, businesses and civil society organizations and could be an important source of knowledge transfer as well as additional financing;
- enhance research and development (hereinafter, R&D) capacities on green and other sustainable development technologies;
- to ensure the long term sustainability of government spending on research and technological development, the local authorities should target R&D spending on social and eco-innovation projects. The undertaking of the “Expo 2017 on the future of energy” should encourage longer term commitments. In particular, research on energy efficient technologies should be encouraged by competitive allocation of resources;
- continue to engage with public and private international partners on R&D activities;
- existing cooperation initiatives between national and foreign partners on PPPs and on R&D activities could serve as pillars for further initiatives;
- work to enhance public participation in city planning and development;
- as smart city initiatives increase, the need to involve urban residents in the design of policy priority will also be a necessity. The Akimat authorities should prioritise those innovations that will allow more active involvement in planning and implementation by inhabitants.

Geography

Kazakhstan is the largest landlocked country in the world. It is bordered by the Russian Federation to the north, China to the east, and Kyrgyzstan, Uzbekistan, and Turkmenistan to the south. Its territory extends almost 3,000 kilometres (km) from the Volga River and the Caspian Sea in the west to the Altai Mountains in the east, and 1,700 km from the South Ural Mountains and West Siberian Plains in the north to the Kyzylkum Desert and Tian Shan Mountains in the south.

The total area of Kazakhstan is 2,724.9 thousand square km (km²)², making it the world's ninth largest country. Its size is equivalent to that of Western Europe. 99.1 per cent of the total area is land, of which 80.4 per cent is agricultural and 1.2 per cent is forest area³. The terrain of the country consists mostly of deserts, steppes and hilly upland areas.

Short history

Nomadic tribes have inhabited the territory of Kazakhstan until the 14th century when Genghis Khan occupied the country as a part of the Mongolian Empire. During the next centuries, the power has returned to the nomads. Kazakhs emerged as a distinct group by the 15th century when Kazakh Khanate was established. Kazakh Khanate's territorial division into three regions (Senior, Middle and Younger regions or "juzes") was retained from Mongolians. To protect itself from the invasion of Jungars, the Khanate joined the Russian Empire. In 1730, the Younger Juz became part of the Russian Empire; the Senior and Middle Juz joined the Russian Empire by the middle of the 19th century.

Following the 1917 October Revolution and civil war, the territory of Kazakhstan was reorganized several times. In 1936, Kazakh Soviet Socialist Republic was established as a part of the Union of Soviet Socialist Republics.

Kazakhstan declared its independence after the collapse of the Soviet Union on 16 December 1991. The capital of Kazakhstan was moved from Almaty to Astana (then called Akmola) on 20 October 1997.

Nature and climate

Kazakhstan's climate is sharply continental with hot summers and extreme winters, especially in the plains and valleys. Temperatures fluctuate widely, with great variations between regions. Average January temperatures in northern and central regions range from -19° to -16° C and -5° to -1.4° C in the south. Average July temperatures in the north reach 20° C and rise to 29° C in the south. Annual precipitation levels are generally low, less than 100 millimetres (mm) in the deserts to between 250 mm and 350 mm in the steppes.

² [Republic](http://www.stat.gov.kz/faces/homePage?_afzCtrl-state=11sx25vstv_21&_afzLoop=16875190870737248) of Kazakhstan, Committee on Statistics of the Ministry of National Economy, *Kazakhstan in Figures 2016*. Available from http://www.stat.gov.kz/faces/homePage?_afzCtrl-state=11sx25vstv_21&_afzLoop=16875190870737248 (accessed 21 February 2017).

³ Food and Agriculture Organization, FAOSTAT. Available from <http://www.fao.org/faostat/en/#data/RL> (accessed 23 February 2017).

Map 1
Map of Kazakhstan



Source: United Nations Cartographic Section. Available from <http://www.un.org/Depts/Cartographic/map/profile/kazakhst.pdf>

Social and economic development

According to the World Bank income classification, Kazakhstan has transitioned from lower middle income to upper middle-income status in 2006. Its GDP in 2015 was USD 184.4 billion, ranking 50th in the world⁴. In the same year, GDP per capita was USD 25,045.

Figure I
Trend in GDP growth, 1991-2015



Source: World Development Indicators. Adapted from
<http://databank.worldbank.org/data/reports.aspx?source=2&country=KAZ#>

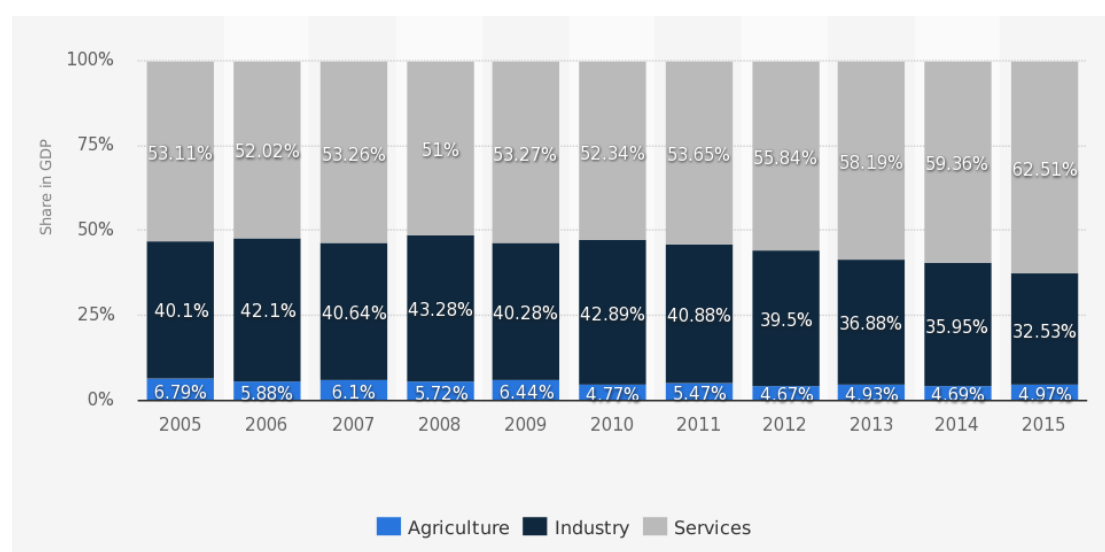
As a part of the Soviet Union's centrally planned economy, Kazakhstan specialized on the production of wheat, metallurgy and mineral extraction. After collapse of the Soviet Union and following its economic disintegration, the country faced a sharp decline in production, growth of inflation and budget imbalance. The economy fell drastically and the country lost 36 per cent of its GDP in the first half of the 1990s.

The economy started recovering in the second half of the 1990s, triggered by high international oil prices and good harvests before being hit by the 1998 Russian financial crisis. Starting from 2000 it grew again underpinned by export growth and currency devaluation. There has been a sharp expansion in commodities revenue, in particular from oil export. GDP growth figures were between 8.9 per cent and 13.5 per cent from 2000 to 2007. Foreign investments have also bolstered Kazakhstan's export volume growth through investment into the oil sector's technologies and production capacities.

From 2011, the country has experienced another slowdown in economic growth due to lower global commodity prices and economic downturn of its Eurasian Economic Union partner, Russia. Kazakhstan devalued its currency, the Kazakhstani tenge (KZT), by 19 per cent in February 2014 in response to the round of regional currency devaluations and a worsening balance of payments due to rising imports. In November 2014, the government announced a package of incentives to counter economic challenges.

⁴ World Bank, GDP, <http://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=KZ>

Figure II
Share of economic sectors in GDP, 2005-2015

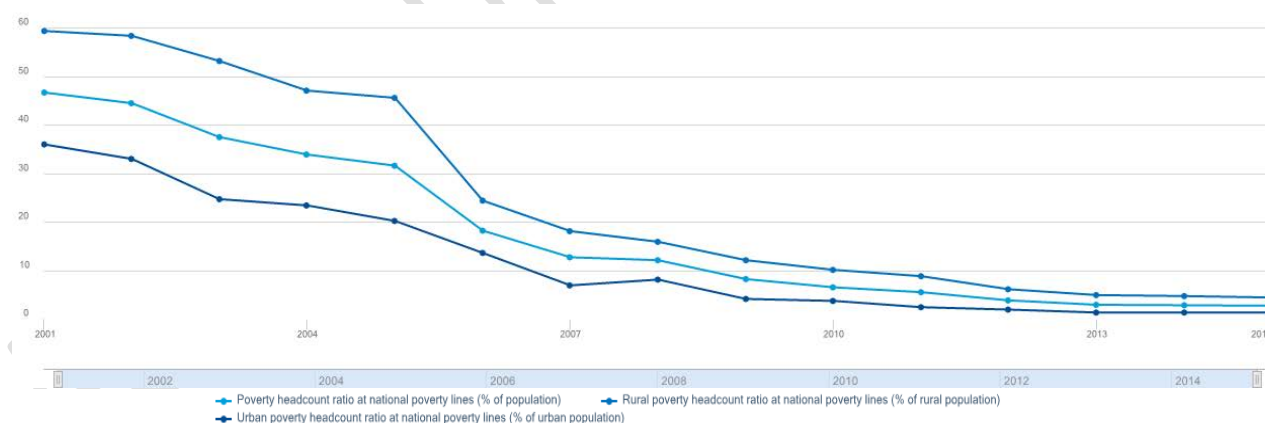


Source: World Bank

Visualisation: Statista, <https://www.statista.com/statistics/436156/share-of-economic-sectors-in-the-gdp-in-kazakhstan/>

In 2015, Kazakhstan has undertaken wide-ranging reforms in an attempt to modernize its economy and improve its institutions. Thanks to these measures, Kazakhstan experienced economic growth and increase of GDP per capita: the percentage of the population living below the national poverty line has declined from 46.7 per cent in 2001 to 2.7 per cent in 2015 (Figure III). However, the gap between urban and rural poverty is still high: the urban poverty rate is 1.3 per cent while the rural poverty rate is 4.4 per cent.

Figure III
Poverty headcount ratio at national poverty rates



Source: World Bank. Adapted from

<http://databank.worldbank.org/data/reports.aspx?source=2&country=KAZ&l=en#>

In spite of progress in institutional reforms and legislation in the 2000s, bureaucracy and arbitrary law enforcement, especially at the regional and municipal levels, are still seen as main concerns by potential

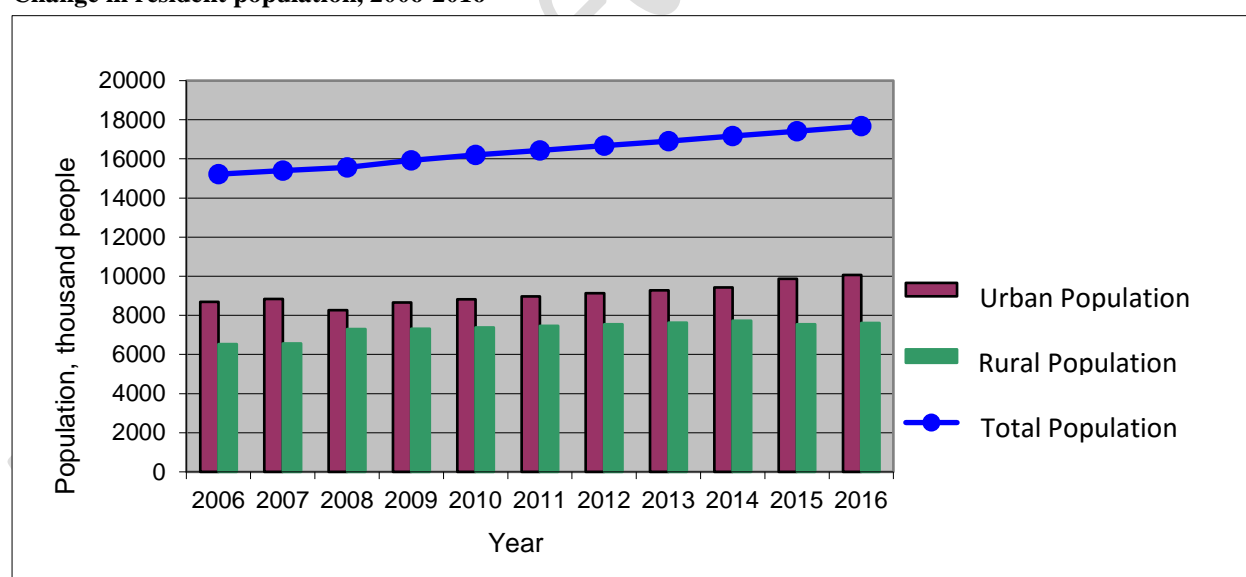
investors⁵. Kazakhstan is also the second largest post-Soviet oil-producer and its economy remains heavily dependent on oil and extractive industries, which makes it vulnerable to changes in oil and commodities prices.

Population, demography, and urbanization patterns

According to the State Committee on Statistics of Kazakhstan, the population of the country is 17.7 million⁶ as of 2016. Given Kazakhstan's large land area, its population density is among the lowest, at 6.5 persons per km.²⁷

The population increased by 8 per cent in the last 25 years compared to 16.4 million people in 1991⁸. However, Kazakhstan's external migration balance has become positive only since 2004 for several reasons. First, Kazakhstan faced massive emigration following its independence from 1991 and until 2004. Population loss amounted to 1.49 million people⁹. The main reason behind it was the freedom of movement introduced after the collapse of the Soviet Union which allowed people who initially moved to Kazakhstan from Russia and other former Soviet republics to return to their homelands or to find better economic prospects. Secondly, since 2004, however, the country experienced immigration: the population has been on the rise due to the influx of ethnic Kazakhs and a growing number of labor immigrants from the neighboring Central Asian countries. Finally, there is also a trend of migration of the rural population to urban areas. The population flows are directed mostly from rural to urban areas and from small and medium size cities to urban centres. The two big cities Almaty and Astana continue to attract most of the internal migrants. While, the total population of Kazakhstan grew from 2006 to 2016 by 16.1 per cent from; population in urban areas increased by 15.8 per cent and by 16.6 per cent in rural areas (Figure IV). Today urban population comprises 57 per cent of the total population while rural population makes up 43 per cent.

Figure IV
Change in resident population, 2006-2016



Source: Statistical compendiums *Regions of Kazakhstan in 2008*, *Regions of Kazakhstan in 2012*, *Regions of Kazakhstan in 2014*, *Kazakhstan in Figures* (2016)

The average population density of Kazakhstan is low, in 2016 it was 6.5 persons per km². The most densely populated region is the South Kazakhstan Region (24.2 persons/km²). Given that Almaty and Astana have

⁵ <https://www.cia.gov/library/publications/the-world-factbook/geos/kz.html>

⁶ http://stat.gov.kz/faces/homePage/homeDinamika.pokazateli?_afzLoop=16634742910880501#%40%3F_afzLoop%3D16634742910880501%26_adf.ctrl-state%3Ddgmzw4esv_115

⁷ United Nations, Department of Economic and Social Affairs, Population Division (2015). *World Population Prospects*, <https://esa.un.org/unpd/wpp/DataQuery/>

⁸ http://stat.gov.kz/faces/homePage/homeDinamika.pokazateli?_afzLoop=16634742910880501#%40%3F_afzLoop%3D16634742910880501%26_adf.ctrl-state%3Ddgmzw4esv_115

⁹ http://stat.gov.kz/faces/homePage/homeDinamika.pokazateli?_afzLoop=16634742910880501#%40%3F_afzLoop%3D16634742910880501%26_adf.ctrl-state%3Ddgmzw4esv_115

approximately equal urban areas (0.7 thousand km²), the population density of Almaty at 2,433.5 persons/km² is twice as high as that of the capital city (1,246.6 persons/km²)¹⁰. This is explained first of all by the physical geography of Almaty being surrounded by the mountains and therefore limited in expanding its territory.

Thanks to robust economic growth, unemployment rate has been steadily decreasing from 7.5 per cent in 1994 to 4.9 percent in 2016¹¹. Unlike other Central Asian states, Kazakhstan does not have any significant dependence on personal remittances from other countries. Even though the amount of personal remittances transferred to Kazakhstan in 2015 (USD 194.5 million) has almost doubled from its 1995 level (USD 116.1 million), its share in the country's GDP of 0.1 per cent is the lowest in the region¹².

In 2016, there were 87 cities in Kazakhstan, including 2 cities of republican significance (Astana and Almaty) and 38 cities of regional subordination. There were 30 settlements and 6,693 rural human settlements (auly) ¹³. More than half of rural human settlements are small, with only 8.9 per cent of the rural population living in these settlements.¹⁴

The largest city of Kazakhstan, Almaty, had a population of 1,703.5 thousand in 2016 while its capital, Astana, had 872.6 thousand.

According to the 2020 Programme of Regional Development, the Government promotes regional development through its support to the development of urban agglomerations with central cities of Astana, Almaty, Shymkent, Aktobe, and in the longer term, with Ust-Kamenogorsk. The emerging urban agglomerations are home to a third of the population.

Government and administrative divisions

According to the Constitution adopted in 1995, the Republic of Kazakhstan is a unitary state with a presidential form of government and a bicameral legislature. The executive branch is represented by the President serving as the head of the State and the Prime Minister leading the Government. The legislative branch of the government consists of a Senate and an Assembly (Mazhilis). Working jointly, the two chambers have the authority to amend the constitution, approve the budget, confirm presidential appointees, ratify treaties, declare war, and delegate legislative authority to the President for up to one year. Each chamber also has exclusive powers. The President is elected by simple majority popular vote for a 5-year term (eligible for a second term). The Prime Minister and Deputy Prime Minister are appointed by the President, with the approval of the Mazhilis.

Kazakhstan consists of 14 oblasts (regions) and 2 municipal districts (Almaty and Astana), which are administratively independent cities and with a status comparable to an oblast. Each oblast is headed by an akim (governor), appointed by the President. Municipal akims (mayors) are appointed by oblast akims. Since December 1997, the capital of Kazakhstan has been Astana. From 1929 to 1997 the capital of Kazakhstan was the city of Almaty, founded in 1854.

The judicial system has three tiers: the local courts, the regional (oblast) courts and a national 44-member Supreme Court. In addition to these, the judicial system includes the seven-member Constitutional Council, specialized courts for arbitration and a military court system.

¹⁰ Calculated based on data from *Kazakhstan in Figures*, Statistical Compendium, the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan, Astana, 2016

¹¹ Available from http://stat.gov.kz/faces/homePage/homeDinamika.pokazateli?_afzLoop=16646521298659066#%40%3F_afzLoop%3D16646521298659066%26_adf.ctrl-state%3D5bxhir7dp_63

¹² World Bank, Personal remittances, received, <http://data.worldbank.org/indicator/BX.TRF.PWKR.CD.DT?locations=KZ>

¹³ *Kazakhstan in Figures*, Statistical Compendium, the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan, Astana, 2016

¹⁴ 2020 Program of Regional Development approved by the Government Decree No. 728 of 28 June 2014.

Chapter 1

Legislative and Institutional Framework of the Housing Sector

A. Legislation

The *Law No. 94-I of 16 April 1997 “on Housing Relations”* is the main regulatory instrument in the field of housing in Kazakhstan. It regulates matters related to the:

- conditions for the creation and termination of property rights to housing and the exercise of right to use homes;
- requirements to housing conditions;
- preservation and maintenance of the housing stock;
- establishment and termination of condominiums as a form of immovable property ownership;
- establishment of condominium management methods, as well as those related to the establishment and activities of cooperatives of homeowners (apartments owners) and housing cooperatives (established for construction of cooperative housing);
- powers of state housing agencies, including control over the observance of citizens' housing rights and use;
- regulatory aspects of housing relations with the participation of “employees of special government agencies” (includes provision of housing subsidies to some categories of government officials, such as those in military service and similar).

The *Civil Code* (1994)¹⁵ sets out the basis for property rights, including:

- the right to an apartment of members of a housing co-operative who fully pay their share contribution (Article 235);
- the right to a newly created immovable asset (Article 236);
- the right to own an unauthorized residential construction (Article 244).

The Civil Code also provides the rules regarding termination of property right to immovable property resulting from a decision of a government body to reserve the land upon which a house or any other property of the owner is located (Article 255), and other issues relevant to the housing sector.

The *Land Code* (2003)¹⁶ regulates matters pertaining to land. It defines

- property rights, land management rights and other land rights;
- land categories;
- procedure of land development, state land cadastre maintenance and land monitoring.

The Land Code stipulates that land in Kazakhstan is a public domain. Private ownership is possible based on the terms, conditions and limits established by Article 3 of the Land Code. Private ownership of land granted to citizens and non-state entities includes land parcels for construction of individual housing, and construction of residential buildings and their complexes, including land intended for the maintenance of buildings (Article 23). The Land Code determines the procedures for the provision of land parcel for construction, including individual housing construction and construction within urban areas.

The *Law No. 242 of 16 July 2001 “on Architectural, Urban planning and Construction Activity”* has the jurisdiction over matters arising between state bodies, individuals and legal entities in the process of implementation of architectural, town-planning and construction activities in the Republic of Kazakhstan. It is

¹⁵ Enforced by Decree of the Supreme Council of the Republic of Kazakhstan No. 269-XII of 27 December 1994.

¹⁶ Code of the Republic of Kazakhstan No. 442 of 20 June 2003.

directed at creating proper human environment, and sustainable development of inhabited localities and inter-settlement territories. The law sets out safety requirements for and outlines the process of control and supervision of architectural, urban planning and construction activities; and establishes a government system of architectural, urban planning and construction normative documents.

The *Law No. 541-IV of 13 January 2012 “on Energy Saving and Energy Efficiency”* governs the area of energy saving and energy efficiency. It defines the legal, economic and organizational frameworks of energy saving and energy efficiency activities for individuals and legal entities, as well as the competence of state bodies in this field. The law stipulates that buildings under design and construction, as well as reconstruction and refurbishment, should comply with the energy saving and energy efficiency requirements of the legislation:

- listings containing description of specific value of loss of energy resources in buildings and construction;
- requirements to architectural and space planning, and technological, constructional and engineering solutions for buildings;
- requirements to engineering systems and technological equipment used in buildings;
- requirements to technologies and materials that enable exclusion of irrational (unreasonable) losses of energy resources used in construction (reconstruction, refurbishment) of buildings (Article 11).

In line with the objective to develop construction objects, the law requires a constructed object that was put into operation to state its energy efficiency class in the technical certificate of constructed (reconstructed, repaired) object. The energy efficiency class of existing buildings is determined by an energy audit. The law in its Article 17 envisages the possibility of providing government support to the owners of residential houses (residential buildings) and individual homes (apartments) to pay for the activities promoting energy saving and improving energy efficiency in housing to ensure the housing conditions are in line with requirements of the Law on Housing Relations.

The *Law No. 310 of 26 July 2007 “on State Registration of Rights to Immovable Property”* determines the purposes, tasks and legal basis of state registration of rights to immovable property. This Law defines:

- a list of immovable property rights, which are subject to state registration in the legal cadastre (Unified State Register of registered rights to immovable property) (Article 4);
- the encumbrance of immovable property rights (Article 5);
- the state registration of an object of condominium (Article 39);
- the rights to apartments and other premises included in the object of condominium (Article 40); and
- the necessary condition for the state registration of rights to immovable property, which is the State technical inspection of buildings, along with the assignment of cadastral numbers, and preparation of technical certificates (Article 18).

B. Institutional framework of the housing sector

The *Government of the Republic of Kazakhstan* develops the main areas of the state housing policies and ensures their implementation. It establishes the rules of housing assistance provision and the procedures of public housing stock privatization; and develops the procedures of registration of citizens who need housing to obtain housing from the public housing stock or otherwise from regional and district authorities (akimats) who rent private housing and provide it to citizens in need of housing.

Responsibilities over the housing sector in Kazakhstan are shared by the national and regional/district authorities¹⁷ since 2014 when some of the central government responsibilities over the housing sector were transferred to regional and district authorities. This was done in accordance with the Law No. 239-V of 26 September 2014 “on Amendments and Additions to Some Legislative Acts of the Republic of Kazakhstan on the Questions of Delineation of Powers between Various Levels of Public Administration”.

¹⁷ These responsibilities are on regions, cities of republican significance, and the capital – i.e., Astana and Almaty have the same level of responsibilities as the regional authorities. Please see more information the introductory chapter of the publication

At the national government level until May 2017 the responsibilities over the management of the housing sector was on the the *Ministry of National Economy of the Republic of Kazakhstan* (hereinafter, MoNE) and specifically on its Committee on Construction, Housing and Communal Services (hereinafter, CCHCS). MoNE was the main public executive body responsible for managing, inter-alia, regional and local government development, development and support of private entrepreneurship, self-regulation, architecture, urban planning and construction activities, housing and communal services, and public regulation of water supply and waste water management, electricity, heat and gas supply within the boundaries settlements. The CCHCS:

- implemented government housing policies, and coordinated and supervised related activities of regional and district authorities;
- developed and approved regulatory legal acts, norms and specifications within its frame of reference;
- identifies a single procedure of government registration of housing stock, adopts technical housing specifications, and monitors the condition of housing stock;
- developed and approved methodologies of proportional allocation of housing from the public housing stock and housing rented in the private housing stock by local authorities, and methodology of calculation of payment for the use of housing from the public housing stock; and
- developed rules of and monitored housing assistance provision.

With respect to condominium management, the Committee

- approved the rules of maintenance of common property of a condominium object;
- developed and approved methodology of calculation of cost estimates for the maintenance of common property of a condominium object, and standard procedures on housing inspection;
- developed and approved standard forms for minutes of the meeting of homeowners (apartment owners), condominium object management agreements and condominium object management reports; standard cooperation agreements between management authorities of condominium objects and market entities providing utility services to end consumers.

According to the Decision of the Government of Republic of Kazakhstan “on Some Issues of the Ministries of Investment and Development and of National Economy of Kazakhstan” of 15 February 2017, the CCHCS was moved, together with its existing responsibilities, in May 2017 under the responsibility of the Ministry of Investments and Development of the Republic of Kazakhstan.

The Committee has four state enterprises under its management, which implement the government housing policy: the State Enterprise for Evaluation of Projects (GosEkspertisa), the State Enterprise on Urban Planning and Cadastre, Research Institute for Construction and Architecture, the Joint Stock Company (JSC) "Kazakhstan Center for Modernization and Development of Housing and Communal Services", and Foundation for the Development of the Housing Sector.

The JSC "Kazakhstan Centre for Modernization and Development of Housing and Communal Services" was established by a decision of the Government of the Republic of Kazakhstan in 2009 with one hundred percent state participation in its authorized capital. The sole shareholder of this joint stock company is the Committee on Housing and Communal Services. Its main activity is to contribute to the dynamic development of housing and communal services by improving the institutional framework of the industry. It is part of the government innovative development institutions of Kazakhstan. The main activities of the Centre are as follows:

- to increase the investment attractiveness of housing and communal services in order to modernize and develop them;
- to conduct analytical and scientific research, and introduce innovative technologies in the sphere of housing and communal services;
- to identify an optimal model of modernization and development of housing and communal services;
- to implement measures ensuring vocational training in housing and communal services; and
- to introduce modern methods of management of housing and communal services.

The *Ministry of Healthcare and Social Development* is another government body engaged in the management of the housing sector. The Ministry is authorized to implement the goals and objectives of the social protection system, including the allocation of housing assistance to low-income families. The Ministry

- establishes the procedures for calculation of subsistence level (in cooperation with a competent authority in the field of government statistics);
- determines the poverty threshold;
- develops a social protection action plan;
- makes statistical observations in the sphere of social protection of the population; and
- develops and approves regulations on information systems maintenance, and organize access to these information systems and databases in the sphere of social security of citizens.

Legislative branches of the regional and district authorities (maslikhats) have responsibilities to approve regional/district development plans, respective economic and social development programmes, local budgets and their execution reviews, social assistance rules (including housing assistance), and establish and identify a list of individual categories of citizens in need. Further, they approve rules concerning: preparation for the heating season; handling and the protection of green space; and landscaping for cities and settlements developed on the basis of standards approved by an authorized architecture, urban planning and construction agency.

The powers of the maslikhatsof regions, cities of republican significance, and the capital also include:

- submission of approvals of schemes of district planning of a region;
- approval of master plans of the development of regional centres, cities of republican significance and the capital city;
- adoption of district plans of administrative areas, cities of regional (except regional centres) and district significance.

The powers of local (of smaller cities and villages) maslikhats include the approval of master plans of the development of cities, towns and villages.

Executive branches (akimats) of regions, cities of republican significance, capital, districts, as well as cities of regional significance have responsibilities to provide land parcels for private ownership and for land use, including for housing. They keep a record of citizens in need of housing, and transfer ownership of housing from the municipal housing stock to the citizens of the country under the conditions envisaged by the law and according to the procedures determined by the Government of the Republic of Kazakhstan. LEAs ensure government control of housing stock management; organize housing inspections to control the activities of condominium management authorities related to the maintenance and proper use of the housing stock; and provide housing assistance to low-income citizens from budgetary funds;

In addition to the ministries, national, regional and local authorities, a number of state enterprises are involved in the management of the housing sector in Kazakhstan.

The non-profit JSC *State Corporation "Government for Citizens"* ¹⁸ (hereinafter, "Government for Citizens") has one hundred percent government participation in its authorized capital and provides public services to the citizens and legal entities, including public e-services, in accordance with the legislation of the Republic of Kazakhstan. It applies the single-window principle in accepting and processing applications for services. The "Government for Citizens" was established by merging and transforming the following:

1. Republican State Enterprise (RSE) "Citizen Service Center" of the Liaison Committee on Informatization and Information of the Ministry for Investments and Development
2. RSE "Real Estate Center" of the Ministry of Justice
3. RSE "Scientific and Production Center of Land Cadastre" of the Construction, Housing and Communal Services and Land Management Committee of the MoNE
4. Republican State-Owned Public Enterprise "State Center for Pension Payments" of the Ministry of Healthcare and Social Development.

¹⁸ Established in line with the Decree of the Government of the Republic of Kazakhstan No. 39 of 29 January 2016 (took effect on 1 March 2016). The rights of ownership and use of the state-owned share package of the JSC State Corporation "Government for Citizens" belong to the Ministry of Information and Communication.

The “Government for Citizens” makes technical inspection of buildings, constructions and/or their components, maintains the public land cadastre, and registers pledges of movable property that is not subject to mandatory public registration.

The JSC “*Baiterek National Management Holding*” (hereinafter, Baiterek Holding) was established in 2013 in accordance with the Decree of the President of the Republic of Kazakhstan No. 571 of 22 May 2013 “on Some Measures to Optimize the Management System of Development Institutions, Financial Organizations, and Development of the National Economy”.¹⁹ The Government is its sole shareholder. The main objective of Baiterek Holding is to manage the participation shares (owned and in trust) of national development institutions, national companies and other legal entities. The structure of Baiterek includes 11 organizations, including financial institutions and national companies engaged in projects related to immovable property, housing and construction savings, and in the implementation of the government programme “Regional Development Programme 2020” — the JSC “Housing Construction Savings Bank of Kazakhstan”, JSC “Kazakhstan Mortgage Company”, JSC “Baiterek Development”, and JSC “Mortgage Loans Guarantee Fund”. The Baiterek Holding is an operator that finances housing construction for citizens who are on the housing waiting lists of LEAs and depositors of the Housing Construction Savings Bank.

The JSC “*Housing Construction Savings Bank of Kazakhstan*” is the only bank in Kazakhstan that implements the system of housing construction savings. The system is intended to improve the housing conditions of people by attracting depositors' money to housing construction deposits and providing depositors with housing loans.

The JSC Mortgage Organization “*Kazakhstan Mortgage Company*” (hereinafter, KMC) was established by the National Bank of the Republic of Kazakhstan in 2000 as a financial operator of the secondary mortgage market. Currently, the main activities of the KMC are as follows: to refinance banks by acquiring rights to claim long-term mortgages granted by partner banks, as well as to raise long-term funds for mortgage lending, including by issuing its own mortgage-backed securities. The KMC is one of the operators of government programmes on construction of affordable rental housing.

The JSC “*Baiterek Development*” (hereinafter, Baiterek Development) is an investment company with the Baiterek Holding as the sole shareholder. The Baiterek Development implements investment projects in the non-primary sector of the economy of Kazakhstan, that is, in the sphere of immovable property, construction materials and manufacturing industry. It returns funds allocated for anti-crisis measures, the completion of financing of construction of toxic shared construction projects. The Baiterek Development takes part in the implementation of the Nurlı Zhol State Programme of Infrastructure Development for 2015–2019 (ensures housing infrastructure development) and the Regional Development Programme 2020, which ensures the construction of rental and loan housing.

The *Housing Construction Guarantee Fund* was created at the end of 2016 by the JSC “*Kazakhstan Mortgage Loans Guarantee Fund*”, which was established in 2003 to increase the availability of mortgage loans to the citizens. The established system of mortgage loan guarantees made the loans available to the citizens, especially to young families who could not afford the high initial payment, as well as to those with low but steady incomes. In 2013, the provision of guarantees for mortgage loans was suspended, and currently, only previously issued guarantees are serviced. The main activity of the Housing Construction Guarantee Fund is to guarantee the completion of a residential housing construction should the construction company fail to fulfill its obligations to the shareholders.

State institutions “*Housing Inspection*” are non-commercial legal entities established by LEAs of a city of republican significance, the capital, a district, a city of regional significance if there are condominium objects in their respective administrative areas. Housing inspection authorities exercise the functions of state control in the sphere of housing management²⁰ — they control the technical condition of the common property in condominium objects, its timely maintenance and repair; implementation of measures for the preparation of residential houses (residential buildings) for seasonal operation, availability of communal heat, electricity, gas and water meters. The housing inspection authority has the powers to determine a list, periods and priority of certain types of refurbishment of the common property of a condominium object, to approve cost estimates for certain types of

¹⁹ Measures to implement this Decree are in the Regulation of the Government of the Republic of Kazakhstan No. 516 of 25 May 2013.

²⁰ The standard provisions of housing inspection authorities were approved by the Order of the Minister of National Economy of the Republic of Kazakhstan No. 241 of 20 March 2015.

refurbishment of the common property of a condominium object submitted by the condominium management authority, if such refurbishment is partly financed from the housing assistance provided from the local budget. The housing inspection authority takes part in the preparation of normative and methodical documents for the quality control of the maintenance of residential houses (residential buildings) and adjacent areas, and the provision of public services, it also provides advice to citizens and organizations on the management and maintenance of residential houses (residential buildings) and adjacent areas.

Chapter 2

Housing Policies and Programmes

The Constitution of the Republic of Kazakhstan (1995)²¹ stipulates that the country shall create the conditions required to provide housing to its citizens. Various strategic documents declare the provision of housing as the purpose of public housing policies. Housing provision is a national objective and is a priority area of the Forecast Scheme for Spatial-Territorial Development of the Republic of Kazakhstan until 2020²².

Kazakhstan's public housing policies are implemented through government housing programmes. Since 2005, Kazakhstan has adopted seven government housing construction programmes, the most recent of which is the Nurly Zher Housing Construction Programme²³ (hereinafter, "Nurly Zher").

Housing policies in government programmes have changing priorities. For example, the priority of the state programme for 2005–2007²⁴ was to promote housing construction by private developers and increase the availability of mortgage loans for homebuyers. Results of an assessment of the purchasing power of the population in 2011 showed that over 6 million working citizens out of the 8.4 million economically active population could not afford to buy housing on market terms. Based on this assessment, a new housing policy priority emerged and that is to increase the affordability of housing for citizens with average and lower than average income. This will be accomplished through the construction of rental housing and housing for the participants of the housing construction savings system, out of the funds allocated from the republican budget to LEAs, and funds of development institutions established by the government. The priority of the most recent housing Programme "Nurly Zher" is the transition from direct budgetary financing of housing construction to extrabudgetary financing.

