

Country Profiles on Housing and Land Management

Republic of Armenia



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FOREWORD

The *Country Profiles on Housing and Land Management* (CPs) are intended to assist governments to improve the performance of their housing, urban development and land management sectors and, at the same time, to promote sustainable development. The profiles analyse trends and policy developments, and make an overall assessment of the political, economic and social framework of these sectors in a country. This work was initiated by the United Nations Economic Commission for Europe (ECE) Committee on Housing and Land Management in the early 1990s, in response to requests from ECE member States.

The studies are requested by member States and carried out by international teams of experts in cooperation with government bodies, other international organizations, non-governmental organizations (NGOs), local authorities and the private sector. Through a process of broad consultation, the experts undertake a comprehensive review of the housing, urban development and land management sectors, and develop recommendations to help policymakers draft strategies and programmes.

This CP of the Republic of Armenia, prepared at the request of the Ministry of Urban Development, is the nineteenth in the series. The CP programme continues to emphasize in-depth analysis and policy recommendations, while focusing on specific challenges or achievements in the housing, urban development and land management sectors that are particularly relevant to the country under review. In the case of the Republic of Armenia, these issues include housing provision and affordability; management and maintenance of the housing stock; energy efficiency in housing; disaster risk mitigation; urbanization; housing finance; and the legal and institutional framework.

This CP lays out a set of policy recommendations. Their timely and effective implementation is regarded as crucial to meeting the challenges which the Republic of Armenia currently faces. With the recent adoption of the New Urban Agenda, the global commitment to sustainable urban development has been reaffirmed. The policy recommendations of this CP will serve to support the country in its commitment to implementing the New Urban Agenda and achieving the Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development, particularly SDG11 on cities and communities.

I would like to thank the international and national experts who contributed to the preparation of this CP, as well as the governments that provided funding for its development. I invite all those with an interest in the Republic of Armenia's housing, urban development and land management sectors to make full use of the information and recommendations contained in this report. It can serve as a framework for future action, and help shape programmes at the national and local levels.

Finally, I would like to stress the relevance of the CP reviews as unique instruments that allow ECE countries to share experiences in housing, urban development and land management issues, to compare trends and gain knowledge from different practices, to adopt policies and planning tools, and to learn about actions implemented. Experience has shown that CPs are a practical policy tool that all stakeholders concerned can use to address development-related challenges in the areas of housing, urban development and land management, particularly in countries with economies in transition.



Christian Friis Bach
Executive Secretary

United Nations Economic Commission for Europe

PREFACE

This Country Profile on the housing, urban development and land management sectors of the Republic of Armenia was requested by the Ministry of Urban Development of the Republic of Armenia, and began with a preparatory mission by the UNECE secretariat. A fact-finding mission by the international expert team was carried out in April 2015.

The project's expenses were covered by extrabudgetary funds provided by the Russian Federation. The Government of the Republic of Armenia made national experts available for the study. The Governments of the United Kingdom and the Russian Federation financed their experts' participation as an in-kind contribution. The OECD also financed one expert's participation as an in-kind contribution. The UNDP Country Office in Armenia contributed in part to other expenses. The successful conclusion of the project would not have been possible without this generous support.

This Country Profile is the second review done for the Republic of Armenia. The first review was prepared in 2004 and the analyses covered only the housing sector.

Previous studies in the series include Bulgaria (ECE/HBP/101, published in 1996), Poland (ECE/HBP/107, 1998), Slovakia (ECE/HBP/111, 1999), Lithuania (ECE/HBP/117, 2000), Romania (ECE/HBP/124, 2001), Republic of Moldova (ECE/HBP/125, 2002), Albania (ECE/HBP/130, 2002), Armenia (ECE/HBP/132, 2004), Russian Federation (ECE/HBP/131, 2004), Serbia and Montenegro (ECE/HBP/139, 2006), Georgia (ECE/HBP/143, 2007), Belarus (ECE/HBP/150, 2008), Kyrgyzstan (ECE/HPB/157, 2010), Azerbaijan (ECE/HBP/156, 2010), Tajikistan (ECE/HBP/163, 2011), Ukraine (ECE/HBP/176, 2013), Republic of Moldova (ECE/HBP/181, 2015), and Uzbekistan (ECE/HBP/185, 2015).

Other UNECE publications related to housing may also prove useful to the Republic of Armenia and other countries in transition: (a) *Social Housing in UNECE region: Models, trends, and challenges* (ECE/HBP/182, 2015); (b) *Good practices for Energy-Efficient Housing in the UNECE Region* (ECE/HBP/175, 2013); (c) *Climate Neutral Cities: How to make cities less energy and carbon intensive and more resilient to climatic challenges* (ECE/HBP/168, 2011); (e) *Green Homes: Towards energy-efficient housing in the United Nations Economic Commission for Europe region* (ECE/HBP/159, 2009); (f) *Self-Made Cities: In search of sustainable solutions for informal settlements in the United Nations Economic Commission for Europe region* (ECE/HBP/155, 2009); (g) *Guidelines on social housing: principles and examples* (ECE/HBP/137, 2006); (h) *Housing finance systems for countries in transition: principles and examples* (ECE/HBP/138, 2005); (i) *Guidelines on condominium ownership of housing for countries in transition* (ECE/HBP/123, 2003).

In addition, the fundamental documents approved by UNECE member States could provide a framework for developing sustainable policies in housing, urban development and land management: the *Geneva UN Charter on Sustainable Housing* and the *Strategy for Sustainable Housing and Land Management in the ECE region for the period 2014-2020*.

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

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PHOTO CREDITS

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ABBREVIATIONS, ACRONYMS, SYMBOLS AND CURRENCY CONVERSION

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AFD	Agence Française de Développement (French Development Agency)
AWSC	Armenian Water and Sewerage Company
CJSC	Close joint-stock company
EBRD	European Bank for Reconstruction and Development
ENA	Electric Network of Armenia
ENP	European Neighbourhood Policy
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GDP	gross domestic product
GEF	Global Environment Facility
GIS	geographic information system
HfH	Habitat for Humanity
HOA	Homeowners association
HPP	hydro power plant
IDB	Islamic Development Bank
IEA	International Energy Agency
JICA	Japan International Cooperation Agency
JSC	Joint-stock company
MAB	multi-apartment building
MENR	Ministry of Energy Infrastructures and Natural Resources
MLSA	Ministry of Labour and Social Affairs
MNP	Ministry of Nature Protection
MTAD	Ministry of Territorial Administration and Development
MUD	Ministry of Urban Development
NAMA	Nationally Appropriate Mitigation Actions
NPP	nuclear power plant
NSS	National Statistical Service
OECD	Organisation for Economic Co-operation and Development
PSRC	Public Services Regulatory Commission
R2E2 Fund	Armenia Renewable Resources and Energy Efficiency Fund
SCREC	State Committee of Real Estate Cadastre
SDC	Swiss Agency for Development and Cooperation
SHPP	small hydro power plant
SIDA	Swedish International Development Cooperation Agency
SUDI	State Urban Development Inspectorate
TPP	thermal power plant
TSFSR	Transcaucasian Socialist Federative Soviet Republic
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USSR	Union of Soviet Socialist Republics
YWSSC	Yerevan Water Supply and Sewerage Company

SYMBOLS

km	kilometre
km ²	square kilometre
kV	kilovolt
kWh	kilowatt-hour
m ²	square metre
mm	millimetre
m ³	cubic metre
MW	megawatt
V	volts

CURRENCY CONVERSION

Exchange rate (April 2015)

1 Armenian dram = .0021 US dollar
1 US dollar = 475 Armenian drams
1 Euro = 508 Armenian drams

EXECUTIVE SUMMARY

This summary provides an overview of the housing, urban development and land management sectors in the Republic of Armenia.

General situation

Armenia is landlocked and has a mountainous terrain. Of its total area, 68.9 per cent is occupied by agricultural land, and 11.2 per cent by forests. Nearly all of its territory is situated in a seismically active zone, making it an earthquake-prone country. Very little land, therefore, is available for settlements and land resources are very limited.

Armenia was part of the former Soviet Union. Dissolution of said Union in 1991 took a heavy toll on the country's economy, due to its strong dependence on cooperation with other ex-Soviet republics and especially Russia. Armenia's GDP posted negative growth until 1993.

Armenia's economic reliance on remittances from abroad, especially Russia, remained after its independence, due to the very large number of the working-age population living and working outside of the country. According to the World Bank's World Development Indicators, Armenia ranked 10th globally in 2014 in terms of personal remittances received from abroad as a percentage of the country's GDP.¹ Total inflow amounted to USD 1.7 billion, and 83 per cent of this came from Russia. This is why the 1998 and 2014 Russian crises gravely affected the economy. There is very high unemployment, reaching 17.6 per cent in 2014.² Thirty per cent of the population is poor, and 2.3 per cent is extremely poor.³

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 sector

Housing stock

The Spitak earthquake left many people homeless. The military conflict with neighbouring Azerbaijan resulted in flows of displaced persons at different times who needed housing. At the same time, the mass privatization of housing after Armenia's independence has caused the disappearance of social and public housing, creating a severe shortage of adequate affordable housing.

The legal and institutional framework for managing the housing sector in Armenia is inadequate. A long-term strategic approach is needed to further its development. There is also a need to elaborate a comprehensive national housing strategy with a view to improving the quality of the housing stock and its long-term sustainability. The Government is committed to reforming its housing sector, and this political will is important for introducing changes in the legislation which will promote sustainable housing in Armenia.

¹ World Bank, Personal Remittances Received (% of GDP), World Bank Open Data. Available from <http://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS>

² Republic of Armenia, National Statistical Service (NSS), *Statistical Yearbook of Armenia 2015*. Table 29, "Labour Resources of the Republic of Armenia." Available from <http://www.armstat.am/file/doc/99493603.pdf>

³ Ibid., Table 85, "Poverty Indicators." Available from <http://www.armstat.am/file/doc/99493608.pdf>

Because of the currently deficient legal and institutional framework, the condition of the housing stock is poor. Adequate maintenance, repair and management are badly needed, especially in the common areas. More than half of residential buildings need to be renovated, reconstructed or reinforced to make them energy-efficient, earthquake resistant and fit for habitation again. Residential buildings that, after inspection, are declared unsafe for habitation (e.g., rundown buildings due to old age or lack of maintenance, those that have low earthquake resistance, etc.) are demolished when reinforcement, reconstruction or capital renovation is no longer possible for technical and economic reasons.

