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Review of the implementation of the programme of work 2016-2017 since the seventy-seventh session

Country profiles on housing and land management

Draft Executive Summary of the publication “Country Profile on Housing and Land Management - Kazakhstan”

Note by the secretariat

Summary

This document contains the draft Executive Summary of the Country Profile of Kazakhstan. It provides an overview of the housing and urban development situation in the country and policy recommendations.

The Committee will be invited to endorse the policy recommendations and approve the publishing of the Country Profile of Kazakhstan (ECE/HBP/191).

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I. Introduction

1. The Committee on Housing and Land Management, at its seventy-sixth session, approved the preparation of a new Country Profile on Housing and Land Management for the Republic of Kazakhstan.
2. This document contains the draft Executive Summary of the Country Profile on Housing of Kazakhstan. Due to unforeseen circumstances, the land management part of the Country Profile has not been completed.

II. Executive Summary

3. This summary provides an overview of the housing and urban development situation in Kazakhstan and policy recommendations of the Country Profile.

A. General situation

4. 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.
5. 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.
6. 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.
7. 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.
8. 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.

B. Housing legislation and policies

9. 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.

10. 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.

11. 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.

12. 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.

13. 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;
- 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.

C. Housing demand

14. 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 Nurlı 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.

15. 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.

16. Rental housing, also through the Nurlı 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.

17. 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.

18. 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 bodies 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.

19. 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.

D. Housing maintenance and management

20. 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.

21. 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.

22. 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.

23. 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.

E. Energy efficiency and energy saving in the residential sector

25. 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.

26. 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.

27. 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.

28. 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.

29. 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.

30. 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.

31. 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.

32. 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.

F. Financial framework of the housing sector

1. Trends in the housing market

33. 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.

34. 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.

35. 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.

36. 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.

2. Access to housing finance

37. 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.

38. 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.

39. 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.

40. 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.

41. 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.

42. 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.

43. 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 promote implementation of measures to stimulate the development of internal long-term financing in the national currency and "de-dollarization" of the economy. In order to reduce risks, banks should promote short-term loans with quick "turnover." The formation of a full-fledged pension system will ensure demand for mortgage-backed securities and eventually become one of the long-term funding sources for mortgage lending. Increasing the liquidity and transparency of the securities market will form the basis for the expansion of long-term lending by credit institutions, including mortgage;
- 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.

G. Urban development

44. 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.

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

46. 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

47. 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

48. 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 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.

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.

49. 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.

50. 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.

51. 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.

52. 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.
-