State housing programmes to increase housing construction and ensure housing affordability for various categories of citizens with different incomes use different mechanisms to address each their goals:

- to attract private investment in housing construction through provision of affordable bank loans to private developers, and use of public-private partnership tools;
- to ensure citizens' access to loans for the purchase of housing by mitigating mortgage lending conditions (by reducing the amount of the initial payment and loan interest rates, and by increasing the loan period), and to provide subsidized housing loans to participants of the housing construction savings system;
- to support individual housing construction by providing land parcels for individual construction equipped with municipal infrastructure, out of the republican and local budgets, and by developing and providing free standard projects for construction of individual houses;
- to engage development institutions and private developers in the construction of affordable housing provided to citizens on rent-to-own terms;
- to support the construction of municipal housing stock by LEAs in order to provide housing to socially vulnerable groups of citizens by ensuring targeted transfers from the national budget, budget loans, issue of securities by LEAs and their redemption by Government-established development institutions;
- to reduce the cost of construction by 1) providing land parcels for construction, 2) speeding up and simplifying procedures related to obtaining construction permit, 3) providing land parcels for

²¹ Adopted on 30 August 1995 and came into effect on 5 September 1995.

²² Approved by Presidential Decree No. 118 of 21 July 2011.

²³ Approved by Government Decree No. 922 of 31 December 2016.

²⁴ State Programme of Housing Construction Development in the Republic of Kazakhstan for 2005–2007, approved by Presidential Decree No. 1388 of 11 June 2004.

construction, equipped with engineering and municipal infrastructure, and 4) developing industrial housing construction and manufacturing home-produced building materials and equipment.

The government has created a wide range of opportunities for citizens to gain access to housing ownership. The presence of the government in the housing sector is significant (please see more above on the Institutional Structure of the housing sector. The State allocates a significant amount of its national budget to satisfy the housing needs of its citizens.

It should be noted that the government takes extraordinary measures to protect the interests of its citizens during crises. During the financial crisis of 2008–2009 (hereinafter, global financial crisis), which bankrupted many private developers, the Government provided KZT 464.3 billion from the public budget and the National Fund of the Republic of Kazakhstan to complete the construction of 450 residential complexes in order to protect the rights of 62,889 co-investors.

Experience from the implementation of government housing programmes serves as the basis for permanent changes in the legislative and regulatory sectors.

Analysis of government housing programmes

Since 2005, the Republic of Kazakhstan has adopted seven government programmes targeted at housing construction and increase of housing provision.

- The Government Programme of Housing Construction Development in the Republic of Kazakhstan in 2005–2007;
- The Government Programme of Housing Construction in the Republic of Kazakhstan in 2008–2010;
- The Programme of Housing Construction in the Republic of Kazakhstan in 2011–2014;
- The "Affordable Housing — 2020" Programme (the programme was cancelled in 2014 due to the fact that its objectives were included in the new integrated programme — the 2020 Programme of Regional Development);
- The 2020 Programme of Regional Development (the programme was adopted in 2014 and till the end of 2016 it included the objective of "Housing Construction Development" with the priority of government support of affordable housing construction);
- The Nurly Zher Housing Construction Programme (approved on 31 December 2016).

Moreover, the housing was constructed under the Nurly Zhol Government Programme of Infrastructure Development for 2015–2019, which envisaged the allocation of funds from the National Fund of the Republic of Kazakhstan to finance the construction of rental, loan and commercial housing.

Various mechanisms of supporting housing construction and ensuring housing provision for different categories of the population were tested and then developed within the context of government programmes. Government programmes are implemented by LEAs and organizations with participation of the government.

The Nurly Zher Housing Construction Programme

The Nurly Zher Housing Construction Programme was approved by the Resolution of the Government of the Republic of Kazakhstan dated 31 December 2016, No. 922. The purpose of the Programme is to increase housing affordability for the population. The Programme will span a period between 2017 and 2021.

The Nurly Zher Programme combined the objectives related to housing construction, and funds allocated for these purposes earlier under the 2020 Programme of Regional Development and the Nurly Zhol Government Programme of Infrastructure Development in 2015–2019.

When implementing the Nurly Zher Programme it is planned to shift the emphasis from direct budget financing of housing construction to extra-budgetary financing.

It is planned to introduce 52.79 million m² of housing through all sources of financing over the five years of the implementation of the Nurly Zher Programme, including 25.92 million m² of multi-apartment housing, and 26.87 million m² of individual housing. The accomplishment of the planned indicators will result in the increase in the area of the housing stock by more than 15 per cent, compared to what Kazakhstan had at the beginning of 2016.

The Nurly Zher Programme is planning to address the following seven objectives:

Objective 1: To increase the affordability of mortgage lending. Due to the fact that between 2013 and 2015 the mortgage market experiences a decline in activity because of high interest rates (15-21 per cent per annum), limited availability of mortgage loans, as well as strict requirements of the banks to the borrowers resulting from the changes in legislation, the Programme plans to restore the volume of mortgage lending in commercial banks to the annual level of loans of KZT 150 billion. To this end, it is planned to subsidize the remuneration rate for mortgages provided by banks to the population so that after subsidizing, the rate becomes 10 per cent per annum for the end borrower. Subsidies are provided only for mortgage housing loans provided by banks at a rate of remuneration that does not exceed the level of the base rate of the National Bank of the Republic of Kazakhstan (as in effect when the decision to provide subsidy is made) by more than 5 per cent.

The funds to subsidize the interest rate of mortgage loans will be annually allocated from the republican budget from 2017 onwards. The subsidy will be provided through the financial agent KMC.

The mandatory requirements for the participation of a borrower (an individual) in the Programme are as follows: mortgage housing loans are provided for the purchase of housing in the primary market; the term of the loan is up to 180 months; 30 per cent of the value of the acquired housing should be available on the borrower's account. The maximum amount of the mortgage housing loan to be subsidized is KZT 20 million in the cities of Astana and Almaty, and KZT 15 million in other regions. The maximum term of subsidizing is 120 months, but not longer than the term of the loan.

Objective 2: To encourage the construction of housing by private developers. To stimulate the supply of affordable housing by private developers, the programme plans to provide developers with financial resources through expanding the scope of loan provision by commercial banks. To this end, it is proposed to subsidize the interest rate for the loans that banks provide to private developers. Subsidies are provided only for the loans provided by banks at a rate of remuneration that does not exceed the level of the base rate of the National Bank of the Republic of Kazakhstan (as in effect when the decision to provide subsidy is made) by more than 5 per cent.

The funds to subsidize the interest rate of the developers' loans will be annually allocated from the republican budget from 2017 onwards. The subsidy will be provided through a financial agent — JSC "Damu Enterprise Development Fund."

The mandatory requirements for the participation of a borrower (private developer) in the Programme are as follows: the term of loans is up to 36 months; the purpose of the loan is housing construction; the private developer is obliged to offer at least 50 per cent of the constructed housing to the investors of Housing Construction Savings Bank (hereinafter, HCSB) at fixed prices for 1 square meter (up to KZT 260,000 in the cities of Astana, Almaty and their suburban areas, and up to KZT 220,000 in other regions). The maximum period of subsidizing is 36 months.

Objective 3: To construct affordable housing for the members of housing construction savings system (including citizens on the housing waiting list of LEAs). To address this objective, there are several mechanisms for raising funds to finance housing construction to be acquired by depositors of the HCSB (the Programme defines this type of housing as "loan housing"):

1. LEAs shall issue securities (bonds) with maturity period of up to 2 years with coupon payments of 0.15 per cent annual interest twice a year;

2. Baiterek National Managing Holding, Samruk-Kazyna Immovable Property Fund shall provide preferential loans to private developers by placing conditioned contributions (deposits) in banks for a period of up to 5 years;
3. Baiterek National Managing Holding shall raise funds from international financial organizations against corporate guarantees to finance the construction of energy-efficient housing with the use of new technologies.

The first mechanism — housing construction finance by LEAs at the expense of bonded loans — is proposed as the main mechanism by the Programme. The Government of the Republic of Kazakhstan is entitled to allocate loans to LEAs from the Republican budget at the rate of 0.01 per cent per annum for the implementation of housing projects for the members of housing construction savings system. The allocated funds are meant to be reused in new construction projects. The funds of the Baiterek National Managing Holding and Samruk-Kazyna National Welfare Fund will be used for the redemption of securities of LEAs.

LEAs direct funds from the bonded loan to the construction of housing with limited floor area of homes (a maximum of 80 m² with a permissible variation of not more than 5 per cent), and with a limited cost of selling housing to depositors of HCSB (up to KZT180,000/m² in the cities of Astana, Almaty, Atyrau, Aktau, and up to KZT 140,000/m² in other regions).

When selecting the housing construction projects presented for consideration, the priority is given to industrial house-building projects. To this end, as well as in order to increase the volume of housing put into operation under the Programme, there are plans to develop model projects of compact housing with the use of industrialized housing construction technologies.

To ensure the predetermined cost of housing and to increase the volume of construction, LEAs are entitled to use a public-private partnership mechanism. Under such projects, developers construct residential buildings with built-in non-residential commercial premises, social facilities and/or additional floors and have the right of selling the apartments at market prices.

Developers are engaged by LEAs through a competitive tender according to the public procurement regulations. Private developers are required to have a land parcel on the rights of ownership and land use, dedicated to housing construction, free from encumbrances, with engineering and municipal infrastructure or a land parcel where there are plans to ensure engineering and municipal infrastructure according to the master plan and human settlement development plan. Developers are also required to have construction design specifications and estimates with a positive conclusion of comprehensive extra-departmental expert review. Developers are required to give consent to the provision of security as a pledge of land parcel, unfinished construction, and design specifications and estimates.

At least 50 per cent of housing constructed at the expense of LEAs, is provided to the citizens on the housing waiting list of LEAs and those who are depositors of HCSB at the same time. The remaining housing is provided to the depositors of the HCSB. Housing is provided to citizens by right of ownership with the use of housing loans, accumulated housing construction savings and/or own resources. The HCSB can provide its clients with the preliminary and intermediate housing loans at reduced interest rates.

To ensure the turnover of funds allocated for the construction of loan housing, there are plans to annually allocate KZT 24 billion to HCSB for 5 years from 2017 onward.

Objective 4: To establish a Rental Housing Stock for socially vulnerable population stratum. To provide housing to the citizens on the housing waiting list of LEAs and socially vulnerable population stratum, the programme envisages targeted transfers to regional budgets, and budgets of the cities of Astana and Almaty. The local authorities should spend these funds on the construction of housing with limited floor space of apartments and limited cost of up to KZT 180,000/m² in the cities of Astana, Almaty, Atyrau, Aktau; and up to KZT 140,000/m² in other regions (excluding the cost of providing the area under construction with utilities).

The constructed housing is classified as municipal housing stock and is provided to citizens belonging to the socially vulnerable categories of the population, on lease and without the right of redemption.

To ensure the established housing cost limitations, local executive bodies shall be entitled to build rental housing using the mechanisms of public-private partnerships (see Objective 3).

Objective 5: To develop individual housing construction. Within this objective, it is planned to continue financing the development of engineering and municipal infrastructure for individual construction. To this end, annually there will be allocated funds from the Republican budget to ensure that around 40 thousand land parcels are provided with water and electricity networks. Provision of utility systems for heat and gas supply, sewerage (waste water management), telephones, road and driveway construction works in the neighbourhood should be financed from the local budget.

Sites for individual housing construction should be allocated as residential districts in accordance with the approved master plans and local area development plans. Also, LEAs are supposed to distribute model construction projects of low-rise residential buildings free of charge.

The priority of this objective of the Programme is the construction of individual houses in a universal architectural style.

It is planned to implement a pilot project of the construction of individual housing in a universal architectural style in regional centers through a single developer with the subsequent sale of individual houses to citizens on a waiting list for a land parcel for individual housing construction. Technologies of integrated home-building factories as well as local building materials will be used for the construction of individual houses,

To finance the construction of individual houses through a single developer, LEAs are entitled to use funds raised through issue of debt securities (see the description of Objective 3). A single developer is entitled to use a subsidized loan (see the description of Objective 2).

The cost of an individual house in a pilot project should not exceed KZT 120,000 (excluding the cost of engineering and communal infrastructure). When selling a constructed house, its total cost includes the cost of engineering and utilities infrastructure.

Citizens on a waiting list for land parcels and participating in the pilot project have the right to independently purchase a finished house with a land parcel and communal infrastructure or to obtain a loan from the HCSB for its purchase. To this end, loans of the HCSB will be provided at reduced interest rates (up to 5 per cent per annum) funded with government subsidies. The land plot on which the individual house is located is provided to the participants of the pilot project for long-term temporary non-gratuitous land use until the purchased house is fully paid for, and then it is transferred to ownership.

Based on the results of the implementation of the pilot project, there will be made a decision on the expediency of its further implementation.

Objective 6: To provide citizens with rental and commercial housing. Under this Objective, the housing construction areas envisaged earlier by the Nurly Zhol Government Programme and the 2020 Programme of Regional Development will be completed between 2017 and 2019:

1. the construction of rental housing by LEAs for citizens registered with LEAs and young families out of the funds provided from the republican budget will be completed in 2017–2019;
2. the construction and acquisition of rental housing of the Kazakhstan Mortgage Company will be completed out of the funds previously allocated from the National Fund of the Republic of Kazakhstan, followed by the provision of housing for rent with a right of redemption to citizens placed on a waiting list of LEAs and belonging the socially vulnerable categories of the population (the redemption period is up to 20 years);

3. in 2017, Baiterek Development, JSC will complete the construction of rental and loan housing started under the Nuryl Zhol Programme. Housing is provided to citizens registered with LEAs for rent with the right of redemption (the period of redemption is up to 20 years), as well as to the ownership to the depositors of the HCSB;
4. the Samruk-Kazyna Immovable Property Fund will stop financing private developers' construction of commercial and rental housing with subsequent redemption (the period of redemption is up to 15 years) in 2017-2018.

Housing constructed under Objective 6 cannot be sold by a participant of the Programme for two years after its acquisition.

Objective 7: To support shared housing construction. To implement the mechanism that guarantees contributions of participants of shared housing construction, the Programme envisages capitalization of the Housing Construction Guarantee Fund to the value of KZT 10 billion in 2017. The Housing Construction Guarantee Fund will impose qualification requirements on the participants of shared construction with regard to the financial stability and experience, and introduce mechanisms to monitor the proper use of shareholders money.

With regard to the housing construction projects secured by the guarantees of the Housing Construction Guarantee Fund, the HCSB is entitled to provide depositors with loans for the purchase of housing against security of claiming rights under partnership agreements.

The pilot project of demolition of unsafe housing in the city of Astana

The pilot project of demolition of unsafe housing was started by the akimat of the city of Astana in 2012 under the "Affordable Housing – 2020" Programme and it goes on under the Nurly Zher Housing Construction Programme.

The pilot project envisages the demolition of unsafe housing and comprehensive reconstruction of old districts of the capital. There are plans to demolish 2,978 residential buildings with a floor space of 588 thousand square meters (11,264 apartments). The floor space of projected housing to replace the demolished housing will be 3.1 million square meters.

The pilot project envisages construction of housing of the 3rd and 4th classes of comfort, elite housing and business class buildings with office premises and parking areas to be sold on the market for project reinvestment.

An authorized organization was established for the implementation of the project by the akimat of the city, it ensures constructional design and construction of new residential buildings, transfers some of constructed residential and non-residential premises to the municipal ownership of the city of Astana for citizens to be relocated there from demolished unsafe housing and for the compensation of the cost of demolished non-residential premises. The remaining residential and non-residential premises are sold on the market by an authorized organization for the reinvestment of earned revenues

Astana City Akimat (i) as established by the law ("in case of district emergency scale"), withdraws premises in unsafe houses and buildings; (ii) identifies reconstruction areas, allocates land parcels for construction; (iii) constructs engineering networks and ensures improvements; (iv) provides owners of apartments in unsafe buildings that are supposed to be demolished with housing from new and existing municipal housing stock; (v) refunds the value of withdrawn property to the owners of non-residential premises in unsafe houses, or with the consent of the owner of non-residential premises provides equivalent non-residential premises in houses under construction.

Owners of apartments in unsafe buildings are provided with new apartments with floor space equal to those in the demolished, but not less than one-room apartment.

To finance the pilot project in the context of the "Accessible Housing – 2020" Programme, the Samruk-Kazyna National Welfare Fund provided a loan of KZT 40 billion (KZT 20 billion a year in 2012 and 2014) to an authorized organization of Astana City Akimat. The Government of the Republic of Kazakhstan provides targeted transfers from the Republican budget to repay the obligations of the authorized organization to the Samruk-Kazyna National Welfare Fund to the value of KZT 40 billion (KZT 20 billion a year in 2013 and 2018).

Further on, the project is supposed to be financed through private investment, bank loans, targeted transfers from the Republican and local budgets for the replenishment of authorized capital of the authorized organization, proceeds from the sale of residential and non-residential premises, and provision of related services during the implementation of the project.

Chapter 3

Provision of Adequate, Safe and Affordable Housing and Basic Services

A. Housing provision

1. Housing stock

The total floor area of the housing stock was 340.6 million m². There were 5,146,855 houses in Kazakhstan at the end of 2015, including 3,200,206 apartments in apartment buildings and 1,946,649 individual residential houses (calculated on the basis of the total population and average household size of 3.6 persons). The average housing provision was comparatively high 21.0 m² per person; this indicator grew by 20 per cent compared to 2005 (17.5 m²/person). Nevertheless, there is significant demand for housing related to the population growth, migration and urbanization. According to the Nurlı Zher Housing Construction Programme²⁵, the number of citizens in need of housing reached 2.5 million people (14 per cent of the population) as of 1 December 2016. But this figure takes into account only (i) citizens registered in LEAs as those in need of housing from the municipal housing stock (400 thousand people), (ii) citizens with deposits in the Housing Construction Savings Bank (780 thousand people), and (iii) citizens on the waiting list for land parcels for individual housing construction (1.3 million people). The actual need for the improvement of housing conditions can be much higher.

Housing provision rate in urban areas is higher than in rural areas: the urban housing stock has a total floor area of 214.6 million m², which is 1.7 times larger than the area of the rural housing stock (126.0 million m²). Since 2005, the total housing stock floor area grew 33.8 per cent, including in urban area - 37.8 per cent and in rural areas - 27.4 per cent (Figure V). The rate of housing provision for the urban population increased since 2005 by 25.7 per cent (18.7 m²/person); for the rural population, it increased only by 11.9 per cent (15.9 m²/person). There are 23.5 m²/person in urban areas compared to 17.8 m²/person in the rural areas. Among urban human settlements, Astana (29.0 m²/person) and Almaty (27.0 m²/person) have the highest housing provision rates, while Zhambyl Region in Southern Kazakhstan (18.8 m²/person) has the lowest rate. Among the rural areas, Mangystau Region has the highest rate of housing provision (22.2 m²/person) while the Zhambyl Region has the lowest (14.3 m²/person).

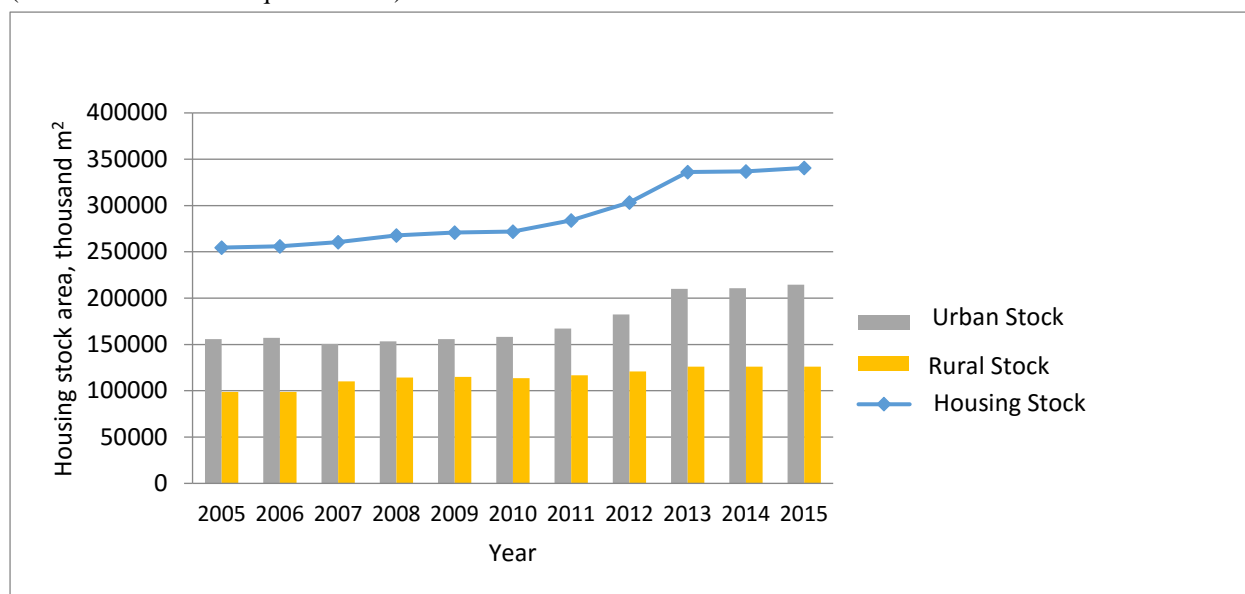
The urban housing stock is concentrated in the cities of Almaty (19.9 per cent of the total urban housing stock floor area), South Kazakhstan Region (11.2 per cent), Karaganda Region (10.7 per cent), and Astana (9.7 per cent). The largest portion of rural housing stock is located in the South Kazakhstan Region (18.4 per cent of the total rural housing stock floor area) and Almaty Region (17.6 per cent).

²⁵ The Nurlı Zher Housing Construction Program was approved by the Resolution of the Government of the Republic of Kazakhstan dated 31 December 2016, No. 922.

Figure V

Housing stock, end of the year, 2005–2015

(Area in thousands of square metres)



Source: Statistical compendiums - Regions of Kazakhstan in 2008, Regions of Kazakhstan in 2012, Regions of Kazakhstan in 2014, Kazakhstan in Figures (2016).

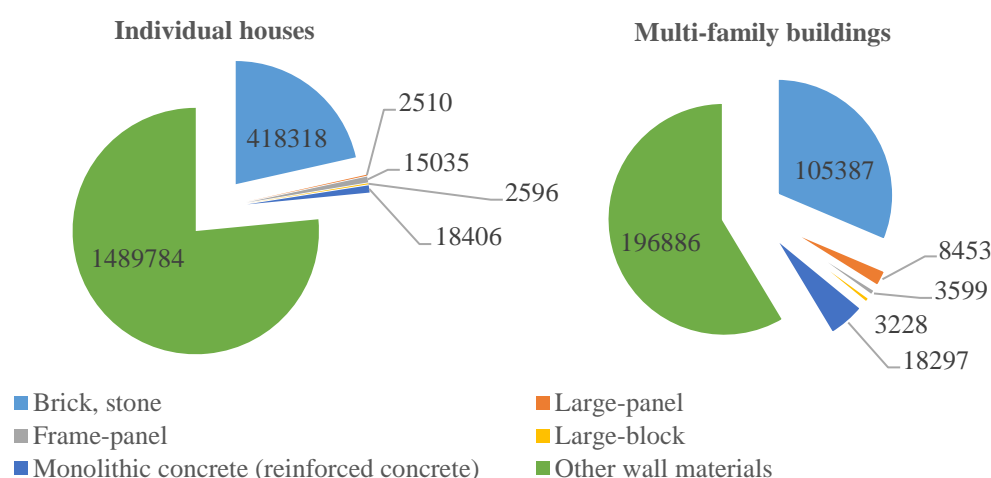
2. Types and characteristics of residential buildings

Out of the total 2,282,499 residential buildings in Kazakhstan in 2016, 1,946,649 or 85.3 per cent were individual or single-family houses and 335,850 or 14.7 per cent were multiapartment buildings. In terms of housing floor area, multiapartment buildings occupied 177,353.1 thousand m² or 52.1 per cent of the total, while the share of individual houses was 163,254.2 thousand m² or 47.9 per cent.

Out of the total number of residential buildings, 914,977 or 40.1 per cent were in urban settlements. Urban residential buildings consisted of 148,998 apartment buildings (representing 16.3 per cent of all residential buildings in urban areas and 44.4 per cent of the total number of apartment buildings) and 765,979 individual houses (83.7 per cent of all residential buildings in urban areas and 39.3 per cent of the total number of individual houses). Apartment buildings in the two largest cities of the country alone — Almaty (157,516) and Astana (36,828) — made up 57.9 per cent of the total number of apartment buildings in Kazakhstan.

The share of individual residential houses with brick or stone exterior walls is 21.5 per cent of the total number of individual houses and it was 31.4 per cent for multiapartment buildings. There were few large-panel, frame-panel and large-block prefabricated residential buildings (1.0 per cent of the total number of individual houses and 4.6 per cent of the total number of apartment buildings). The share of monolithic reinforced concrete multiapartment buildings is 5.45 per cent. According to statistics, the most significant portion of residential buildings consists of building with exterior walls of materials undefined in statistical reporting — 76.5 per cent of individual houses and 58.6 per cent of multiapartment buildings (Figure VI).

Figure VI
Classification of residential buildings by external wall materials



Source: Committee on Statistics of the MoNE, *On Housing Stock of the Republic of Kazakhstan*, Statistical Compendium, 2016.

3. Housing stock development

The level of housing stock development in Kazakhstan is high (Table 1). Water is supplied to more than 99 per cent of multiapartment buildings and individual houses in urban settlements and to more than 96 per cent of the houses in rural human settlements. Between 2011 and 2015, the average housing water supply rate increased from 64.6 percent to 98.4 per cent.

The supply of central heating and hot water to apartments in urban areas was 88.6 per cent and 79.7 per cent, respectively. High level of gasification (more than 96 per cent) of individual houses in both urban and rural settlements, as well as apartment houses in rural areas, allows provision of heating and hot water supply from individual installations.

In 2016, the central sewerage availability rate of the housing stock was still low. In the urban areas, individual houses, had availability rate of 64 while in the rural areas, both individual and multiapartment houses had low central sewerage availability rates of 27 per cent and 41.6 per cent, respectively. However, it should be noted that the average sewerage availability rate of the housing stock increased from 44.7 per cent to 64.7 per cent between 2011 and 2015.

Table 1
Housing stock development, as at 1 January 2016

| Percentage of housing stock provided with various types of amenities | | | | | | |
|--|----------------------|-----------------------|-------------------|-----------------------|-------------------|--|
| Type of amenities | In urban settlements | | | In rural settlements | | |
| | Total | Multiapartment houses | Individual houses | Multiapartment houses | Individual houses | |
| Water supply ¹ | 98.4 | 99.8 | 99.5 | 96.6 | 96.2 | |
| Waste-water disposal system ² | 64.7 | 94.3 | 64.1 | 41.6 | 27.3 | |
| Central heating ³ | 40.5 | 88.6 | 8.1 | 11.1 | 0.5 | |

| | | | | | |
|--|------|------|------|------|------|
| Individual heating systems | 59.9 | 12.0 | 92.4 | 89.0 | 99.5 |
| Bathtub or shower | 41.1 | 83.9 | 15.1 | 16.9 | 2.7 |
| Central hot water supply | 36.2 | 79.7 | 7.5 | 7.1 | 0.4 |
| Hot water supply from individual water heaters | 11.7 | 5.6 | 29.3 | 11.8 | 7.9 |
| Gas ⁴ | 88.7 | 77.4 | 96.1 | 96.2 | 97.9 |
| Floor-mounted electric stoves | 9.8 | 21.3 | 1.7 | 2.6 | 0.6 |

Source: On Housing Stock of the Republic of Kazakhstan, Statistical Compendium (2016)

Note:

1. A dwelling is considered equipped with a water supply system if there is: running water in the house (apartment); a water pipe outside the house (apartment); and a distribution network, which receives water from a central water pipeline or an artesian well, or from a water column or another source of water in the yard if there is a well.
2. A dwelling is considered equipped with a central sewerage system, when the house has a sewerage device for the discharge of black water to the street sewerage network or drain wells, and it is considered not to be equipped with a sewerage system if it does not have a water pipeline or a bio toilet.
3. A dwelling is considered equipped with central heating system if the heating is supplied from a boiler room inside the building, a group (quarter), joint and district boiler house, or thermal power plant.
4. A dwelling is considered equipped with a gas distribution system (with both pipeline and liquefied gas) if it has a floor-mounted gas stove.

4. Technical condition of the housing stock

Statistics on housing stock do not have information on the life span of residential buildings (breakdown of buildings by the year of commissioning). According to the 2009 census, housing stock constructed between 1960 and 1990 (consisting of 67.1 per cent households) is predominant in Kazakhstan. In 2009, the share of households living in houses built before 1960 was 12.3 per cent, while the share of those living in houses built between 1991 and 2008 was 17.9 per cent.²⁶

In 2010, 50.1 million m² of multiapartment buildings (32 per cent of the total) required refurbishment. In 2015, the share of the multiapartment housing stock in need of refurbishment dropped to 27 per cent. In addition, poor energy efficiency is a common problem in most apartment buildings. According to a study²⁷ conducted in 2010, the consumption of thermal energy in apartment buildings is 270 kWh/m² per year, which is significantly higher than the European average rates of 100–120 kW/m² per year. About 30 per cent of heat is lost through the enclosing structures: facade walls, windows, roofing, basements, ground floors, and entrances of apartment buildings.

In 2016, 4,582 residential buildings with a total floor area of 2,176 m² were dilapidated and in a critical condition; with 108,673 people living in these unsafe buildings. A large part of unsafe housing is concentrated in urban settlements. There are 2,880 unsafe buildings in urban settlements (62.85 per cent of the total number of unsafe residential buildings) occupying an area of 1,913.6 thousand m² (87.94 per cent of the total area of unsafe residential buildings) with 94,767 people living there (87.2 per cent of the total number of people living in unsafe residential buildings). Majority of the unsafe residential buildings are located in Almaty — 1,875 unsafe buildings

²⁶ Findings of the 2009 National Census of the Republic of Kazakhstan: Analytical Report. Agency on Statistics of the Republic of Kazakhstan, Astana, 2011.

²⁷ The interaction between parties is a necessary basis for energy efficiency retrofitting of apartment buildings. United Nations Development Programme in Kazakhstan, the Ministry of National Economy of the Republic of Kazakhstan / edited by A.V. Beliy. - Astana, 2014

or 40.92 per cent of the total number of unsafe buildings and 65.1 per cent of unsafe buildings in urban areas). The area of unsafe housing stock in Almaty is 1,158 m² (53.2 per cent of total area of unsafe housing stock) and there are 50,246 inhabitants in these unsafe houses (46.2 per cent of the total number of people living in unsafe housing). In rural human settlements, unsafe residential buildings numbered 1,702 with a total area of 262.5 m² and 13,906 inhabitants.

B. System of homeownership and registration of immovable property rights

1. Right of homeownership

In accordance with the Law “on Housing Relations”, the housing stock in Kazakhstan is divided into:

- 1) public housing stock — state-owned housing, which is subdivided into:
 - municipal housing stock — dwellings in the jurisdiction of LEAs, reserved by a special government agency citizens who are entitled to homes from the municipal housing stock;
 - housing stock of state-owned enterprises — dwellings within the jurisdiction of state-owned enterprises;
 - housing stock of state agencies — dwellings within the jurisdiction of state agencies, including
 - corporate housing that is on the balance sheet of state agencies and that is supposed to be provided by a decision of the housing commission to civil servants appointed to positions on rotation basis for the period of performance of official duties without the right of further privatization.
- 2) private housing stock — dwellings in the ownership of individuals or non-state entities and their associations.

Kazakhstan, like other former Soviet republics, completed privatization of the public housing stock as part of the housing reform in order to establish a housing market. Privatization was carried out through the “privatisation coupon” mechanism. Citizens permanently residing in Kazakhstan were given privatization coupons, in accordance with the duration of their employment. The cost of privatized housing was determined with due regard to its accumulated depreciation. If citizens did not have enough coupons to buy homes, they paid in cash as a lump sum or in instalments.

The privatization of public housing stock is carried out in accordance with the Rules of Privatization of Dwellings from the Public Housing Stock²⁸. As a rule, privatization is carried out based on the depreciable value of home. The privatization cost may be paid in instalments for a period of up to 10 years, with an initial contribution of at least 30 per cent. However, there are certain categories of citizens that could privatize housing free of charge.

At the beginning of 2016, 97 per cent of the housing stock was privately owned (Table 2). The share of public housing stock in urban areas (3.2 per cent) is higher than that in rural areas (1.1 per cent).

Table 2
Housing stock ownership structure, as at 1 January 2016

| Type of housing ownership | Housing stock | | | | | |
|---------------------------|-------------------------|------------|-------------------------|------------|-------------------------|------------|
| | Total | | in urban settlements | | in rural settlements | |
| | Thousand m ² | Percentage | Thousand m ² | Percentage | Thousand m ² | Percentage |
| State ownership | 8 157.6 | 2.4 | 6 778.5 | 3.2 | 1 379.1 | 1.1 |
| Private property | 332 449.7 | 97.6 | 207 824.6 | 96.8 | 124 625.1 | 98.9 |

Source: Committee on Statistics of the MoNE, *On Housing Stock of the Republic of Kazakhstan*, Statistical Compendium, 2016.

²⁸Approved by the Decree of the Government of the Republic of Kazakhstan No. 673 of 2 July 2013.

The legislation of Kazakhstan does not contain any restrictions with regard to women's titles to real property.

In accordance with Article 29 of the Law “on Housing Relations”, the ownership of housing may be terminated, against the will of the owner, by fiat in the following cases:

1. foreclosure of the dwelling along with the land parcel for the debts of the owner;
2. requisition - compulsory withdrawal of a dwelling from the owner due to emergency situations authorized by resolutions of state agencies in accordance with the procedures established by legislative acts, and with the payment of the value of the withdrawn dwelling or other types of compensation;
3. confiscation;
4. compulsory expropriation of the land parcel on which the house is located, for public use;
5. demolition of housing that is about to collapse or fall down (unsafe housing).
6. In cases 2 and 4 above, the owner could choose one of the following compensation options:
7. monetary compensation paid prior to the termination of the ownership right, which includes the market value of the dwelling and land parcel, as well as full compensation of the losses inflicted to the owner²⁹;
8. housing with amenities (an apartment or a residential house) in accordance with the procedures established by the law;
9. return of requisitioned housing after the emergency situation that caused the withdrawal is over, with full compensation of the owner for the losses inflicted by the requisition.

2. Registration of homeownership rights

The right of homeownership as well as the encumbrance of immovable property rights are subject to state registration in accordance with the Law “on State Registration of Rights to Immovable Property”.

The registration is a public service³⁰ and it is provided for a fee by territorial justice authorities at the place where the property is located. Applications for registration are submitted:

- 1) via the "Government for Citizens" accepts applications for registration of rights to immovable property and distributes the deliverables at the location of the immovable property;
- 2) via e-government web portal at www.egov.kz (only by notaries who notarized the transactions);
- 3) by notaries. There is an established system of e-registration of immovable property rights with respect to transactions certified by a notary. Notaries provide this public service through the Notary Information System by sending an electronic copy of the property title to the Legal Cadastre System.

A prerequisite for the state registration of rights to immovable property is the state technical inspection of buildings, constructions and/or their components. The public technical inspection is carried out by the JSC "Government for Citizens". The state technical inspection determines technical and identifying characteristics of buildings, structures and their components that are required for the maintenance of legal cadastre, and generates a technical certificate of an item of immovable property and assigns a cadastral number to buildings, constructions or their components.

Rules and lead time for state technical inspection of immovable property were approved by the Minister of Justice of the Republic of Kazakhstan on 6 May 2013, No. 156. State technical inspection takes from 2 working days (for the preparation of a technical certificate for an apartment or room) to 9 working days (for the preparation of the technical certificate for items of immovable property with total area of more than 1000 m²). The inspection includes survey of the land parcel and plotting of a schematic plan of the land parcel, survey (measuring) and floor plans of the item of immovable property. State technical inspection of immovable property is a paid service.