Housing maintenance and management

One of the economic reforms launched after independence was the privatization of state-owned apartments. Its massive scale meant that 96 per cent of dwellings were in private ownership by 2000. However, this also meant changes in the system of maintenance, repair and management of apartment buildings, which was the responsibility of municipal enterprises during the Soviet times. The 'new' homeowners were faced with a situation where they were not even aware of their rights and responsibilities concerning the maintenance, repair and management of their apartments and of the common areas. They did not have the knowledge and experience to maintain and manage them, and could not afford to invest in shared ownership of the common areas.

The multi-apartment buildings (MABs) management system remains a major issue, despite successive reforms made by the Government, including the adoption of new laws, and amendments to some of the existing ones. Further reforms should be made, beginning with legislation that would ensure mechanisms for the participation of homeowners in the management of the common areas in MABs. These mechanisms should be made as simple as possible. Raising the awareness of homeowners as to their rights and responsibilities in the maintenance of their building, and their participation in maintenance costs, is also extremely important.

Housing availability, provision and affordability

Statistics show a high rate of housing availability in Armenia, influenced more by the decreasing population (because of emigration) and a large share of empty dwellings rather than an actual increase in the housing stock. Statistically, the country's housing availability rate is higher than that of Russia and Ukraine, and closer to the rates in Europe. Based on a different indicator, the number of dwellings per 1,000 inhabitants, Armenia is far behind Russia and Ukraine. Despite what statistics show on housing availability, the need for housing is significant. Results of the 2011 census show that 30,000 families are homeless and approximately 30,000 more need better housing conditions.

Social housing stock is not developed in Armenia. Aside from deteriorating housing conditions, due to the aggravated economic situation, production of housing is also declining. Compared to the production of residential buildings in 1981-1990 alone, total residential buildings built after 1990 (a period of more than 20 years) was 65 per cent less.

Currently, Armenia has no legislation that ensures the development of affordable housing and the rental sector. The Government has adopted the National Strategy on Developing Social Housing Stock (2013), but it lacks regulations on a number of issues on social housing provision and the affordable rental sector. Under this Strategy, the Government provides housing to vulnerable groups of the population under the public budget, and creates rental housing through public-private partnership mechanisms. However, budget limitations make it impossible to effectively address the issues. International organizations, such as the Swiss Agency for Development and

Cooperation, Habitat for Humanity (HFH) Armenia, and the United Nations Development Programme (UNDP), cooperate with the Government to support the construction of social housing, home improvements and energy-efficiency improvements.

Energy efficiency and energy savings in housing

The construction sector is one of the major consumers of energy in Armenia; energy consumption and greenhouse gas emissions are mainly related to the heating of dwellings. Buildings consume almost 28 per cent of primary energy resources.

After the collapse of the Soviet Union, Armenia has gone through a severe energy crisis. The start of a military conflict in the region, and the resulting economic blockade by Azerbaijan and Turkey, cut off Armenia's only source of gas and oil for its thermal plants. Four years prior to that, due to a massive earthquake, the Metsamor nuclear power plant, a source of roughly one third of Armenia's generating capacity, was shut down. The communal infrastructure was severely affected by this crisis, which was, at the same time, a strong incentive to initiating energy-efficiency programmes. Armenia, as a result, is ahead of its neighbouring countries in implementing energy-efficiency measures in its building sector.

The majority of the housing stock in Armenia consists of Soviet-era MABs with poor insulation and low quality construction, which were built without consideration for energy efficiency. Together with poor or no maintenance, this meant that the housing stock was a big energy consumer. Considering the energy saving potential of the residential sector, policies on climate, energy and housing have given priority to energy-efficiency improvements in the construction sector. A number of Government policy documents emphasize the importance of energy efficiency in the construction sector, and provide general plans of essential technical solutions. The Government has also taken actions to improve its legal and regulatory framework for energy efficiency, especially in the housing sector. An energy audit was also given a place in the Government's energy-efficiency priorities, and the "Procedure for carrying out energy audit" was adopted in 2006. Aside from a number of laws and regulations, energy efficiency is also regulated by international legal obligations. Under the United Nations Framework Convention on Climate Change, Armenia is committed to improving energy efficiency in buildings.

Some ongoing projects to improve energy efficiency in housing, in collaboration with international organizations, are: the UNDP-Global Environment Facility (GEF) project "Improving Energy Efficiency in Buildings" and the HFH Armenia project "Residential Energy Efficiency for Low-Income Households", to name but two. Loans from commercial banks and international financial institutions are also offered to support energy-efficiency improvement and energy savings in the residential sector.

Mitigation of disaster risks

Armenia is one of the 60 most disaster-prone countries in the world. Risks related to geophysical hazards (such as earthquakes, landslides and mudflows, hail storms, etc.) are very high. The 1988 Spitak earthquake alone did not only take the lives of thousands of people but also caused heavy damage to property, including houses (517,000 people were left homeless). The consequences of earthquakes such as Spitak only emphasize the importance of making the housing stock earthquake resistant.

The Government has adopted important laws and resolutions on seismic hazard reduction and emergency management. Design and construction regulations were also revised and updated to reflect actual seismic hazards and to ensure more accurate identification of the seismic load on buildings and structures in the development of design and cost estimate documentation.

In 2012, the Government adopted the National Strategy on Disaster Risk Reduction, which aims to strengthen disaster resilience, to improve the safety of individuals and society as a whole, and to contribute to sustainable development.

Communal infrastructure and services

As explained above, due to a severe energy crisis at the beginning of its independence, Armenia's communal infrastructure was badly hit and this, in turn, caused the quality of utility services to drop to a disastrously low level. The centralized heating supply was almost completely destroyed.

The Government has made efforts to reconstruct and develop its communal infrastructure and improve the quality of services of utility providers by using various mechanisms of public-private partnership and raising funds through international financial institutions and organizations. Engaging the private sector in public services provision is aimed at improving the quality of services based on international experience and standards, attracting private investment, and introducing modern and efficient systems of service management.

The Public Services Regulatory Commission set utility rates according to policy. The rates are set so that they fully cover the operating costs of providers. However, setting economically reasonable rates is constrained by the low income of the majority of households. A system of targeted assistance to low-income households is important at this point, and it is recommended to use the international experience of providing subsidies based on the assessed income of households.

Urban development and planning

Urbanization

The growth of Armenia's urban population reflects the country's changing social and economic circumstances over the past century. Although urbanization levels have been on a downtrend in recent years, Armenia remains highly urbanized, with more than 63 per cent of its population living in urban areas. More than half of the urban population lives in Yerevan. Several challenges result from the country's rapid urbanization, including that of governance at national, regional and local level, and the need for specific policy instruments to address them. A more effective response to urbanization is hindered by a lack of intersectoral cooperation.

In the medium to long term, therefore, greater cooperation and coordination between all levels of government is needed to empower regional and local economies to promote economic growth. The Government is exploring new principles and practices for urban policy in the future as part of its preparations for Habitat III.

Urban development

At the national level, the General Settlement Plan of the Republic of Armenia, approved in 2003, sets out the broad strategic direction of the Government's national urban development policy. The Plan introduces a policy of restricting urban development in intensively developed areas, where 90 per cent of Armenia's 49 urban communities are located, where this could be harmful to the natural ecology of an area, to create a more balanced settlement structure.

At the regional ("marz") level, Area Planning Designs have been prepared for selected areas and monitoring of these documents is undertaken at that level. The work is funded by the state budget.

Responsibility for preparing Master Plans and Zoning Plans at the local level rests with the local authorities, according to the Law “on Local Self-Government”. Urban development activities within the administrative boundaries of communities are regulated by both the Master Plan of the Community (Settlement) and the urban development zoning plan, which constitute “urban development project documents”. So far, 43 out of 49 urban communities and 52 out of 866 rural ones have approved Master Plans.

Enforcement of the Master Plan rests with the State Urban Development Inspectorate, which has responsibility for ensuring that urban development is in line with its provisions. The State Inspectorate also conducts inspections of regional urban development branches. At the regional level, the head of the office of the region oversees compliance with the Area Planning Designs.

Regional development

In recent years, regional disparities have been increasing. Yerevan dominates the country's economic growth performance, and has the highest levels of non-agricultural employment and the lowest poverty rates in the country. Disproportionate development reflects unfavourable socio-economic and demographic conditions, including a lack of infrastructure to support development, especially for settlements located far from the capital, those located in border regions and in mountainous areas, and those with unfavourable climatic conditions.

There is a need to promote regional cohesion in order to help reduce regional differences and attract people to less populated, especially rural, areas. However, this requires massive investment in transport and other infrastructure. The Armenia Development Strategy 2014-2025 highlights a range of challenges that need to be addressed by a targeted regional development strategy and, on the urban development side, efforts are already underway to address some of these challenges.

Spatial planning and urban development impacts on the environment, and resilience to disasters

Disaster risk reduction, particularly in relation to seismic risk, is a key priority for all levels of government in Armenia. Measures have been taken to address this issue and minimize the risk of environmental disasters and their impact, such as the development of policies for disaster risk reduction and the preparation of seismic hazard assessment maps. It is recommended to develop practical measures to address seismic risk, for instance, undertaking a review of disaster/seismic hazard assessment and risk reduction strategies in urban planning and development policies to ensure they reflect the latest learning and best practice.

Climate change adaptation is also a priority issue for Armenia. It is committed to limiting its greenhouse gas emissions and, for the residential sector, programmes were developed to improve energy efficiency. Further initiatives could help address the challenge of climate change in the country, as discussed in the recommendations chapter of the Country Profile.

Land administration

Several important projects adopted in the early years of independence laid the foundation for effective land administration in Armenia, and contributed to the privatization of almost the entire land stock. Almost all agricultural land was transferred to private ownership, the cartographic coverage of Armenia was completed, all real estate was registered in the cadastre, property rights were secured, and a real estate transfer system based on the effective registration of property rights was formed.

Armenia provides efficient services of property and land rights registration for its citizens. Moreover, there are widely promoted mechanisms for resolving complaints and disputes. However, to ensure the effectiveness of the system, the taxation, registration and administrative elements of land management must be supported by accurate and updated maps.

Armenia has always been considered a leader among the countries of the former Soviet Union in creating land policies to address its land issues, but much remains to be changed, especially in its shortcomings in land management, land consolidation and the land market, which are based upon land valuation. Land parcels and buildings are valued separately. Armenia has adopted a real property mass valuation system but it is not based on market/actual value, and therefore does not meet international standards and the principles of the 2001 UNECE Guidelines. It is recommended to use the comparative sales analysis method (actual prices) as the basis for valuation, to enhance transparency and trust.

Financial framework

The main source of financing for housing construction in Armenia is homeowners' funds. Housing construction under the public budget is limited. In housing renovation activities, very little is allocated from the public budget, since maintenance and repair is supposed to be the homeowners' responsibility. Energy efficiency in buildings is one of the priorities of the Government, but public funding for energy-efficiency improvement programmes focuses on industrial buildings. In the residential buildings sector, international organizations, with the support of the Government, carry out a number of pilot programmes that finance energy-efficiency improvements.

The rental sector in Armenia is not well developed. Private leasing is predominantly informal. Rent rates are not controlled by the State and, currently, rates are low since they are established without taking into account the need to repay capital investment.

Land parcels can be used as collateral for loans for private housing construction. Since real properties are valued based on cadastral values, which are low, banks are reluctant to take them as security.

The cost of housing is unaffordable for most Armenians. The Government is planning to provide rental housing at affordable rates to those who cannot afford to purchase housing, and for those who do not meet the criteria for participation in public housing programmes. Mechanisms for housing development and financing sources are currently being developed.

The mortgage market in Armenia is rather young, and is hindered by unfavourable forecasts by banks regarding the medium-term development of the housing market. Loans for housing construction are underdeveloped considering that there is a high demand for this type of loan. Banks prefer to deal with short-term commercial loans because they make a profit within a shorter time period.

A pre-requisite to housing finance development is the stable flow of long-term investments in the country's economy. Currently, Armenia receives limited long-term funding from foreign institutions and private investors. The Government should provide incentives to local businesses involved in large scale housing projects, including in the reconstruction and renovation of existing housing stock.

In developing housing finance mechanisms, the Government should make land and unfinished construction attractive for banks to accept as security when implementing construction projects.

In developing new credit products, including those focused on energy efficiency, the Government should take into account private lending institutions and support their initiatives in developing accessible products to meet the demand for housing construction, renovation and energy-efficiency improvement. Suppliers of these products may become microlending organizations.



Source: Cecil Batac, 2015.

CHAPTER I

Overview

In the 6th century BC, Armenians settled in the kingdom of Urartu (Urartu is an Assyrian name of Mount Ararat). The first Armenian state appeared after the downfall of the union of Urartian states immediately after the collapse of the Assyrian Empire in 612 BC. Later on, Tigranes II (Tigranes the Great) (95–56 BC) took advantage of a dragged-out war between Rome and Parthia, and created a vast, but short-lived empire that stretched from the Lesser Caucasus to the borders of Palestine.

The rapid expansion of Armenia under the reign of Tigranes the Great demonstrated the tremendous strategic importance of the Armenian Highlands. For this reason, in a later era and until the end of the World War I, Armenia repeatedly found itself at the epicentre of struggle between neighbouring states and empires (Rome and Parthia, Rome and Persia, Byzantium and Persia, Byzantium and the Arabs, Byzantium and the Seljuk Turks, the Ayyubids and Georgia, the Ottoman Empire and Persia, Persia and Russia, and Russia and the Ottoman Empire).

In 1918, after the defeat by the Turks in World War I, an independent Republic of Armenia was established. It remained so only until 1920, when the Soviets took control of the country, forming the Armenian Soviet Socialist Republic. In 1922, the Soviet Government united Georgia, Armenia and Azerbaijan to form the Transcaucasian Socialist Federative Soviet Republic (TSFSR), which became part of the Union of Soviet Socialist Republics (USSR) or the Soviet Union. In 1936, on the dissolution of the TSFSR, Armenia became a socialist republic and, on 21 September 1991, it declared its independence from the Soviet Union.

Geography

Armenia is a landlocked country in South Caucasus. It is bordered by Georgia to the north, Azerbaijan to the east, Iran to the south, and Turkey to the west.

Its total area is 29,743 km² (slightly smaller than Maryland or Belgium) with agricultural land occupying 68.9 per cent, and forest area making up 11.2 per cent.⁴

Nature and climate

Armenia has an alpine continental climate with four pronounced seasons. Consequently, the temperatures change dramatically with every season. Summers are usually hot – up to 25°C, while in the Ararat Valley temperatures may rise to 40°C. Winters are rather cold with temperatures as low as -5°C and it is colder in the Ararat Valley and the Lake Arpi area where temperatures can go down to as low as -30°C and -46°C, respectively. The average annual amount of precipitation throughout the country is 550 mm.

Armenia is earthquake prone and its earthquakes are accompanied by droughts or floods. One of the most devastating ones was the 1998 Spitak earthquake (magnitude 7.0 on the Richter scale⁵). This earthquake brought devastation to 40 per cent of Armenia's land area. Overall, 21 cities and 342 villages were hit, while the town of Spitak was completely ruined. According to official

⁴ Republic of Armenia, National Statistical Service (NSS), "206. Total Land Area and Agricultural Lands by Type", *Statistical Yearbook of Armenia 2015*. Available at <http://armstat.am/file/doc/99493643.pdf>

⁵ Republic of Armenia, Ministry of Emergency Situations.

statistics, 25,000 people were killed, 140,000 became disabled, and more than half a million were left homeless, and 40 per cent of industrial capacity was destroyed.

Map 1
Map of Armenia



Source: United Nations Geospatial Information Section, Department of Field Support. Available from <http://www.un.org/Depts/Cartographic/map/profile/armenia.pdf>

Social and economic development

According to World Bank ranking, Armenia belongs to the lower-middle-income economies. Its GDP in 2014 was USD 11.6 billion, ranking 136th in the world.⁶ In the same year, its GDP per capita was USD 3,864⁷.

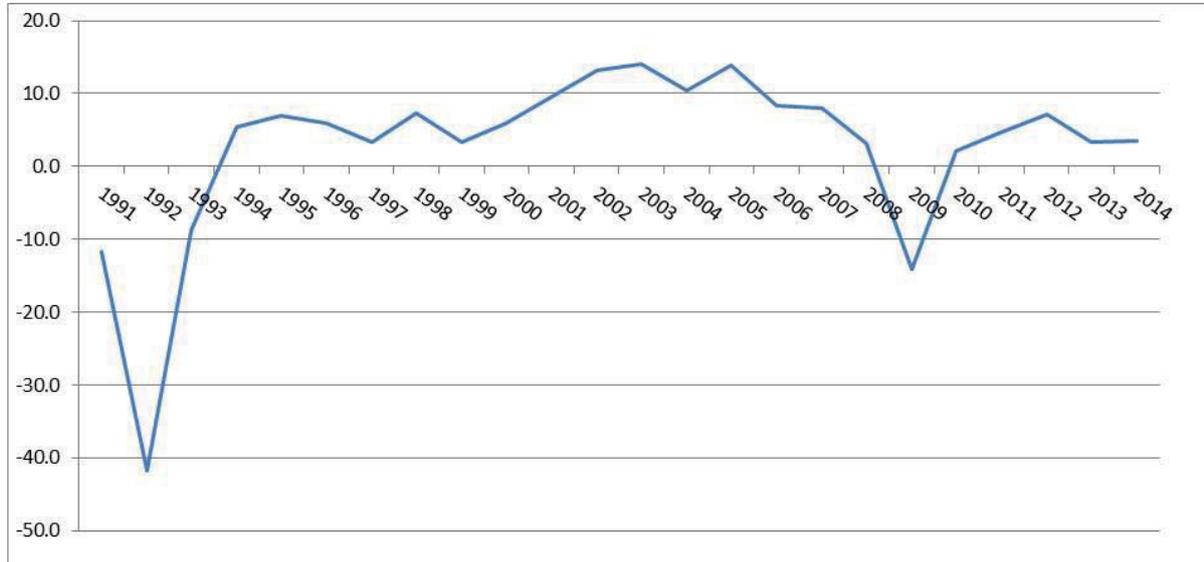
The transition of Armenia to a market economy after gaining independence from the Soviet Union took a heavy toll on its economy. Consequently, its GDP posted a negative growth until 1993. It slowly recovered since then but the 1998 Russian financial crisis hit Armenia badly and progress slowed down again. During the period 2001-2008, Armenia experienced rapid economic growth but the 2008 global economic crisis changed the picture. Just like in other countries with economies in transition, the crisis had severe consequences on Armenia’s economy. With lower global demand and the drop in international prices for its commodities, exports fell, and economic contraction in other countries reduced remittances. The drop in remittances has profoundly

⁶ World Bank, GDP ranking, World Development Indicators. Available from <http://data.worldbank.org/data-catalog/GDP-ranking-table>

⁷ Republic of Armenia, NSS, “170. Economic Indicators”, *Statistical Yearbook of Armenia 2015*. Available from <http://armstat.am/file/doc/99493643.pdf>

affected construction output and real estate prices. The huge decrease in construction output accounted for more than three-quarters of the decrease in GDP in 2009. Figure I shows the trend in GDP growth.

Figure I
Trend in GDP growth, 1991-2014



Source: World Development Indicators.