Common property ownership in multiapartment housing

In accordance with the Law on Housing Relations of the Republic of Kazakhstan (1997), if there are apartments (and non-residential premises) individually owned by different persons (citizens), legal entities, or state in a

²⁹ According to local experts, there are limitations with regard to the amount of monetary compensation payable to the owner following the withdrawal of a land parcel with a dwelling for the public use.

³⁰ The standards of the public service "State Registration of the Rights (Encumbrances) to Immovable Property" was approved by the Order of the Minister of Justice of the Republic of Kazakhstan No. 246 of 28 April 2015.

multiapartment house, all homeowners have shared ownership of common property in the multiapartment house. Such form of ownership of an item of immovable property, which combines individual homeownership rights of different persons and the right of shared ownership of all owners of common property in the building, is called a "condominium" in the legislation of the Republic of Kazakhstan. Thus, a single immovable property complex (a multiapartment house) consisting of homes (apartments) that are individually owned by different persons, and common property, is called an "object of condominium."

Common property of an object of condominium includes hallways, stairs, elevators, roofs, attics, basements, extra-apartment or communal engineering systems and equipment, land, including amenities and other types of community property.

The share of each homeowner in the common property cannot be separated from the individual ownership of their home. The size of the share is determined by the ratio of the useful floor area in individual property to the total amount of useful floor area of all residential and non-residential rooms in the condominium. Such share cannot be singled out in kind (an ideal share). The transfer of homeownership to another person shall entail a transfer of the proportionate share in the common property to the acquirer.

Registration of an object of condominium

According to the Law of the Republic of Kazakhstan on Housing Relations (Article 32), an object of condominium, including an apartment in ownership and a common area share, should be registered as a single object in accordance with the legislation on state registration of rights to immovable property³¹ (Article 39 of the Law on State Registration of Rights to Immovable Property).

The registration of the object of condominium is performed upon an application of a member of condominium or an authorized representative of the owner(s). The composition of common property is identified during the registration of a condominium object (when a technical certificate of an apartment building is generated). During the initial registration of a condominium object, the technical certificate of a condominium object is supposed to be produced at the expense of the budgetary funds.

The rules for state registration of object of condominium were approved by Order of the Minister of Justice of the Republic of Kazakhstan No. 241 on 24 August 2007. The state registration of a condominium object shall require entitling and identification documents with respect to the land parcel, if the title to the land parcel was not registered prior to the registration of a condominium object, and homeowners' shares in the common property shall be determined by homeowners' agreement.

The requirement in the legislation to register objects of condominium is difficult to implement in practice. According to the 2009 data, only 14,681 (8.5 per cent) objects were registered out of the total number of 172,164 apartment houses in urban areas, which were objects of condominiums. According to local experts, local authorities, housing inspections and managers of cooperatives of homeowners (apartment owners) have done a lot to register objects of condominiums recently. According to the information of the Association of cooperatives of apartment owners of the Republic of Kazakhstan, in 2016 about 30 per cent of objects of condominiums were registered countrywide, and about 80 per cent in Astana. The increased share of registered objects of condominium is also linked to the fact that only after the registration of an object of condominium, an apartment house can be included in the refurbishment programme financed from budgetary funds (see Subsection 3.4).

The chairs of the management boards of cooperatives of apartment owners explain the problems with registration of condominium objects by the fact that it is very difficult to hold a general meeting of owners to adopt a decision on the registration of a condominium object and have signatures of all homeowners in the document regulating the distribution of shares in the common property. Homeowners believe that registration of a condominium object is a documented confirmation of their responsibility for the proper maintenance and repair of the community property, and therefore, it results in an increase in the contributions for these purposes. Moreover, non-registration of an object of condominium is not an obstacle for transactions with homes in an apartment building and those

³¹The state registration of an object of condominium is regulated by Article 39 of the Law of the Republic of Kazakhstan on State Registration of Rights to Immovable Property dated 26 July 2007, No. 310

with registration of the right of individual ownership of an apartment, therefore owners have no vested interest in the registration of an object of condominium.

The legislation considers an apartment (non-residential premises) in an apartment building to be a separate item of immovable property (a secondary item in the composition of a condominium object) in the individual ownership, which is assigned an individual cadastral number. Neither entitling and identification documents for the land parcel, which is part of the common property, nor confirmation of the state registration of a condominium object are required for the state registration of homeownership in the legal cadastre (Article 40 of the Law on State Registration of Rights to Immovable Property).

Right to the land parcel on which the building is located

According to the Land Code of the Republic of Kazakhstan (2003), the ownership right to the building entails, in accordance with the procedures established by the legislation, the right of ownership to the land parcel on which the said building is located, except for the cases envisaged by the Code (Article 52). The right of public entities to economic activities or their right of operational administration with regard to buildings (structures, constructions) entails, in accordance with the established procedure, the right of permanent use of the land parcel occupied by the said objects. These rights are inseparable.

Transfer of the right of ownership, or the right of permanent use of land, or the right of temporary use of a land parcel on which buildings (structures, constructions) are located, and which is also allocated for their use without respective transfer of the said immovable property, as well as transfer of immovable property without respective transfer of the land parcel, where the said immovable property is located, shall not be permitted.

In accordance with the Law on Housing Relations (Article 19), sale, donation, transfer by inheritance, forced sale of residential house collateral, as well as that of an unfinished residential building, entail the transfer of the right of ownership (land use) of a land parcel to the new owner of the residential house.

A land parcel required for the placement, exploitation, and maintenance of an apartment building or another condominium object, in accordance with the established procedure, is transferred to the common shared ownership of owners of homes, which make part of a condominium object (Article 62 of the Land Code). Transfer of ownership of an apartment (home) to another person involves the transfer of a corresponding share in the right to the land parcel (land parcels) to the buyer of an apartment (home).

The procedure of the use of a land parcel located outside (out of the boundaries of) the footing of the building is determined by an agreement of condominium members upon the condition of observing public interests, sanitary and hygienic, ecological, fire prevention, urban planning and other norms. The partition of a land parcel being a part of a condominium object is permitted following a written consent of all members of the condominium, provided that sanitary, environmental, fire protection, construction and other standards and regulations are observed.

The land parcel on which the building (structure, construction) is located can be rendered to the separate ownership of condominium members where it is necessary to meet the technological requirement for the functionality of non-residential premises, as long as this land parcel is located outside the building (structure, construction) and its use is consistent with the conditions of use of the land parcel that is a part of the condominium object, as well as with sanitary and hygienic, environmental, fire protection, construction and other norms and regulations.

A land parcel for an individual residential building or one being a part of the common property of a condominium object (multi-apartment building) is made available for the ownership (or land use) by LEAs on the basis of a positive opinion of a commission established by LEAs, and pursuant to the land management project.

The boundaries of a land parcel in-situ are established on the basis of the applicant's application in accordance with the procedure prescribed by the Legislation of the Republic of Kazakhstan³².

³²Regulations for land surveying activities in the Republic of Kazakhstan with respect to the development of draft projects of inter-farm land tenure in order to establish and streamline the existing land management, drainage and identification of the boundaries of land parcels in situ, were approved by the Order of the Chairman of Agency of the Republic of Kazakhstan for

Identification documents for the land parcel are produced and issued by the State Corporation "Government for Citizens", which maintains the public land cadastre. An act for the right of private ownership of a land parcel is an identification document in case of private ownership of a land parcel.

According to local experts, it is not difficult to register the rights of shared common ownership of condominium members for the land parcel under the apartment building, but it is still very difficult to resolve the issues related to the transfer of a part of the common property of a courtyard area, especially in big cities.

3. Provision of Social and Affordable Housing

Social housing in Kazakhstan is housing from public (municipal) housing stock. In accordance with the Law on Housing Relations (Articles 67 and 68), homes from municipal housing stock or homes rented by LEAs in private housing stock are provided for the use of citizens in need of housing who belong to the following categories:

1. persons with disabilities and participants in the Great Patriotic War;
2. orphaned children and children without parental care;
3. socially vulnerable groups of citizens:
 - persons with equal status with persons with disabilities and participants in the Great Patriotic War;
 - persons with disabilities of the 1 and 2 groups;
 - families with or caring for children with disabilities;
 - persons with severe forms of some chronic diseases;
 - retirement pensioners;
 - oralmans (ethnic Kazakhs who returned to the Republic of Kazakhstan for permanent residence in the historic homeland);
 - persons who lost their homes as a result of environmental disasters, natural and human-caused emergencies;
 - large families (a family with four or more minor children living together);
 - families of persons who died during the performance of government or public duties, military service, during the preparation of or during a flight into outer space, or rescuing human lives, or protecting the law;
 - single-parent households;

Persons from this group are provided with social housing upon the condition that their joint average monthly income over the twelve months preceding their application for the provision of housing for every family member, is lower than 3.1-fold subsistence level established for the respective fiscal year by the Law on Republican Budget.

1. public servants, employees of budgetary organizations, military serviceman, cosmonaut candidates, cosmonauts, staff of special government agencies and holders of government elective offices (housing provided to such citizens from the municipal housing stock is equivalent to corporate housing);
2. citizens of the Republic of Kazakhstan, whose one and only housing is recognized unsafe in accordance with the legislation of the Republic of Kazakhstan (when provided with housing from the municipal housing stock such citizens transfer the unsafe housing they own to municipal ownership).

Thus, citizens belonging to a quite large list of categories have the right to housing from the public (municipal) housing stock, the right to social housing is not always associated with low income of households (low income is used as a registration criterion only for citizens belonging to a group of socially vulnerable citizens).

Registration of citizens who need housing from the municipal housing stock, is carried out in their communities by district akimats, cities of regional significance, the cities of Astana and Almaty. To be registered, citizens are required to permanently reside in the human settlement and not to have housing by right of ownership. For citizens to be registered in the cities of Astana and Almaty they are required to permanently reside in these cities for at least three years. The requirement of permanent residence in the human settlement does not apply to

citizens, who changed their place of residence because of their participation in government employment programmes.

The lists of citizens who need housing are made separately for each of the above-mentioned groups of citizens, and are published on the websites of akimats, as well as lists of citizens who obtained housing.

In accordance with the Law on Housing Relations (Article 75), the provided housing from the municipal housing stock should have floor space of not less than 15 square metres and not more than 18 square metres of usable floor area per person, but not less than a one-room apartment or a dormitory room.

According to the information provided in the Nurly Zhol Government Programme of Infrastructure Development in 2015–2019, between 2011 and 2015 the number of registered citizens who needed housing from the municipal housing stock of LEAs, doubled and it continues to grow. As of 1 January 2015, the number of citizens registered by LEAs was more than 300 thousand people, of which over 130 thousand people belonged to the socially vulnerable stratum of the population, 127 thousand people were employees of budgetary organizations and public servants, and 44 thousand were orphaned children.

According to housing administration of Astana City Akimat, in 2009 there were still people on the housing waiting list who filed their applications for housing back in 1986. Between 2009 and 2016, housing was provided to everyone who was included in the lists of those in need before 2005. Nevertheless, in 2016 there were approximately 43,000 people on the lists of those who needed housing because of significant migratory influx to the capital.

To provide housing to citizens registered with LEAs, the construction of communal housing through targeted transfers from the Republican budget to local executive bodies was resumed in 2012. New housing of municipal housing stock is provided to citizens with the lowest incomes. The number of citizens provided with housing from the municipal housing stock between 2012 and 2015 was 10,600.³³

Provision of housing to citizens placed on housing waiting lists in akimats, is also carried out by constructing housing with limited floor areas of apartments and limited cost at the expense of budgetary loans provided by LEAs, and funds of companies with participation of the state (development institutions). To ensure the return of the funds invested in the construction, such housing is provided to citizens for rent with a right of long-term redemption (15-20 years) at the expense of rental payments. At the beginning of 2015 about 1 million square meters of such rental housing was put into operation, more than 16 thousand citizens were provided with housing.

Housing affordability to citizens with low incomes is also ensured by the housing construction savings system supported by the government. To provide housing to depositors of Housing Construction Savings Bank, organizations also construct housing with a limited floor area of apartments and limited cost with the participation of the government. Citizens can purchase such housing out of the accumulated funds and housing loans of Housing Construction Savings Bank at the annual interest rate that is much lower than the market rate. At the beginning of 2015, 859 thousand square meters of loan housing was put into operation, and more than 13 thousand citizens were provided with housing.

Another possibility for citizens of Kazakhstan to purchase affordable housing is to construct individual housing on land parcels equipped with communal infrastructure at the expense of budgetary funds

4. Provision of Rental Housing

Rental housing in Kazakhstan includes housing of any type of ownership, offered for permanent or temporary possession and use for a fee.

State-owned rental housing (municipal housing stock and housing stock of state-owned enterprises and institutions) is only 2.4 per cent of the total floor area of the housing stock.

³³ According to information in the Nurly Zhol Government Program.

A certain proportion of homes owned by citizens are leased to other persons. There is no official information about the floor area of such private rental housing.

In 2014, the President of the Republic of Kazakhstan in his message "Nurly Zhol is the path to the future" emphasised that rental housing is one of the promising areas of housing construction. The rental housing constructed under government programmes (with the exception of housing in communal ownership) is supposed to be provided to citizens on housing waiting lists in akimats and it is provided for rent with a right of redemption. That is, such housing is rental only for a certain period of time, until it is redeemed at the expense of the rental payments, after redemption the housing is no longer rental and it becomes a home in the private ownership of citizens.

At present, there are no discussions about establishment of a sector of affordable rental housing to meet the housing needs of citizens who are not entitled to social housing and cannot or do not want to acquire housing in their ownership.

Residential buildings for commercial rent are not constructed because private developers are not interested in such construction.

Thus, there is still a trend in Kazakhstan to increase the volume of housing in private ownership.

5. Citizens' Access to Public Services and Quality of Communal Infrastructure

Water supply

The objective of improving the population's access to water supply services was formulated by the government Programme "Drinking water" (2001–2010), and then it was addressed by the Ak Bulak Programme (2011–2020), which became part of the 2020 Programme of Regional Development in 2014.

By the end of 2015, 87 per cent of the urban population and 51.5 per cent of the rural population of Kazakhstan had access to centralized water supply systems. In 2011, these figures were 82 per cent and 42.5 per cent³⁴ respectively. Between 2011 and 2015, the number of citizens with access to centralized water supply system increased by 1.3 million people.

The 2020 Programme of Regional Development plans the following indicators of access to the centralized water supply system in 2019: 97 per cent for the urban population and 62 per cent for the rural population³⁵. At the same time, the State Water Management Programme of Kazakhstan³⁶ provides higher planned indicators of access to the centralized water supply system by 2020: at least 100 per cent of the urban population and at least 80 per cent of the rural population of the country.

As of 1 January 2016, there were 868 water supply enterprises in the Republic of Kazakhstan³⁷.

In 2015, the centralized water system supplied the population with 467.5 million m³ of water (43 per cent of the total volume of water supplied to consumers)³⁸. The average water output per day per person was 73 litres.

According to official data³⁹, the quality of drinking water has been maintained at a stable level for several years. There is a laboratory control of all sources of drinking water, both centralized and decentralized (wells, springs).

³⁴ National report for the United Nations conference on housing and sustainable urban development – HABITAT III Astana, 2016

³⁵ The 2020 Program of Regional Development was approved by the Resolution of the Government of the Republic of Kazakhstan dated 28 June 2014, No. 728 (as amended by the Resolution of the Government of the Republic of Kazakhstan dated 30 July 2016, No. 449)

³⁶ Approved by the Decree of the Government of the Republic of Kazakhstan dated 4 April 2014, No. 786.

³⁷ *On the Operation of Water Supply and Sewerage Facilities in the Republic of Kazakhstan*, Statistical Bulletin, 2015.

³⁸ *Housing and Utilities in 2011–2015*, Statistical Compendium, Astana, 2016

³⁹ National report for the United Nations conference on housing and sustainable urban development – HABITAT III Astana, 2016

The length of water supply networks was 67,856.7 km at the end of 2015, which is 27.8 per cent more than at the end of 2011. Between 2011 and 2015, 18,219 km of water supply networks were put into operation. The number water supply networks accidents decreased 4 times (from 24,691 to 6,120 accidents per year) in this period and reached 0.09 accidents/km of networks at the end of 2015. In 2015, the loss of water during its transportation decreased to 19 per cent as planned by the 2020 Programme of Regional Development.

The share of water supply networks in the Republic of Kazakhstan that needed replacement was 24.8 per cent at the end of 2015. In the city of Almaty, 60 per cent of water supply networks need replacing⁴⁰. Water supply networks in cities — regional centers, small towns and single-industry towns — are in poor technical condition: according to the 2020 Programme of Regional Development, the deterioration of water supply networks in many of them was 60–80 per cent in 2015.

Sewerage

As of 1 January 2016, there were 311 sewerage enterprises in the Republic of Kazakhstan⁴¹. 82 per cent of the urban population and 11 per cent of the rural population of Kazakhstan had access to centralized water disposal (sewerage) systems. In 2011, these figures were 73 per cent and 8.8 per cent⁴² respectively.

The 2020 Programme of Regional Development plans the following indicators of access to the centralized water disposal system in 2019: 97 per cent for the urban population and 13 per cent for the rural population⁴³.

The length of sewerage networks was 15,227.7 km at the end of 2015, which was 3.4 per cent more than at the end of 2011. Between 2011 and 2015, 914.8 km of sewerage networks were put into operation. The number sewerage networks accidents decreased by 40 times (from 30,901 to 784 accidents per year) in this period and reached 0.05 accidents/km of networks at the end of 2015.

The share of sewerage networks in the Republic of Kazakhstan that needed replacement was 36.2 per cent at the end of 2015. This being the case, 63 per cent of sewerage networks need replacing in Mangystau Region, as well as 45 per cent of networks in the city of Almaty⁴⁴. According to the 2020 Programme of Regional Development, the deterioration of sewerage networks in most cities (regional centers) was 60–75 per cent in 2015.

The share of treated wastewater in the total volume of wastewater in the central sewerage systems increased from 79.4 per cent to 82.6 per cent between 2011 and 2015, which indicates an improvement in the condition of the sewage treatment facilities. The share of treated wastewater is 100–99 per cent in the cities of Astana and Almaty, West Kazakhstan Region and Zhambyl Region. The lowest volume of treated wastewater is 35.5 per cent in Atyrau Region.

Heat supply

40.3 per cent of the housing stock in Kazakhstan are provided with centralized heat supply. This figure was the same in the last five years. Centralized heat supply prevails in urban settlements (62.5 per cent of urban housing stock) and is practically non-existent in rural settlements (only 3.2 per cent of rural housing stock). The highest level of centralized heat availability can be found in urban settlements of Mangystau Region — 83.9 per cent of the urban housing stock of the region. The availability of centralized heat supply in the housing stock of the cities of Astana and Almaty is 76.3 per cent and 70.7 per cent, respectively.

⁴⁰Statistical reporting form 1-VC for 2015, source: <http://stat.gov.kz/>

⁴¹ *On the Operation of Water Supply and Sewerage Facilities in the Republic of Kazakhstan*, Statistical Bulletin, 2015.

⁴² National report for the United Nations conference on housing and sustainable urban development – HABITAT III Astana, 2016

⁴³The 2020 Program of Regional Development was approved by the Resolution of the Government of the Republic of Kazakhstan dated 28 June 2014, No. 728 (as amended by the Resolution of the Government of the Republic of Kazakhstan dated 30 July 2016, No. 449)

⁴⁴Statistical reporting form 1-VC for 2015, source: <http://stat.gov.kz/>

In 2015, there were 2,527 sources of heat supply, there were generated 81.0 million gigacalories of heat energy, including 51.0 million gigacalories by thermal power plants (63 per cent), 27.5 million gigacalories by boiler plants (34 per cent). The population consumes about 30 per cent of the heat energy supplied to consumers.

The total length of two-pipe heat supply networks is 11.9 thousand kilometers. 302 kilometers of heat supply networks were put into operation in 2011–2015.

The share of heat supply networks in need of replacement increased from 26.5 per cent to 31.1 per cent between 2011 and 2015. The largest increase in the share of networks that required replacement was in Almaty — from 20.8 per cent to 56.6 per cent. At the same time, the share of networks that required replacement decreased in some regions. For example, this indicator decreased from 57.7 per cent to 30.8 per cent in the Almaty Region, and from 25.9 per cent to 4.9 per cent in the West Kazakhstan Region⁴⁵.

The number of heat supply network accidents decreased from 334 to 81 between 2011 and 2015. The loss of thermal energy in the heat supply networks in the Republic of Kazakhstan increased from 9.4 per cent in 2011 to 13.2 per cent in 2015. The loss of thermal energy in 2015 amounted to 8.7 million gigacalories.

Power supply

In 2015, the population was supplied with 11,115.5 million kW·h of electric energy (13.5 per cent of the total volume of electricity supplied to consumers — 82,198.0 million kW·h)⁴⁶.

Electric energy is used in the housing stock of Kazakhstan mainly for lighting purposes. Only 9.5 per cent of the housing stock are equipped with floor-mounted electric stoves (14.5 per cent of the urban housing stock and 1 per cent of the rural housing stock). In some regions, the use of electrical energy for cooking is significantly higher than across the board in the country: in Pavlodar Region, 52.3 per cent of the housing stock (74.2 per cent of the urban housing stock and 1.5 per cent of the rural housing stock) are equipped with floor-mounted electric stoves, while in Karaganda Oblast — 26.5 per cent of the housing stock (31.6 per cent of urban housing stock and 6.5 per cent of rural housing stock). The Astana housing stock equipped with floor-mounted electric stoves increased from 29.9 per cent to 54.1 per cent between 2011 and 2015. At the same time, the share of such housing stock in Almaty decreased from 9.1 per cent to 2.1 per cent.

Power supply sector has the largest share of networks requiring repair across the entire utility sector. Thus, 97.5 thousand kilometers or 73 per cent of 0.4 kV electric networks require repairs out of the total length of 133.6 thousand kilometers. Moreover, 10/0.4 kV transformer substations, domestic switchgears and internal networks also require repairs⁴⁷.

Technological losses of electrical energy in electric networks decreased from 6.8 per cent to 5.1 per cent between 2011 and 2014. In Astana, the electrical energy losses in the networks decreased from 14.5 per cent to 6.5 per cent, while in Almaty — from 11 per cent to 5.5 per cent. The level of electrical energy losses remains high in some regions: 12.0 per cent in Almaty Region, 10.7 per cent in Akmola Region, 10.1 per cent in West-Kazakhstan Region, and 8.2 per cent in Karaganda Region⁴⁸.

Gas supply

At the beginning of 2015, there were 44 natural gas distribution companies⁴⁹, and 18 liquefied gas distribution companies in the Republic of Kazakhstan.

The number of human settlements supplied with natural gas increased from 670 to 914 (12.8 per cent out of the total of 7,152 human settlements in the Republic of Kazakhstan) between 2011 and 2015. The length of gas

⁴⁵Source: Statistics Committee of the Ministry of National Economy of the Republic of Kazakhstan <http://stat.gov.kz/>, Statistical reporting form 6-TP (2015)

⁴⁶*Housing and Utilities*, Statistical Compendium, Astana, 64 pages

⁴⁷2020 Program of Regional Development.

⁴⁸Source: The Statistics Committee of the Ministry of Economy of the Republic of Kazakhstan <http://stat.gov.kz/>, Electrical Balance of the Republic of Kazakhstan, Consultant's estimates.

⁴⁹*Housing and Utilities*, Statistical Compendium, Astana, 64 pages

networks increased from 20.25 to 27.11 thousand kilometers. 8.3 thousand kilometers of gas networks were put into operation.

Citizens of 32 cities, 4 towns and 878 rural settlements use natural gas. Another 12 human settlements are supplied with liquefied gas.

In 2014, the population was supplied with 3,220.4 million m³ of natural gas (37.3 per cent of the total volume of 8,639.4 million m³ of natural gas supplied to consumers) and 18,375 tons of liquefied gas (77.7 per cent of the total of 23,644 tons of liquefied gas supplied to consumers).

The loss of natural gas amounted to 206.5 million m³ in 2015 (2.4 per cent of the supplied volume of gas). The share of street gas network in need of repair was 2.1 per cent in 2015 (for comparison, 0.6 per cent of street gas network was in need of repair in 2012)⁵⁰.

Municipal infrastructure modernization and development programmes

To address the problem of significant depreciation of municipal infrastructure and to increase population's access to public services, the Government of Kazakhstan adopted several state programmes. Thus, the State Programme of Modernization of Housing and Communal Services for 2011-2020⁵¹ plans to modernize over 24.4 thousand kilometers of networks by 2015 (and another 6.7 thousand kilometers of networks within the Ak-Bulak Programme). The Programme aims to reduce the share of networks that need to be replaced: heat supply networks – down to 55 per cent by 2015 and down to 40 per cent in 2020; power supply networks – down to 68 per cent by 2015 and down to 53 per cent in 2020; gas supply networks – down to 51 per cent by 2015 and down to 38 per cent in 2020.

In 2014, the objectives of the Programme of Modernization of Housing and Communal Services related to the modernization (reconstruction and construction) of municipal infrastructure became part of the new 2020 State Programme of Regional Development. This programme planned to modernize 4 per cent of heat, power and gas supply networks in 2015, and later on around 1.5 per cent of networks annually between 2016 and 2019. Over 1.5 thousand kilometers of heat supply networks, 12 thousand kilometers of power supply networks, 3 thousand kilometers of gas supply networks, and about 8.8 thousand kilometres of water supply networks and 1.2 thousand kilometres of water disposal networks are supposed to be modernized (constructed) under the programme between 2015 and 2019. By 2020, the number of water supply network accidents is supposed to be reduced to 0.3 per 1 kilometer of networks, for water disposal networks – 0.1 per 1 kilometer of networks.

The modernization (reconstruction and construction) objectives related to housing and utilities infrastructure, as well as heat and water supply and disposal systems are addressed by the Nurlı Zhol State Programme of Infrastructure Development for 2015–2019⁵². This Programme plans to upgrade around 1 thousand kilometers of heat supply networks and about 6 thousand kilometers of water supply and disposal networks where losses and accidents indicators are at the highest. As a result, it is planned to decrease the depreciation of heat and water supply and disposal networks to 53 per cent (by contrast, the depreciation of networks amounted to 67 per cent in 2015) by 2020. The share of standardly treated sewage water in the discharge process should be 100 per cent in cities.

By and large, KZT 300 billion are allocated to the regions from the Republican budget annually for the development of engineering infrastructure. Infrastructure modernization and development projects are financed through budgetary loan facilities (via LEAs to housing and communal enterprises), subsidies (infrastructure subsidies from the Republican budget), and loans from international financial organizations. The joint-stock company "Kazakhstan Center for Modernization and Development of Housing and Communal Services" is an operator that provides infrastructure grants (subsidies).

⁵⁰Source: The Statistic Committee of the Ministry of Economy of the Republic of Kazakhstan <http://stat.gov.kz/>. Statistical form "Operation of enterprises supplying natural and liquefied gas in the Republic of Kazakhstan"

⁵¹ Approved by the Decree of the Government of the Republic of Kazakhstan dated 30 April 2011, No. 473. Ceased to be in force by the Decree of the Government of the Republic of Kazakhstan dated 28 June 2014, No. 728.

⁵² Approved by the Decree of the President of the Republic of Kazakhstan dated 6 April 2015, No. 1030.

According to the Committee on Construction and Housing and Communal Services under the Ministry of National Economy, the European Bank for Reconstruction and Development is financing eight municipal infrastructure modernization projects in the regions of Kazakhstan for USD 109 million.

6. Relationships in the Provision of Public Services to the Population

In accordance with the Law on Housing Relations of the Republic of Kazakhstan (1997), public services include not only services of water, sewerage, gas, electricity and heat supply provided to consumers, but also garbage disposal and elevator maintenance services⁵³.

Until recently, relations between the consumers of public services (citizens) and providers of public services were regulated by Law No. 1822 “on Rules of Utility Services Provision” of 7 December 2000. In 2014, the Law of the Republic of Kazakhstan No. 239-V ZRK of 29 September 2014, transferred the powers to approve the rules of utility services provision to local public authorities of the regions and cities of Astana and Almaty. Akimats of all regions, Astana and Almaty approved the rules of utility services provision in the relevant areas in 2014–2016. In fact, these rules repeat the text of the rules of utility services provision previously established by the government (with the exception of the Rules of Utility Services Provision in the City of Almaty⁵⁴, which are differentiated by the types of utility services and make use of Rules of Electric Power Usage⁵⁵, Rules of Heat Energy Usage⁵⁶, and other special regulatory documents).

In accordance with the legislation of the Republic of Kazakhstan, utility services are provided on the basis of individual agreements between organizations providing utility services (utilities providers) and end consumer (citizen). Model agreements for providing consumers with utility services are developed and approved by an authorized government agency⁵⁷. Utility services for communal needs in multiapartmenthousing are provided on the basis of agreements between providers of utility services and a cooperative of homeowners (owners of apartments) or any other management authority of an apartment building. Requirements to consumer properties and mode of service provision are established by standard technical documents (national standards and technical regulations).

Consumers are supposed to pay utility service bills issued by providers of public services every month on the basis of information from the metering devices and established rates of utility services. Metering devices are supposed to be installed by providers of utility services. In accordance with the regulations, users shall reimburse the cost of acquiring and installing meters to the providers through the rate of the relevant utility service. Yet, between 1 July 2012 and 1 January 2014, low-income families (citizens) living in privatized apartments and individual residential houses, as part housing assistance⁵⁸ and at the expense of the local budgets, were provided with compensation for the cost of single-phase electrical energy meters with the accuracy class not lower than 1, with a differentiated readings and time-based energy consumption control, installed to replace single-phase electrical energy meters with 2.5 accuracy class in accordance with the invoice provided by a supplier of electrical energy⁵⁹. This means that the cost of replacement of outdated electrical energy meters has not been included in the electrical energy tariffs.

Although the information is not available, it is possible to assume that homes are fully equipped with electric and gas metering devices. 79 per cent of consumers (88 per cent of urban population and 71 per cent of rural population) were provided with water metering devices in 2015⁶⁰. The 2020 Programme of Regional Development plans to provide 95 per cent of consumers with water metering devices in 2019.

⁵³Paragraph 10 of Article 2 of the Law on Housing Relations of the Republic of Kazakhstan dated 16 April 1997, No. 94

⁵⁴Approved by the Resolution of Akimat of the city of Almaty dated 11 May 2016, No. 2/186

⁵⁵Approved by the Order of the Minister of National Economy of the Republic of Kazakhstan dated 25 February 2015, No. 143.

⁵⁶Approved by the Order of the Minister of Energy of the Republic of Kazakhstan dated 18 December 2014, No. 211.

⁵⁷Model agreements for the provision of utility services were approved by the Order of the acting Minister of National Economy of the Republic of Kazakhstan dated 27 March 2015, No. 266.

⁵⁸Housing assistance is a benefit to low-income families to pay for housing and communal services

⁵⁹In accordance with the Law No. 542-IV of the Republic of Kazakhstan as of 13 January 2012

⁶⁰National report for the United Nations conference on housing and sustainable urban development – HABITAT III Astana, 2016

Utility service providers are required to monitor the consumption of utility services and consumers' payments, and are entitled to suspend the provision of services if consumers fail to pay for the services within the time limits stipulated in agreements.

The system of direct contractual relations between utility service providers and end customers (citizens) assumes that consumers receive separate bills for each type of utility services. According to Rules of Utility Services Provision in the City of Astana⁶¹, the city established a universal payments center to service consumers and issue a single billing document (invoice) to pay for utility and housing services. The objective of the universal payments center is to form a single database of users of all utility services, which provides information on the number of residents in apartments and homes (residential buildings), total floor area of apartments and homes, level of their improvement, types of utility services, standard rates of service consumption (if any), amounts of consumed utility services, assessed amounts, payments made, information about metering devices and their readings, details of concluded utility services agreements, and other information. The database of consumers belongs to the local executive authority (Astana City Akimat).

The universal payments center operates on the basis of agreements with utility services providers, and housing services providers. In accordance with concluded agreements, the Universal Payments Center has the following functions: to keep records of consumers of utility services; to organize the process of concluding utility services agreements with consumers; to take readings and check metering devices; to calculate (recalculate) utility payments for the provided services to present them for payment to consumers; to generate, print, and deliver single billing document (invoice) to consumers; to organize the collection of payments for utility services through second-tier banks and other organizations with relevant licenses; to collect bills receivable for delivered utility services from consumers in accordance with pre-trial and legal procedures; to accept consumers' applications for customer support services; to organize the operation of a call center; to analyse the actual volumes of and payments for provided utility services; to ensure communication between consumers and service providers.

The legislatively defined system of relations between providers of public services and organizations that manage apartment buildings seems to be contradictory. On the one hand, the rules of utility services provision approved by the Government (2000), and then by LEAs (2014–2016), established that is the responsibility of utility services provider to ensure proper technical maintenance and safety of communal networks and metering devices and it is fulfilled on the basis of a separate agreement with a cooperative of apartment owners or other authorized representatives of consumers. This means that there is supposed to be a paid services agreement between a house management organization and utility services provider, under this agreement the provider is obliged to independently (if it has a permission to) or using the resources of a specialized organization that has a license (permission) to such type of activities, maintain interior networks through which utility services are delivered to consumers in an apartment building, a cooperative of apartment owners is supposed to pay for this work from the contributions of homeowners for the maintenance of community property. On the other hand, in accordance with powers established by the Law on Housing Relations of the Republic of Kazakhstan⁶², the authorized government agency (Ministry of National Economy) approved model agreements of cooperation between condominium management authorities and market entities that provide utility services to end consumers⁶³. According to these model agreements, utility services providers are entitled to (i.e. not obliged) to maintain internal engineering networks, through which services are provided to consumers, and to organize validation and verification of communal metering devices. An organization managing apartment buildings is obliged to preserve and ensure proper technical condition and operation of internal networks (independently or with assistance of third parties to complete repairs and service checks). Model cooperation agreements do not suggest any financial relationship between the providers of public services and condominium management authorities.

It is not clear from the text of the model agreements of cooperation between condominium object management authorities and market entities providing utility services to end consumers why there is a need for and what is the value of cooperation between these organizations. In addition, when cooperation agreements are made and management authorities of apartment buildings assume obligations to ensure proper technical condition of internal networks, it is not established who is liable to the end consumers for the violation of the provision mode or quality

⁶¹Approved by the Resolution of Astana City Akimat dated 30 April 2015, No. 115-638.

⁶² Paragraph 10–11 of Article 20-2 of the Law on Housing Relations

⁶³Approved by the Order of the Minister of National Economy of the Republic of Kazakhstan dated 19 February 2015, No. 109.

of utility services — a provider of municipal services or a condominium management authority, how those responsible are identified and how the losses incurred by the party not at fault are compensated.

7. Tariffs Policy

Pursuant to the Law on Housing Relations of the Republic of Kazakhstan, payments for utility services in dwellings of all forms of ownership are charged at rates approved in accordance with procedures established by the Government of the Republic of Kazakhstan. This procedure is established by the Rules of Approval of Tariffs (Prices, Rates of Charges) and Tariff Estimates of Regulated Services (Goods, Works) of Natural Monopoly Entities⁶⁴.

In accordance with the Law on Natural Monopolies⁶⁵ of the Republic of Kazakhstan dated 9 July 1998, No. 272, the approval of tariffs for public services for end consumers is within the scope of functions of the Committee on Regulation of Natural Monopolies and Protection of Competition under the Ministry of National Economy of the Republic of Kazakhstan. To approve new tariffs, utility enterprise is required to attach draft tariffs and tariff estimates for the provided services and other substantiating documents to its application. Tariff estimates are developed in accordance with the Special Costing Procedure used to approve tariffs (prices, rates of charges) for regulated services (goods, works) of natural monopolies entities⁶⁶. The Committee on Regulation of Natural Monopolies and Protection of Competition shall make an expert examination of draft tariffs and tariff estimates and shall submit the draft tariff proposed by utility enterprise for discussion at a public hearing⁶⁷.

Public-private partnership agreement (concession agreement) stipulates a procedure of formation and approval of tariffs for regulated services (goods, works) of natural monopolies entities operating under public-private partnership agreement, including the concession agreement.