After 2009, value added on construction continued to decline, while the agricultural sector exhibited the opposite trend. From a value added of 16.3 per cent of GDP in 2008, the latter registered a share of 18.5 per cent by 2014, employing 37.6 per cent of the total employed population.⁸

In post-crisis years, the share of the poor and extremely poor in the composition of population slightly decreased. In 2009, 34.1 per cent of the population is poor and 3.6 per cent is extremely poor while there were 30 per cent of the population poor and 2.3 per cent extremely poor in 2014.⁹

Problems of post-communist transition in Armenia were exacerbated by the Spitak earthquake. The long-term effects of this tragedy are felt even today; industry has not been fully restored in the affected areas. High unemployment, housing problems, and low standards of living force people to migrate from the country.

Population and demographic indicators

The demographic dynamics of Armenia is one of the most important factors in its economic development. According to World Bank's World Development Indicators, in 2014 Armenia was 136th in population ranking¹⁰ (3.017 million people). The Armenian population, despite its positive natural increase, is decreasing. According to the 2011 census, it decreased by 12.5 per cent compared to the last census of the Soviet period (1989).

⁸ Republic of Armenia, NSS, *Labour Market in the Republic of Armenia 2010-2014*. Available at http://www.armstat.am/file/article/trud_2015_6.pdf

⁹ Republic of Armenia, NSS, "85. Poverty Indicators", *Statistical Yearbook of Armenia 2015*. Available at <http://www.armstat.am/file/doc/99493608.pdf>

¹⁰ World Bank, Population ranking. Available from <http://data.worldbank.org/data-catalog/Population-ranking-table>

Recent years saw an increase in emigration from Armenia to Russia. According to the Federal Migration Service of Russia, the number of Armenian citizens in Russia as of 2 July 2015 was 532,300 (about 17.5 per cent of the Armenian population).¹¹ Moreover, the size and share of the Armenian diaspora in the resident population of Russia is steadily increasing. According to the 2010 All-Russia population census, the Armenian population was 1,182,400 or 0.83 per cent of the Russian population. The Armenians represent the seventh largest group in the national composition of the Russian population. These factors account for a large amount of remittances sent by these individuals from Russia to Armenia, steadily growing from USD 530.5 million in 2006 to USD 1,416 million in 2014.¹² Armenia is ranked number 10 in the world in terms of share of personal remittances in its GDP (19.0 per cent of GDP in 2010–2014).¹³

Despite intensive emigration, high unemployment remains (16.2 per cent in 2013, 17.6 per cent in 2014, and 19.1 per cent in the first quarter of 2015).¹⁴

The proportion of the rural population in Armenia has been on the rise during the entire post-Soviet period. The rural population comprised 30.8 per cent of the total population in 1991, and stood at 36.6 per cent in 2014.

Government and administrative division

According to the amendments to the Constitution of the Republic of Armenia adopted by a referendum on 6 December 2015, Armenia is a sovereign, democratic, social state with a parliamentary government system.

The government system is based upon an equal distribution of powers between the executive, legislative and judicial authorities. After the transition to a parliamentary government system, which is planned for 2017-2018, the executive authority will be represented by the head of government (Prime Minister) and members of government. The Parliament (National Assembly of the Republic of Armenia) will become the supreme legislative body and will consist of 101 members. The unicameral parliament of Armenia will be formed under proportional multi-party election system and will be elected for a five-year term. The Court of Cession will become the highest body of the judicial system and will consist of 10 members. Five members are to be appointed by the Parliament, the rest by the general meeting of judges.

Armenia is divided into 906 administrative territorial units: 10 regions – Aragatsotn, Ararat, Armavir, Gegharkunik, Kotayk, Lori, Shirak, Syunik, Tavush, Vayots Dzor - and 896 communities. The city of Yerevan as the capital of the country has a special administrative status.

Regions are governed by marzpets (governors) appointed by the Government of Armenia. Yerevan is governed by a mayor appointed by the Council of Elders.

¹¹ Russian Federation, Interior Ministry of Russia, General Administration for Migration Issues. The original source was the Federal Migration Service (FMS) of Russia, which was abolished under the Decree of the President of Russia No. 156 of 5 April 2016. The respective functions and tasks of the FMS were transferred to the Interior Ministry of Russia.

¹² Russian Federation, Central Bank of Russia. Website: <http://www.cbr.ru/statistics/Default.aspx?Prtid=tg>

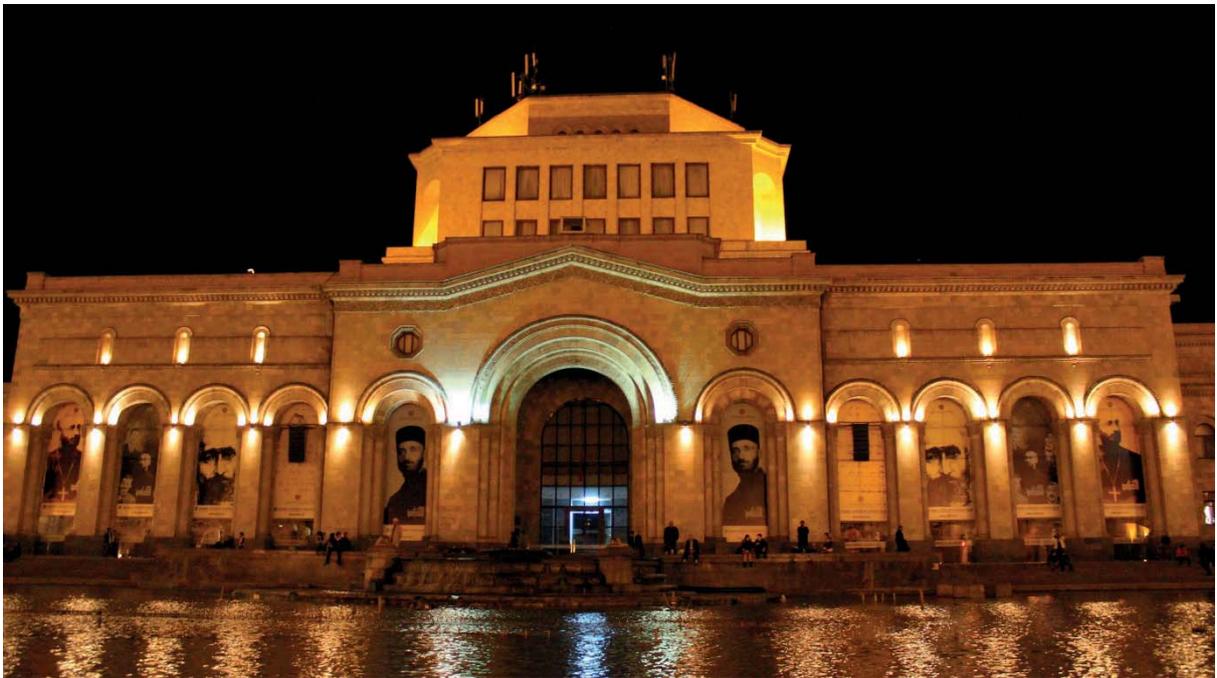
¹³ World Bank, Personal remittances, received (% of GDP). Available from <http://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS>

¹⁴ Republic of Armenia, NSS, Unemployment rate, Statistical Indicators. Available from <http://www.armstat.am/en/?nid=126&id=08010&submit=Search>

Map 2
Administrative map of Armenia



Source: UNHCR, August 2004. Available from <http://www.unhcr.org/41c0682e4.html> (accessed 1 March 2016).



Source: Cecil Batac, 2015.

A. Housing policy

The Housing Code adopted back in the Soviet times was repealed only in 2005. A new draft Housing Code was prepared, but it has not yet been adopted. The housing sector is currently governed by a number of laws, such as:

- Civil Code (1998);
- Law “on State Registration of Rights to Property” (1999);
- Land Code (2001);
- Law “on Condominiums” (2002);
- Law “on Apartment Building Management” (2002);
- Estate Tax Act (2002);
- Law “on Local Self-Government” (2002);
- Law “on Local Self-Government in Yerevan” (2008);
- Law “on Land Tax” (1994);
- Law “on Energy Saving and Renewable Energy” (2004).

The above-mentioned laws and acts were amended and supplemented on multiple occasions; however, the legal framework of the housing sector cannot be considered as sufficiently developed. Currently, a number of important issues are not regulated by the legislation, such as housing provision to socially vulnerable groups of the population, the creation of social and affordable housing and regulations for its provision, the development of the market for the management service of apartment buildings, and the refurbishment and modernization of the existing housing stock. Laws have been drafted on these issues but have not yet been adopted, mainly because of the lack of financial support for their implementation. Instead of adopting laws, the Government launches various initiatives and strategic plans, which often do not have the features of normative legal acts and do not create budgetary obligations for their implementation. Actions under such strategic plans may be revised or postponed for an indefinite period due to lack of public funding. In fact, housing programmes are reviewed after every change of government.

The Government recognizes that housing laws need to be revised and updated to improve and regulate the housing sector across the board for further sustainable development. It is also necessary to determine long-term strategic goals for sectoral development; and determine state obligations and the role, rights and responsibilities of various stakeholders in housing under the changing social and economic conditions.

After proclaiming its independence in 1991, Armenia, like other former socialist countries and Soviet republics, launched economic reforms, including those in the housing sector. In the early years, the housing policy was focused on privatizing public housing stock. In a very short period of time, 96 per cent of dwellings were transferred to private ownership. Mass privatization resulted in the emergence of a housing market, but, as in other transition economies, there were two problems - social housing stock almost disappeared, and a class of "poor homeowners", who could not afford to maintain the houses they owned, emerged. The main problem is the maintenance of common areas in apartment buildings.

The situation in the housing sector was aggravated by its inability to provide housing to citizens whose houses were destroyed by the 1988 earthquake. More than 500,000 people became homeless from this tragedy. Moreover, military conflict with Azerbaijan made many people refugees.

Currently, there remains the pressing problem of providing housing to families who are homeless or in need of better housing conditions but are unable to afford housing in the market. In addition to families left homeless due to natural disasters (earthquakes, avalanches, landslides) and near-border military activities, there are also families living in houses that are in a dilapidated condition and subject to demolition, as well as Syrian Armenian refugees needing housing.¹⁵

Until 2000, the housing conditions of the population were improved by providing families in need with homes built at the expense of the state budget. However, a substantial decrease in public financing caused a sharp drop in the completed housing stock. In 2000, only 62,000 m² of housing was constructed, compared to 849,000 m² in 1991.

Since 2000, housing policies to improve housing conditions for the population have included the development of a housing market, notably by providing support to private residential investment and providing targeted financial assistance to certain categories of citizens for purchasing housing under various programmes.¹⁶ Financial mechanisms for housing sector development include budgetary subsidies, refinancing of mortgage loans, tax benefits, and preferential mortgage loans for young families, young professionals and civil servants.

Despite a marked increase in housing construction in recent years, a significant number of households have serious difficulties in purchasing a house or an apartment. This is due to higher market prices and mortgage terms that are unaffordable for the majority of citizens who are not eligible to participate in targeted state programmes.

Due to limited public finance for the housing needs of citizens entitled to obtain housing, the State's housing policy has been focused on providing housing to the most vulnerable, which includes:

- Families left homeless as a result of natural and man-made disasters and whose housing needs have not been satisfied under previously implemented programmes;
- Families of military servicemen who died or were disabled and require better housing conditions;
- Refugees;
- Residents of apartment buildings that were recognized as dangerous to live in and subject to demolition;
- Care leavers and single pensioners.

As many as 23,000 families belonging to the above categories were able to improve their housing conditions under various state programmes between 2000 and 2015. Nevertheless, much remains to be done to tackle the problems of homeless people living in temporary and inadequate housing. According to experts, despite measures taken, about 60,000 families still need better housing conditions and these make up 7.8 per cent of the total number of households in the country. Out of the total families needing housing, 8,000 families live in dormitories, cabins, and rooms adapted for dwelling, while 22,000 live in overcrowded apartments with four or more

¹⁵ In 2009, there were 8,400 refugees as a result of the military conflict with Azerbaijan. In 2013, 11,090 refugees (ethnic Armenians) came to Armenia from Syria (Source: United Nations High Commissioner for Refugees, UN Data. Available from <http://data.un.org/Data.aspx?q=armenia+datamart%5bUNHCR%5d&d=UNHCR&f=indID%3aType-Ref%3basyID%3aarm>. Last update of UN Data: 5 September 2014).

¹⁶ Habitat III National Report, Annex to Government Protocol Decision No. 38 of 11 September 2014.

people living in one room. Most families living in dormitories are found in Yerevan. People who live in temporary and other inadequate housing are poor and cannot afford to purchase housing without government assistance.

The Protocol Decision of the Government No. 26 of 26 December 2013 adopted the National Strategy on Developing Social Housing Stock for the period 2014-2025 (hereinafter, Social Housing Strategy) to address the existing housing affordability problems. The Strategy identified two models of social housing:

- 1) Supported social housing – housing constructed using the government budget and intended for vulnerable groups (such as refugees) and targeted citizens.
- 2) Social rental housing – housing constructed intended for rental:
 - with the assistance of state funding, or financed and developed through public-private partnerships;
 - upon the initiative of local authorities using local budgets, and if the local funding is not sufficient, with the support of investors or through public-private partnerships.

The action plan of the Strategy includes the following areas:

- Urgently resolving the problems related to the improvement of housing conditions of vulnerable populations and special groups;
- Assisting in attracting investment and in the promotion of public–private partnerships in the implementation of projects aimed at the formation and development of social housing stock;
- Implementing targeted housing provision programmes, and engaging citizens belonging to various social groups in the process;
- Ensuring target-oriented and proper use of social housing stock;
- Ensuring continuity of target-oriented programmes;
- Promoting cooperation between government agencies, local communities and competent authorities or social services organizations;
- Ensuring public awareness and engagement in the implementation of projects;
- Eliminating continuous dependence on social assistance and social care by fostering self-help skills and local initiatives.

The implementation of the Strategy is supported by a number of pilot projects with the participation of international institutions, municipalities and non-profit organizations. According to the Strategy, social housing stock can be created under projects that provide energy-saving measures in construction, the renovation of existing apartment blocks, the completion of unfinished buildings, and the purchasing of housing on the market.

However, the Strategy does not ensure the regulation relating to the development and use of social housing.

Another important priority in the Armenian housing policy is to ensure the proper maintenance of the existing housing stock, and thus safe housing for the population. This priority is relevant because of the poor condition of a significant part of the privatized multi-family housing stock. Poor condition of multi-family houses is the result of ineffective management by the owners and their insufficient investment in the maintenance and repair of common facilities. Therefore, a fairly large proportion of apartment buildings need to be reconstructed or demolished for safety reasons. Furthermore, the housing policy is aimed at increasing the energy efficiency of apartment buildings, both to conserve energy resources and to reduce the cost of utility services for the population. Significant financial investment is required to find solutions to improve the

technical conditions of apartment buildings, and to demolish and reconstruct housing that does not meet safety requirements, but such funds cannot be provided by homeowners alone.

It is recognized that the existing control, maintenance and repair system for multi-family housing cannot be regarded as satisfactory. Apartment owners are poorly informed about their rights and responsibilities related to common facilities in apartment buildings, and, in practice, are not engaged in their management, and not motivated to invest in improving the condition of their apartments. The buildings management authorities, both municipal ones and condominiums, lack efficiency in using payments they obtain from apartment owners for the maintenance of common facilities.

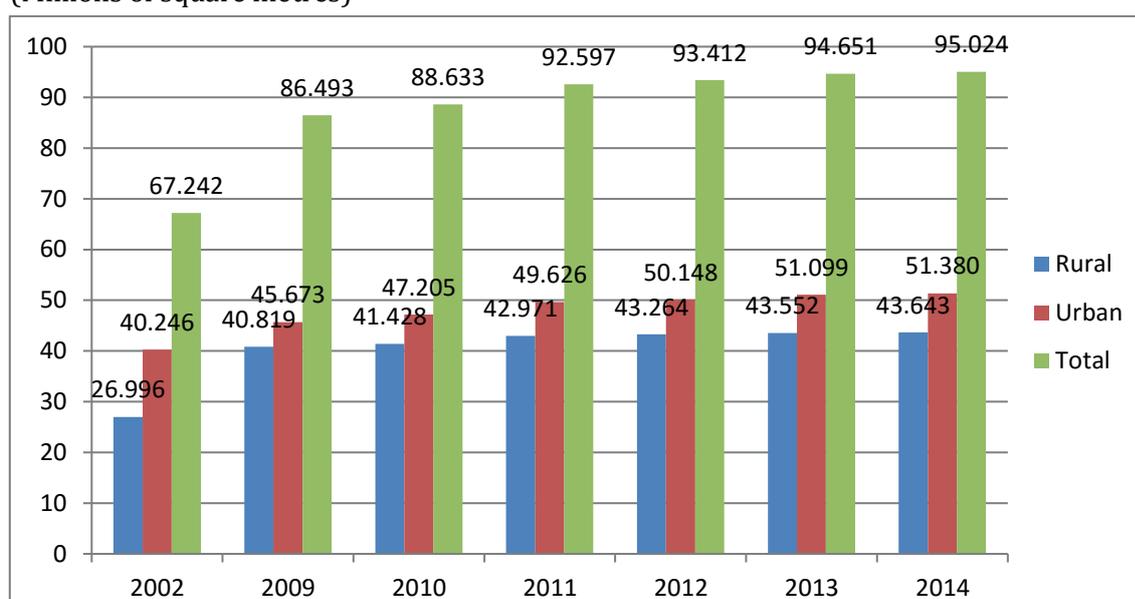
In 2011, the Government approved a five-year strategic programme to improve the management, maintenance and use of apartment buildings, which identified:

- Basic principles of reforms in the sphere of management, maintenance and use of multi-family housing stock;
- Stages of implementation of the new model of building management, infrastructure modernization, and energy-efficiency measures; and
- Forms and mechanisms of providing public support to the new building management model.

B. Analysis of the existing housing stock

Total housing floor space in Armenia was 95.024 million m² in 2014, 54.1 per cent of which was urban housing stock. Over the past six years, the housing stock grew by 9.9 per cent, with the increase in the cities (12.5 per cent) almost twice as large as the increase in rural areas (6.9 per cent). In comparison with 2002, the total housing stock was 41 per cent more and there was a larger increase in the rural housing stock (61.7 per cent) than in the urban one (27.7 per cent) (Figure II).

Figure II
Housing stock in Armenia, 2002 and 2009–2014
 (Millions of square metres)



Source: Armenia, National Statistical Service (NSS), *Statistical Yearbook of Armenia 2015*, Table 146, "Housing Stock." pp. 186-187. Available from <http://armstat.am/file/doc/99493628.pdf>

The housing stock consists of 863,307 dwellings (apartments in multi-apartment buildings (MABs) and single-family houses) in 2014, 66 per cent of which are in the cities and 34 per cent in rural areas (Table 1). The majority of urban dwellings (72 per cent) are apartments in MABs, while housing stock in villages consists mostly of single-family houses (92 per cent). There was an increase of 3.7 per cent in the number of dwellings in the six years from 2009 to 2014, accounted for by housing construction in urban areas. More than half of the new dwellings built in urban areas were private dwellings (single-family houses). Yerevan accounted for 32.8 per cent of the dwellings, or 283,571 units, and 75.2 per cent of them are in MABs.