There is a special procedure for the approval of threshold levels of tariffs for a five-year term or longer for holders of natural monopolies that implement investment projects and bring in borrowed assets of international financial organizations⁶⁸.

The legislation of the Republic of Kazakhstan permits establishing tariffs for utility services, differentiated by consumer groups or consumption volume, and other indicators (by day zones, availability or non-availability of a metering device), as well as establishing investment rates (if there is an approved investment programme) until full cost recovery of investments made.

Tariffs for utility services in Kazakhstan are not subsidized from the budget, but when establishing tariffs cross-subsidization is widely used: tariffs for the population are set below the economically feasible level, while tariffs for other groups of consumers are set above the economically feasible level (Table 3).

⁶⁴ Approved by the Order of Chairman of the Agency of the Republic of Kazakhstan on Regulation of Natural Monopolies dated 19 July 2013, No. 215-OD (as amended by the Order of the acting Minister of National Economy of the Republic of Kazakhstan dated 27 March 2015, No. 273)

⁶⁵ As amended by the Law of the Republic of Kazakhstan dated 29 October 2015, No. 376-V (effective as of 1 January 2017)

⁶⁶ Approved by the Order of Chairman of the Agency of the Republic of Kazakhstan on Regulation of Natural Monopolies dated 25 April 2013, No. 130-OD (as amended by

⁶⁷ Rules of public hearings during consideration of applications for the approval of tariffs (prices, rates of charges) or their threshold levels with regard to regulated services (goods, works) of natural monopoly entities, as well as draft prices for goods (works, services) of regulated market entities in electrical energy industry were approved by the Order of the Minister of National Economy of the Republic of Kazakhstan dated 17 March 2015, No. 219

⁶⁸ A special procedure for regulation of the activities of natural monopolies holders bringing in loans from international financial organizations included in the list of natural monopolies holders bringing in loans from international organizations, was approved by the Order of acting Minister of National Economy of the Republic of Kazakhstan dated 24 November 2015, No. 710.

Table 3
Cold water supply rates (as of September 2016)

| No. | Region | Consumer groups | Rates, KZT/m ³ |
|-----|---------------------------------|--|---------------------------|
| 1 | Astana | Population | 44.55 |
| | | Thermal organizations | 140.56 |
| | | Budgetary organization | 194.47 |
| | | Legal entities | 194.47 |
| 2 | Almaty | Population | 49.61 |
| | | Thermal organizations | 49.61 |
| | | Other consumers | 136.37 |
| 3 | Akmola Region | Population | 63.33 |
| | | Thermal and budgetary organizations | 112.7 |
| | | Legal entities | 147.45 |
| 4 | Aktobe Region | Population | 66.28 |
| | | Thermal organizations | 93.74 |
| | | Budgetary organization | 231.92 |
| | | Other consumers | 231.92 |
| 5 | Almaty Region | Population | 60.79 |
| | | Thermal and budgetary organizations | 130.13 |
| | | Legal entities | 145.56 |
| 6 | Atyrau Region | Population | 101.33 |
| | | Legal entities | 316.72 |
| 7 | East Kazakhstan Region, Oskemen | Population | 49.58 |
| | | Thermal organizations | 85.09 |
| | | Legal entities | 192.48 |
| | East Kazakhstan Region, Semey | Population | 45.55 |
| | | Thermal organizations | 38.81 |
| | | Legal entities | 126.96 |
| 8 | Zhambyl Region | Population, consumption of under 3 m ³ | 24.07 |
| | | Population, consumption of over 3 m ³ and up to 4 m ³ | 36.65 |
| | | Population, consumption of over 3 m ⁴ without individual metering devices | 105.43 |
| | | Budgetary organization | 60.98 |
| | | Thermal organizations | 36.65 |
| | | Legal entities | 105.43 |
| 9 | West Kazakhstan Region | Population | 44.64 |
| | | Budgetary organization | 346.41 |

| No. | Region | Consumer groups | Rates, KZT/m ³ |
|-----|--------------------------------|---|---------------------------|
| | | | |
| | | Legal entities | 268.51 |
| 10 | Karagandy Region Karaganda | Population | 98.45 |
| | | Budgetary organization | 534.38 |
| | | Okjetpes, LLP | 65.25 |
| | | Karaganda Energocentr, LLP | 80.15 |
| | | Teplotransit Karaganda, LLP | 98.94 |
| | | Industrial enterprises with consumption of less than 5,000 m ³ | 320.63 |
| | | Industrial enterprises with consumption of over 5,000 m ³ | 534.38 |
| | Karagandy Region Zhezkazgan | Population | 36.67 |
| | | Other consumers | 101.72 |
| 11 | Kostanai Region | Population | 69.83 |
| | | Thermal organizations | 69.83 |
| | | Other consumers | 142.53 |
| 12 | Kyzylorda Region | Population | 54.32 |
| | | Thermal organizations | 66.1 |
| | | Budgetary organization | 85.3 |
| | | Other consumers | 164.62 |
| 13 | Mangistau Region | Population | 209 |
| | | Legal entities and population without individual metering devices | 291.93 |
| 14 | Pavlodar region | Population with individual metering devices | 26.31 |
| | | Population without individual metering devices | 39.32 |
| | | Budgetary organization | 132.03 |
| | | Legal entities | 67.93 |
| 15 | North Kazakhstan Region | Population | 67.88 |
| | | Budgetary organization, other consumers | 190 |
| 16 | South Kazakhstan Oblast | Population, thermal organizations | 68.9 |
| | | Budgetary organization | 308.21 |
| | | Legal entities | 239.09 |

Source: The Committee on Regulation of Natural Monopolies and Protection of Competition under the Ministry of National Economy of the Republic of Kazakhstan

Tariffs that are applied to the services of centralized water supply and disposal, heating, power and natural gas supply are differentiated with respect to consumer groups. Some areas have universal tariffs for certain types of utility resources for all consumer groups.

Over five years (from 2011 to 2015), average tariffs for cold water supply increased by 33 per cent, tariffs for water disposal – 55 per cent, for heat supply – 32 per cent, for hot water and power supply – 29 per cent, for gas supply – 36 per cent. Inflation for the same period amounted to 36 per cent. At the same time, the growth of tariffs did not substantially increase the cost burden of housing and utility services for the population. Such costs amounted to 3.7 per cent of nominal money income and 7 per cent of consumer spending in 2015.

The existing tariffs for municipal services only cover operating activities of public utility companies. The established tariffs prevent utility enterprises from making the required investment in the development and upgrading of municipal infrastructure and result in the fact that municipal sector is financed from the budget. At the same time, the statistics on the unprofitability of public utility enterprises demonstrate that the financial conditions of all utility enterprises have been deteriorating for the last five years.

According to the Committee on Regulation of Natural Monopolies and Protection of Competition under the Ministry of National Economy of the Republic of Kazakhstan, there are plans to eliminate cross-subsidization step by step when establishing differentiated tariffs for public services for different consumer groups and to move towards economically justified tariffs, while improving the system of social assistance for the population.

8. Provision of Budgetary Subsidies to Cover Costs of Public Utilities and Housing Maintenance

With regard to the payments for housing and utility services (affordability of housing and utility services), the tariffs for utility services for the population are kept low to support the population of the Republic of Kazakhstan; this is done through cross-tariff subsidies to various consumer groups and direct budget subsidies and loans to utility enterprises, as well as subsidies to the families whose incomes are low because they have to pay for housing and utility services.

Pursuant to the Law of the Republic of Kazakhstan on Housing Relations (Article 97), the government shall take measures to provide assistance to low-income families (citizens) to pay for the maintenance of the community property of a condominium object, utility services, and telephone service and to pay rental fees for the use of a house from the private housing stock, which is leased by LEAs (what is known as "housing assistance").

The availability of housing assistance (a subsidy) depends not only on the household income and the cost of housing and utility services, but also on other characteristics of the household. Thus, when calculating the entitlement to housing assistance, the cost of maintaining community property of a condominium object (in an apartment building) is only taken into account for owners of privatized homes and tenants of homes in the public housing stock. Rental costs are taken into consideration only for those citizens whose housing is provided by LEAs, which rent homes in the private housing stock. When providing housing assistance, only utility costs are taken into consideration for low-income households.

Pursuant to the Rules of Housing Assistance Provision⁶⁹, the right to such budgetary subsidy belongs to households whose expenses for the established list of housing and utility services exceed the maximum permissible level of expenses for these purposes in the aggregate income of the family. The housing assistance is provided from the local budget. To provide housing assistance local representative authorities (maslikhats) of cities and districts establish a maximum permissible level of household payments for housing and public services. At the republican level, there is no normative or recommendatory document for local representative authorities to stipulate the percentage of maximum permissible expenses of the family for the calculation of housing assistance. The maximum permissible level of households' expenditure on housing and public services, which is established by the decision of a maslikhat, varies from 2 per cent to 20 per cent. The most typical figure for this indicator is 10-15 per cent. In Almaty, the share of families' maximum permissible expenses for utility and other services is set at 10 per cent, while in Astana at 8 per cent. Differences in the rules of housing assistance provision, adopted by local representative authorities, resulted in an extremely high level of regional differentiation with regard to the share of housing assistance recipients — from 0.2 per cent in Almaty to 5.6 per cent of households in the Zhambyl Region.

Housing assistance is allocated by a local executive authority of a city or a district, whose powers include social protection of the population. Citizens' applications for housing assistance are submitted to and notices of housing

⁶⁹ Resolution of the Government of the Republic of Kazakhstan No : 2314 "on Rules of Housing Assistance Provision " of 30 December 2009, No. 2314.

assistance are issued by the non-profit Joint Stock Company "State Corporation 'Government for Citizens'" or through the e-government web portal (www.egov.kz). The allocation of housing assistance is a public service and it is carried out in line with the approved standard for the provision of public services⁷⁰.

According to the Ministry of Health and Social Development of the Republic of Kazakhstan, the number of households that receive housing assistance decreased more than twice between 2008 and 2015, and by 35 per cent over the past five years: while in 2011 the housing assistance was allocated to 145 thousand households, in 2015 it was allocated only to 93.9 thousand households (about 2 per cent of all households). At present, the share of housing assistance recipients is less than that of the population with incomes below the subsistence level (2.7 per cent). According to the expert assessment based upon the per-capita-income distribution of households, around 17 per cent of all households could claim housing assistance under existing conditions.

Over this period, the average amount of allocated housing assistance increased by 28 per cent – from KZT 1,697.9 per month in 2011 to KZT 2,179 per month in 2015. Housing assistance mainly compensates household for their expenses for utility bills. In 2015, expenses for utility services amounted to 95.92 per cent of the gross volume of housing assistance allocated to urban households, and 81.42 per cent of the housing assistance to rural households.

Within the programme of technical assistance to the Government of the Republic of Kazakhstan in reforming tariff policies and regulating the activities of natural monopolies in the municipal sector, the European Bank for Reconstruction and Development is currently assisting the Government in improving the system of social support for the population with regard to the payments for housing and communal services.

Chapter 4

Housing Management and Maintenance

A. Framework of housing stock management

Pursuant to Article 6 of the Law “on Housing Relations”, housing stock is managed directly by the owner or through authorities established (appointed, elected) by the owner, as well as through proxies.

For an apartment building that is an object of a condominium, Article 42 of the Law “on Housing Relations” envisages the following forms of management:

- direct joint management by all owners, if there are not more than twenty of them;
- cooperative of homeowners (apartment owners);
- condominium management by third parties: elected or hired individuals — managers of residential houses or legal entities;
- other forms, which are consistent with the legislation of the Republic of Kazakhstan (various forms of cooperatives are created in practice).

The law defines an individual or legal entity exercising the functions of condominium object management as a "condominium object management authority."

Within a month after the establishment of the condominium, homeowners of an apartment building should choose their form of condominium management at their general meeting. If homeowners of an apartment building came to an agreement on the form of its management, and condominium was established following the privatisation of homes, the privatizing authority can suggest that homeowners establish a cooperative of homeowners (apartment owners) or engage a manager. For new apartment buildings put into operation after the completion of the construction, a housing inspection authority shall identify an organization to maintain the house for a period of 3

⁷⁰ The standard for the public service "Allocation of Housing Assistance" was approved by the Order of the Minister of National Economy of the Republic of Kazakhstan No. 319 of 9 April 2015. Available from <http://adilet.zan.kz/rus/docs/V1500011015#z6>

months⁷¹, if homeowners have not chosen the form of management. In this case, the maintenance organization at the same time performs the condominium management functions.

Article 42-1 of the Law “on Housing Relations” identified a list of issues related to the management and maintenance of apartment buildings, which require the approval of a general meeting. Such issues include:

- choosing or changing the form of condominium management;
- approval and management of contributions to the maintenance of the common property of the condominium;
- decision on the conclusion, amendment or termination of the condominium management contract;
- changes to the legal cadastre by judicial authorities [to establish and change the size of shares in the right to the community property in a multi-family house];
- changes to residential building (expansion, modernization, technical upgrade, reconstruction, restoration, refurbishment);
- identification of the amount of monthly contributions for refurbishment of the common property of the condominium object or for the accumulation of funds for refurbishment on the savings account;
- the expenditure of money accrued on the savings account;
- choice of, and/or refusal from the services of a maintenance organization;
- approval of the cost estimate for the refurbishment of the common property of the condominium.

A homeowner in an apartment building shall have one vote at the general meeting. If one owns more than one apartment in the building, he or she would have as many votes as number of apartments owned in the condominium have the respective number of votes.

According to the Law on Housing Relations, the general meeting is authorized to adopt decisions only if at least 2/3 of the homeowners are present. Making decision requires a majority of the votes of participants of the meeting. Yet, if at least 1/5 of voices out of the total number of votes of all homeowners will be submitted against the proposed decision when considering items 2, 6, 7, 8 and 9 from the list of items mentioned above, the law requires the item to be reconsidered at the general meeting. Taking decision during the reconsideration requires at least 2/3 in its favour out of the total number of votes of homeowners. Because there are complicated rules established in respect of the issues related to homeowners' expenses on management, maintenance and refurbishment of common property, it is a big problem to make decisions on such items at the general meeting.

If it is not possible to provide a quorum at a general meeting, the Law on Housing Relations provides a possibility of adopting decisions by a written survey of homeowners. It is required that at least 2/3 of homeowners take part in such a survey, and the decision is adopted if it is voted for by more than a half of homeowners in an apartment building. Thus, a decision by written survey to be adopted requires a more votes than adopting it during the meeting.

Local experts note that greater difficulties with decision-making by general meetings of homeowners of apartment buildings result from excessive requirements of the Law on Housing Relations to the quorum of the general meeting and the number of votes required for decision-making, as well as from poor activity of homeowners.

The Law on Housing Relations regulates the establishment and activities of a co-operative of homeowners or apartment owners (widely-used abbreviation is CHO). A CHO is a non-profit organization established by homeowners (apartment owners) for the joint management of community property of an object of condominium. The law permits the establishment of a CHO to manage not only a single apartment building, but also a group of buildings. Taking decision on the establishment of a CHO requires at least 2/3 of the votes of the statutory meeting participants. The statutory meeting should be attended by at least a half of homeowners or their proxies. If the general meeting is not held there should be conducted a written survey of more than 2/3 of owners. The CHO shall acquire rights of a legal entity from the date of its registration.

The Law does not explicitly determine whether the CHO membership is compulsory for all homeowners (apartment owners) after its establishment. Given that the law stipulates that a CHO member is a homeowner (apartment owner) in a condominium object, and a founder of the cooperative or a member of the cooperative

⁷¹In accordance with the amendments made to the Law on Housing Relations by the Law of the Republic of Kazakhstan No. 270 (V) of 29 December 2014.

admitted on the basis of submitted application, it is possible to make a conclusion that membership in the cooperative of homeowners (apartment owners) is voluntary. Consequently, following the establishment of CHOs the decision-making powers related to the management of apartment buildings belong to two different general meetings with different compositions of participants — a general meeting of homeowners of apartment buildings and a general meeting of cooperative members. There is no clear delineation of powers of these two general meetings, which seems to be especially important if CHO manages several apartment buildings and homeowners from different buildings take part in the general meeting of the CHO members. It is not specified whether the decision of the general meeting of one of the apartment buildings (every building) is binding for CHO.

The decision-making rules of the general meeting of CHO members are as complicated as those of the general meeting of homeowners, the required number of votes to take a decision is also high (for the most important issues it is at least 2/3 of votes of the cooperative members). Therefore, the establishment of a CHO does not provide a quick and easy way of taking decisions on the management of apartment buildings.

In the legislation of Kazakhstan, the cooperative of homeowners (apartment owners) is regarded as a non-profit management organization rather than a method of self-organization of homeowners in an apartment building for the joint management of shared property and representation of common interests. To increase the professional level of CHO activities, the housing inspection authority is granted the right to recommend to the general meeting of homeowners a candidate for the position of the chairman of the board of the cooperative, who is supposed to meet the qualification requirements established by an authorized government agency (Ministry of National Economy).

The Law on Housing Relations makes no difference between CHOs (associations of owners) and third parties engaged for management (managers, managers of organizations) when regulating the activities of condominium object management. Thus, the amendments made to the Law on Housing Relations in 2014 prohibited the condominium management authorities, including CHOs, from independent maintenance of the common property in apartment buildings that they manage. It is required to conclude agreements with service providers to service companies for maintenance and repair of the common property. The management authorities, including CHOs, are supposed to open for each apartment building (condominium object) a separate bank account for homeowners to make contributions (payments) for the maintenance and repair of common property of the apartment building. At the same time, it is not specified that the funds on such bank accounts belong to homeowners of an apartment building and cannot be spent on the needs of other apartment buildings.

In general, the legislative regulation of the issues related to the management of apartment buildings is quite complicated, especially for understanding and application by homeowners of apartment buildings, and it establishes excessive requirements for decision-making by the owners of the common property in apartment houses, and unwarranted restrictions with regard to the activities of cooperatives of apartment owners. At the same time, there is no regulation of the issues concerning multi-house CHOs in particular. All of this results in quite serious problems in management and maintenance of apartment buildings.

Despite numerous changes repeatedly made to the Law on Housing Relations, local experts and representatives of cooperatives of homeowners (apartment owners) believe that it is essential to continue with further comprehensive changes to the legislation related to the management of apartment buildings and CHO activities.

The Law on Housing Relations envisages government control of housing stock management. The control is effected by housing inspection authorities of local executive bodies (akimats). Housing inspection authorities make inspections of the technical condition of apartment buildings, observance of the rules of condominium common property management, activities of management authorities. The inspections are made in accordance with the Entrepreneurial Code of the Republic of Kazakhstan.

Practices of management and maintenance of multi-family housing stock

Co-operatives of homeowners (apartment owners) are the predominant form of managing apartment buildings/items of condominium in Kazakhstan. According to the information of the COH Association of Astana, about 340 COHs operate in the capital, and about 2,400 CHOs across Kazakhstan.

Large scale establishment of CHOs was the result of the changes to the apartment buildings management system after the privatization of the public housing stock, when CHOs were established by the decision "from above" to

replace public housing maintenance organizations, and not as a result of the independent choice of homeowners in apartment buildings. Many apartment buildings were transferred in the management of such CHOs (50–70 houses in one CHO).

Later on, there began to emerge CHOs created on the initiative of homeowners of a single apartment building or a small number of buildings, those were detached from large CHOs. Information and methodical activities of several UNDP projects in Kazakhstan contributed to the creation of single-house and small CHOs. Some CHOs have good experience of interaction with the homeowners and their engagement in making decisions about the management of their houses. Several CHOs took part in UNDP demonstration projects to improve the energy efficiency of apartment buildings.

With the support of UNDP, there were established CHO associations of Kazakhstan, CHO associations of Astana and Almaty, regional and city associations. CHO associations are engaged in dissemination of legal and methodological information among CHOs and apartment owners to exchange best practices. CHO associations currently represent the interests of homeowners and their non-profit unions in the dialogue with central and local public authorities, including the development of apartment building management legislation.

Despite the success of some single-house and small CHOs, so far multi-house CHOs are dominating the management sphere. The programme of modernization of housing and communal services of the Republic of Kazakhstan in 2011-2020⁷², noted as one of the problems of apartment building management and maintenance that CHOs have a monopolistic position in the market, provide management services, and maintain and repair apartment buildings using their own resources. Apartment owners are dissatisfied with the poor quality of CHO services. This results in poor collection of homeowners' payments for the maintenance and repair of apartment buildings. At the same time, the Programme noted low activeness of apartment owners in managing their houses: they do not make decisions about changing the form of management, do not accumulate funds for refurbishment.

To improve the management and maintenance of apartment buildings there was a proposal to legally share the condominium management functions, and maintenance and repair works between different service-providers. In 2011, relevant amendments were made to the Law on Housing Relations: control functions are supposed to be executed by a condominium management authority (it can be either a CHO or an employed manager or a managing organization) and the management authority is supposed to enter into agreements with service providers to ensure maintenance and repair of an apartment building. A list of management functions for apartment buildings was enclosed as an annex to the model condominium management agreement⁷³. The following documents were developed and approved:

- The rules of maintenance of common property of a condominium object⁷⁴;
- The methodology of organization of activities of CHOs and management authorities of condominium objects⁷⁵;
- The methodology of calculating the cost estimates for the maintenance of the common property of an object of condominium⁷⁶.

To test the new system of management and maintenance of apartment buildings of JSC "Kazakhstan Center for Modernization and Development of Housing and Communal Services" within the programme of modernization of housing and communal services of the Republic of Kazakhstan in 2011-2020 implemented several pilot projects in Karaganda and Shymkent to establish and engage service companies in the management, maintenance and

⁷²Approved by the Decree of the Government of the Republic of Kazakhstan dated 30 April 2011, No. 473.

⁷³The standard form of condominium management agreement was approved by the Decree of the Chairman of the Agency for Construction and Housing and Communal Services of the Republic of Kazakhstan dated 13 September 2011, No. 338

⁷⁴The Rules of Management of Common Property of Condominium Object were approved by the Resolution of the Government of the Republic of Kazakhstan dated 1 December 2011, No. 1421. The current version of the Rules was approved by the Decree of the Minister of National Economy of the Republic of Kazakhstan dated 19 February 2015, No. 108.

⁷⁵The methodology of the organization of the activities of CHOs and condominium object management authorities was approved by the Order of the acting Chairman of the Agency for Construction and Housing and Communal Services of the Republic of Kazakhstan dated 29 December 2010, No. 606

⁷⁶The methodology of calculating the cost estimates for the maintenance of the common property of an object of condominium was approved by the Order of the Chairman of the Agency for Construction and Housing and Communal Services of the Republic of Kazakhstan dated 12 December 2011, No. 479 The new revision of the methodology was approved by the Order of an acting Minister of National Economy of the Republic of Kazakhstan dated 26 March 2015, No. 246.

repair of apartment buildings. The pilot projects were implemented for apartment buildings, which were refurbished under the government refurbishment program. According to local experts, after completion of the refurbishment of apartment buildings, the service companies stopped their management and maintenance activities in those buildings.

The legislative requirements with regard to the separation of the management and maintenance functions in apartment buildings between CHOs and for-profit service organizations are not enforced in practice. CHOs, even those managing few houses, continue to exercise not only functions of apartment building management, but also those of its maintenance and repair. To this end, CHOs, in addition to the administrative staff, hire operational staff — plumbers, electricians, cleaners and janitors. Contracting agencies are engaged to the maintenance of elevators, solid waste removal and refurbishment works.

The legislative requirements related to opening of a separate bank account for each apartment in CHO is not also fully enforced. Chairpersons of CHO boards see no point in opening such accounts because their opening and banking services result in additional CHO costs, which homeowners do not want to pay for. At the same time, a separate account of a house does not protect the interests of homeowners in this house because the funds in the account belong to the CHO, and if there are claims to the CHO creditors' demands are satisfied from these funds, even if they are not related to the maintenance costs of the apartment building.

Poor engagement of service companies in the management and maintenance of apartment houses managed by CHOs, on the one hand, results from the fact that the decision to employ these companies should be taken at a general meeting. If no decision is taken, the CHO continues to manage and maintain apartment buildings at its sole discretion. On the other hand, the management and maintenance of apartment houses by CHOs has no appeal to the private business because of small amount of contributions homeowners make to CHOs.

Private managers and service organizations operate in new apartment complexes. Such organizations are often established by developers.

In 2012, there was established an Association of managers and service companies of Kazakhstan, which brought together 34 managers and service organizations. The main goal of the Association is to improve the efficiency of management and maintenance system of apartment houses. The objectives of the Association are as follows: to create a market of housing and communal services; to develop an evaluation system of effectiveness of managers and service companies; to shape reasonable pricing in the market; to participate in the elaboration of proposals for the improvement of normative and legal regulations for management and maintenance of the housing stock; to provide legal and consulting support to the Association members and staff of the member organizations. The Association is working to establish a republican Register of Housing Managers and Service Organizations, which shall include the companies proved to be bona fide participants of the market of apartment buildings management and maintenance. The purpose of the Register is to prove the expertise of managers and service organizations to the customers, homeowners in apartment buildings, to make available information about organizations with bad record.⁷⁷

Charges for management and maintenance of common property in apartment buildings

According to statistics,⁷⁸ an average payment for management, maintenance and repair of an apartment building across the Republic of Kazakhstan amounted to KZT 22/m² in 2015. In cities — regional centres — of the Republic of Kazakhstan the payment varies by more than 3 times: with the minimum value of KZT 10 /m² in the cities of Kyzylorda and Taraz, and the maximum value of KZT 36/m² in the city of Kostanay. In Almaty, the average payment is KZT 23/m², while in Astana it is KZT 34/m².

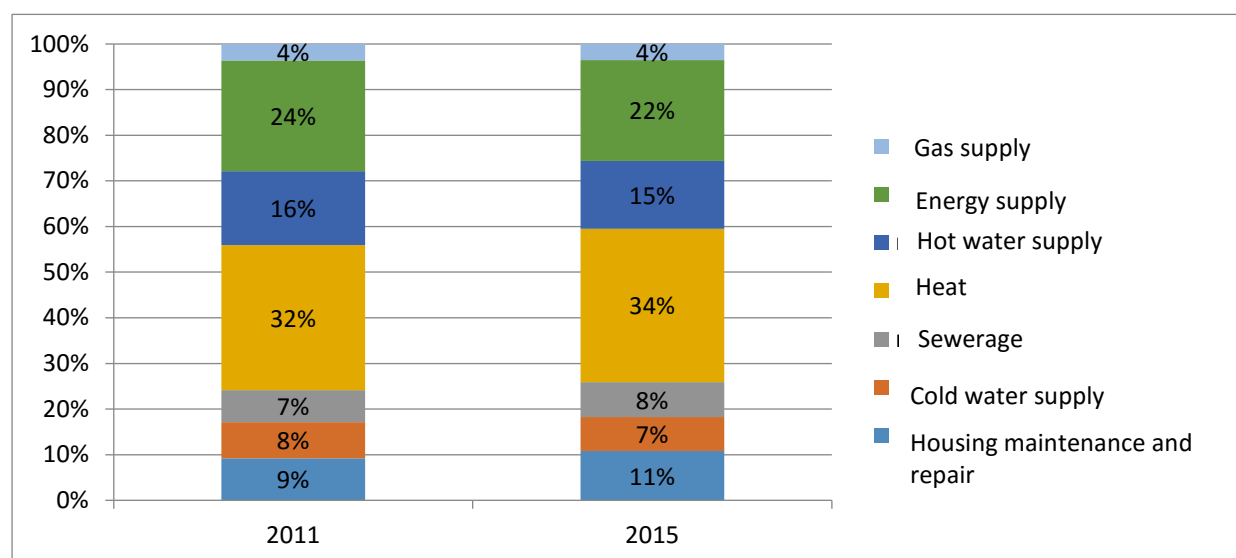
In 2015, maintenance fee was only 11 per cent in the expenditure pattern for housing and utility services, it increased by 2 percentage points compared to 2011 (Figure VII).

⁷⁷ <http://usk.zhkh.kz/>

⁷⁸ *Housing and Utilities*, Statistical Compendium, Astana, 2016

Figure VII

Pattern of spending on housing and communal services, per square metre of home floor space in apartment buildings



Source: Housing and Utilities, Statistical Compendium, Astana, 2016, calculations of the Institute for Urban Economics (Russia).

Note: The pattern of spending was calculated for homes with centralized cold and hot water supply system, sewerage, heating, gas and power supply systems. The calculations use average values of housing provision: 18.7 m²/person and 21.0 m²/person in 2011 and 2015.

Despite the increase in average payment for management, maintenance and minor repairs of common property in apartment buildings (KZT 22/m²) by 47 per cent in 2015 compared to 2011 (KZT 15/m²), the amount of payment is still very low. It does not ensure the delivery of all services and works for the proper maintenance of common property. For comparison, the payment for service companies' package of management, maintenance and minor repair services in new residential neighbourhoods in Astana is KZT 140/m².

The chairmen of the CHO boards tell about enormous difficulties in making decisions to increase contributions for management and maintenance of common property at general meetings of homeowners in apartment buildings. Homeowners still do not understand their responsibility for the condition of apartment buildings, they expect that the state will provide them with new housing when their housing becomes unsafe.

It should be noted that the legislation of Kazakhstan permits imposing a court-enforced collection on the owner's apartment for debts related to the payment of mandatory contributions for the maintenance of common property in an apartment building (Article 50 of the Law on Housing Relations). The court-enforced collection is imposed according to the procedure established by the Law of the Republic of Kazakhstan on the Mortgage of Immovable Property.

Information systems

In accordance with the Law on Housing Relations (Article 7), there is required to be public registration of the housing stock in the Republic of Kazakhstan. The rules of public registration were approved in 2015.⁷⁹ The main objective of the public registration of the housing stock is to obtain information about the availability, location, quantity and quality, technical condition, level of improvement and the cost of housing of all forms of ownership, and about changes in these indicators.

The public registration of the housing stock is carried out through statistical register of housing stock, which is formed on the basis of data from the Public Database of Register of Immovable Property of the Ministry of Justice of the Republic of Kazakhstan, and information from LEAs about unsafe houses, accountancy records in human

⁷⁹The Universal Rules of State Registration of the Housing Stock of the Republic of Kazakhstan were approved by the Order of the Minister of National Economy of the Republic of Kazakhstan No. 110 of 19 February 2015.

settlements, and nationwide statistical observations. Maintenance of the statistical register of the housing stock is the responsibility of the Statistics Committee of the Ministry of National Economy of the Republic of Kazakhstan. Statistical information on the status of the housing stock is subject to dissemination in accordance with the statistical action plan for the relevant year.

Information related to the housing sector is also contained in the following public cadastres:

- Legal Cadastre, which contains information on existing and terminated rights to immovable property, identification characteristics of immovable property, information about rightholders, information about pending requests for information from the legal cadastre
- Public Land Cadastre contains information about the location, intended use, size and boundaries of land parcels, their quality characteristics, about land management and cadastral value of land parcels, as well as about holders of rights to land parcels
- Public Urban Development Cadastre contains cartographic, statistical and textual information about the areas of urban, architectural and construction activities, social and legal mode of land use, and the level of engineering and technical provision, about parameters and status of objects located there, as well as natural and climatic conditions and environmental status of the areas.

The Ministry of Justice of Kazakhstan shapes legal cadastre information system and establishes the rules of interaction between authorized agencies, which organize the maintenance of land cadastre (Ministry of Agriculture of Kazakhstan), public urban development cadastre (MoNE), other public central and LEAs, Government Corporation "Government for Citizen", which carries out public technical inspections of items of immovable property, and registration authorities to exchange information for maintenance of legal and other cadastres.

The Law on State Registration of Rights to Immovable Property (Article 17) establishes a list of government agencies and persons to whom information can be provided from the legal cadastre on the basis of a motivated request. Condominium members get only a certificate of registered rights (encumbrances) to immovable property and its technical characteristics. The authority of a member of a condominium object to obtain information are supported by the provision of a legal document or a notarized copy of the document of this condominium member's title to a secondary item of immovable property (home in an apartment building) or the minutes of the general meeting of condominium members, confirming the powers of the representatives of condominium members.

A request for information from legal cadastre on a paper medium is supposed to be sent to the local justice authority in the area where the immovable property is located. The data is presented in the form of an information summary. The information can also be obtained electronically from the Government Corporation "Government for Citizens" or through the e-government portal if the applicant has an electronic digital signature. The information from the legal cadastre of public registration of rights to immovable property is provided free of charge.

The Government Corporation "Government for Citizen" shapes an information system of public technical inspection of buildings and their components (including multi-family houses — condominium objects), as well as land parcels, issues technical certificates of items of immovable property, and duplicate copies of technical certificates.

B. Refurbishment and modernization of the housing stock

In accordance with the legislation of the Republic of Kazakhstan, homeowners are supposed to refurbish their homes at their own expense. In apartment buildings (condominium objects), homeowners are required to bear the costs of major repairs of the common property in proportion to the share of common property ownership. Due to the fact that homeowners in apartment buildings did not take independent decisions about the refurbishment for a long time, as well as about accumulation of funds for refurbishment, the Law on Housing Relations was amended in 2011, whereby homeowners in apartment buildings are obliged to make a monthly contribution for refurbishment in the amount determined by the general meeting of the homeowners, but not less than 0.02-fold monthly calculated rate established by the Law on Republican Budget⁸⁰ for the respective fiscal year, and calculated per square meter of useful space of residential (non-residential) premises. To accumulate funds for

⁸⁰ This indicator is designed for the calculation of allowances and other social payments, penalties, taxes and other payments.

refurbishment of common property in apartment building, a CHO (another management authority) is required to open separate bank savings accounts for each apartment building it manages. Funds accumulated on savings accounts are spent only by the decision of the general meeting taken by a majority vote of the homeowners (apartment owners) of the condominium object.

Currently, the legislative requirements of the monthly contributions for refurbishment to generate savings are not fully enforced. This is due to the fact that even though the law established mandatory payment of such contributions, but the decision on the amount of the contribution must be taken by the general meeting of homeowners. If such a decision is not adopted, the contributions are not paid. Homeowners do not take decisions, because the requirement of contributions for refurbishment proved to be too high in comparison with the payment for the maintenance and minor repairs of common property. Thus, based on the amount of the calculated monthly rate of KZT 1,852, KZT 1,982 and KZT 2,121 established by the 2014, 2015 and 2016 laws on republican budget, the contributions for refurbishment in said years should be not less than KZT 37.04/m², KZT 39.64/m², and KZT 42.42/m², respectively. For comparison, an average payment for management, maintenance and repair of common property was KZT 21/m² and KZT 22/m² in 2014 and 2015, respectively.

In practice, the decision on the contributions for refurbishment is taken by homeowners of apartment buildings, which are refurbished under government programs.

Refurbishment of apartment buildings was originally envisaged by the Program of Modernization of Housing and Communal Services of the Republic of Kazakhstan in 2011–2020, which was approved by Resolution of the Government of the Republic of Kazakhstan No. 473 of 30 April 2011. In 2014, following the adoption of the 2020 Program of Regional Development (approved by the Government of the Republic of Kazakhstan on 28 June 2014, No. 728), the Program of Modernization of Housing and Communal Services was abolished, and the refurbishment objectives for apartment buildings with elements of thermal modernization were included in the 2020 Program of Regional Development.

The Program of Modernization of Housing and Communal Services of the Republic of Kazakhstan planned to reduce the share of apartment buildings in need of refurbishment from 32 per cent in 2011 to 22 per cent in 2015. The 2020 Program of Regional Development plans to reduce this figure from 27 per cent in 2015 to 21 per cent in 2019.