Table 1
Types of dwellings, 2009 and 2014

	<i>Total dwellings</i>		<i>Apartments</i>		<i>Private dwellings (single-family houses)</i>	
	<i>2009</i>	<i>2014</i>	<i>2009</i>	<i>2014</i>	<i>2009</i>	<i>2014</i>
In urban areas						
Units	542 943	569 221	402 643	410 819	140 300	158 402
Growth, percentage		4.8		2.0		12.9
In rural areas						
Units	289 732	294 086	28 050	24 529	261 682	269 557
Growth, percentage		1.5		-12.6		3.0
Total						
Units	832 675	863 307	430 693	435 348	401 982	427 959
Growth, percentage		3.7		1.1		6.5

Source: Armenia, NSS, *Statistical Yearbook of Armenia 2015*, Table 146, "Housing Stock." pp. 186-187. Available from <http://armstat.am/file/doc/99493628.pdf>

Out of the total 18,964 MABs in Armenia, 25.4 per cent are located in Yerevan (Table 2). Almost half of these are one- and two-storey buildings and 39 per cent are three to five storeys. The share of the tallest buildings (with nine and more storeys) is relatively low at about 14 per cent, and the majority of them are located in Yerevan. A few can also be found in the Kotayk and Lori regions.

Table 2
Multi-apartment buildings by number of storeys and type of wall materials, 2014

	<i>Wall materials of buildings (Percentage)</i>				
	<i>stone</i>	<i>panel</i>	<i>monolithic</i>	<i>others</i>	
Number of apartment buildings					
Total	18 964	69.2	23.3	6.5	1.0
Yerevan	4 813	47.9	51.2	0.8	0
Number of storeys					
one-storey	3 942	90.6	5.8	0.4	3.2

two-storey	4 600	88.5	7.1	3.2	1.2
three-storey	1 250	80.0	9.7	10.3	0
four-storey	2 598	63.1	9	27.9	0
five-storey	3 562	77.5	17.5	5	0
six to eight-storey	327	31.3	68.1	0.6	0
nine-storey or more	2 685	0.4	97.4	2.2	0

Source: Armenia, NSS, *Housing stock and communal services in 2014*, "Number of floors and type of wall materials of apartment buildings." pp. 10-20. Available from http://armstat.am/file/article/bf_2015_1,2.pdf.

Percentages may not total 100 due to rounding off.

Buildings less than six storeys high are usually built of stone, notably of volcanic tuff, which is a traditional material for Armenia. Multi-storey houses are mainly prefabricated modular buildings. Recent years have seen the construction of high-rise buildings making use of monolithic frame construction technology to meet earthquake resistance requirements; the buildings are also equipped with envelopes to improve their thermal protection.

Table 3 shows that the housing stock of Armenia is relatively young. More than 60 per cent of the buildings have been in use for less than 45 years. The share of buildings constructed before 1950, that is, those in operation for over 65 years, decreased from 13 per cent in 2008 to 8.7 per cent in 2014, following the demolition of unsafe buildings. The share of buildings constructed after 2001 increased to 5.2 per cent in 2014, compared to 2 per cent in 2008.

Table 3
Age of the housing stock, 2014

	<i>Buildings*</i>	<i>Year built</i>					<i>2001 and later</i>
		<i>before 1950</i>	<i>1951-1970</i>	<i>1971-1980</i>	<i>1981-1990</i>	<i>1991-2000</i>	
Armenia							
Number	18 815	1 647	5 583	4 453	4 314	1 792	1 026
Percentage	100	8.7	29.7	23.7	22.9	9.5	5.4
Yerevan							
Number	4 763	352	1 840	1 217	1 113	151	90
Percentage	100	7.4	38.6	25.5	23.4	3.1	1.9

Source: Armenia, NSS, *Housing stock and communal services in 2014*. Available from http://armstat.am/file/article/bf_2015_1,2.pdf

* Excluding dormitory buildings

Percentages may not total 100 due to rounding off.

Despite this, there are serious concerns about the technical condition of the housing stock, notably with regard to multi-apartment housing. According to the 2007 survey of the condition of multi-apartment dwellings, 30 per cent of the dwellings are in poor condition, 64 per cent are in satisfactory condition, and only 6 per cent are in good condition. A higher share of buildings in

poor condition are to be found in Gegharkunik, Lori, Shirak and Ararat regions.¹⁷ The following repairs or major renovation of MABs are needed:¹⁸

- 75 per cent of roofs and drainage systems;
- 60 per cent of entranceways;
- more than 50 per cent of domestic water supply and sewage systems;
- 50 per cent of power supply systems;
- 35 per cent of building footings; and
- 15 per cent of elevators.

The poor technical condition of MABs is, first and foremost, a result of many years of poor maintenance and lack of necessary repairs. The problem is worsened by poor earthquake resistance in a large part of them. According to the Ministry of Emergency Situations (MES), the following buildings have been identified as having poor earthquake resistance:

- Buildings with less than six storeys, built with masonry walls (30 per cent of total buildings);
- Frame and panel nine-storey buildings (15 per cent); and
- 12- to 16-storey buildings constructed using the lift slab construction method, mainly in Yerevan (7 per cent).

More than 50 per cent of MABs need to be either renovated to improve their earthquake resistance or to be demolished. Some of the residential buildings, which were given emergency status after their inspection, have already been demolished.

Almost all buildings constructed using prefabricated panel construction technology, during the Soviet era, do not meet modern thermal protection requirements and, in addition to renovation, they also require energy-efficiency improvements.

B.1 Housing tenure system

Right to housing

According to the Civil Code, a citizen can own a dwelling based on the right of ownership (Article 222) or on the right of occupancy (Article 225). For the latter, an agreement with the homeowner specifies the origin, conditions and termination of the right to occupy a residential premises. The agreement is made in writing and is certified by a notary public. The Civil Code provides for the possibility of gratuitous occupancy of residential premises.

Pursuant to the 1999 Law “on State Registration of Rights to Property”, the right of ownership and the right of occupancy of a residential premises are subject to registration at the State Committee of Real Estate Cadastre (SCREC), the body with executive authority to maintain a unified state cadastre of real estate (see Chapter IV B for more details).

Under this Law, the Government shall recognize, guarantee and protect registered property rights. During the registration process, each dwelling (real estate unit) is given a cadastre code. Apartments and other property units in a building are given individual codes that are affixed to a

¹⁷ State programme for multi-apartment housing stock management, exploitation and maintenance (2008).

¹⁸ Ibid.

specific building, and buildings are also given codes that are affixed to the codes of the land on which these buildings are built.

By right of shared ownership, homeowners (owners of apartments and non-residential premises) in MABs are also the owners of common properties in them (Article 223 of the Civil Code). Common properties include load-bearing structures of the building, inner constructions (floors, ceilings), basements, attics, mechanical floors, roofs, entrances that have been designed for general use, staircases, stairs, lifts, and land plots that are used for maintaining and servicing the building, etc. (Article 224 of the Civil Code).

It should be noted that the definitions of common property given in the Civil Code and in the 2002 Law “on Apartment Building Management” are slightly different. According to the latter, ‘common property’ does not include the land plot that is used for servicing the building; and according to the Civil Code, it does not include entryways. Moreover, the building envelope, notably front walls, façade windows, and balconies, was not defined as common property in the Civil Code. Therefore, in practice, it is difficult to identify persons who should make the decisions regarding the maintenance and repair of these elements of the building, and who should carry the responsibility and financial burden for it.

There is also a problem with the legislative definitions of MABs and subdivided buildings and, accordingly, it is not clear what law provisions should be applied to regulate them. The Civil Code provides definitions of these terms that are difficult to understand and use (see Article 222 of the Civil Code).

Common properties in privatized MABs (previously State-owned and part of the public housing stock) are not included in the State cadastre system, and a homeowner’s share in the right of ownership to the common property is not registered in the State Unified Register of Rights to the Property (hereinafter, State Unified Registry). However, common properties in MABs constructed after 2002 are already taken into account in the State real estate cadastre pursuant to the 1999 Law “on State Registration of Rights to Property”, which states that all rights of ownership and use are subject to State registration. A right to a common property is registered in the State Unified Registry and is assigned an individual registration page. The page contains a description of the real estate item, as well as the ownership rights to it, among other things. The type of right to the common property should be noted in the registration page. A cadastral file is compiled for every real property object in the building, which should contain the building plan, with individual real property units and all parts of common ownership or use noted (Article 40).

The introduction of a legislative requirement to register a common property in the State cadastre would entail the need to make an inventory of the common property, including its qualitative and quantitative characteristics, and to complete registration procedures, notably making changes to the cadastre in the event of changing the composition or characteristics of the common property. This legislative requirement also entails additional costs for homeowners in MABs, which does not seem appropriate in the current economic climate in Armenia.

In accordance with the 2002 Law “on Property Tax”, residential buildings, apartments, and non-residential premises in MABs are subject to taxation.

Land title

As a result of economic reform, land became a real property item, which may be owned by the State, municipalities or by individuals. Further, the privatization of land and housing stock made citizens mainly the owners of land plots and the single-family houses built on these plots. A land

plot and a house located on it are interrelated real property items, which, as a rule, are owned by one person. Ownership of these items must be registered in the State real estate cadastre.

The land on which a MAB is built and a perimeter of 1.5 metres around it is a common property. Currently, the right to common shared ownership of the land on which a MAB is built is not registered, nor is the right to common shared ownership of a common property in the building.

Pursuant to the 1994 Law “on Land Tax”, land owners are obliged to pay tax on land. For non-agricultural lands, taxation is based on the value of the land from the cadastral evaluation. Areas that are subject to taxation include land occupied by buildings and structures, land necessary for their maintenance, and land for sanitary, technical and other facilities (Art. 6 of the Law “on Land Tax”).

Housing ownership structure

The privatization of public housing in 1989-1998 resulted in 96 per cent private citizen ownership of the housing stock. The remaining 4 per cent was mostly transferred to municipal ownership. In Yerevan, almost 100 per cent of the national housing stock was privatized in that period. Currently, private housing stock in Armenia stands at 99.8 per cent. Almost 100 per cent of houses are real estate items now.

Although the free-of-charge housing privatization period expired at the end of 1998, it continued for some categories of citizens until November 2014. This was done primarily for families who lost their homes during the Spitak earthquake and, therefore, were not able to privatize their houses in accordance with the standard procedure.¹⁹ Ownership of housing constructed (reconstructed) for the victims of the earthquake under the government programme was also transferred to the citizens.