Both these government programs use the same organizational and financial mechanism of refurbishment:

- Refurbishment of common property in apartment buildings is carried out by specialized authorized organizations established in the regions and cities of Astana and Almaty, the authorized capital of which was formed with government participation (under the Program of Modernization of Housing and Communal Services of the Republic of Kazakhstan in 2011–2020, it was permitted to establish social business corporations with the participation of the government in the authorized capital). The specialized authorized organization exercises the functions of a general contractor and, if necessary, can employ subcontractors. The same organization provides design specifications and estimates for the refurbishment of apartment buildings. The design specifications and estimates undergo government expert review and are agreed with akimat's housing inspection authorities, and further on with homeowners of apartment buildings.
- To finance the refurbishment of apartment buildings carried out by a specialized authorized organization, LEAs are provided with targeted transfers allocated from the national budget. Then homeowners in the apartment building reimburse the costs of the refurbishment by paying contributions for the refurbishment for 8–15 years (depending on the list of completed works). The funds returned by the homeowners in the renovated houses are then used by a specialized authorized organization to repair other apartment buildings.
- To include an apartment building in a refurbishment program, it must be registered as an object of condominium. At their general meeting, homeowners in an apartment building are required to take decisions (by a majority of not less than 2/3 of the votes) (i) on the consent for the refurbishment of the common property of the condominium object at the expense of budgetary funds; (ii) on the list of refurbishment works (minimum or maximum); (iii) on the cost of repairs required for each apartment (home) and the amount of monthly contributions for the refurbishment; (iv) on the selection of homeowners' representatives who participate in the acceptance of works.
- All homeowners in the apartment building and the management authority of the apartment building (CHO) are required to conclude a refurbishment contract with a specialized authorized organization.

Pursuant to these agreements, homeowners are required to pay monthly contributions for the refurbishment to a savings account at the bank. CHO is required to open a savings account and transfer funds from the savings account of a specialized authorized organization to pay for the completed works, as well as to collect arrears on the payment of contributions from homeowners who did not sign a contract with a specialized authorized organization. Low-income apartment owners can receive budgetary subsidies (housing assistance) to pay contributions for the refurbishment from local budgets.

- LEAs, on the basis of homeowners' applications, generate a list of houses that are subject to refurbishment, prepare a financial and economic assessment and generate a budgetary request to the authorized housing and communal authority to receive funds from the republican budget in order to increase the authorized capital of a specialized authorized organization. Design specifications and estimates for the refurbishment are developed at the expense of the local budget.
- LEAs control the refurbishment progress and establish a commission for the acceptance of completed works with the participation of representatives of the housing inspection authority and departments of the akimat that oversee this program, state architectural and construction supervision authorities, engineering supervision authorities, CHOs, and homeowners elected by the general meeting.

In accordance with the government program, the refurbishment of the common property of a condominium object from budgetary funds is completed upon the condition that the thermal characteristics of the apartment building are improved as a result of such repairs, and community heat meters as well as an automated system for heat consumption regulation (if centralized heat supply is available) are installed. The program envisages awareness raising campaigns to promote energy saving among the population, to engage homeowners in apartment buildings to making decisions on the energy efficiency retrofitting during the refurbishment.

Homeowners of apartment buildings included in the government refurbishment program can choose a minimum or maximum list of works that will be completed during the refurbishment. The minimum list of works includes repair of roof (insulation), repair of the entrance (replacement of windows, doors, and lighting equipment for energy efficient ones) and repair of the basement (including repair of utility networks), installation of a community heat meter and automated heat management system. The maximum list of works includes advanced repairs of the façade and elevator.

LEAs are required conduct an energy audit of apartment buildings before and after the refurbishment to assess the reduction of energy consumption as a result of the renovation. To this end, LEAs are allocated targeted transfers from the Republican budget.

Thus, Kazakhstan applies an administrative and centralized approach to financing and refurbishment of apartment buildings. Refurbishment is made entirely for the budgetary funds (upon the condition of their return to homeowners in several years) and through authorized government organizations. The role of homeowners and management authorities of apartment buildings has been reduced mainly to the payment of contributions to return the budgetary funds spent on the refurbishment. There are no requirements of preliminary accumulation of funds for refurbishment by homeowners as a precondition for granting budgetary resources. It does not address the problem of establishing a refurbishment loan granting system by the banks with parallel government support of owners in multi-family houses to ensure transition to market mechanisms and increase the volumes of refurbishment and modernization of the multi-family housing stock.

According to information from the open sources, there are many complaints about the quality of repairs and inflated cost. Local experts and representatives of CHOs feel that the efficiency of the budgetary funds allocated for the refurbishment could be much higher if they were provided directly to CHOs.

Chapter 5

Energy Efficiency and Energy Saving in Residential Sector

A. Energy Consumption in Residential Sector

The energy sector of the country is a source of 80 per cent of all emissions, 90 per cent of which is in heat and electric power production sectors. Buildings, primarily in the residential sector, consume about 13.6 per cent of electric power and 40 per cent of heat power. The residential sector is the third largest consumer of the heat and electric powers in the country following the energy and manufacturing sectors.

Majority of the housing stock consists of old non-energy-efficient buildings with the district heat- and energy supply systems constructed in 1950-1985. According to experts, the consumption of heat energy in buildings in Kazakhstan is about 240 kW/m² per annum (in comparison, this indicator in Sweden is 82 kW/m², in Germany – 120 kW/m², in France – 126 kW/m², and in England – 130 kW/m²). In 2010-2013, a mass energy audit of the residential buildings in Kazakhstan was conducted, which demonstrated that apartment buildings have high consumption of heat energy: for example, in Almaty, the average consumption of heat energy per annum was 136 kWh/m², in Atyrau – 181 kWh/m², and in Kokshetau – 257 kWh/m² (according to Kazakhstan Centre for Modernization and Development of Housing and Utilities JSC).

The housing stock consists mostly of multi-apartment buildings. For production of electric and heat energies in Kazakhstan in 2015, 43.6 million tonnes of the equivalent fuel⁸¹ were used, 72 per cent of which is coal. Natural gas (20 per cent) is used as a primary fuel in west and south regions of the country.

More than a half of greenhouse gases emissions in heat- and energy supply sectors in Kazakhstan originate from premises heating (due to climate specificity). In 2015, 60.8 million Gcal⁸² of heat energy were distributed, including for 24.1 million Gcal (39.6 per cent) for population. One fifth of total emissions in the residential sector comes from consumption of hot water and electricity. The remaining share includes cooking and other types of heat and electric energy consumption. Coal is used for production of 85 per cent of electric energy in the country.

B. Policy and Measures on Promotion of Energy Efficiency in the Residential Sector

In recent years, an improvement of energy efficiency of the economy became a national strategic priority in Kazakhstan. The political will of the country in the promotion of energy efficiency was expressed through the adoption of a number of strategic documents, namely Strategy of Transition of the Republic of Kazakhstan to a “Green” Economy”, Strategy-2050, and programmes such as Nurly Zhol, 100 Steps of the Nation, Energy Saving-2020 and others.

Energy efficiency issues are within the competence of different government institutions, particularly, the CCHCS of the MoNE (architecture, town planning and construction), and the Committee on Industrial Development and Industrial Safety of the Ministry for Investments and Development (energy saving and energy efficiency).

The main document on energy efficiency is the Law of the Republic of Kazakhstan No. 541-IV “on Energy Saving and Energy Efficiency Improvement” of 13 January, 2012. For energy efficiency in buildings, in particular, the Law introduced the term “thermal modernization” for the first time, defined as the activities on improvement of thermal and technical specifications of a building leading to reduction of heat losses. Furthermore, Article 11 of this Law “ensures an energy efficiency of the buildings, structures, premises when designing and construction”. A term “building energy efficiency class” was determined, a designer’s competence was introduced for development of “Energy Efficiency” section, for determination of the building energy efficiency class and for observance of energy saving requirements and energy efficiency improvement as imposed to the design (design and estimate) documentation of the buildings. The required energy efficiency class is specified in a Customer’s Specification for Construction Project Development (reconstruction, capital renovation) and indicated in technical data sheet of the constructed and commissioned facilities when registering the real property rights after putting the completely constructed (reconstructed, capitally repaired) facility into operation. Moreover, the Law specified the responsibilities of the competent authority on enforcement of the requirements to energy saving and energy efficiency in architectural and engineering, and other pre-design and/or design (design and estimate) documentation to be developed and approved for purposes of reconstruction and construction of buildings. Currently, the “Energy Efficiency” section and availability of Energy Data Sheet is checked in case of expertise of design documentation. The energy efficiency class of existing buildings, structures, premises and its revision is determined in the manner established by a competent authority according to the results of energy audit and specified in data sheet of building, structure, premises. The energy audit report is attached to the data sheet of buildings, structures, and premises. Energy efficiency labeling of the existing buildings, structures, and premises is established according to the results of energy audit and specified in the energy audit report.

A possibility indicated in the Law to assist and support the owners of residential buildings, residential accommodations (apartments) with payment of measures aimed at energy saving and improvement of energy efficiency in compliance with the housing legislation of Kazakhstan is of especial importance. Also, this Law requires that the design of multi-apartment buildings should provide compulsory use of energy-efficient materials,

⁸¹ Statistical Book “Fuel and Energy Balance”, Statistics Committee of the MoNE, 2016

⁸² Statistical Book “Housing and Communal Services”, Statistics Committee of the MoNE, 2016

installation of in-house heat and water metering devices, in-apartment electric energy, cold and hot water, gas metering devices, as well as controllers in heating systems, automated heat consumption control systems.

In addition, Kazakhstan adopted the construction standards such as SN RK 2.04-04-2011 “Buildings Heat Insulation” establishing the energy efficiency requirements to designs of new buildings. The UNDP-GEF Project “Energy Efficient Design and Construction of Residential Buildings in Kazakhstan” developed a rating table of building efficiency class according to heat consumption in compliance with these regulatory documents when designing new residential buildings in pilot cities.

Furthermore, in compliance with the Law of the Republic of Kazakhstan “on Energy Saving and Energy Efficiency Improvement”, the following Resolutions of the Government of the Republic of Kazakhstan were adopted, which govern the execution procedure of this Law in the part of energy efficiency of buildings:

- Resolution of the President of the Republic of Kazakhstan No. 1181 “on Setting the Requirements to Energy Efficiency of Buildings, Structures, Premises and their Elements being a Part of Enclosing Structures” of 11 September, 2012
- Resolution of the President of the Republic of Kazakhstan No. 1117 “on Adoption of Rules for Determination and Revision of Energy Efficiency Classes of Buildings, Structures, Premises” of 31 August, 2012
- Resolution of the President of the Republic of Kazakhstan No.1192 “on Adoption of Requirements to Energy Saving and Improvement of Energy Efficiency Imposing to Pre-Design and/or Design (Design and Estimate) Documentations of Buildings, Structures, Premises” of 13 September, 2012.

Within the forthcoming International Exhibition “EXPO-2017 “Future Energy”, there is an increasing interest to a “green” buildings construction and certification in Kazakhstan with the aim to comply with environmental assessment standards. The national companies (Astana EXPO-2017 JSC, Samruk-Kazyna Fund and BI Group) are working at development of design for “green” districts and exhibition pavilions, which, upon completion, are expected to be certified to obtain the estimates according to the “green” construction rating systems.

One of the first steps for implementation of the energy efficiency policy in Kazakhstan cities is development of economic mechanisms to support installation of heat metering devices and energy products at public facilities, industrial enterprises, housing sector facilities, and subsequent practical introduction of the first devices of individual and group fiscal metering.

Since 1 July, 2012, a provision of the Law “on Energy Saving and Energy Efficiency Improvement” was introduced according to which the consumers shall pay for heat energy according to the differential tariffs depending on an availability or lack of heat energy measuring devices⁸³. Thus, the heat supply tariffs in Astana have been set with differentiation depending on an availability or a lack of heat energy metering devices by population:

- if heat metering devices are available – KZT 2,485.45/1 Gcal
- if heat metering devices are not available – KZT 2,994.91/Gcal
- population living in shabby, failing private premises, and bunk houses where it is impossible to install the in-house heat metering devices – KZT 2,495.76/Gcal⁸⁴.

C. Possibilities for Promotion of Energy Saving in the Residential Sector

⁸³ This is about in-house heat metering devices. Note that the consumers in multi-apartment buildings can have individual heat metering devices and pay according to them according to legislation, the practice shows that it is impossible to do for different reasons: both technical ones (rising wiring of the heating system in the building and an impossibility to install the devices) and economical ones (high costs for calibration and maintenance of devices).

⁸⁴ As of March 2017, exchange rate was USD 1 = KZT 318.

The current state of energy efficiency improvement in residential sector can be assessed as a period of slow creation of an ideology, legal and regulatory provisions, and their slow transfer to the practical activities with the subsequent gradual testing of actual energy-saving technologies.

The following key factors should be mentioned that when eliminated will allow promoting energy saving process in the residential sector.

1. In case of the existing tariffs for natural monopoly services (energy system), a payback period of investments into energy-saving projects on the side of a consumer is too long. Low paying capacity of the most of consumers, partial payment for consumed energy (involving the energy subsidies⁸⁵) determine a non-attractiveness of a sector for investing in modernization and technical upgrading of the residential buildings and facilities. As a result, a quality of energy supply services is decreasing, energy losses are increasing and infrastructure becomes out of date.
2. The construction standards determining the requirements to energy efficiency of the residential buildings are not always observed relatively to construction of new buildings in order to please a decrease of construction estimate cost⁸⁶. The consumers, in their turns, are unaware of the real state of a facility (building) to be put into operation due to non-availability of energy data sheet for the facility, although the latter is required by approval of design and estimate documentation.
3. Even if a facility has been constructed in compliance with all energy saving norms and regulations, a keeping its operational condition to ensure the energy characteristics as specified by the project is often problematic. The fact is that there are no any mandatory standards in Kazakhstan on maintenance and operation of the housing fund, including those concerning a level of building energy efficiency. In fact, there are no any clear regulations on maintenance of multi-apartment buildings which to be observed by the owners strictly. Actually, the owners are given complete control for decision-making (renovations, prevention, maintenance of engineering utilities, communications, etc.). As there are no any existing regulations, the apartment owners have a right to waive from necessary operating costs, including the costs related to maintenance of equipment regulating the energy consumption level in the building (for example, heating distribution units, equipment for effective lighting, etc.).
4. A content for capacity building (curricula and, as a consequence, a qualification of the graduates) in the field of energy saving fails to comply with the competences required to take different decisions related to operation and maintenance of the residential buildings. The personnel working in these fields does not have sufficient qualification and competences to make effective energy-saving renovation and further operation of the equipment installed.
5. Reasonable high values of specific energy consumption in the housing stock of the country are also explained by the existing system of housing management. As is known, after privatization of apartments, the multi-apartment buildings are managed by the association of apartment owners (AAO) and other forms of condominiums. These forms of condominiums are dealing with maintenance of heating systems in the residential buildings (heating distribution units), preparation of housing stock for winter conditions, etc. The apartment owners pay these works through specific (target) charges or monthly payments for building maintenance. For consumed heat according to the metering devices (where installed), an apartment owner pays directly to an energy supply company. The management and service provider companies are not motivated to monitor the level of energy consumption. In practice, such companies are not motivated in energy saving in light of a lack of clear housing maintenance standards and energy efficiency target values. This relates both to heat and electrical energy for in-house needs (lighting of public places (entrances) and other general costs).

D. Information about Activities of Donors in the Field of Housing Energy Efficiency

Since 2007, the UN Development Programme (UNDP) in Kazakhstan, with the support of different donors (particularly, the Global Environment Facility, Kazakhstan Government), has been implementing the projects aimed at improvement of energy efficiency and energy saving in different economic sectors, including in the residential one. Among implemented projects are “Removing Barriers for Improvement of Energy Efficiency in Municipal Heat Supply” (2007-2013), “Integrated Energy-Efficiency Solutions in small settlements” (2013-2014), “Energy-Efficient Design and Construction of Residential Buildings” (2011-2015), “Promotion of Energy-

⁸⁵ OECD Report

⁸⁶ Review of activities and results of the UNDP/GEF Full-Size Project “Energy-Efficient Design and Construction of Residential Buildings” – Astana, UNDP, 2015. – 22 p.

Efficient Lighting” (2012-2017), and dedicated Components on housing and communal infrastructure implemented as part of the regional UN Joint Programs in Kyzylorda and Mangistau regions (2014-2016). These projects contributed and are contributing to conservation of global environment through reducing greenhouse gas emissions by creating the conditions for complex thermal modernization of buildings and testing of various technical and organizational solutions leading to energy saving in residential buildings.

So far, the key achievements of these UNDP projects and initiatives are:

- a successful involvement in adoption of the Law “on Energy Saving and Energy Efficiency Improvement” approved in January 2012 and amended at the end of 2014. The Law includes such terms as “thermal modernization of buildings”, “energy efficiency class”, “energy service company” which are promoting the energy efficiency in such socially important sector as the housing one.
- a demonstration of the sustainable practices of energy efficiency improvement in residential buildings with annual effect of up to 40 per cent of reducing the costs for energy and a reduction of greenhouse gas emissions of up to 180 tones per one modernized building.
- a demonstration of essential social and economic benefits for Kazakhstan from energy saving in a form of a creation of new jobs, an extension of access to sustainable energy. It is estimated that thermal modernization of one multi-storied building creates at an average 1-2 permanent “green jobs” annually.
- a demonstration of new energy efficient technologies when constructing the residential buildings enabled to calculate a reasonably rising costs by 10% by construction of a building to obtain energy efficiency effect by 35-40%. A building constructed in this way will comply with high energy efficiency class (B class).
- based on approved solutions with an involvement of the UNDP, the regulatory and technical documents for design of energy efficient residential buildings in Kazakhstan were developed and took effect from July 1, 2015, and the existing building construction standards which govern the energy efficiency according to a comfort class of the buildings to be constructed were amended.

The examples of different pilots aimed at energy efficiency improvement in residential buildings and implemented by the UNDP-GEF are given in the inserts.

In 2010-2013, a German-Kazakhstan Project “Development and Implementation of Qualification Improvement Course “Management of Building Energy Saving Rehabilitation” was implemented in Kazakhstan. This Project was supported by the Federal Ministry for Economic Cooperation and Development of Germany and the private businesses: Viessmann Industrial Group, Profine, Lacufa and non-profit organization from Berlin “Initiative Wohnungswirtschaft Osteuropa” (IWO).

Within the project implementation, the workshops and events were conducted in five regions of Kazakhstan which were focused on a distribution of an idea of buildings energy-saving rehabilitation, familiarization with the European practice of housing renovation. Within the project implementation a training course “Management of Buildings Energy Saving Rehabilitation” was developed with support of international and local experts,.

In 2012, as part of activities of the Task Force on Implementation of the Environmental Action Programme (EAP Task Force) for Eastern Europe, Caucasus and Central Asia (EECCA), the Project “Improvement of Energy Efficiency of Residential Sector in Kazakhstan: a pilot design of the public investment program” was implemented. The published similarly named report summarizes the results of a pilot project implemented to support the activities of the Ministry of Environmental Protection of the Republic of Kazakhstan on identification, development and cost estimation of the long-term program of budgetary investments in a key area related to the climate change – energy efficiency of the residential sector. The residential sector was designated as a priority, by the example of which the main phases, criteria and tools for development of budgetary investment program shall be demonstrated. The Developed Program provides three project portfolios:

- *a thermal insulation (thermal renovation or modernization) of the residential buildings, particularly typical bearing-wall residential buildings.*
- *an assembling of the automatic building level substations (BLS) and installation of thermostatic regulators on the heating radiators to improve a heat energy distribution according to the needs and increase a thermal comfort in the living space;*
- *a transfer from coal to natural gas when producing energy for heating in the residential sector (i.e. local boiler stations supplying heat to multi-apartment buildings).*

- For today, the proposed design of the public investment program on energy efficiency improvement in residential sector of Kazakhstan has not been put into practice yet.

Chapter 6

Housing Construction

A. Construction Requirements and Procedures

1. State regulation of construction activities

The Law of the Republic of Kazakhstan No. 242 "on Architectural, Urban-Planning and Building Activities in the Republic of Kazakhstan" of 16 July 2001 is the basic law regulating construction-related relations. Moreover, regulation by the Government is ensured by a system of normative documents on architectural, urban planning and construction activities.

The Government system of normative documents on architectural, urban planning and construction activities includes:

- normative legal acts that establish mandatory requirements for the organization of activities, and regulate relations between architectural, urban planning and construction entities; state urban development norms and regulations; technical design and construction regulations (for buildings, structures, their complexes, and communications); standards of government architectural and construction inspection; departmental regulations for other government inspection agencies; construction guidelines;
- regulatory technical documents that establish mandatory safety requirements for certain types of products and/or their life cycle processes in line with the requirements of technical regulations (for buildings, structures, their complexes, and communications) — construction norms (CN); construction norms and regulations (SNIIP); operation flow charts; construction pricing regulations;
- optional regulatory technical documents: codes of practice for design and construction activities; legal and technical manuals; engineering standards; normative standardization documents for architectural, urban planning and construction activities, industry, building materials, products and structures; manuals and guidelines that contain practice-tested provisions for the development and enforcement of mandatory requirements for technical regulations and building codes, or for some individual issues that are not regulated by mandatory standards.
- Basic safety requirements for construction projects were established by the technical regulations entitled "Safety Requirements for Buildings and Structures, Building Materials and Products" approved by the Decree of the Government of the Republic of Kazakhstan dated 17 November 2010, No. 1202. Residential buildings are designed and constructed in accordance with the following normative and technical documents:
 - SNIIP of RK 3.02-43-2007 "Residential Buildings";
 - SNIIP of RK 3.02-27-2004 "Single-Family Houses";
 - Construction Norms (CN) of RK 02-2013 3.02 "Technical Requirements for Housing."

Certain issues related to the design of structures, fire protection, thermal protection, lighting, noise protection, and utility provision for residential buildings, are governed by the relevant national regulations.

Design and construction activities in the zones (areas) of high seismic hazard take into account the requirements contained in government architectural, urban planning and construction standards regulating these issues.

Normative documents on construction pricing shall be used if the construction is financed by public funds and funds of organizations with state participation (quasi-public sector entities).

In accordance with the Kazakhstan-2050 strategy and the National Plan – 100 Specific Steps to Implement Five Institutional Reforms, Kazakhstan is currently:

- implementing a phased transition to the system of European codes to replace outdated building codes and regulations;
- introducing an input method to estimate construction costs on the basis of real market value of materials, products, equipment and labour.

Construction-related procedures

The Law of the Republic of Kazakhstan on Architectural, Town-planning and Construction Activity (Article 68) defines main requirements to construction procedures. Procedures, terms of registration and issuance of documents required for the construction of new objects and modification of existing ones are established by the Rules for Housing Development and Licensing Procedures in the Construction Sector.⁸⁷

Customers (individuals or legal entities), which intend to construct an object, are required to obtain a decision granting a right to a land parcel from local district/city executive authorities (with the exception of construction on land parcels owned by customers). In accordance with the Land Code of the Republic of Kazakhstan (2003), it is prohibited to allocate land parcels for construction projects if there are no draft detailed plans or master plans for human settlements (or substitutionary development schemes for human settlements with up to five thousand people).

Land parcels for individual housing construction may be allocated at sites equipped with water and electricity supply networks. In human settlements, where there is no centralized water supply, such land parcels may be allocated only if there are power supply networks. Land parcels of 0.10 hectare for individual housing construction are granted to citizens of the Republic of Kazakhstan free of charge to their private ownership.

Land parcels may be used by the owners or land users for the development (including communications laying, engineering preparation of the site, improvement, planting and other types of site development) only in accordance with approved project documents (construction projects). Project (design and estimate) documents shall contain spatial-planning, design, manufacturing, engineering, environmental, economic, energy-saving and other solutions, as well as estimated costs of construction, engineering preparation, and improvement activities.

A construction project shall be developed on the basis a decision granting the right to a land parcel, a customer-approved design assignment, technical specifications for access to engineering support facilities and utility services, and requirements of an architectural and planning assignment issued to the customer by LEAs, as well as requirements of government standards for architecture, urban planning and construction activities.

The prepared project (design and estimate) documents shall be submitted for adjustment, comprehensive non-departmental examination and approval in accordance with the requirements established by government regulations.

Project (design and estimate) documents, which are not used to start construction activities for 3 or more years after they were produced, are considered outdated and can be used for construction only after a new examination and re-approval as required by law.

Upon the agreement with LEAs, a customer (an owner) may construct an individual residential house without project documents using sketches (sketch projects), with the exception of construction in zones of high seismic hazard or other special geological (hydrogeological) and geotechnical conditions requiring special design solutions and measures to implement them. In the capital – the city of Astana – and in areas of high seismic hazard or other geological (hydrogeological) and hydrotechnical conditions, individual houses are constructed in accordance with project documents, which are subject to mandatory examination.

⁸⁷ The latest version of the Rules for housing development and licensing procedures in the construction sector was approved by the Order of the Minister of National Economy of the Republic of Kazakhstan No. 750 of 30 November 2015.

Project documents are examined to evaluate the quality of the projects, compliance (noncompliance) of design solutions to the provisions of source design documents prescribed by the legislation of the Republic of Kazakhstan, as well as compliance of design solutions and calculations with requirements of planning and technical regulations, rules and regulations of governmental and intergovernmental normative documents.

Comprehensive non-departmental examination of construction projects is carried out by expert organizations and is performed by experts attested in relevant sections (parts) of feasibility studies or design and estimate documentation. The state monopoly includes a comprehensive non-departmental examination of projects (feasibility studies and design and estimate documentation) for the construction of new industrial buildings and structures classified as potentially hazardous construction projects, as well as new technically and/or technologically complex objects, their complexes, engineering and transport communications regardless of the sources of financing.

The examination of projects for the construction of technically simple objects is not mandatory, which includes individual houses (except for individual houses in the city of Astana) funded without the contribution of the budgetary funds or other forms of public investment.

Prior to the commencement of construction and installation activities, the customer is obliged to notify government architectural and construction inspecting authorities of such activities.

The construction process is inspected and supervised by architectural and construction authorities.

Upon the completion of its construction, the object shall be accepted into service if there is a statement of its compliance with the approved project, and a document certifying the quality of construction works and the compliance of such works with the approved project. Acceptance of the completed object shall be recorded in an act, which is to be approved by the customer. The act of acceptance of the completed object shall be signed by the customer, contractor (primary contractor), and technical and architectural supervisors.

Owner (customer) shall independently accept completed technically simple objects, including individual houses and other buildings, designed for personal use of citizens. This rule shall not apply to the acceptance into service of individual residential houses constructed at the expense of public investment or with their contribution, as well as individual residential houses constructed in areas of high seismic hazard or areas with other special geological (hydrogeological) or geotechnical conditions.

The act of acceptance of constructed object by the owner is to be mandatorily registered with local architecture and urban development executive authorities. The approved act of acceptance of the constructed object is the basis for its registration of rights to immovable property with an official registration authority.

Inspection and supervision

The construction project owner shall organize technical supervision of construction activities (independently or with the assistance of engineering companies) and designer's supervision by the developers of project documentation (under a contract with the customer) .

State architectural and construction inspection shall be provided by:

- an authorized agency for architecture, urban development and construction (Construction, Housing and Communal Services and Land Management Committee of the Ministry of National Economy of the Republic of Kazakhstan), which also monitors the activities of LEAs performing architecture, urban planning, and construction control functions and ensuring government architectural and construction inspection;
- local architecture and urban planning executive authorities within their supervisory responsibilities.

Functions of government architectural and construction inspection are exercised by the State Architecture and Construction Inspection and in-house experts of the republican authorized authority on architecture, urban planning and construction and LEAs.

State Architecture and Construction Inspection consists of:

- a structural unit of the republican authorized authority on architecture, urban planning and construction;
- a local executive authority of a region, a city of the republican significance, the capital, which ensures government architectural and construction inspection of the quality of constructed objects.

The functions of government architectural and construction inspection (state construction inspectors) are as follows:

- to monitor objects under construction (reconstruction, expansion, retrofitting, overhaul) and those put into operation;
- to apply measures required by law with respect to legal entities and officials, who committed non-correctable violations or failed to correct violations within the prescribed standard deadlines;
- to monitor the activities of organizations providing technical and architectural supervision;
- to oversee the organization and implementation of technical and designer's inspections by customers (owners) at construction sites.

Government architectural and construction control takes the form of technical inspection as well as other forms. The inspections are carried out in accordance with the Entrepreneurial Code of the Republic of Kazakhstan.

Government architectural and construction inspection shall not inspect the construction of individual houses and other technically simple buildings designed for private use by citizens, with the exception of construction in zones of high seismic hazard or areas with other special geological (hydrogeological) and geotechnical conditions requiring special design solutions and measures to implement them, and individual houses constructed in the capital of the Republic of Kazakhstan, as well as those constructed at the expense of budget funds.

According to an expert opinion⁸⁸, in practice, when there is a significant share of objects with normal criticality (risk) rating and there is a lack of inspectors of the government architectural and construction inspection, the government control is carried out primarily through examination of documents and information requested from customers, contractors and representatives of designer's and technical inspection agencies. Therefore, the quality of control depends upon the reliability of the provided information. It is felt necessary to make designer's and technical inspection independent from the customer, as well as to determine liability mechanisms for each party of construction activities (architects, designers, builders, engineers, engineering and construction organizations) with regard to the customer prior to the expiration of guarantee period.

Licensing

In accordance with the legislation of the Republic of Kazakhstan, individuals and legal entities must have relevant licenses to develop pre-project and project (design) documentation, and to carry out construction and installation works.

The licenses take into account the qualification requirements for persons engaged in design, construction and installation activities, depending on the criticality rating of design and construction objects. Licenses specify the criticality rating of objects, which may be designed or constructed by licensees.

The licensing of architectural, urban planning and construction activities is carried out by LEAs of regions, and cities of Astana and Almaty, which are responsible for architectural and construction inspection.

Administrative barriers in the construction sector

In recent years much has been done to remove administrative barriers in construction sector in Kazakhstan. Thus, there was introduced an easier procedure of allocating land parcels for housing construction, including

⁸⁸ Analysis of the current system for monitoring the compliance with the legal acts and normative technical documents in the construction sector. - E. Akanov, UNDP/GEF project, Energy-Efficient Design and Construction of Residential Buildings, Astana, 2011.

individual housing construction. Land parcels are allocated to citizens and legal entities under the "single window" principle through Government Corporation "Government for citizen" or e-government web portal.

To ensure access to land parcels for housing construction under the Nurly Zher State Housing Construction Program, it was stipulated that local authorities should:

- make an inspection of existing land parcels suitable for large-scale construction;
- identify priority areas for large-scale construction of residential buildings in line with the approved master plans and detailed planning projects;
- complete preliminary preparation of land parcels;
- ensure free access to the information on availability of land parcels.

To reduce the developers' expenses, land parcels allocated for housing construction should be equipped with engineering and utility infrastructure, including heat, water, gas and electricity supply networks, telephone networks, sewerage (sanitation), engineering structures, internal roads and driveways prior to the construction of residential houses. Engineering and utility infrastructures are designed and constructed at the expense of the republican and local budgets.

In accordance with the Kazakhstan-2050 strategy and the National Plan – 100 Specific Steps to Implement Five Institutional Reforms, the legislation was amended, and a "single-window" principle was implemented for construction permits, and the terms required to obtain permits in LEAs were reduced. Construction permission documents are obtained through the Government Corporation "Government for citizen" or e-government web portal. The new regulations identify three key stages and deadlines for obtaining design and construction approval documents:

- *Issuance of an architectural and planning assignment:* the time required for the issuance of design approval documents has been reduced more than twice: from 40 to 15-17 working days depending on the complexity of an object;
- *Approval of a sketch project:* the time required for the approval of a sketch project has been reduced from 60 to 10-15 working days depending on the complexity of the project.
- *Issuance of a construction permit:* the procedure of issuance of construction permits (in paper form) is replaced by notifications of the commencement of construction filed by customers to the government architectural and construction inspecting agencies (electronically) through the e-government portal. If customers have all preliminary permission documents, projects and examination findings, they have the right to proceed with the construction of the object immediately upon filing the notification.

As a result of the reforms in the construction sector, Kazakhstan was ranked 22nd in Doing Business 2017 report, a surge from 152nd position in 2015.

In line with the objective to phase-out state monopoly to examine pre-project and project documentation, there were made some necessary amendments to the legislation, there were approved rules for the accreditation of expert organizations (2015), and there was established a Chamber of accredited expert organizations. According to the results of ten months of 2016, 69 organizations were accredited to make an expert examination of projects, they examined 4,700 projects, and issued 1,774 conclusions. It is planned that 90 per cent of projects will be examined by private agencies by 2020. The state expert inspection will cover only unique, technically and technologically sophisticated objects.

2. Housing demand and supply

According to the information provided in the Nurly Zher State Housing Construction Program, the demand for residential housing in Kazakhstan significantly exceeds the supply. The lagging housing demand can be indirectly indicated by the housing availability indicator, which was at 21 m² per person in 2015. It is lower than in Russia (23.4 m²), Poland (25 m²), the People's Republic of China (32 m²), and Germany (39 m²).

According to statistics⁸⁹, the period between 2006 and 2013 saw the annual construction rate of about 400 m² of housing per 1,000 persons of the resident population, and in 2014 and 2015 this figure increased to 434.7 m² and 509.6 m², respectively. It is believed that it is necessary to construct approximately 1 m² of housing per one inhabitant a year to fundamentally improve the housing availability during the lifespan of one generation. Thus, Kazakhstan will need to nearly double the volume of housing construction.

The ability to meet the current housing demand on the primary market is significantly constrained by the low purchasing capacity of the population with regard to the cost of housing offered by private developers. According to the statistics provided in the Nurlı Zher Program, the housing prices on the primary market increased by 1.3 times in 2016, as compared to 2013: from KZT 189,100 to KZT 248,200 per m². The highest prices can be found in Astana (KZT 339,800), Atyrau (326,300), Almaty (KZT 304,500), Aktau (KZT 297,100), and the prices are the lowest in Taldykorgan and Zhezkazgan: approximately KZT 90,000 per m². New luxury and higher comfort housing is available to a small percentage of the population with high income. This demand has almost been satisfied. According to local experts, in the past two to three years private developers have difficulties in selling completed houses and are taking steps to divide larger apartments into smaller ones to make them more affordable.

The 2011 research found that about 70 per cent of the economically active population are not able to purchase housing on the market even under relatively mild mortgage conditions (the period of 15 years, at 12 per cent per annum). Therefore, state programmes have been aimed at addressing the challenges of improving the housing affordability for the population. Budgetary funds and finances from quasi-governmental organizations are used to construct economy-class housing (housing of 3^d and 4th classes of comfort, with limited floor area and fixed cost). Such construction activities provide housing to the participants of the housing savings system, as well as to the citizens on the waiting lists of LEAs, who do not belong to the socially vulnerable groups of the population. Such housing is available to citizens whose incomes are sufficient to repay a housing loan or redeem provided rental housing within the prescribed period (up to 15-20 years).

Budgetary funds are also used to construct housing for socially vulnerable groups of citizens registered in the files of LEAs; such housing is provided for rent without the right of redemption (social housing from the public housing stock). However, the volumes of social housing construction cannot not fully satisfy the housing needs of such citizens. Even the capital — the city of Astana — which has the largest volume of housing construction, cannot yet provide housing to the eligible citizens registered ten years ago.

Given the fact that the Government's efforts to construct rental and mortgage housing still cannot satisfy the housing needs of low-income urban dwellers, which do not belong to socially vulnerable groups, and do not address the needs of rural dwellers, individual housing construction is considered the most feasible way to meet housing needs. In urban human settlements, especially in large cities, this method is constrained by the lack of urban land parcels for individual housing construction, while in rural areas it is constrained by law provisions stipulating that LEAs should in the first place provide land parcels for individual housing construction with communal infrastructure. It can be expected that individual residential houses, especially in rural areas, will be more affordable for the population due to the annual planned allocation of funds from the national budget (under the Nurlı Zher Program) to LEAs to assure the construction of water and electricity networks at around 40 thousand land parcels designated for individual housing construction.

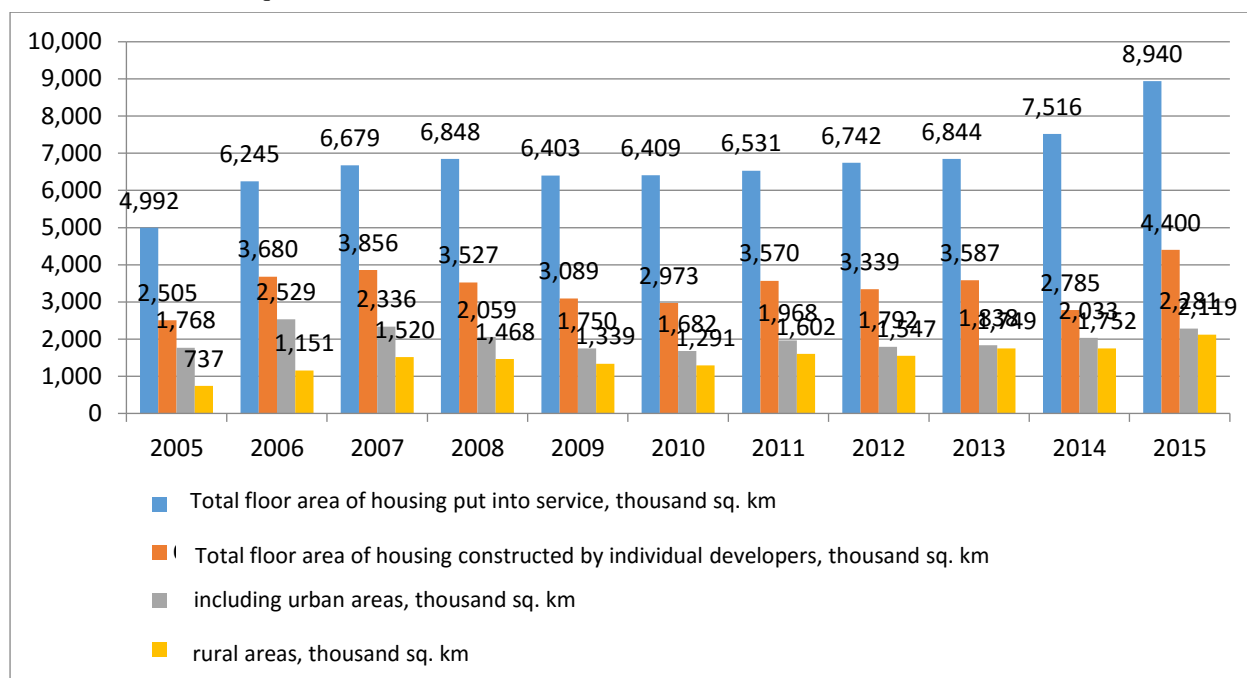
3. Public and private housing construction

The crisis and drastic decrease of state participation in housing construction financing has resulted to a significant decline in housing construction from 1991 to 1999. The annual volume of housing put into service during this period decreased from 6.13 million m² in 1991 to 1.11 million m² in 1999 (18 per cent of 1991 level). Since 2000, the volume of housing construction has gradually began to increase due to the construction of multi-apartment buildings by private developers and construction of residential houses by individual developers. Yet, up until 2006 the annual volume of housing put into service was below the 1991 level.

⁸⁹ *Investment and Construction Activities in the Republic of Kazakhstan, 2011-2015*, Statistical Compendium, the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan, Astana, 2016

According to statistics,⁹⁰ 6.2-6.8 million m² of housing were annually put into service between 2006 and 2013, which is 2-12 per cent higher than the 1991 level. The volume of housing put into service significantly increased in 2014 and 2015, amounting to 7.5 million m² and 8.9 million m² of housing per year, respectively (see Figure VIII).

Figure VIII
Housing put into operation, 2005-2015
(Area in thousands of square metres)



Source: *Investment and Construction Activities in the Republic of Kazakhstan, 2011-2015*, Statistical Compendium, the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan, Astana, 2016.

The Nurlı Zher Program aims to increase housing provision up to 22 m² by 2020. If such levels of housing provision and the predicted population of Kazakhstan by 2031 (i.e., 24 million people) are maintained, the annual volume of housing put into operation between 2016 and 2030 should be at least 12 million m². The Nurlı Zher Program aims to put into operation over 10 million m² a year between 2017 and 2021 using all sources of finance.

Starting from 2005 up to the present, the housing construction is supported through the allocation of a considerable amount of budget funds under public housing programmes, infrastructure and construction industry development programs. Since 2005, 7.3 million square meters of housing have been constructed at the expense of government investments, which made it possible to provide housing to more than 105 thousands of citizens⁹¹. The share of government agencies in housing construction decreased from 25.9 per cent (in 2005) to 12.6 per cent-18.4 in the subsequent period. In 2015, the government developers accounted for 16.2 per cent of the total floor area of housing put into operation.

In addition to direct financing of housing construction, the budget funds are used to promote private investments in housing construction. Between 2005 and 2015, out of 74.15 million m² of housing put into operation, 62.23 million m² of housing (83.9 per cent of the total housing volume) were constructed at the expense of private financing. Individual developers account for the largest share of private investment, 38.31 million m² of housing were put into operation at their expense in this period (51.67 per cent of total housing put into operation).

⁹⁰ Kazakhstan, Ministry of National Economy, Committee on Statistics, *Investment and Construction Activities in the Republic of Kazakhstan, 2011-2015*, Statistical Compendium, Astana, 2016.

⁹¹ Nurlı Zher Housing Construction Program.

The share of housing constructed by individual developers in various years ranged from 46.4 per cent to 58.9 per cent of housing put into operation. In 2015, individual developers accounted for 49.2 per cent of the total volume of housing put into operation. It is noteworthy that individual housing construction in rural areas was noticeably behind such construction in urban areas up until 2013, which indicates poorer housing availability for rural residents. In 2015, the volumes of individual housing construction in urban and rural areas became almost equal (2.28 and 2.12 million m², respectively).

4. Construction materials and housing construction technologies

The first public housing programs showed that private construction industry, established in 1970-1980, is able to satisfy only a fraction of the needs of the construction industry of Kazakhstan, and consequently, imported products account for a substantial share of the market. The technologies for manufacturing domestic construction materials are outdated, and production facilities are functionally obsolete. Domestic machine-building industry is underdeveloped, and there are virtually no plants manufacturing load lifting and construction machinery, mechanical handling equipment, technological equipment, sanitary wares, and glass factories. To increase housing construction and to shorten the time of housing construction, as well as to reduce the costs of housing, it is necessary to ensure the industrialization of construction process and to organize the manufacturing of domestic modern and efficient construction materials, products, and components.

In 2010, Kazakhstan approved the Program of the Development of Construction Industry and Manufacturing of Building Materials in the Republic of Kazakhstan for 2010-2014.⁹² One of the objectives of the Program was to meet the needs of the home market with the use of domestic construction materials by more than 80 per cent by 2014. The Program was aimed to include:

- construction of new cement plants and modernization of existing ones;
- construction of plants producing sanitary-technical and facing ceramics and glassworks;
- modernization of existing concrete products plants and construction of new concrete products plants manufacturing a new generation of components for prefabricated and frame-monolithic construction of multi-family residential buildings with improved design of flats, matching brick and monolithic buildings in appearance and performance properties.

Financial support for the construction and reconstruction of building industry enterprises has been entrusted to the Joint Stock Company Sovereign Wealth Fund "Samruk-Kazyna" (crediting, leasing, equity participation).

The State provides a number of measures to stimulate domestic manufacturing of construction materials and structures, such as the use of technical specifications of domestic products in model projects, construction of multi-family and individual houses, long-term contracts for the supply of manufactured construction products under Government programmes. With respect to the housing construction under the Nurly Zher Program for the citizens registered in akimats, and for the depositors of the Housing Construction Savings Bank, the priority is given to projects that use products manufactured by domestic plants. Standard projects of individual housing construction will also focus upon the structures manufactured by domestic plants.

Chapter 7

Financial Framework for the Housing Sector

A. Analysis of trends in the housing market as well as the actors in the housing market

After gaining independence in 1991, the housing policy of the State has undergone major changes (please see Chapters 1 and II for more information). There was a privatization process that ended with the of public allocation of housing stock both for business and residential sectors, after which a new role for the government was defined. According to the Presidential Decree No. 1344 of 6 September 1993 "on a New Housing Policy", the first State programme to reform the housing sector and its finance systems was developed which foresaw decreasing the role of the Government's role in the housing sector to indirect management through a system of financial and

⁹² The Program of the Development of the Construction Industry and the Construction Materials Operations of the Republic of Kazakhstan for 2010-2014 was approved by the resolution of the Government of the Republic of Kazakhstan dated 30 September 2010, No. 1004.

economic instruments and the creation of the basic institutions of the housing market and their legislative regulation. The focus of this new approach was on provision of support to people for purchase of homes through mortgage lending.

At the end of 1999, the National Bank of the Republic of Kazakhstan (hereinafter, NBRK) initiated the development of a regulatory framework for mortgage lending. As a result, the "Concept on long-term financing of housing construction and development of mortgage lending system in the Republic of Kazakhstan" was approved.⁹³

Law No. 2723 of 23 December 1995 "on Mortgage of Immovable Property" introduced mortgage lending in Kazakhstan. However, the lending conditions were characterized by high interest rates and downpayment requirements as well as short loan terms. Therefore, mortgage lending at that time was not a popular tool for the people in solving their housing problems. On 7 December 2000, Law No. 110 "on Housing Construction Savings" was adopted to regulate the system of contractual savings for housing construction. In the same period, the JSC "Kazakhstan Mortgage Company" (hereinafter, KMC) was founded. KMC's main activity was to refinance mortgage loans issued by banks to increase affordability of housing for the population (see Chapter 6 for more detailed discussion on KMC).

To a certain extent, the participation of KMC in the mortgage market has improved lending conditions – reduced downpayment; longer loan terms; and lower interest rates. For example, in 2001, mortgage interest rates in commercial banks were between 20 per cent and 24 per cent per annum, loan term was only five years, and mortgages were issued mainly in foreign currency. By 2003, it became possible to take out a loan at an annual interest rate of 12.6 per cent for a term of up to 20 years in national currency. However, the granting of mortgages took place only in main big cities such as Astana, Almaty and Atrau. Purchase of housing through mortgage lending was still not affordable to majority of households, both in terms of the lending conditions and value of the real estate. One of the reasons of such situation was housing deficit caused by the low levels of housing construction in the 1990s.

To address this problem, the Government developed the "State Programme of Development of Housing Construction in the Republic of Kazakhstan for 2005-2007"⁹⁴. The main purpose of this Programme was the construction of affordable houses for certain categories of people and their subsequent sale under preferential mortgage terms. During its implementation phase, there was a high level of activity in the construction sector.⁹⁵ Average house prices in 2007 doubled from its 2005 level (from KZT 76,645 to KZT 148,750). One of the reasons for this rise was the significant "deferred demand" (lack of housing and finance), which was formed during the 1990s, when the annual volume of housing construction did not exceed 1.5 square meters per capita, as well as significant increase in household incomes (for the period 2001-2007 it was 229 per cent).

The global financial crisis of 2008, triggered by a crisis in the subprime mortgage market in the United States, had a serious impact on the housing market of Kazakhstan. Citizens who invested in housing construction projects (hereinafter, co-investors) were greatly affected due to the freeze in construction of a large number of residential projects. At the beginning of the crisis, there were 62,889 co-investors registered in the country and who have been victims of the crisis. In order to help them, the Government invested about KZT 464.3 billion (representing 2.3 per cent of GDP in 2009) to facilitate the completion of 450 residential projects.

Along with this, in November 2008, the "Plan of priority measures to ensure stability of social and economic development of the Republic of Kazakhstan in the period 2007-2008" was adopted. According to this Plan, KZT 122 billion were allocated with the goal to stabilize the housing construction market (financing of "frozen" construction projects). In the case of mortgage lending, KZT 20 billion was allocated, including KZT 8.5 billion for replenishment of the authorized capital and KZT 12 billion as a concessional budget loan (rate 0.1 per cent for 20 years) for refinancing / purchase of mortgages from banks.

During the pre-crisis period, the country's financial institutions had free access to foreign capital markets. Mortgages in foreign currency were available in almost all banks and enjoyed popularity among borrowers due to more liberal conditions (mortgage loans in foreign currency amounted to about 50 per cent of the mortgage

⁹³ Approved by Government Decree No. 1290 of 21 of August 2000.

⁹⁴ Approved by Decree of the President of the Republic of Kazakhstan

⁹⁵ In particular, in 2005, the rate of commissioning of new housing was 93 per cent more than the level in 2004. In 2006, the rate increased by 25 per cent, and in 2007, the rate was 7 per cent more compared to the previous year.

portfolio of the banking system)⁹⁶. The devaluation of the national currency in 2009 and the simultaneous decrease in incomes⁹⁷ has caused the real value of borrowers' payments on such loans to increase sharply. This in turn has resulted in massive default on foreign currency mortgages. In order to prevent further deterioration of the situation, the Government launched a mechanism for refinancing foreign currency mortgage loans⁹⁸. The volume of financing of this program was KZT 600 billion.

Beginning in 2011, the housing construction market slowly recovered. In 2011-2014, there was a gradual increase in the volume of housing construction, both industrial and individual, with average annual growth rates of 4 and 6 per cent, respectively. The average annual rate of growth in the value of real estate was about 15 per cent.

At the end of 2014, due to the decrease in the value of exported energy goods, Kazakhstan faced another financial crisis, which was worse than the previous one of 2007-2008. A more serious devaluation of the national currency took place and the average daily value of the KZT in 2015 decreased by 25 per cent compared to the previous year.

The real estate market has reacted with a significant reduction in demand and almost complete stoppage of transactions. In the face of economic uncertainty, market participants took a wait-and-see attitude. The dollar equivalent price of real estate decreased twofold, while the price in national currency "froze". According to experts, demand of cheap economical housing became more preferable now. Developers who are letting out large apartments are having difficulty renting them out. In some cases, they are forced to divide large apartments, which have already been distributed, into smaller units. Transactions in luxury real estates are extremely rare, and occur only if the seller provides a significant discount.

According to the Committee on Statistics of the Republic of Kazakhstan, the value of real estate on the secondary and primary markets in 2016 amounted to KZT 188,600 and KZT 247,400 per m², respectively. Compared to 2015, the price of real estate in the secondary market increased by 7 per cent, which is more than two times lower than the inflation rate⁹⁹. The price in the primary market, on the other hand, showed a slight decrease (less than 3 per cent) from its 2015 level. In the main cities of the country - Astana, Almaty, Atrau, and Aktau, real estate prices are much higher. The cost of new housing varies between KZT 300,000 and 340,000, which is 30 per cent higher than the national average. In the secondary market, the cost of housing in these cities is in the range of KZT 262,000-340,000, which is almost 65 per cent higher than the cost of such housing in the rest of the country.

The rental housing sector is well developed, but mainly in the main cities of the country where the need for such type of housing is high. Commercial rental housing stock consists of mainly small apartments that were inherited by citizens, or were acquired for subsequent leasing.

Information on the cost of residential rental housing is collected at the state level. According to the Committee on Statistics, in 2016, the cost of rental housing amounted to KZT 1,300 per m², virtually unchanged from the previous year. In Astana and Almaty, this indicator was fixed at the level of KZT 2,300 - 2,400 per m².

Market participants

The key participants of the housing market are the real estate developers. According to the Committee on Statistics, as of 1 January 2016, the number of developers was 7,594, and around 30 per cent of them operated in the cities of Astana and Almaty.

In October 2016, a new version of the Law "on Equity Participation in Housing Construction" came into force.¹⁰⁰ This new law introduces new provisions aimed at protecting the rights of participants of equity construction. In particular, the conditions under which developers could attract funds from co-investors are clearly regulated. In

⁹⁶ Republic of Kazakhstan, National Bank.

⁹⁷ Average daily rate of the KZT against the USD decreased by 23 per cent and the nominal income of the population decreased by 11 per cent between the period 2008-2009.

⁹⁸ Government Resolution No. 179 "on Certain Issues of Refinancing of Mortgage Loans by Second-Tier Banks" of 17 February, 2009.

⁹⁹ According to the Committee on Statistics of the Republic of Kazakhstan, inflation rate in 2016 in relation to the previous year was 14.6 per cent.

¹⁰⁰ Law No. 486-V ZRK of April 2016. This law entered into force on 10 October 2016 and repealed the previous version (Law No. 180 of 7 July 2006).

the previous version of the law, developers had the opportunity to raise funds from co-investors through transactions that were not subject to legislative regulation. The new law clearly regulates the conditions for and methods of organizing equity housing construction, defines the requirements for developers (Table 4), and introduces an option of liability insurance for developers.

Table 4

Requirements for developers, by method of organizing equity housing construction

| <i>Method 1 Guaranteeing contributions of equity co-investors</i> | <i>Method 2 Financing of projects by second-tier banks</i> | <i>Method 3 Construction of the frame of a residential building at the expense of a developer own capital</i> |
|---|---|--|
| <ul style="list-style-type: none"> • At least 3 years of experience in constructing residential buildings; • No performance loss in the last 2 years; • Borrowed capital does not exceed own capital more than 7 times during the whole construction period before the facility becomes operational. | <ul style="list-style-type: none"> • At least 3 years experience in constructing residential buildings of at least 18,000 m² total area in cities of national significance or in the capital, and at least 9,000 m² in other administrative-territorial units; • Availability of a land plot in the form of property or in rent; • Availability of design estimate documentation (hereinafter, PED) with a positive conclusion of the state examination. | <ul style="list-style-type: none"> • Availability of the constructed skeleton of residential building at the own expense of the developer; At least 5 years of experience in constructing residential buildings of at least 60,000 m² total area in cities of national significance or in the capital; and at least 30,000 m² in other administrative-territorial units; • Availability of the land plot in the property or in rent; • Availability of PED with a positive conclusion of the state examination. |

Under this new law, the Housing Guarantee Fund (hereinafter, HGF) was established based on the existing Kazakhstan Mortgage Guarantee Fund. Its authorized capital is KZT 60 billion.

The HGF has the authority to request qualification requirements for participants of equity construction on financial sustainability experience, and to apply control mechanisms over the targeted use of co-investors' money by engaging independent engineering companies, and to use best practices of risk management.

In addition, the HGF will form a special reserve guarantee fund from contributions of developers for the exclusive purpose of covering costs associated with settlement of warranty claims. The amount of the guarantee contribution to the reserve fund is equivalent to 2-6 per cent of the project cost.

In case of an event covered by the warranty, the HGF has an obligation to complete the unfinished construction project. Warranty cases include the following: violation of the deadline for completion of a residential building; non-targeted use of funds by the developer; and insolvency of the developer, established legally by a court decision.

Market participants note that strict requirements established under the new law on equity construction will help to withdraw smaller players from the market and, consequently, monopolize the housing construction market.

Along with developers, realtors and appraisal companies are other significant stakeholders in the real estate sector. However, not all market participants are regulated by legislation. Currently, there is no law regulating the activities of realtors. A non-profit association of professional real estate agencies "United Association of Realtors of Kazakhstan" operates in the country.¹⁰¹ This organization has its own standards of practice of realtor activities, which provides for attestation and issuing of certificates for the provision of real estate services. Currently, a draft law on realtor's activities is being developed, which will protect the interests of participants of real estate transactions, and promote the full legalization of the realtor services market.

¹⁰¹ It was formed through the merger of the Association of Realtors of Kazakhstan and the National Association of Realtors in 2009.

Law No. 109 of 30 November 2000 “On Appraisal Activities in the Republic of Kazakhstan” sets out the regulations in the implementation of real estate appraisal. The self-regulating organization “Chamber of Professional Appraisers of Kazakhstan”¹⁰² operates in the country. Currently, its members are 199 independent appraisal companies, employing 436 appraisers from all regions of the country. Representatives of this association take an active part in lawmaking. In particular, they have participated in the development of twelve draft state evaluation standards, six of which were adopted by the Government of the Republic of Kazakhstan.

B. Mortgage market

Although mortgages were introduced in 1995, the mortgage market began to function only from 2001, when the first mortgage loan was issued. From 1995-2000, the Government together with the NBRK have carried out work on the formation of the legislative base and necessary infrastructure for mortgage lending. Unlike most ex-Soviet countries, development of the mortgage lending system in Kazakhstan took place without participation of international donors.

It is worth noting that two housing finance schemes are operating in the country - the American two-tier model (issuance of mortgage-backed securities secured by rights requirements for mortgages) and the European model (system of housing construction savings). An example of a State refinancing organization operating under the American model is the state joint-stock company KMC.

KMC was to become a pioneer organization in Kazakhstan in launching securitization process - the issuance of mortgage-backed securities under the pledge of mortgage claims. KMC also was the primary implementing institution of public housing programmes, in particular the “State programme of housing construction development in the Republic of Kazakhstan for 2005-2007”¹⁰³. Under this programme, the State’s lending standard of “10/10/20” was established (interest rate - 10 per cent, downpayment - 10 per cent, mortgage term - up to 20 years). Young families, employees of public sector and civil servants have the priority to participate in this programme.

The early stage of mortgage market development (early 2000s) was characterized by strict mortgage conditions: the size of down payment was almost 50 per cent, interest rates in national currency were up to 20 per cent, and loan terms did not exceed 10 years. The appearance of KMC products on the mortgage market contributed to the softening of the mortgage requirements and increased competition between commercial banks. Interest rates for mortgages in the national currency fell to 12-15 per cent per annum, the initial downpayment was reduced to 15-20 per cent of the value of the property and the loan period was increased to 15 years. In addition, the banks actively offered mortgages in foreign currency and adjustable mortgage rates (floating rates). As a consequence, the mortgage market grew at a fast pace. Thus, if in 2003 the mortgage-to-GDP ratio was 1.7 per cent, it reached 5.3 per cent in 2007.

Like many other countries, the global financial crisis had a profound effect on the mortgage market in Kazakhstan, which forced the government to intervene. In order to prevent massive defaults on foreign currency mortgage borrowings, the Government launched a refinancing programme of such mortgages through second-tier banks (hereinafter - STBs)¹⁰⁴. As a result of Government measures loans in the national currency are issued with less than 9 per cent interest rate for special categories of population and less than 11 per cent for all other categories for a term of up to 20 years. The condition for participation was that the borrower be the owner of a single apartment of up to 120 square meters.

As a result of the Government measures, the market gradually stabilized in the period 2010-2014. Banks started to participate again in the mortgage market and an increase in mortgage loans issued was seen. In particular, the volume of mortgage loans increased almost three-fold - from KZT 85.1 billion in 2010 to KZT 248.5 billion in 2014. However, a new economic crisis in late 2014 caused a new round of devaluation of the national currency, which contributed to the sharp decline in the volume of mortgage lending and financing of housing construction.

¹⁰² Established under the basis of Kazakhstan association of appraisers

¹⁰³ Approved by the Decree of the President of the Republic of Kazakhstan No. 1388 of June 11, 2004.

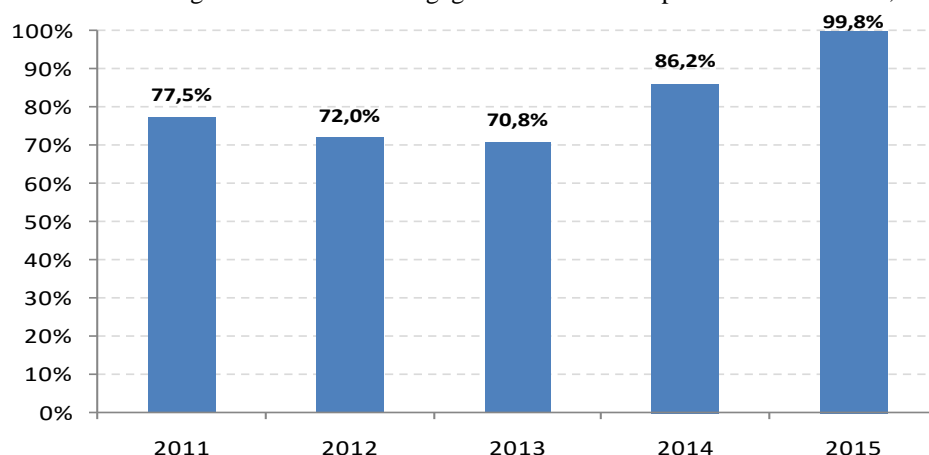
¹⁰⁴ According to the Law No. 2444 “on Banks and Banking Activities in the Republic of Kazakhstan” (as amended and supplemented on 28 February 2007) of 31 August 1995. Refers to all credit institutions of the country excluding the National Bank of Kazakhstan and the Development Bank of Kazakhstan

Many banks in 2016 declared that they restarted issuance of mortgages, but the terms became significantly stricter: according to a website portal¹⁰⁵, the mortgage market is controlled by five major banks. At the end of 2015, mortgages issued by these banks reached almost 100 per cent of the total mortgage portfolio of banks (Figure IX). The three largest mortgage market participants were the JSC “Housing Construction Savings Bank of Kazakhstan” (31 per cent), People’s Bank (22 per cent) and Bank Center Credit (19 per cent).

Strengthening the position of the biggest players took place against a background of stagnation of the mortgage market itself. Indeed, the volume of mortgages issued in 2016 amounted to KZT 195.1 billion, the lowest in the last 4 years.

Figure IX

Share of the five largest banks in the mortgage market of the Republic of Kazakhstan, 2011-2015



Source: Ranking.kz (www.ranking.kz). Calculations based on NBRK data.

In fact, two players are maintaining the current size of the mortgage market - Housing Construction Savings Bank of Kazakhstan (hereinafter, HCSB) and the People’s Bank, which collectively increased their mortgage portfolios by KZT 134.5 billion in 2015. The HCSB’s mortgage portfolio has been growing constantly since 2009 (an average growth rate of 33 per cent per year). As at 01 March 2016, the share of HCSB to the total mortgage portfolio of the banking system was about 33 per cent (28 per cent in 2014).¹⁰⁶

Founded in 2003, the HCSB has a special place in the system of housing finance of the country being the only bank that implements the system of housing construction savings. The bank adopted the German system of contractual savings for housing or “Bauspar” model wherein a housing loan is linked to a savings deposit. In this system, an investor and a bank enter into a contract for housing construction. The investor deposits money for housing construction that earns interest below market interest rates and is entitled to a housing loan –also below market rates- once a minimum accumulated amount of savings has been reached as stipulated in the contract (usually at least 50 per cent of the loan amount). The investor repays the loan with interest based on the agreed rate in the contract, which is fixed and therefore, it does not depend on market conditions. From the time the system was implemented until 1 January 2017, the bank already signed 1,175,241 agreements on housing construction savings amounting to KZT 3.0 trillion; total depositors savings reached KZT 407 billion; and 128,997 loans amounting to KZT 608 billion were granted.

From 1 November 2016, in accordance with the "Standard Terms and Conditions of the Contract for Housing Savings", HCSB started to offer four different tariffs or products for contractual savings for housing with different savings/loan periods and loan interest rates. Savings accumulation period ranges from 3.5 to 15 years depending on the deposit plan, and the interest rate on all types of deposits is 2 per cent per annum. Note that all HCSB products require an accumulated savings of at least 50 per cent of the contracted amount.¹⁰⁷ When the investor has reached the required amount of savings, he is entitled to borrow a mortgage loan at an interest rate of 4 per

¹⁰⁵ Ranking.kz

¹⁰⁶ Ibid.

¹⁰⁷ In accordance with bullet 7 Chapter 2 of the "Standard Terms and Conditions of the Agreement on contract savings ", the contracted amount is the amount of funds necessary for the investor to improve housing conditions, which consists of housing construction savings and housing loans

cent to 11 per cent per annum payable up to 25 years. HCSB offers also products that help improve the living conditions of citizens who do not have the required amount of savings through preliminary and intermediate housing loans.

Currently, almost all banks have mortgage programmes for acquiring real estate in the primary and secondary markets, as well as to improve living conditions. The initial downpayment for these type of loans ranges from 15 per cent to 50 per cent and loan term is up to 30 years. Some banks grant mortgages without downpayment if the borrower provides an additional pledge. Interest rates on mortgages in the national currency range from 15 per cent to 23 per cent per annum. Mortgages in foreign currency (in USD) are also available but the borrower should provide an official confirmation of income in that currency. Some banks place a moratorium on loans and charge penalties for early repayment.

There are also specialized mortgage companies that provide housing mortgages. As of 1 November 2016, the KMC JSC "Almaty Regional Mortgage Company", JSC "Mortgage organization" and Express-Finance have started granting mortgages. The loan terms they offer are similar to the terms offered by banks - loan term of 20 years, interest rate of 17-19 per cent per annum and 30 per cent downpayment for loans in the national currency.

In accordance with Government Decree No. 179 of 17 February 2009 "on Some Issues of Mortgage Loans Refinancing of Second-tier Banks", nine banks are implementing a state programme for refinancing foreign currency mortgages after it was expanded in February 2016. For this purpose, the NBKR has allocated KZT 120 billion to these banks for refinancing of foreign currency mortgage loans amounting to KZT 120 billion¹⁰⁸. According to the terms of the programme, the foreign currency loans are converted to tenge and refinancing is provided at an interest rate of no more than 3 per cent per annum, and the loan term is increased to 20 years. To qualify for refinancing, one must belong to a socially vulnerable group¹⁰⁹; the mortgage loan must have been granted during the period 1 January 2004 to 31 December 2009; and the outstanding principal balance on the loan should not be more than KZT 36.5 million; and a delay in payments of more than 90 days.

Some KMC partner banks offer mortgages with floating interest rates, the rates depending on the level of inflation and KMC loan spread. The initial installment for such loan 15 per cent of the value of the property, and the loan term is up to 20 years. In case of early repayment within the first year of the loan, sanction is given in the amount of 1 per cent of the outstanding principal¹¹⁰. As of February 2017 this is the only mortgage loan with a floating rate available on the market.

Delinquency and defaults on mortgage loans are isolated cases and are regulated out of court. In theory, the lender has several options to impose foreclosure on the mortgaged property:

- foreclosure of the mortgage through court
- foreclosure of the mortgage out of court
- transfer of pledged property to the lender in case of failure of auctioning.

Law No. 401-IV of 28 January 2011 "on Mediation" also regulates the resolution of mortgage disputes out of court.

Currently, two credit bureaus are operating in the country, the TTO "First Credit Bureau" and the JSC "State Credit Bureau"¹¹¹. The legislation provides for the mandatory provision of information to the State Credit Bureau for the following organizations: STBs, organizations carrying out certain types of banking operations, microfinance organizations; and individual entrepreneurs or legal persons selling goods and services on credit or through deferred payment. Compliance with this provision will allow the State Credit Bureau to generate a reference database of credit histories. In accordance with Law No. 573 of 6 July 2004 "on Credit Bureaus and Formation of Credit Histories of the Republic of Kazakhstan", the NBRK shall regulate credit bureaus.

¹⁰⁸ Resolution of the Government of the Republic of Kazakhstan No. 891 of 12 November 2015 on amendments to Government Decree No. 179 of 17 February 2009.

¹⁰⁹ Socially vulnerable citizens are defined in Art. 68 of Law No. 94-I of 16 April 1997 "on Housing Relations".

¹¹⁰ As of January 2017, only JSC Bank Centercredit offers this type of loan.

¹¹¹ Established on the basis of NBRK Board Resolution No. 213 of 4 July 2012 "On approval of the foundation of the joint stock company State Credit Bureau". State Credit Bureau is a specialized non-profit organization and NBRK owns 100 per cent of its voting shares.

C. Public and private financing of housing sector

Since independence, provision of housing has been one of the priorities of the State's policy. The Government is aware of the importance of assisting citizens in improving their living conditions. Since mid-2000s, the government has adopted a number of programmes aimed at increasing affordability of housing. In particular, the following programmes were approved:

- 1) State Programme of development of housing construction in the Republic of Kazakhstan for 2005-2007¹¹² (hereinafter, State Programme 2005 - 2007);
- 2) State programme of housing construction in the Republic of Kazakhstan for 2008-2010¹¹³ (hereinafter, State Programme 2008 - 2010);
- 3) Programme for the development of the construction industry and production of construction materials in the Republic of Kazakhstan for 2010 - 2014¹¹⁴ (hereinafter, State Programme 2010-2014);
- 4) Programme of housing construction in the Republic of Kazakhstan for 2011 - 2014¹¹⁵ (hereinafter, Programme 2011-2014);
- 5) Programme "Affordable Housing 2020"¹¹⁶;
- 6) Regional Development Programme 2020"¹¹⁷.

The main goal of the State Programme 2005-2007 was to increase affordability of housing for the population by stimulating construction and implementing various financial mechanisms. It involved the construction of housing at a reduced cost (KZT 56,500 per m² -with a market value of KZT 126,000 and KZT 97,000 on the primary and the secondary market, respectively-), which will help ease mortgage conditions for the population. In 2005–2007, KZT 1113 billion of investments from all financial sources was allocated for housing construction and 17.9 million m² of residential houses are already operational (another 15.8 million m² are planned).

The State Programme 2008–2010 continued with the provision of housing at a reduced cost to priority categories of citizens. The number of potential beneficiaries was increased to include the category of persons those who didn't have enough funds for downpayment (through the application of a contract savings system based on a preliminary loan).

As mentioned previously, the construction industry was hit heavily by the global financial crisis and it was at this period that the State Programme 2008-2010 was being implemented. To prevent a slowdown in construction, the Government developed a plan of priority measures to ensure stability of socio-economic development¹¹⁸. The main objectives of the action plan were: 1) to reduce dependence of STBs from external funding; 2) to reduce the financing of small and medium business projects, as well as budgetary investment projects; 3) to ensure the stability of the mortgage market; and 4) to protect the rights of co-investors. The injection of budget funds in the sector of equity construction was considered by the Government of the Republic of Kazakhstan as a "one-time action" due to the need to prevent the collapse of the construction and related industries.

The State Programme 2010-2014 continued the objective to develop housing construction. The main goal of this programme was to provide balanced sustainable production of building materials in the country. Increasing the share of building materials production to 80 per cent was among the goals of the programme. Approved funding under this programme was KZT 38.6 billion.

Taking into account the substantial volume of public investments channeled to the sector of housing construction in 2008 - 2010, a significant decrease in the volume of private investments in housing construction also occurred (private investment had financed more than 87 per cent of housing before the crisis, including 60 per cent of individual housing construction). The main reasons include the tightening of the requirements of supervisory authorities for the formation of STB provisions, lack of cheap long-term funding in the domestic market from STB, as well as the deterioration of STB collateral due to the falling real estate prices. Furthermore, the lack of funding for housing utilities infrastructure has resulted in the decrease of the volume of individual housing

¹¹² Approved by the Decree of the President of the Republic of Kazakhstan No. 1388 of 11 June 11 2004.

¹¹³ Approved by the Decree of the President of the Republic of Kazakhstan No. 383 of 20 August 2007.

¹¹⁴ Approved by the Decree of the Government of the Republic of Kazakhstan No. 1004 of 30 September 2010.

¹¹⁵ Approved by the Decree of the Government of the Republic of Kazakhstan No. 329 of 31 March 2011.

¹¹⁶ Approved by the Decree of the Government of the Republic of Kazakhstan No. 821 of 21 June 2012.

¹¹⁷ Approved by the Decree of the Government of the Republic of Kazakhstan No. 728 of 28 June 2014.

¹¹⁸ Approved by the Decree of the Government of the Republic of Kazakhstan No. 1039 of November 6, 2007.

construction. For example, under the State Programme 2010-2014 KZT 10 billion was allocated for the period of 2011-2012 for individual housing construction, including the budget for utilities infrastructure. In previous years, KZT 30 billion annually was allocated for the same purpose, including KZT 10-15 billion for the construction of housing utilities infrastructure.

On 31 March 2011, the Government adopted the State Programme 2011-2014 in order to maintain the volume of industrial and individual housing construction and to attract private investments. The overall objective of this programme was to provide a comprehensive solution to the problems of the housing construction sector, which could help increase affordability of housing for all groups of the population.

Within the framework of the State Programme 2011-2014, new schemes of housing construction financing were envisaged: implementation of contract savings scheme through HCSB; support for the construction of commercial, industrial and individual housing through the funding of STBs, the construction/acquisition of real estate by JSC "Samruk-Kazyna Real Estate Fund" for subsequent rent/lease purchase and direct sale. The total amount of funding for this programme was KZT 488.3 billion.