Various government programmes aimed at improving the housing conditions of some categories of citizens (young families, young professionals, civil servants) mostly provide assistance to citizens for purchasing housing. Social and affordable housing that is supposed to be leased to families who cannot afford to purchase housing on the market, is only beginning to take shape under some individual projects involving the Government, municipalities and international agencies. Generally speaking, the social housing sector does not currently play a significant role in the tenure system.

The sector of commercial rental housing in Armenia, as in many transition countries, is informal. There is no reliable data on the number of owned or rented dwellings. The amount of such dwellings could range from 10 to 15 per cent of the housing stock.

B.2 Management of multi-apartment buildings

Legislative regulation of multi-apartment buildings management

The 2002 Law “on Apartment Building Management” stipulates that the meeting or assembly of all homeowners (hereinafter, assembly) is the highest governing body for the management of common shared property and has the final decision on issues in this area, except for those that are referred to by this Law as the exclusive responsibility of the building governing body (or building management authority), such as the implementation of mandatory standards for MABs. It is unusual for a legislation to exempt a “highest governing body” from making decisions on

¹⁹ Law “on Free-of-charge Privatization of Apartments in the Public Housing Stock” of 2000.

issues related to the management of common shared property. However, since building management authorities are obliged by law to comply with mandatory standards for MABs, not involving the homeowners in these decisions means that the mandatory standards are implemented.

An assembly is convened at least once a year. Any homeowner or building management authority can convene an assembly. During an assembly, decisions on agenda items are discussed and drafted. Homeowners may adopt the draft decisions during the assembly, through absentee/distance voting or through a notice. The latter involves placing a copy of the draft decisions on the most visible areas of the building, such as entrances.

The last point could be noteworthy for other post-Soviet countries, because it is instrumental in making decisions if the majority of the homeowners are inactive.

Homeowners are entitled to hold independent elections on the form of management of the building, and to elect a management authority from the following options specified by the Law:

- Legal entity – a condominium created by homeowners;
- Managing proxy (a representative);
- Trustee.

Buildings with up to four homeowners can be managed by the Assembly and, therefore, do not need to elect a building management authority.

A condominium is established pursuant to the 2002 Condominium Act and the Civil Code. It may be established by citizens, legal entities, Armenia, or municipalities. According to the law, a condominium is a non-profit cooperative, which has the status of a legal entity and is based on the membership of citizens and legal entities. It is created by consolidating the share of its members of the common property, and is established for the management of the MAB or its common properties.

The resolution on the establishment of a condominium should contain information about the members of the condominium, their shares, a list of members authorized to make decisions, the term of office, and a list of activities required for the implementation of mandatory standards of common property management.

The significant features of a condominium in Armenia are as follows:

- As opposed to the legislation of other countries, the condominium is not a special organizational and institutional form of legal entity, and it is established not upon the concept that its members share ownership of common property in a MAB, but rather it is established with the sole purpose of consolidating asset contributions.
- A condominium can incorporate homeowners in various MABs, and can be a building management authority for several buildings.
- Membership in the condominium is voluntary; a homeowner may join a condominium and relinquish membership by submitting an application. At the same time, if the membership in the condominium is less than 50 per cent, the condominium should be closed down.
- Two different meetings have the power to make decisions on the common property in a MAB: the Assembly, and the general meeting of the condominium. If condominium members are homeowners in different MABs, they take part in making decisions on one building only, including decisions on the annual budget for common property

management in that building. Members of these meetings have a different number of votes: the number of votes of a member of the meeting of homeowners in MABs is equal to their share in the common shared ownership, while every member of the general meeting of condominium has one vote.

- A condominium that manages several buildings can spend the funds it receives as contributions (payments) from homeowners in one building on management of houses in other buildings.

The above-mentioned features of the Condominium Act suggest that the condominium is not so much an association of co-owners of common property, or a mechanism of identification of common interests and representation of the homeowners in their relations with third parties, but rather a legal entity that manages buildings. It is different from other managing organizations only because the condominium is not focused on making a profit.

A managing proxy may be an individual or a legal entity who manages the building by virtue of a written power of attorney given by homeowners and an agreement concluded with owners. The power of attorney and the agreement must contain details of the homeowners and their shares in the common shared ownership, a list of the manager's powers, and the term of office. The manager exercises power and makes transactions on behalf of the homeowners.

Trust management of common property in MABs is carried out by a trustee (either an individual or a legal entity) by virtue of a trust management agreement or a paid services agreement. The agreement must contain relevant information on the homeowners who transferred their shares to the trust management, the size of their shares, a list of the manager's powers, a list of mandatory activities for maintaining the common property in a MAB, and the term of office. The trustee shall exercise power and make transactions under his/her own name.

With regard to trust management, it must be noted that there is a contradiction between the 2002 Law "on Apartment Building Management" and the Civil Code (Chapter 42). The object of trust management is a real estate (Article 955), which is transferred to the trustee. In the case of MABs, homeowners cannot transfer a common property because they use it themselves, and, moreover, they cannot transfer it in shares because a common property in a MAB is not divided into shares. Therefore, the essential function of the manager is the management of the building, which is not trust management as defined in the Civil Code.

It must be emphasized that, pursuant to the law, a building management authority is elected to manage common property in order to comply with mandatory standards of common shared property management. To address other issues of MAB management, homeowners can vest powers both in the elected building management authority, and in other individuals or legal entities. The laws and practices applied in other countries do not specifically distinguish management functions related to the implementation of the mandatory legislative requirements. As a rule, one person (a managing organization, a manager, a partnership (an association of homeowners)) is responsible for the whole range of activities in MAB management. It seems unlikely that two different persons are able to effectively address issues related to the management of the same building (even if the functions are divided into mandatory and optional).

To be adopted by the Assembly, the resolution on the election of a building management authority needs to receive more than half of the votes of the homeowners. Any homeowner or a head of the municipality is entitled to convene a meeting for the election of a building management authority.

With regard to all management methods set forth in the Law "on Apartment Building Management", it should be noted that the disadvantage of legislative regulation is that any of these methods may be remitted not only as a result of a common resolution by the majority of

homeowners adopted at their meeting, but also as a result of a number of individual resolutions of individual homeowners (which are taken at any time) to revoke the powers vested in the management authority (or to relinquish their membership in the condominium). Pursuant to the Law, the powers of the building management authority shall be terminated the next day after the number of votes of homeowners, who vested powers in it, becomes less than 50% out of the total number of votes of the members of the condominium.

Thus, pursuant to the existing legislation, a MAB may be left without management at any time. If homeowners fail to elect a new building management authority within two months, the Law grants the authority to manage the building to the head of the respective municipality.

Currently, the legislation of Armenia does not require any proof of the essential professional qualifications of the person managing a MAB. There is discussion on the introduction of licensing for MAB managers. In this regard, it should be noted that the law of Armenia on licensing does not contain MAB management in the list of activities that should be licensed. The legislation of most other countries does not view MAB management as a potentially dangerous activity, which should be licensed, either. This is not the case in Russia, which introduced compulsory licensing for managing organizations in 2015; however, this should be rather regarded as a negative example, since the introduction of this legal requirement was prompted by the authorities' wish to have an administrative mechanism to remove unsuitable management authorities from the market.

Some countries set a legal requirement for professional training of real estate managers, notably managers of MABs. For instance, since 2004, Hungarian managers have been obliged to have a certificate of professional expertise issued by a special commission based on a certificate of successful completion of a training course. This legal requirement for a qualification certificate was introduced only after a permanent training system had been established and had successfully operated in the country for several years, and when the country had a developed market of MAB management services in place.

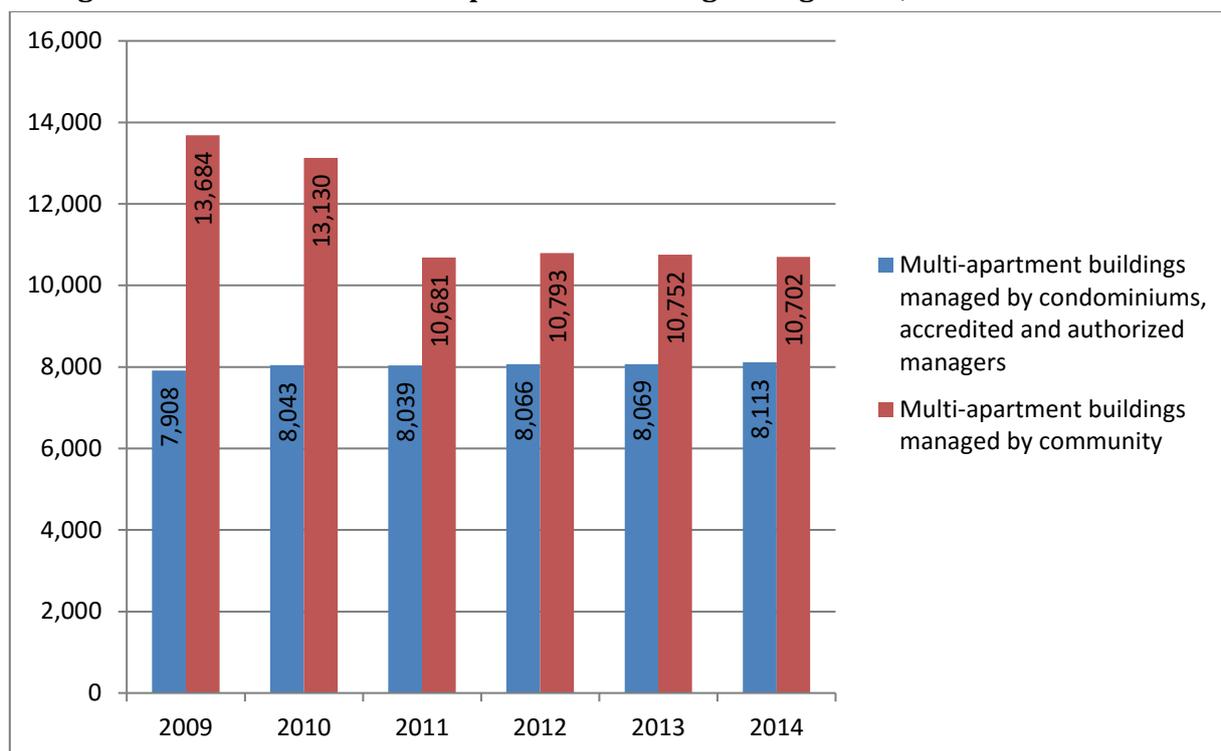
Estonia, on the other hand, does not set a legal requirement for professional training of managers. However, the Tallinn Technical University and the Estonian Property Management and Maintenance Union (EKHHL) jointly developed an effective system of training and career enhancement in the area of management, and issue certificates for real estate managers and professionals. In consumers' opinion, a qualification certificate and a professional certificate give managers competitive advantage in the market.