Despite the achievements of the state programmes, housing was still inaccessible for most households. According to the Ministry of Economy, over 6 million out of the 8.4 million economically active population could still not afford to buy housing on market terms. At the same time, the number of people in the housing waiting list continued to grow and the level of provision of quality housing was rather low.

In order to address these challenges, an integrated audit and analysis of the existing programmes in the construction industry was conducted. Its results served as the basis for the development of new unified programme "Affordable Housing 2020". The programme envisaged 1) bringing the annual volume of rental housing construction to up to 1 million m² per year, 2) the development of rental-purchase mechanisms, and 3) establishing a set of measures for the development of the construction industry. In view of the devaluation of the national currency in late 2014, the programme was transformed. Effective 1 January 2015, the programme became the "Regional Development Programme 2020", which combined the following five programmes:

1. "Regional Development"
2. "Mono-cities Development Programme for 2012-2020"
3. "Modernization of housing utilities and Communal Services for 2011-2020"
4. "Ak Bulak for 2011-2020"
5. "Affordable housing 2020"

The amount of funding from the State, local budgets and extrabudgetary sources amounted to KZT 2.2 trillion until 2019. In addition to these areas, the Regional Development Programme until 2020 provided funding for credit, commercial and rental housing in the amount of KZT 277 billion under "Nulry Zhol"¹¹⁹.

The implementation of state programmes is mainly focused on increasing housing affordability in urban areas. Housing provision for the 43.1 per cent rural population is 17.4 persons per m², which is lower than the 20.9 per cent national average. According to the Committee for Construction, Housing and Utilities, the number of people waiting for 0.1 hectare land plot for individual housing construction is about 1.2 million, which is almost half of the number of people needing improvement of living conditions. According to the Land Code of the Republic of Kazakhstan, only land plots with developed utilities infrastructure could be transferred to private ownership.

At the end of 2016, the Government adopted the new housing programme "Nurly Zher"¹²⁰. This programme aims to develop new approaches to stimulate housing construction to improve housing affordability and to integrate various housing programmes into one.

Under this new programme, housing policy is focused on shifting accents from budgetary to extra-budgetary funding. Funds for housing construction allocated under the state programmes "Nulry Zhol" for 2015-2019 and "Regional Development Programme until 2020" will be concentrated and redistributed into this programme.

¹¹⁹ Approved by the Order of the President of the Republic of Kazakhstan No. 1030 of 6 April 2015.

¹²⁰ Approved by the Decree of the Government of the Republic of Kazakhstan No. 922 of 31 December 2016.

Nurly Zher has seven goals, which refer to the specific tasks of the programme.

Task 1. Increasing the affordability of mortgages

In order to increase the affordability of mortgages, it is proposed to subsidize interest rates of banks on mortgages granted by STBs to citizens. Starting 2017, the State, through the financial agent KMC, will subsidize up to 7 per cent of the interest rates on mortgage loans. This will reduce the end borrower's mortgage of up to 10 per cent per annum. For the period 2017-2019, KZT 120 billion annually is expected to be allocated to subsidize 8,000 loans per year.

Task 2. Stimulation of housing construction by private developers

In order to increase the supply of housing by private developers, it is proposed to subsidize interest rates on loans issued by STBs to private developers for the construction of new housing (subsidies will be provided only for mortgages disbursed by STB, at a rate not exceeding base rate of NBRK on more than 5 per cent, relevant for the time of decision to subsidize). From 2017, the State, through the JSC "DAMU Entrepreneurship Development Fund" (hereinafter, EDF Damu), an investment arm of JSC "NMH Baiterek", will grant subsidies of up to 7 per cent of the interest rate on loans to private developers.

However, the loan term and the term of subsidizing of the interest rate must be the same and not exceed 36 months. Under this programme, the developer is required to sell at least 50 per cent of the commissioned housing to participants of the contract savings system through HCSB () at fixed prices - up to KZT 260,000 per m² in Astana, Almaty and suburbs, and up to KZT 220,000 in other regions. The volume of funding for 2017 is expected to be KZT 157 billion.

Task 3. Construction of credit housing through the contract savings system

Under the framework of this task, credit housing construction will continue, including for those people registered in the waiting lists of local executive authorities (hereinafter, LEAs). The funding mechanism for credit housing construction will be implemented in the following areas:

- 1) by issuing 2-year LEA bonds with redirection of funds previously allocated for new construction projects;
- 2) placement of "conditional" deposits in STBs (interest rate on the "conditional" deposit should not exceed 3 per cent per annum and the effective rate on loans granted by STBs should not exceed more than 7 per cent per annum);
- 3) attraction of funds from international financial institutions under guarantees quasi-public sector entities.

Construction of credit housing through the LEAs will be financed by borrowed funds from the quasi-public sector entities through the issuance of securities with maturity of up to 2 years and coupon of 0.15 per cent per annum twice a year.

Additionally, the Government provides the right for allocation from the Republican budget of loans to LEA for the implementation of HCSB housing construction projects at a rate of 0.01 per cent per annum.

Financing of credit housing construction by LEAs will be implemented through the issuance of securities and raising funds for purchasing from the following sources:

- 1) KZT 67 billion from the Joint-stock Company "National Management Holding Baiterek" (hereinafter, JSC "NMH Baiterek") in 2016 to purchase debt securities (bonds) of LEAs;
- 2) Redirection in 2018 of KZT 113 billion provided by JSC "NMH Baiterek" in 2016 for the construction of rental and credit housing;
- 3) Redirection in 2018 of KZT 97 billion provided by JSC "Samruk-Kazyna" in 2016 for the construction of commercial housing.

An additional mechanism for financing the construction of credit housing is the placement of "conditional" deposits in STBs. It is also assumed that JSC "NMH" Baiterek "will raise funds from international financial

organizations under the corporate guarantees for financing credit housing construction. It is expected that by 2021 the volume of housing construction under this task will reach 1.8 million m² per year.

Task 4. Creation of rental housing stock for the socially vulnerable population

Involves target transfer of State budget to regional budgets and to budgets of the cities of Astana and Almaty for the design and construction of rental housing by LEAs for socially vulnerable groups of people who are in the waiting lists of LEAs. At the same time, it is allowed to construct rental housing at the expense of the budgets of LEAs without purchase option.

The planned annual commissioning of rental housing is 150,000 m² per year.

Task 5: Development of individual housing construction

In order to finance the construction of individual houses, LEAs may channel the funds raised through the issuance of debt securities under the direction "Construction of credit housing through the system of contract savings". People from the waiting lists participating in pilot project, have the right to buy finished individual houses with the land plot, provided with housing utilities infrastructure or to obtain a loan in HCSB for its purchase.

HCSB provides loans with reduced interest rates for the purchase of individual house. Under the direction "Increasing the affordability of mortgage lending", the Government provides grants of up to 7 per cent per annum of the lending rates on preliminary and intermediate housing loans in order to reduce the borrower's annual interest rate on a loan to up to 5 per cent, for a maximum period of 5 years. The interest rates subsidy ends after this period. For these purposes HCSB raise funds on the market. It is expected that, under this task, the volume of housing construction will reach 5.5 million square meters per year by 2021.

Task 6. Creation of commercial and rental housing stock

Within the framework of this task, the implementation of the following areas of housing construction, previously stipulated in the programmes "Nurly Zhol" and Regional Development until 2020 will be completed:

- 1) rental housing for people in LEAs' waiting lists and for young families;
- 2) rental housing with purchase of KMC;
- 3) rental and credit housing JSC "Bayterek development";
- 4) commercial and rental housing with purchase of JSC "Samruk-Kazyna".

Task 7. Support of equity housing construction

This the task will continue the implementation of previously provided mechanisms for the protection of housing equity contributions, financing of HCSB housing projects with private developers, and the pilot project of demolition of emergency housing in the city of Astana. It is expected that the volume of contributions accumulated in the HGF to guarantee equity construction, will increase by KZT 100.5 billion in 2017 to KZT 199.1 billion in 2021.

The funding for the implementation of the programme will come from the State budget; private investments, including those from the quasi-public sector; and from other funds raised from the capital market, including funds from the Single Accumulative Pension Fund. The total volume of funding for the period 2017-2021 is KZT 1.542 trillion, –of which KZT 802.8 billion will come from the State budget and –KZT 739 billion from extra-budgetary sources.

Despite the considerable amount of investments in housing construction by the State, its share in the total amount of funding is no more than 10 per cent. The largest volume of construction was financed by the population, which has significantly increased in the last two years (from 43 per cent to 51 per cent in the first nine months of 2016). At the same time, the number of apartments commissioned by individual developers over the past three years accounted for 40 per cent of the total volume of commissioned apartments.

Table 5

Investment in housing construction by financial source
(Billions of Kazakhstani tenge)

| <i>Sources of financing</i> | <i>2014</i> | <i>2015</i> | <i>As at</i> | |
|-----------------------------------|-------------|-------------|--------------------|--|
| | | | <i>01 December</i> | |
| | | | <i>2016</i> | |
| Republican budget | 89 | 84 | 46 | |
| Local budget | 47 | 35 | 42 | |
| Own funds | 331 | 435 | 487 | |
| Including funds of the population | 222 | 309 | 330 | |
| Bank loans | 54 | 63 | 55 | |
| Including funds of foreign banks | 0.5 | 0 | 0 | |
| Other borrowed funds | 92 | 102 | 65 | |
| Including funds of non-residents | 0.08 | 0.03 | 0.07 | |
| Total | 614 | 719 | 695 | |

Source: Committee on Statistics of the Republic of Kazakhstan.

D. Link between housing policy and the banking system

Banking system

To date, the banking sector of the Republic of Kazakhstan is the largest and dominant segment of the financial market. According to NBRK, as of 1 January 2017, there are 33 STBs operating in the country, 15 of which have foreign participation, including 11 subsidiary STBs.

Until mid-2007, credit organizations actively borrowed from the international capital market (syndicated loans, debt financing). After the global financial crisis, the Agency of the Republic of Kazakhstan on Regulation and Supervision of Financial Market and Financial Organizations¹²¹ took measures to increase banks' capitalization requirements on liabilities to non-residents; to increase capital adequacy of banks in relation to real estate loans and consumer lending; and to improve the risk-management system and internal control of STBs.

Starting 2011, the banking sector started to show gradual recovery. However, growth dynamics indicate a lack of efficiency of the banks on reallocation of resources in the economy, and in meeting the demand for loans (Table 6).

Table 6

Comparative dynamics of some banking indicators in the Republic of Kazakhstan, 2011-2016

| <i>Indicators</i> | <i>2011</i> | <i>2012</i> | <i>2013</i> | <i>2014</i> | <i>2015</i> | <i>2016</i> |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Billions of Kazakhstani tenge</i> | | | | | | |
| GDP | 27 572 | 31 443 | 34 443 | 38 624 | 40 884 | 44 354 |
| Banking sector assets | 12 817 | 13 870 | 15 462 | 18 239 | 23 780 | 25 561 |
| Banking sector liabilities | 12 975 | 11 873 | 13 384 | 15 880 | 21 290 | 22 716 |
| <i>Percentage</i> | | | | | | |
| Assets/GDP ratio | 46.5 | 44.1 | 44.9 | 42.7 | 57.6 | 57.6 |

¹²¹ Decree of the President of the Republic of Kazakhstan No. 25 of 12 April 2011 transferred the functions and powers of the Agency to NBKR.

| | | | | | | |
|--------------------------------------|-------|-------|-------|-------|------|-------|
| Loan portfolio/GDP ratio | 38.0 | 37.1 | 38.8 | 36.7 | 37.7 | 35.0 |
| Return on equity (ROE) | -0.94 | 26.52 | 13.15 | 13.17 | 15.4 | 15.18 |
| Return on assets (ROA) | -0.1 | 1.61 | 1.77 | 1.64 | 1.96 | 1.64 |
| Share of the five largest banks: | | | | | | |
| In the assets of second-tier banks | 65.3 | 60.0 | 55.4 | 52.4 | 59.2 | 58.2 |
| In the total loan portfolio of banks | 70.9 | 65.3 | 62.1 | 58.9 | 63.4 | 60.6 |
| In the total deposits of clients | 62.2 | 57.5 | 54.4 | 51.0 | 60.6 | 58.2 |

Source: NBRK

From 2011 to 2016, banking sector assets have almost doubled – from KZT 12,817 billion to KZT 25,561 billion. However, in relation to GDP, the volume of banking assets increased only by 11 per cent. The situation of the loan portfolio of the banking sector is similar. As of 1 January 2017, it was KZT 15 trillion, an increase only of 58.7 per cent from its 2011 level. However, the loans/GDP ratio, which reached a maximum of 66.7 per cent in 2007, remained low at 35 per cent by the end of 2016. Therefore, there is a decrease in the level of assets and the volume of loans in relation to GDP, which can be attributed to unbalanced lending to sectors of the economy, low diversification of the loan portfolio, and short-term funding. The portfolio of issued loans is characterized by an increasing concentration on the non-productive sector; high proportion of turnover, mainly in trade and services sectors, which brings quick and high returns but does not participate in creating the final product and increase of real GDP.

At the same time, a serious challenge to the adequate and balanced development of the economy is the high concentration of the banking sector to the five largest banks whose assets share is nearly 60 per cent.

One other problem of the banking system of Kazakhstan is its fund base. Historically, deposits of firms and individuals formed more than half of the fund base of the banking system. After the global financial crisis, access to foreign capital markets for Kazakh financial institutions became limited due to the increased financial risk and decreased interest of potential foreign investors in the debt instruments of Kazakhstan. This situation provided the impetus for banks to use domestic funding sources. Since 2013, banks began to use undistributed earnings as an additional source of capital (Table 7).

Table 7

Structure of funding sources of the banking sector of the Republic of Kazakhstan
(Percentage of the total liabilities)

| <i>Liabilities</i> | <i>2011</i> | <i>2012</i> | <i>2013</i> | <i>2014</i> | <i>2015</i> | <i>2016</i> |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Interbank deposits | 0.8 | 1.2 | 1.8 | 2.1 | 2.1 | 1.6 |
| Loans received | 4.8 | 4.4 | 3.8 | 5.4 | 43 | 4.8 |
| Deposits of clients | 60.8 | 61.5 | 63.7 | 62.2 | 65.6 | 67.6 |
| In foreign currency | 32.7 | 31.3 | 37.2 | 57.8 | 69.2 | 53.8 |
| Issued securities | 11.7 | 7.2 | 6.3 | 6.7 | 8.8 | 7.0 |
| Share capital | 20.0 | 20.1 | 18.2 | 15.9 | 6.6 | 6.3 |
| Reserve capital | 3.1 | 3.2 | 3.3 | 2.6 | 1.2 | 1.1 |
| Undistributed net income (loss) of the current year | 0.3 | -1.5 | 1.5 | 1.6 | 0.9 | 1.6 |
| Other liabilities | -1.5 | 3.9 | 1.3 | 3.6 | 10.5 | 10.0 |

Source: NBRK.

Over the last 5 years, there has been a growth in the deposits base of the banking sector due to currency revaluation. Given that a substantial part of the deposits is fixed-term deposits, which depositors could claim ahead of schedule, deposits base is regarded as a relatively stable source of funding only because of its high exchange rate? volatility. Therefore, banks are forced to provide loans in foreign currency or bear credit risks.

The stock market currently remains weak, especially due to the pension reform and the reduced demand for securities, previously provided by private pension funds. As of 1 September 2016, the amount of funds raised through the issuance of securities was less than 8 per cent. Thus, the resource base of the banking sector is quite expensive due to the shortage of long-term sources of funding, which in turn affects the cost of long-term loans to final borrowers.

A high share of "non-performing" loans has destabilizing effect on the banking activity. Over the last few years, starting from 2010, the share of non-performing loans (4 and 5 category¹²²) in the loan portfolio of banking system was consistently high at 36 -37 per cent. This indicates that the potential use of the banks 'classic' instruments of improving asset quality, such as debt restructuring, is almost exhausted. In this regard, several mechanisms of improving the quality of banks' assets were implemented in 2012. The mechanisms are the following a): sale of distressed assets to JSC "Fund of problem loans" and subsidiaries of banks that acquire doubtful and bad assets of parent bank; and b) the extension of terms for the remission of "bad" debts till the end of 2015 year without incurring additional tax liabilities for the banks. This move has brought down the share of loans in arrears from 23.6 per cent in 2015 to 8 per cent in 2016.

The banking sector has slowly recovered after the global financial crisis but challenges remain. International rating agencies outline the following factors hampering full recovery: a) extremely high credit risk due to aggressive underwriting standards and weak payment culture; b), a significant mismatch between the foreign currency loans and deposits; and c) low profitability adjusted for risk, due to lower margins and rising of provisioning costs. Moreover, economic risks in the country remain high as the economy, which depends on raw materials, is pressured by low and volatile oil prices against the backdrop of a significant weakening of the national currency from August 2015.

The level of banking industry risk also remains high because Kazakh banks are still dependent on a significant amount of currency swaps in the interbank market and by the NBRK, taking into account the very high, albeit decreasing level of "dollarization" of deposits. The rating agency Standard & Poor also predicts a decline in the level of savings and increased volatility of deposits of state companies, firms and individuals.¹²³

Microfinance

As of 1 July 2016 (latest available data of the NBRK at the time of writing), there are 118 microfinance organizations (hereinafter, - MFOs) registered in the country. Previously, MFOs were not under the control of the NBRK. On 26 November 2012, the Law No. 56-V "on Microfinance Organizations" was adopted, which required all MFOs to register with the NBRK until 1 January 2016.

According to the latest available data of NBRK, the volume of MFO assets is KZT 106.3 billion, an increase of 16.7 per cent from the beginning of 2016. Originated loans (74.4 per cent) occupy the largest share in the assets of MFOs, followed by share deposits (12.9 per cent). The volume of total liabilities of MFOs is KZT 71.7 billion, of which 93 per cent are attracted loans. Such a high proportion of loans in the total liabilities is due to government programmes supporting businesses through microfinance that focus only on providing lower interest rates to final borrowers (households) and do not take into account the interests of the MFOs themselves. Traditionally, high rates of microfinance products are the result of large transaction costs of loans rather than high risks of default, as evidenced by official statistics. According to the NBRK, the share of NPLs as of 07.01.2016 was only 4 per cent, while the same indicator for the banking sector was 8 per cent. Legislative restrictions of MFOs through the issuance of securities or in attracting deposits affect significantly the cost of financial resources for MFO.

The Government recognizes the importance of the development of the micro lending industry and takes certain actions in this direction. In particular, the EDF "Damu" in its Development Strategy for 2014-2023 has planned to invest about KZT 1 billion in 2016 as initial support to MFOs. In the same year, microfinance institutions may receive financial support from the World Bank, Asian Development Bank, European Bank for Reconstruction and

¹²² 4 category - doubtful loans that have arrears of 61-90 days; 5 category - unprofitable loans with arrears of more than 90 days.

¹²³ S&P Global Ratings' Credit Research, *Latest Banking Industry Country Risk assessment on Kazakhstan Published* (New York, Alacra Store, 2016). Available from <http://www.alacrastore.com/s-and-p-credit-research/Latest-Banking-Industry-Country-Risk-Assessment-On-Kazakhstan-Published-1722583>

Development and the European Investment Bank. Funds received from international financial organizations will be issued to the EDF "Damu" and the NBRK, which will provide the MFOs with liquidity in the local currency.

The EDF "Damu" estimates that the total volume of microfinance funding until 2020 will reach about KZT 15 billion, which will allow loan provision to 27,000 borrowers. Moreover, a special loan product is being developed, wherein the EDF "Damu" will act as a guarantor for a loan.

Currently, microfinance is mainly used for lending to business activities (financing of working capital) in private farming and for renovation to improve the energy efficiency of housing. For a private farming business, the borrower can apply for an unsecured loan of up to KZT 500,000 with a collective guarantee of 3 to 10 people payable for a period of up to 18 months. For purposes of improving the energy efficiency of housing, the loan amount could be up to KZT 1 million payable in 36 months. The maximum loan amount that MFOs extend should be in accordance with the regulations of the Law "on Microfinance Organizations", that is, the loan amount should not exceed eight thousand-fold of the monthly calculation index (MCI)¹²⁴ for the respective year.

Stock market

The stock market in Kazakhstan is currently underdeveloped and does not function as a means to attract funding for banks and organizations. Currently, the lion's share of trading volume are on the sectors of foreign currency and repo transactions (38 per cent and 60 per cent, respectively). On the other hand, the volume of trading of corporate debt securities accounts for less than 1 per cent (Table 7).

Table 7

Volume and structure of the stock market of the Republic of Kazakhstan

| <i>Sector of stock market</i> | 2016 | | 2015 | |
|-------------------------------------|---------------|-------------------|---------------|-------------------|
| | <i>Amount</i> | <i>Percentage</i> | <i>Amount</i> | <i>Percentage</i> |
| Foreign currency | 36 124 | 38.2 | 66 202 | 72.0 |
| Government bonds | 556 | 0.6 | 428 | 0.5 |
| Stock | 250 | 0.3 | 900 | 1.0 |
| Corporate bonds | 507 | 0.5 | 1 229 | 1.3 |
| REPO operations | 57 114 | 60.4 | 23 214 | 25.2 |
| Bonds of investment funds | 0.5 | < 0.1 | 0.1 | < 0.1 |
| Bonds of microfinance organizations | 0 | 0 | 0 | 0 |
| Futures | < 0.1 | < 0.1 | 0 | 0 |
| Total | 94 552 | 100.0 | 91 972 | 100.0 |

Source: Kazakh stock exchange

In particular, the market of mortgage-backed securities is not well developed, and not even considered by credit institutions as a separate full-fledged source of funding. Nevertheless, the necessary infrastructure to ensure an effective mechanism of issuance and circulation of mortgage-backed securities¹²⁵ is available in the country. Banks issuing mortgages do not issue mortgage-backed securities, and keep the mortgage loans on their balance sheets, or refinance them through KMC (under government programmes).

The main reason of this situation is the lack of large institutional investors in mortgage-backed securities, for example, private pension funds, which were merged into a single state pension fund - Unified Accumulated Pension Fund (hereinafter, UNPF) during the Government pension reform. According to the NBRK, as of 12

¹²⁴ MCI is established by the Law "on Republican Budget" for the relevant period and is used to calculate benefits and other social payments, as well as for the application of penalties, taxes and other payments in accordance with the legislation of the Republic of Kazakhstan.

¹²⁵ The issuance of securities is regulated by the Law No. 461 "on Securities Market" of 2 July 2003.

January 2016, UNPF will be the only organization that will carry out the accumulation of obligatory pension contributions. UNPF acts in accordance with the investment declaration¹²⁶, which defines the subjects of investment, and conditions and restrictions on investments of UNPF assets. According to the declaration, the permitted amount of investment should not be more than 20 per cent of the portfolio in securities secured by real estate and in assets with ratings (either of the securities and / or the issuer) of not less than "BBB-" on the scale of S & P rating agency or a similar level from another international rating agency. As of 1 September 2016, the amount of pension savings of citizens amounted to KZT 6.6 trillion. Therefore, the potential amount of investment in mortgage-backed securities only in the sector of the pension savings is KZT 1.33 trillion.

As measures to reduce shortage of long-term liquidity shortage, in 2016, the NBKR started to create the conditions for the formation of a yield curve, designed to serve as a benchmark for money value in the domestic market. Furthermore, the volumes of credit notes placed by the NBRK were increased and terms of the notes were. For the first time since 2008, credit notes with a maturity of 1 year were issued. In September and November 2016, two auctions were held where the demand for notes was significantly oversubscribed. Moreover, the interest of foreign participants to Kazakh debt instruments was observed.

Since 15 November 2016, the NBRK has started to transact in the secondary market with government securities of the Ministry of Finance with maturities from 2 to 5 years. It is important to note that these measures can contribute to an increase of the volume of long-term liquidity in the national currency.

E. Housing affordability, availability of housing finance, financing of housing improvements

According to the latest available data of the Committee on Statistics, housing provision in 2013 was 20.9 m² per capita - 23.7 m² in urban areas and 17.4 m² in rural areas¹²⁷. This indicator is much higher in developed countries., in Germany the value is 45 m², in the UK – 62 m², and in the US - 75 m².

At the same time, according to official data of the CCHCS of the MoNE, as of 1 September 2016, 2.3 million people are in need of housing, including the following categories: people in the waiting lists of akimats (more than 400,000), depositors of HCSB (more than 700,000), and in the waiting list to receive 10 acres of land¹²⁸ (more than 1.2 million).¹²⁹ Thus, about 14 per cent of the population is officially recognized as in need of better housing conditions.

According to the Committee on Statistics, in December 2016, the average price of real estate in the secondary market was KZT 190,000 per m². In the cities of Astana and Almaty, it was more than 1.5 times the national average (KZT 317,000 and KZT 337,000, respectively). This price level is unaffordable for the majority of households: average housing affordability index (hereinafter, HAI) for the country is 5.0¹³⁰, and 4.6 and 3.6 for the cities of Almaty and Astana, respectively.

Many banks offer loans for housing repair or renovation. People can avail of such loan by guarantee of the mortgaged real estate and loan conditions vary depending on the currency of the loan, presence of collateral, income verification method, and the availability of bank commissions. For loans in the national currency with commission (which is usually equivalent to 1 per cent of the loan amount), interest rates start from 20 per cent per annum and 22 per cent for loans without commission. Interest rates on dollar loans start from 13 per cent. Loan amounts granted range from KZT 600,000 to KZT 10 million with terms ranging from 12 to 360 months.

The World Bank's "Kazakhstan Energy Efficiency project", aims to improve the energy efficiency in public and social facilities, as well as improving the conditions for the establishment of financial mechanisms for energy saving projects. The Swiss Agency for Development and Cooperation provided a USD 21.8 million grant for this

¹²⁶ Approved by the Law No. 105-V "on Retirement Insurance in the Republic of Kazakhstan" of 21 June 2013.

¹²⁷ Statistical digest of the Republic of Kazakhstan "On housing stock 2009-2013".

¹²⁸ In accordance with Art. 50 of the Land Code of the Republic of Kazakhstan (land plots are provided to citizens for housing construction in the amount of 0.1 hectare at no cost).

¹²⁹ Available from <http://kds.gov.kz/index.php/ru/component/content/article/15-novosti/239-v-minnatseconomiki-prokomentirovali-dalnejshee-izmenenie-tsen-na-goszchile>

¹³⁰ When calculating the HAI, the area of the purchased apartment was accepted at a rate of 54 square meters, and the size of the household - 3.6 people. The average nominal income per capita was used, adjusted for the subsistence level (67 112 KZT for the Republic of Kazakhstan, 128,956 KZT - for Astana and 111,530 KZT - for Almaty).

project through the Trust Fund administered by the World Bank. The grant agreement on the project was signed and approved on 1 June 2015.

F. Role of national and local housing finance authorities

The implementation of housing policy is one of the most important directions of the state policy in the Republic of Kazakhstan. A number of government housing programmes are available, however, a comprehensive market research of demand and opportunities of the population, STBs and developers was not conducted.

According to the Law No. 148 of 21 January 2001 "on Local Government and Self-government in the Republic of Kazakhstan", LEAs act as the executors of government housing programmes.

The CCHCS is responsible for the development and implementation of housing policy in the country. A number of government institutions implement government housing programmes. There is not a single State body (for example, in the form of an institution for development), which is responsible for the formation and implementation of state policy in the housing sector, and for the development of long-term objectives in the field of housing finance.

One of the largest public institutions, the National Managing Holding "Baiterek", is composed of four companies and its activities are concentrated in the area of housing finance:

- JSC "Mortgage organization Kazakhstan Mortgage Company" - implementation of government programmes on rental housing, as well as refinancing STBs by purchasing rights of claims on mortgage loans;
- JSC "Baiterek Development" - implementation of investment projects in the residential and commercial property sectors and production of building materials; return of funds allocated for anti-crisis measures and completion of financing of projects of equity housing construction that were frozen;
- Housing Guarantee Fund (on the basis of the Kazakhstan Fund of Guarantee of Housing Loans)¹³¹ – provision of guarantees to co-investors for the completion of construction of residential houses or buildings in case developers fail in this respect;
- JSC "Housing Construction Savings Bank of Kazakhstan" - development and implementation of the contract savings system.

Separately, the JSC "Real Estate Fund Samruk-Kazyna"¹³² was established to promote the development of the construction industry and the real estate market by investing in the use of "green" and other innovative technologies in construction. It is currently one of the operators of the State programmes "Regional Development until 2020" and the infrastructural development programme "Nurly Zhol". It is expected that JSC "Real Estate Fund Samruk-Kazyna" will start implementing large-scale projects in the field of "green" development and development of commercial real estate in 2017.

According to Article 55 of the Tax Code of the Republic of Kazakhstan, 13 kinds of taxes, 1 state duty, 5 types of registration fees, and 10 different types of fees are levied by Governments at various levels.

Funds received from taxes and other obligatory payments is allocated in accordance with the Budget Code of the Republic of Kazakhstan and the Law on the Republican Budget.

According to the Budget Code, tax system of the country can be described as three-tier and depending on the types and the source, taxes are distributed to the:

- republican budget;
- regional budgets, city budgets of city of national importance (Almaty) and the capital (Astana);
- regional budgets, budgets of cities of regional importance.

¹³¹ Established under the framework of the Law "On equity participation in housing construction"

¹³² Established in accordance with the Decree of the Government of the Republic of Kazakhstan from the 6th of March, 2009, No. 265 "On some measures to solve problems in the real estate market"

However, local/regional budgets are sort of "transit" budgets, as funds transferred from the republican budget are subsequently redistributed directly to the budgets of cities and regions where they are actually spent.

Proceeds from land and property taxes are directed to regional budgets, as well as the budgets of cities of republican importance. The object of taxation of land tax are all lands according to their purpose and belonging to specific categories. The tax base for the calculation of this tax is the area of the land plot. The base rates on agricultural lands are established per one hectare and are differentiated by the quality of the soil. Base rates for agricultural land provided to individuals for personal household (auxiliary) farming, gardening and countryside construction, including land occupied by buildings, are established as follows:

- with an area up to 0.50 hectare – KZT 20 per 0.01 hectare;
- with an area of more than 0.50 hectare – KZT 100 per 0.01 hectare.

Tax base rates for land settlements, occupied by housing stock, are set at KZT 0.96 to KZT 5.2 per m².

The object of taxation of property tax for individuals are dwellings, buildings, cottages, garages and other structures and premises belonging to them by right of ownership. The rate of property tax of individuals is progressive and is calculated as follows: a fixed payment plus a percentage of the amount exceeding a certain limit. The minimum property tax rate is 0.05 per cent of the value of the object of taxation up to KZT 2 million. The maximum rate (KZT 2.9 million) is charged when the value of the property is more than KZT 450 million, plus 2 per cent of the amount exceeding KZT 450 million.

Despite the large number of various taxes and fees levied in accordance with Kazakhstan's legislation, the rates of major payments to the budget (income tax, value-added tax, excise duty, etc.) are low compared to other CIS countries in particular and to the world in general.

Advance Unedited Version

Chapter 8

Fostering Innovation for Sustainable Development: Achievements, Opportunities and Challenges for Astana to Become a Model Smart and Sustainable City

The ECE and the International Telecommunication Union (hereinafter, ITU) define a smart sustainable city as an innovative city that uses information and communication technologies (hereinafter, ICTs) and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social, environmental as well as cultural aspects.¹³³ A *smart city* therefore can be understood as an agglomeration that enables each of its residents to access all services (public and private) in a way best suited to his or her needs. It implies the building of adequate hard infrastructure, human capital and skills, community institutions and (digital) technologies that fuel sustainable development and provide an attractive environment to foster innovation and human well-being. In other words, smart cities can be described as a process by which urban centres become more sustainable, inclusive, safe, resilient to climate change and able to respond more quickly to development challenges. In addition to fostering local innovation, the embeddedness of smart cities in world networks of knowledge and technology has also been emphasized. Thus, smart cities are also cities which have successfully built experience in attracting foreign direct investment (FDI) from global sources, which have become socially and economically open to the rest of the world¹³⁴ as well as environmentally sustainable.

With global urban population forecast to reach 5 billion by 2030, the need for *smart* and *sustainable* cities has become more urgent. The newly adopted United Nations Sustainable Development Goals under 2030 Agenda for Sustainable Development call for improved policy calibration in order to achieve improvements in each of these two areas (smart cities and sustainable urban development). Whereas the “urban” Sustainable Development Goal 11 includes targets to “Make cities and human settlements inclusive, safe, resilient and sustainable”, the “infrastructure” Goal 9 calls for member States to work together to “build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”¹³⁵.

Moreover, innovation activities, which are fundamental for achieving each of these objectives, are recognized as a significant pillar for the implementation of the entire 2030 Agenda.

In this context, the implications for countries seeking to promote smart and sustainable cities are multifaceted. For example, improving ICTs is crucial to achieve the urban climate targets of lowering energy use and GHG emissions while boosting socio-economic growth. Although some cities in various geographies claim to have already become “smart and sustainable”, their levels of achievements are uneven. Countries with economies in transition face additional constraints. ECE research on innovation policies has identified these barriers to often include low levels of entrepreneurship, insufficient access to stable sources of funding, human capital deficits, and insufficient access to cutting edge technologies and knowledge, among others¹³⁶.

¹³³ <http://www.unece.org/housing-and-land-management/united-4-smart-sustainable-cities-u4ssc.html>

¹³⁴ Government of the United Kingdom of Great Britain and Northern Ireland (2013). “Smart Cities: Background Paper”, Department for Business, Innovation and Skills, October. Available from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/246019/bis-13-1209-smart-cities-background-paper-digital.pdf (accessed 15 December 2016); R. S. Wall & S. Stavropoulos (2016) “Smart cities within world city networks”, *Applied Economics Letters*, 23:12, 875-879, p. 878.

¹³⁵ Innovation policies are also implicit in the targets specified for Goal 8 on decent jobs, and in achieving Goal 12 on sustainable consumption and production.

¹³⁶ For more information, see <https://www.unece.org/index.php?id=41402#/> (accessed 15 December 2016)

Another challenge is that, at present, there are no universally agreed standards and indicators that could be used to measure “smart sustainability”. Although innovations in the use of digital technologies can help create life improvements such as intelligent transport, smart energy systems, resource efficiency and transparent and open societies, at present there are still no established standards and benchmarks that could generate a more predictable transition towards climate neutrality through the use of novel products, processes, and technologies.

Box 1

Measuring “smart sustainability”

Recently, the ECE has initiated activities to help Governments and local authorities to tackle these constraints. In cooperation with ITU, It has launched the United for Smart Sustainable Cities (hereinafter, U4SSC) global initiative, which now includes 16 UN agencies and programmes¹³⁷ as well as several cities and relevant stakeholders. Since 2013, the two organisations have started to build indicators to evaluate smart sustainable cities. ITU worked under the framework of the Focus Group on Smart Sustainable Cities and ECE under the framework of the Committee on Housing and Land Management and its project “United Smart Cities”. The three-year multi-stakeholder negotiations concluded in December 2015 with the endorsement by the ITU and the ECE Committee on Housing and Land Management of the UNECE-ITU Smart Sustainable Cities Indicators. These indicators formed the basis to the ITU-T Recommendation on Key Performance Indicators (KPIs) on smart sustainable cities to address the achievement of SDGs.

The U4SSC global initiative was launched at the ITU-UNECE Forum “Shaping smarter and more sustainable cities: striving for sustainable development goals”, which took place in Rome in May 2016¹³⁸. By providing a platform that is open to all UN agencies and other relevant stakeholders, U4SSC will advocate public policy projects to encourage the use of ICTs to facilitate and ease the transition to smart sustainable cities. The initiative will produce policy guidance for the integration of ICTs in urban operations based on existing international standards.

1. The Smart cities agenda in Kazakhstan: the case of Astana

The “Smart Astana” concept, support institutions, and activities

Since becoming the capital of Kazakhstan in 1998, Astana has been regarded as a modern, innovative city. In order to revamp its sustainable development agenda, the Government has also undertaken reforms to promote sustainable city principles. *Smart Astana* as a brand has been advertised to represent the capital's smart and sustainable development aspirations. This goal became an official policy initiative after a Road Map was set up by order of the President (Order № 01-7.6 of 22 April 2013 "On the need of developing an action plan for including Astana in the list of 50 "smart cities" of the world"). The goal is to improve quality of life and to speed up the modernization of infrastructure in Astana as well as to enhance its level of public safety. Since Astana has a population of near 700000 inhabitants and a GDP near 1 billion US dollars), the Astana Smart City Roadmap was inspired by other successful cities of relatively medium size (e.g. Amsterdam in the Netherlands, Boston in the USA, Oulu in Finland). For instance, the government has considered the history and institutional framework of these cities for the establishment of innovative business-hubs¹³⁹.

One key objective of the Astana Smart City Roadmap, which is in line with the national Programme of Progressive Industrial-Innovative Development, is to assist Astana authorities in the introduction of innovations that could create spill-overs all over Kazakhstan and contribute to economic diversification¹⁴⁰. The basis of the *Smart Astana* Roadmap

¹³⁷ The UN agencies which joined the U4SSC as of April 2017 are UNECE, ITU, ECLAC, UNECA, UNIDO, UN-Habitat, WTO, WMO, FAO, UNEP, UNEP-FI, UN Women, UNFCCC, UNCCD, UNU-IAS, WHO (observer).

¹³⁸ The ITU and UNECE Forum concluded with the Rome Declaration, a document in ten points that encourages the transition of cities into smart sustainable cities and stresses the role of smart sustainable cities in the New Urban Agenda.

¹³⁹ See Interview with Yerlan Kozhagapanov, Deputy Mayor of Astana «We build a Smart City», *Infopanorama*, Issue 1(01). 2011. Pp.75-77.

¹⁴⁰ Furthermore, the Government sector is also undertaking reforms under the "100 specific steps National Plan" of 2015, which assigns the objective to make Astana a business, cultural and scientific center of Eurasia attracting researchers, students, entrepreneurs and tourists from all over the region.

relies on the enhancement of a combination of six characteristics that make for a “smart city”: smart economy, smart management, smart life, smart mobility, smart people and smart environment; and it includes policy actions aimed at the complex modernization of the city infrastructure. As a result of application of the six smart city characteristics, the government expects to achieve a more centralized but also agile and responsive administration of city infrastructure. Furthermore, progress will also occur in terms of higher quality of life, better housing and utility services, renewed utilities network and increased urban security. Finally, new types of social programs are envisioned, including more affordable and higher quality education, healthcare and social protection. The project will rely significantly on the establishment of a modern ICT network. The ICT network will serve as the basis for all expected innovations, services and products. Since this is also the most costly part of the project, it is expected to be undertaken through the attraction of both public and private investments.

One of the key actors involved in the implementation of the Astana Smart City Roadmap is a smart city development agency, Astana Innovations JSC, which has been operating since 2011 (Decree of the Akimat of Astana № 30-48 of 31 May 2011). The company is fully owned by the municipality (or “Akimat”) of Astana and plays a significant role in coordinating all state mechanisms of support of innovations. Other important players in the field of innovation are the National Academy of Sciences, Nazarbayev University, JSC National Scientific and Technological Holding “Parasat”, and JSC “National Innovation Fund”¹⁴¹.

Since its establishment, Astana Innovations became an engine and catalysing element of the innovative development of the city. According to its management, the work of the agency is aimed to improve the quality of life of the urban population by increasing the energy efficiency of city services as well as developing the innovation potential of small and medium businesses. The main service provided by Astana Innovations is to act as a one-stop-shop for all support mechanisms that exist at the national level (e.g. investment promotion, innovation grants) to help deepen industry-science linkages. Key initiatives that have been undertaken include developing the *Smart Astana* and *Safe City* concepts as well as providing technological business incubation and development, and enhancing the potential of 3D technologies in the capital (see smart Astana projects below).

According to the Government plans, the process of development of *Smart Astana* has three components. The first one took around three years to implement and focused mainly on improving city management. Actions included strengthening the rationalisation of consumption and using more flexible tariffs for public utilities to encourage savings. The second component is currently being rolled out. It involves adopting new management technologies for selected infrastructure development projects (e.g. water and heating supply systems, energy, street lightning and transport). The most difficult and long-lasting stage is the third component. It includes the involvement of city residents as active participants of the smart city. In particular, it means that citizens will become active decision makers on issues such as determining the quantities of heat and electricity they use and the quantity of waste they produce. Overall, it means they will become more conscious of the dangers to the environment of their everyday actions and behaviour¹⁴².

In the context of *Smart Astana*, all kind of research and development (R&D) activities, including marketing, will be supported by “Damu”, the Government Fund for the Development of Entrepreneurship¹⁴³. The Development Bank of Kazakhstan will also be involved providing part of the finance. The private sector will be involved through investments in the Special Economic Zone (SEZ) Astana new city (Box 1). The first industrial park in the SEZ was developed in a rather rapid fashion: as of 2016, it nearly exhausted its resident capacity, counting already 62 resident firms, out of its maximum capacity of 70 firms. One key challenge has been that registration in the park was done without much planning and the park soon exceeded its capacity to accommodate new firms. The development of another park is expected to start in 2017 to accommodate increased demand.

International cooperation on innovation will also be significant. An agreement has been signed with the Fraunhofer Institute of Germany, which will promote the development of high-technology projects. The initiative was launched

¹⁴¹ See “Interview with Mr. Nuraly Bekturganov, Chairman of the Board of Parasat”, *Astana Innovations* N°1 (02)2012, pp. 68-71. See also UNECE (2012). *Innovation Performance Review: Kazakhstan*, United Nations: New York and Geneva.

¹⁴² « Astana Smart City » *Infopanorama*, Issue 1(01), Astana Innovations. 2011. Pp 80-81

¹⁴³ The “Damu” Entrepreneurship Development Fund” JSC, established by Government Order No 665 “On Establishment of “Small Entrepreneurship Development Fund” of 26 April 1997.

in 2012 and will help transferring new technologies that could bolster public infrastructure, such as 3D engineering¹⁴⁴. This type of cooperation will be instrumental to encouraging more intramural applied research in the business sector of Astana and Kazakhstan more generally, which is underdeveloped¹⁴⁵.

FDIs will also play a crucial role. There are significant advantages for foreign investment in innovative activities in Astana. These include a dynamic financial sector, an expanding IT and knowledge intensive activities, the availability of adequate infrastructure to introduce smart technologies at the city level, the emergence of some clusters in the medical, scientific and educational sectors, as well as a favourable tax and investment environment. The division on Investment Promotion of Astana Innovations foresees that, thanks to a series of measures to be undertaken to improve the investment climate, it is expected that the city will attract FDI worth USD 200 billion within a ten year period¹⁴⁶.

In addition to the Expo 2017, which will focus on sustainable energy solutions, other significant investment promotion initiatives will also encourage innovation. These include plans to establish an international financial center “Astana”, which has the potential to become a financial hub for Central Asia, the Caucasus, Eurasian Economic Union, the Middle East, West China, Mongolia and Europe¹⁴⁷; the deepening of aftercare services with firms in the Special Economic Zone “Astana New City”; and the development of further service support for investors.

Box 2

Industrial parks in the Special Economic Zone (SEZ) Astana New City

The industrial park of Astana New City is located in an area of 598.1 hectares (ha) within the Astana city district. Its public infrastructure was built up through Government funded investments. As of 2015, 62 projects worth USD 1.124 billion have been implemented. Amongst these, 11 projects are foreign owned. Since its inception in 2006, a total of 96 firms have been registered of which 21 are already operational. The total value of manufactured products amounted to about USD 1.9 billion in 2015.

Municipal authorities are interested in further attracting leading transnational corporations and other investors in order to foster transfer of technology and knowledge spill-overs. Major global transnational corporations (TNCS) that have been involved through investments both in infrastructure and in priority economic sectors undertook activities in the production of electric locomotives (Alstom, France), production of train coaches (Talgo, Spain), diesel locomotives (General Electric, USA) and helicopters (Eurocopter, Germany and France: through a joint venture with domestic partner Kazakhstan engineering).

Companies located in the territory of Astana - New City SEZ are exempt from the following taxation: income tax, land tax and value added tax (VAT). An additional benefit is that tariffs for public utilities are lower compared to other regions: examples include water (water and sewerage rate is \$1.3 per cubic meter), electricity (USD 0.09 per kW), and heating (USD 7.9 per Gcal). These benefits apply both to local and foreign investors.

Because of the rapid growth and continued interest of industrial enterprises, the city administration decided to build a new Industrial Park in an area of 433.1 ha, adjacent to the territory of the existing industrial park. Jurong Consultants, a subsidiary company of Singaporean Jurong International, has been involved into the development of the second industrial park master plan.

¹⁴⁴ 3D technologies are at the forefront of innovations that have made engineering more accurate. Although leading companies have successfully introduced these 3D technologies in production processes, most universities in Kazakhstan are still to adopt them. See *Astana Innovations N°1 (02)2012*, pp. 86.

¹⁴⁵ See UNECE (2012). *Innovation Performance Review: Kazakhstan*, United Nations: New York and Geneva, Chapter 4, pp. 51-68.

¹⁴⁶ Recent measures include the provision of incentives for large projects, simplification of the process of hiring foreign personnel, tax exemptions from corporate income, land and property tax for up to 10 years in some cases, subsidies for up to 30 per cent of the actual costs of construction and assembly works and purchase of equipment; new guarantees for investors with regards to tax stability and employment legislation; and the introduction of the figure of the Investment Ombudsman, amongst others. Karmanov, Kairat (2015) “Investment Attractiveness of Astana: Components” in *Smart Astana* N°3, December, pp. 54-60.

¹⁴⁷ See <http://www.aifc.kz/>

Finally, it should be highlighted that the further enhancement of infrastructure in Astana and the deployment of smart city technologies and services will require large financial investments. In a context where the Kazakhstani economy has been negatively affected by a number of external factors (i.e. economic crises in trade partners in the Eurasian Economic Union (EAEU), the decline of world commodity prices), it is unlikely that national and municipal budgets for such investments could keep up with demand. Authorities have highlighted mechanisms such as Public-Private Partnerships (PPP) to make up for shortfalls in public spending that may occur. PPPs are an alternative to public procurement for both building new and upgrading existing infrastructure. Their success depends on finding the right balance of responsibilities and risks to be borne between government and private actors. In order for such initiatives to succeed, it is also necessary to work out sectorial legal and other measures to encourage private investments in priority sectors of the economy.

With this goal in mind, a new law on PPPs was enacted in 2015, which is based on best practice international experiences, including new concepts and mechanisms for various PPP implementation schemes. These mechanisms could provide for the private capital with opportunity of stable revenue from infrastructure investments with low risk as compared to commercial projects, including on smart projects. For instance, investments in modern roads that include highly intelligent systems integrating modern technology of flow control and traffic safety could involve funding through PPPs. Similar systems can be implemented in the urban environment (e.g. smart traffic lights, intelligent security systems). -->start here

Innovative products and services of selected Smart Astana projects

Pilot projects

As of 2016, Astana Innovations has implemented four pilot projects of Smart city with support of the municipality of Astana, which totalled public investments of about USD 10 million. These are the following: the Smart Polyclinic, Smart School, Smart Street Lighting and Smart Payments. It is expected that each of these projects will be replicated upon their completion in other city locations.

Smart healthcare

The Smart Polyclinic project has been launched with the goal to modernize healthcare facilities of Astana and improve the quality of medical services in the city. The project is currently being implemented in pilot mode in the City polyclinic №4. In the long term, the objective is to improve operation of the healthcare industry across the board by means of enhancing the automation of internal and external processes.

One of the problems of health facilities in Astana is that they involve high waiting times and long queues for doctor visits. Finding a solution to this challenge has been one of the main objectives of the project. For instance, innovative solutions have allowed for doctor appointments to be arranged either through a terminal or else online at the polyclinic's website, which helped minimise queuing times by 10 per cent. In addition, the system also offers the opportunity to save time through the digitalisation of health information, thus reducing time needed for entry of patient records. Finally, it is expected that the introduction of analytical systems will help improve coordination and performance of all departments of the polyclinic. Such systems will support medical, accounting, financial and laboratory activities in the institution.

Another constraint that has been tackled by the "Smart polyclinic" project was diagnostics. Since the project was introduced, it has enabled the more efficient work of doctors by providing them with medical instruments that contain all necessary elements for making right diagnostics decisions. In the future, it is expected that productivity of clinics' laboratories will increase significantly after a unified database of research results is created. This will imply integrating all medical laboratory information records with the earlier existing informational systems of medical and preventive treatment facilities, which will provide access to test results for all doctors treating the same patient. For this purpose, a Medicine Information System (MIS) has been setup that is closely linked to the register of the Ministry of Health and Social Development of Kazakhstan. The system allows automatic checking of patients' registration at a particular

polyclinic. In addition, the system reduces the use of paper-based patient records that need to be filled in by hand. In total, over 600 standard forms of medical examination protocols have been introduced so far.

As of year 2015, 8,735 patients were provided with services through the MIS in the City polyclinic №4; more than 700 people have used the new terminal and online appointment service; and 363 employees of the polyclinic have been trained to work in the system. According to preliminary estimates, a successful scaling up of this project could save about 600 million tenge of the city budget¹⁴⁸. In the autumn of 2015, the project was presented to the delegates of the VI International Investment Forum «Astana Invest 2015» at the *Smart Astana* exhibition hall. It is expected that the further development of the project will significantly improve interaction between healthcare organizations and Astana citizens. In particular, significant results can be expected in the form of shorter queues and waiting lists; reduction of medical prescription errors; and the improvement of accuracy, efficiency and informational content of diagnostic research.

Smart schools

The goal of this project is to increase the automation of education-related processes in two Astana schools (No. 3 and No. 5). Paramount among its objectives is the prevention of access of unauthorized persons to the schools' buildings; the prevention of emergency situations; improved student welfare by enhancing the efficiency of service in school canteens; and better monitoring of student expenditures by parents. The project will also make use of the library more attractive as well as increase safety and security with the use of video surveillance and access control systems. In each of these spheres, the project involves the introduction of innovative technologies in the everyday management of schools, including the following:

- *ACMS (Access Control and Management System)*: Enhances the control of access to the school building through the use of SMS notifications to parents' cell-phones that register student attendance.
- *Video surveillance*: Includes certain functions to enhance security in the classroom, including monitoring in real time, manual/automatic recording, playback and storage of video information.
- *E-canteen*: Introduction of electronic payment in canteen. Allows parents and students to better monitor spending by registering transactions in a personal account.
- *E-library*: Involves the rolling out of an electronic database of books and software for quick searches of entries in the library collection. In addition, the project involves the distribution of electronic reader cards, which will allow for faster processing of book requests.
- *Personal account*: The setting up of students' personal accounts will allow parents to oversee statistics on attendance, compliance with class schedules as well as setting a tracking system for monitoring the use of library resources and expenditure statistics in the school canteen.

Smart Street lighting

The goal of this project is to reduce energy consumption and street lighting operating expenses. Among its objectives, it is expected to obtain energy savings up to 48 per cent because of the improved use of technology; an additional energy saving of 13.6 per cent due to automatic dimming; and significant reduction of expenses on maintenance and inspections. The latter is achieved given that the system will allow for the transfer of light usage and lamps condition information through IT to a central managing and monitoring unit, where an operator will be able to visualise information displayed on the monitor of his or her office computer. Statistical data have already proved the project's effectiveness. As of November 27, 2015, since the beginning of the project implementation electricity consumption has reduced from 22'950.8 kW (KZT 390,852) in 2014 to 10 229.5 kW (KZT 174,208). Thus, the project has allowed to save 12'721.3 kW or KZT 216,644.¹⁴⁹

¹⁴⁸ See Astana Innovations (2015) "«Smart Polyclinic»: comfort, high quality, promptness" in *Smart Astana*, N°3, December 2015, p. 62.

¹⁴⁹ Astana Innovations (2015) "Smart Potential of Astana" in *Smart Astana*, N°3, December, p. 45.

A pilot street was selected to begin the project implementation (Enbekshiller, located in the Yessil district of Astana). The system of lighting in this street has been refurbished, providing for a more flexible configuration of operating modes that increased energy efficiency. The manager is able to set the schedule of turning on/off lighting (which can also be programmed to occur automatically). The operator can thus determine the schedules for lamp usage according to the availability of natural light. Notably, the dimming function provides control over light consumption and ensures a better management of lighting equipment¹⁵⁰. Communication is provided by means of both wireless (radio, GSM) and wired technologies (PLC). It is expected that the "Smart street lighting" will be one of the key projects of EXPO-2017 international specialized exhibition¹⁵¹.

This project also builds on Kazakhstan's national strategy on efficient lighting, which has been set up to implement Law 541-IV of 2012 "On Energy Saving and Energy Efficiency". The strategy promotes the use of light-emitting diode (LED) lamps by introducing a phase-in ban on the use of incandescent lamps¹⁵². Some specific measures include the following: (i) upgrade of indoor lighting in public buildings, (ii) upgrade of street lighting in towns and settlements; (iii) proposals for energy efficient labelling for lighting products; (iv) demonstration projects on energy efficient lighting; (v) proposals for amending construction standards for lighting; (vi) a proposal for setting limits on production and sale of mercury containing lamps; (vii) upgrade of electric lighting and power supply systems in multi-apartment buildings; (viii) utilization of mercury containing lamps¹⁵³.

Smart payments

This project involves the provision of payment of utility services in electronic format. The system allows for payments in electronic format of bills for water supply, water disposal, gas supply, municipal waste disposal, residential expenses, and electricity, heating and telecommunication services. The system of personal accounts also keeps records of the payment history of residents in line with the Law No. 94-V of 21 May 2013 "on Personal Data and Its Protection". In order to input payments, an "electronic wallet" can be replenished via payment terminals and bankcards.

The project's goal is the creation of a single account for all consumer utility payments. In the long term, the rolling out of all stages of this project will contribute to a "one-stop-window" that provides an opportunity to efficiently perform all city payments at one place avoiding the need to visit several organizations. The project relies on an internet portal that allows users to create an account and pay for city expenditures such as administrative fines, taxes, electronic tickets for public transport, parking tickets, polyclinic services as well as to make contributions for school lunches of children.

Other projects

In addition to the four pilot projects, a series of other initiatives have been envisioned that will be rolled out in the future through partnerships between the municipality and private investors, including the following:

- Enhancing ICT Infrastructure

Astana Innovations will implement a series of projects aiming at strengthening the city's ICT infrastructure for the benefit of residents and the business sector. With the accelerated growth in the use of smartphones and tablets, urban residents have a real need for high-speed mobile Internet anywhere. Thus, one key initiative concerns expanding the coverage of free Wi-Fi urban locations. The "Open Wi-Fi" project was first designed in 2011. Its components involved strengthening the ICT infrastructure of Astana by creating a city network of hotspots that provide open access to the

¹⁵⁰ The software provides the opportunity to dim each lamp separately or as well as selected group of lamps.

¹⁵¹ The project will also benefit of innovative development at the Industrial Park, where "Parasat" Holding established a joint venture with LLP "Led System" through a PPP mechanism for manufacturing of LED products.

¹⁵² Because favourable price changes for LED lamps have made such a strategy cost efficient, and given challenges related to disposal of mercury containing lamps, the Government has put in place the Program 2020, which proposes to replace incandescent lamps with LED lamps.

¹⁵³ UNDP. *Project Document 2010-2015: Nationally Appropriate Mitigation Actions for Low-carbon Urban Development*. UNDP, Astana, 2010. P. 13

Internet. The project has been undertaken with the cooperation of "The one capital" company, a partner of Astana innovations. As of 2016, the project has provided free Wi-Fi access in 24 public places of Astana, including public monuments, parks, public transportation terminals, restaurants and shopping malls¹⁵⁴.

One outcome of this project has been that over 15'000 people a day now use free Internet in public places during working days according to city authorities. In addition, the initiative has had an impact on the attitude of local entrepreneurs, who felt themselves encouraged to extend free provision of Wi-Fi services to their clients¹⁵⁵. Results of monitoring by Astana Innovations show that, as of 2016, all major public institutions of Astana (shopping centers, hotels, restaurants, cafes, sports facilities, libraries) provide clients with free Internet because they consider it a tool to increase their competitiveness.

- Intelligent Contact Centre Astana

Intelligent Contact Center is a unit of the larger Complex Life Support System of Astana (CLSS). The goal of this project is to provide residents with efficient communication between the administrators of city services and related institutions. The Center will perform professional processing of incoming requests received by the city services providers (e.g. Akimat units, emergency and dispatching services, among others). Once fully implemented, the system will allow to centralize all service requests from citizens; expand methods of informing the population about city services; provide receipt of requests through different channels (i.e. phone, email, website and social network); provide high-quality and fast processing of all types of requests; and keep a record of statistics on the provision of city services.

- Unified Resident Card

This project will enable the full coordination of all *Smart Astana* projects. Among other objectives, it will allow citizens to pay for bus tickets electronically; request appointments and access waiting lists at polyclinics; and enable students to use plastic cards to carry out such activities as entering school facilities through turnstiles and pay for lunches in the canteen. The goal is that after full-scale implementation of each of the *Smart Astana* projects discussed, residents and visitors of the city will be able to request and receive a plastic card for payment of all smart services. The "Unified Resident Card" will contain personal information of the card holder (e.g. full name, unique identification number, current monetary balance of electronic wallet). Replenishment of the electronic wallet will be possible through the Internet portal or payment terminals.

The introduction of the "Unified Resident Card" will be gradual. Initially, cards will be granted to representatives of vulnerable social groups, schoolchildren and university students. In the longer term, the cards will be available for all residents and guests of the capital.

Smart cities and the Sustainable Development Agenda: implications for Astana city authorities

The potential for cities to become smarter and more sustainable will likely increase over time. The number of innovation activities by resident start-up companies has been increasing in many cities around the world, regardless of their population and size. During recent years, cloud computing, open software and hardware, social networks, and global payment platforms, among other things, have made it easier to create start-ups with fewer physical resources and personnel. The availability of new technologies lowers the cost of innovation and permits entrepreneurs to take scales and other advantages from agglomeration. Thus, these trends have let businesses take advantage of city agglomeration effects to a greater extent than only a few years before.¹⁵⁶

A research programme by The Economist Intelligence Unit (EIU) has shed light on some of the key agendas for the future of smart cities, which include both aspects of improving the use of technologies in city planning as well as

¹⁵⁴ Smart Astana. Available from <http://smart.astana.kz/en/projects-open-wi-fi.html> (accessed 15 November 2016)

¹⁵⁵ *Smart Astana* N°3, December 2015, p. 47

¹⁵⁶ Victor Mulas, Michael Mingos, Hallie Applebaum (2016). "Boosting Tech Innovation: Ecosystems in Cities: A Framework for Growth and Sustainability of Urban Tech Innovation Ecosystems" in *Innovations: Technology, Governance, Globalization*, Vol. 11, No. 1-2: Winter-Spring. Pp. 98–125.

enhancing transparency and public participation. The programme brings together the views of citizens, businesses, government leaders and experts. In May 2016, the EIU conducted a survey of 1,950 citizens and 615 business executives in 12 cities: Barcelona, Berlin, Buenos Aires, Chicago, London, Los Angeles, Mexico City, New York City, Rio de Janeiro, Shanghai, Singapore and Toronto, the findings of which has provided useful feedback to policy makers.¹⁵⁷

For instance, survey information has provided a list where future avenues for smart innovations are more promising, which include the following¹⁵⁸:

- the improvement to quality and affordability of social services (e.g. education and healthcare)
- reduced traffic congestion
- faster access to city services and more transparency (e.g. e-government)
- crime reduction and improved emergency services
- improved commuter networks
- improved delivery of utilities such as water and electricity
- improved waste management services, reduced pollution, energy consumption and other improvements in environment sustainability
- vibrant city life and leisure activities (commerce, festivals, public spaces).

With regards to the functional areas where digital technologies have impacted city life, survey information shows that both citizens and business representatives point to telecommunication services (36 per cent) as the most important area that was transformed through recent innovations. It is followed in ranking by transportation; emergency and crime prevention; e-government; and social services. Other areas that were not highlighted by recent experiences were still deemed promising for transformation in the near future, which include pollution reduction and environmental sustainability. Overall, the EIU analysis highlights that the surveyed cities are facing similar challenges regardless of the different levels of economic development, which points to the fact that application of digital technologies can generate significant improvements for the welfare of urban dwellers in any geography.

When contrasting the experience of Astana with that of cities in other countries reflected in the EIU study, it can be suggested that much of what has been taking place in Kazakhstan's capital city is in line with global trends. Looking forward, there is still much potential for Astana to develop further applications that rely on data provided by citizens. Whereas the pilot and other projects promoted by Astana Innovations seem to constitute a solid base to build on new projects, while the experiences of other cities also point to alternative policy paths that could further strengthen both private sector involvement and public engagement.

With regards to the incorporation of sustainable development priorities in the agendas of municipal authorities in line with the adoption of the UN Agenda 2030 for Sustainable Development, there is much room for Government action as well as private led investment to undertake new projects that could ensure both increasing economic returns and the achievement of public objectives. Recent examples of smart uses of new technologies –IT in particular–point to the importance of innovations that help gather, store and manage data on aspects of urban life in areas ranging from traffic and land-use planning to pollution and crime. Also, the innovative use of digital technology can improve city safety structures at times of natural disasters (Box 3).

Box 3

Success stories on the smart use of digital technologies that foster sustainable development

¹⁵⁷ *Empowering cities* is a research program developed by The Economist Intelligence Unit (EIU), on behalf of Philips Lighting. The goal of the project is to assess the progress of cities toward adopting smart technologies. Between 150 and 185 respondents were interviewed from each city; of these, about half were aged 18-34 and the other half were aged over 35. In terms of gender, they were evenly split. Business respondents were drawn from various industries, functions and company sizes. See Economist Intelligence Unit (2016). *Empowering cities: The real story of how citizens and businesses are driving smart cities*.

¹⁵⁸ Economist Intelligence Unit (2016). *Empowering cities: The real story of how citizens and businesses are driving smart cities*, pp. 14.

USA: In Boston, dwellers can use smartphones to record road defects through the “Street Bump” application. The GPS location is uploaded to a server for analysis, and these data helps municipal authorities to monitor potholes and other road issues. It also helps setting priorities regarding decisions about investments in the road network. The application was developed by the Mayor’s Office of New Urban Mechanics. In Pittsburgh, the *MyBurgh* application allows citizens to log service requests through cell phones and consult Government press releases, including through social media interaction.

Spain: IT applications have been used to monitor the performance of procurement for the maintenance of public assets (e.g. parks and roads). In Madrid, work has been undertaken with IBM to develop a platform that aggregates data from invoices and other sources, including reviews by citizens, to assess the performance of suppliers. Pay rates for contracts has been tied to performance in order to enhance efficiency. In Barcelona, wireless sensors have been utilised to collect data on environmentally significant variables (e.g. temperature, air quality, pedestrian traffic, waste recycling), with information accessible to citizens through smartphone applications.

Poland: Until recently Warsaw had no motorway system and just one metro line, and the relatively dense railway network was underused. During the last decade, the development of the city’s transport network, including intensive expansion of the metro, has stimulated urban development and promoted wiser use of urban spaces. As part of this process, the city authorities have explored low-emission technologies (e.g. alternative fuels power was used in the entire urban bus fleet). Other innovations included the implementation of a single ticket system for all modes of transport and an intelligent traffic management system.

Indonesia: In 2015, PetaJakarta, an online open-source platform, was developed. The application allows collecting information about flooding in the country capital city, Jakarta. The software crowdsources information on flooding inputted by residents so that city emergency authorities can promptly react. The application works through geo-location technology, which gathers users’ reports posted on Twitter, and adds each report to an open-source map.

Sources: Economist Intelligence Unit (2016). *Empowering cities: The real story of how citizens and businesses are driving smart cities*; and Olszewski, M. (2016) “Warsaw A City of Innovation and Change” in *Innovations, Technology and Globalization*. Vol. 11 (1-2): 32-36, Winter-Spring.

2. Conclusions

Over recent years, a dichotomy can be observed among municipalities promoting smart innovations between those who are investing in IT infrastructure and data collection devices on the one hand; and those who have privileged the development of human capital resources of residents through investments in knowledge generation and opportunities for public participation. Each of the two groups have been interpreted as representing respectively a “hard” vs. “soft” approach to develop smart cities. Whereas the hard approach focuses on infrastructure refurbishing and setting-up selected urban sensors that gather information, the second group focuses on the level of education of people and identifying incentives and other determinants that encourage them to participate and innovate.¹⁵⁹ It should be highlighted that both types of interventions can benefit from proper planning, inter-ministerial coordination, and public-private partnerships.

In the case of Astana, although existing projects show an emphasis on the “hard” approach, the need to increase public engagement has already been acknowledged as a priority for one of the components of the *Smart Astana* initiative. The two types of intervention may face significant constraints; therefore, a list of policy challenges needs to be considered by national and local authorities of aspiring cities that wish to embrace smart innovations concerning policy implementation. Regarding the short to medium term, the following is a summary of the crucial subject areas:

- The need for improved coordination between national and municipal innovation policies

¹⁵⁹ Pisani, Francis (2015) *A Journey through Smart Cities: Between Datapolis and Participopolis*. UNESCO, Paris.

If city administrations are provided more resources to tackle the most pressing sustainable development challenges, there will be more need for coordination between existing capacities at the local level, and policies and strategies of national governments addressing the same areas. Firstly, support by national authorities is crucial with regards to the setting up of technology standards and best practices. Higher levels of government are also relevant to sanction legislation that promotes a transparent business environment. Whereas national authorities play crucial coordinating roles, these need to be complemented by the need for more practical and locally customised solutions that directly affect people's needs at the city level. Thus, further collaborations between city and national authorities in the design of "smart" development strategies should be encouraged. This collaboration should be based on clear distribution of roles and responsibilities of different authorities (i.e. avoiding overlaps and improving communication). Such closer collaboration between different authorities will create synergies and enable funding of integrative initiatives by local and national authorities.

- The need for improved transparency in legal frameworks and privacy protection.

It is likely that, progressively, smart applications will involve the generation, storing and use of newly generated information that may affect citizen rights. Thus, it is important that municipal authorities in Astana engage the national government to create a suitable legislative environment that promotes the disclosure of data while guaranteeing appropriate levels of privacy. Crucial examples of what needs to be legislated include how cities may obtain energy use data from utilities, or how medical records may be shared to create more effective, systemic health-care solutions that involve emergency responders, social support of civic organizations, hospitals, health insurers, and other actors.¹⁶⁰

- The need to enhance citizen participation.

Social media and other forms of crowdsourcing have increasingly given stakeholders the opportunity to provide feedback on city services and infrastructure. Thus, there is a potential for digital technologies to offer ample opportunities to democratise decision making at the city level. For instance, technology has the potential to channel increased citizen participation and to enable elected officials to solicit far greater input on decisions than would be possible by scheduling public hearings or other traditional means. If government officials accompany these trends with policy reforms, this will add another layer of grassroots participation in a city's innovation ecosystem.¹⁶¹ Astana authorities could learn from examples of successful participatory experiences both online (e.g. applications and platforms) and offline (e.g. laboratories and innovation spaces) gathered by the European Innovation Partnership on Smart Cities and Communities (EIP-SCC).¹⁶²

- The need to engage in national and international networks of learning

Enriching local innovation ecosystems by linking to global networks of academia, businesses and civil society organizations is critical to ensure continuous learning and transfer of technology. Such networks may also be of help to recruit and retain a workforce that shares common values about improving urban life and thus boost a city's scarce technical skills. Examples of peer-to-peer collaborative models between cities and other institutions already exist that have addressed significant sustainable development challenges (e.g. monitoring greenhouse gas emissions and combat climate change, promote innovation amongst disadvantaged groups, matchmaking between research centres and city authorities)¹⁶³. Astana authorities could consider engaging in such type of initiatives. To increase the chances of

¹⁶⁰ Luís M. A. Bettencourt and Javier Gonzales, "Science and Practice for Thriving Cities Free Access", *Innovations: Technology, Governance, Globalization*, vol. 11, No. 1-2 (Winter-Spring 2016), pp. 20–30.

¹⁶¹ However, the results of the EIU survey in some large cities reveal there is certain room for improvement. Few respondents say they feel able to have an impact on smart city projects (15%) or improvements in energy and water services (9%), while one in four executives (the largest group) feel that their company cannot participate effectively in urban improvements. See Economist Intelligence Unit (2016). *Empowering cities: The real story of how citizens and businesses are driving smart cities*.

¹⁶² EIP-SCC, *Principles and enablers for citizen engagement: the experience from the European Innovation Partnership on Smart Cities and Communities* (n.p., 2015). Available from [https://eu-smartcities.eu/sites/all/files/CitizenFocus%20FINAL%20DOC%20\(2\)_0.pdf](https://eu-smartcities.eu/sites/all/files/CitizenFocus%20FINAL%20DOC%20(2)_0.pdf) (accessed 15 December 2016).

¹⁶³ For example, global initiatives such as "C40 Cities" and the "Compact of Mayors" have helped standardize the accounting of greenhouse gas emissions in cities; and to promote innovations and collaborations to combat climate change. In the United States, the "My Brother's Keeper" initiative by the White House seeks to create a network of cities that addresses issues related to

success, it would also be important for them to also create technological platforms that promote network effects between cities and other regions of the country.

- The need for smart calibration in the building of new infrastructure through the involvement of private and public actors.

The transition towards smart cities creates both challenges and opportunities for the interaction between public and private interests, including through public-private partnerships. Successful PPPs have already been undertaken to promote smart and sustainable projects. For instance, in Australia, PwC (a business management consultant) recently assisted the transportation authority in Sydney in the creation of a community of smartphone application developers.¹⁶⁴ In the future, Astana authorities can expect both local and foreign investors to become interested in partnering to develop its smart infrastructure. In this regard, the recent launching of the *Astainable* initiative in cooperation with the Government of France will offer numerous opportunities for French firms to undertake smart and sustainable development friendly projects in infrastructure, including eco-mobility, energy expertise, responsible water and waste management, sustainable construction, digital and information technologies, and farming and nature in urban environments.¹⁶⁵

Concerning the undertaking of PPPs, the UNECE has been at the forefront of discussions on how to best adopt best practices in the creation of infrastructure that could bolster innovation and sustainability at the urban level. Notably, in 2015, a Center of excellence was established in Barcelona, Spain that was sponsored by the local City Hall (Box 3). Considering the variety of projects envisioned in the Astana Smart Concept, engaging with the programme of activities of the Center could offer significant learning opportunities to Astana authorities in the future.

disadvantaged youth. The MetroLab network, launched in 2015 as part of the White House's Smart Cities Initiative, helps form partnerships between research institutions and city governments to develop practical solutions using ideas and technologies from scientific practice. See Luis M. A. Bettencourt, Javier Gonzales (2016) "Science and Practice for Thriving Cities Free Access" in *Innovations: Technology, Governance, Globalization* Winter-Spring 2016, Vol. 11, No. 1-2: 20–30.

¹⁶⁴ Top software application developers participated in a competition to present applications for city bus passengers, and winning teams were offered access to geo-location data of buses and support in advertising through the Transportation for NSW. This initiative allowed software firms to assist in the development of smart infrastructure improving the welfare of passengers who can now better plan their trips. See Akmal Nartaev (2015), "Private-Public Partnership: opportunities and trends" in *Smart Astana* N°3, December, pp. 6-9.

¹⁶⁵ A contract by the French Government was awarded to a consortium led by Eiffage in partnership with EGIS, ENGIE, Poma, Suez Environnement, Enodo and PGA. The consortium's role is to promote French excellence in the various "bricks" that make up a sustainable city. <http://www.eiffage.com/en/home/developpement-durable/astainable.html> (accessed 10 December 2016).



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