Existing system of multi-apartment buildings management

Statistics in 2014 show that only 43.1 per cent of MABs in Armenia are managed by condominiums or managers authorized by homeowners (proxy management and trust management are rare).²⁰ The remaining 56.9 per cent are managed by organizations that belong to the municipalities. Over a five-year period, the number of MABs managed by methods chosen by homeowners increased by only 205 (Figure II). This testifies to the low activity of homeowners in managing common shared property, which resulted in the head of the municipality taking responsibility for the management.

²⁰ Republic of Armenia, NSS, *Statistical Yearbook of Armenia 2015*. Table 147, "Multiple Dwellings Controlled by Community, Condominiums and Authorized Managers." Available from <http://armstat.am/file/doc/99493628.pdf>

Figure III
Changes in the methods of multi-apartment building management, 2009-2014



Source: Armenia, NSS, *Statistical Yearbook of Armenia 2015*, Table 147, "Multiple Dwellings Controlled by Community, Condominiums and Authorized Managers." pp. 187-188.

Note: The decrease in the quantity of MABs in 2011 as compared to 2009–2010 resulted from the change in the community system of registration of low-rise MABs, which are now registered as residential houses.

Condominiums and authorized managers manage 80 per cent of apartments in cities (Table 4). Yerevan accounts for the majority of condominiums. A lot of small towns do not have these management methods. For example, no condominiums have been established in Goris, which has 110 MABs. All MABs are managed by the municipal enterprise, Close Joint-Stock Company (CJSC) "Goris", with all its shares belonging to the community. CJSC "Goris" addresses all municipal services, including municipal improvements and garbage removal, so as to be able to provide better services. The Goris Municipal Council established a separate municipal enterprise which will specialize in the management and maintenance of MABs.²¹

Table 4
Methods of multi-apartment building management, 2014

		<i>Total</i>	<i>Cities</i>	<i>Villages</i>
Managed by the community	Number of apartments	105 397	82 201	23 196
	Percentage of total	100.00	77.99	22.01
Managed by condominiums,	Number of apartments	329 309	328 026	1 283

²¹ Interview with Vachagan Adunts, Mayor of Goris, Goris, April 2015.

accredited and authorized managers	Percentage of total	100.00	99.61	0.39
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Source: Armenia, NSS, *Statistical Yearbook of Armenia 2015*, Table 147, "Multiple Dwellings Controlled by Community, Condominiums and Authorized Managers." pp. 188-189. Available from <http://armstat.am/file/doc/99499413.pdf>

At present, according to the Ministry of Justice, there are about 720 condominiums registered in the country. The total number of condominiums somewhat decreased in recent years as a result of merging, with the support of city administrations, and transfer to trust management (with reduced taxes).

Only a few of the condominiums were established on the initiative of homeowners and they are single-house condominiums (condominiums managing only one MAB). There are only about 20 such condominiums out of a total of 200 condominiums in Yerevan. Although there are success stories of single-house condominiums, the general belief is that they are economically inefficient. The majority of condominiums in Yerevan were established to replace the liquidated public housing maintenance organizations. Upon their establishment, they incorporated a large number of MABs (one condominium in the centre of Yerevan managed almost 600 buildings). Later on, these condominiums were reorganized, and now a condominium in Yerevan manages on average 20 MABs. The maximum number of MABs that a condominium is allowed to manage is 200 (there are 2-3 such condominiums in the capital).²² According to Yerevan's mayor's office, only around 35 per cent of the condominiums are fully functional. Condominiums face the common problem of a low rate of contributions from homeowners for the maintenance of common property, and a low level of collection of payments.

The reform of the multi-apartment housing management system did not bring the expected results:

- Homeowners still do not play an active role in making decisions on the management of common property.
- Only a few condominiums were established on the concept of "one house – one condominium" but they cannot function effectively because the markets of services and management activities, and building maintenance and repair activities are underdeveloped.
- A significant part of MABs are managed by large condominiums and municipal organizations, whose style of operation is not much different from that of the Soviet housing maintenance organizations. Therefore, reforms of MABs management should continue, both at legislative and practical levels.

In 2011, the Government approved a five-year strategic programme to improve the management, maintenance and exploitation of multi-apartment housing in Armenia.²³ In the programme, management of MABs focuses on creating an institution of professional managers, and separating the functions of management and maintenance of common property in MABs.

Armenians do not consider professional property management in the same way as Western countries because they do not have a clear understanding of it. Property management primarily focuses on assisting homeowners in making intelligent decisions on the maintenance and improvement of common properties in MABs; long-term planning of real estate development in

²² Interview with Karlen Ghazaryan, Head of the Department of Communal Services of the Municipality of Yerevan, Yerevan, April 2015.

²³ Approved by the Protocol Resolution of the Government No. 38 of 29 September 2011.

the interests of owners and improving housing conditions; and organizing a whole range of activities and services for regular maintenance, repairs and renovation of the common property with the assistance of qualified contractors.

Concerning the rights, responsibilities and obligations of homeowners and property managers in the management of common property, their roles should be well-defined and made clear. The homeowners should be “customers” of professional property managers, that is, the services and activities related to the management, maintenance and repair of common properties in MABs should be offered to them by the property managers.

Professional property management and housing maintenance service provision are private businesses (the norm in countries with a market economy). Property management service is provided by market participants (management companies or individual management entrepreneurs). Organizations or companies engaged in the above businesses should be free to decide on what services they will provide – management, maintenance, or both. The State should not limit them to being either management companies or maintenance organizations. The market should be the basis for the decision as to what type of service they will venture into. The responsibility of the State is to create conditions that will stimulate homeowners to make decisions on the management of their common properties, and encourage them to use professional housing management and housing maintenance services. The administrative approach to separating the functions of professional housing management and housing maintenance services does not always yield the expected results, as can be seen from the Russian experience.

It should also be emphasized that, in assessing condominium size (the number of MABs it manages), it is not correct to use an approach that is similar to what is used to assess the effectiveness of business organizations. The success of a business depends on the number of customers and the ratio of the price to the prime cost of goods, services, and labour. The effectiveness of an organization that provides management services or maintains common property in MABs under the orders of the owners or condominiums, depends on the number of customers and the ratio of the price of services (works) to their cost. A condominium is an association of common property owners in a MAB established for the joint management of common shared property and sharing the costs of the management, maintenance and repair of the common property. Therefore, condominiums are created on the principle of common shared ownership of the association members (in one MAB). According to experiences of different countries, the overall expenses of the homeowners in the condominium are lower if services and works are commissioned to specialized contractors on the market, rather than performed by employees of the condominium. To develop the "right" single-house condominiums, it is necessary to have a market of services and works for the management, maintenance and repair of MABs.

Maintenance of common property in multi-apartment buildings

The 2002 Law “on Apartment Building Management” stipulates that homeowners must comply with the standards for mandatory activities and works required for maintaining common shared property (mandatory standards or norms). Failure to comply with the standards may cause danger to peoples’ life and health, the property, or the environment.

Mandatory standards are established by the Government. The latest government resolution, which set mandatory standards for the maintenance of common property in MABs, was adopted in 2007,²⁴ and replaced standards established in 1997 and 2002.

Mandatory standards specify a list of measures and activities to be carried out in apartment buildings, and deadlines for their completion:

- 1) Waste removal at least once every three days, with removal every day if the air temperature is above +5°C;
- 2) De-infestation (extermination of insects) and deratization (extermination of rodents) in public areas, garbage chutes and refuse chute termination rooms should be carried out at least once every three months;
- 3) Sanitary purification of public areas should be carried out at least once every two days;
- 4) Cleaning and adjustment of flues should be carried out at least once a year;
- 5) Maintenance of mailboxes in new residential buildings;
- 6) Repair activities and preventive measures aimed at ensuring compliance with the requirements for the maintenance of common property in MABs.

There is also a list of repair activities and preventive activities for individual structural elements, engineering equipment and networks, as well as deadlines for their completion. The management authority must set the deadlines for repair and preventive activities based on visual inspections that should be made at least twice a year (in spring and autumn), and, if necessary, based on the opinion (recommendation) of a professional organization but within the specified deadlines. The results of the visual inspection of common property are registered in a special register. Furthermore, full examination of the technical condition of MABs should be carried out at least once every 10 years.

Building management authorities must ensure the implementation of mandatory standards of common property maintenance in the buildings. In this regard, the management authority should draw up and submit to the homeowners an estimated cost of the works required for compliance with mandatory standards. A meeting of homeowners in a MAB (a general meeting of the condominium) must approve the annual budget for common shared property management. In cases where the head of municipality is responsible for the management of a MAB, the amount of payments required for the implementation of the mandatory standards is set by the highest local self-government authority – the Council. The amount of mandatory payments established by the board shall be applicable in the event that a meeting of homeowners fails to approve the amount of such payments. Thus, the amount of mandatory payments established by a local authority is a kind of cost benchmark for homeowners in MABs, including those managed by condominiums.

Even though the Law clearly defines the mandatory standards, there are no methods for calculating reasonable fees to implement them. It is generally agreed that the established amount of payments (on the average, 15–20 drams/m² or USD 0.03-0.04/m² of dwelling in a MAB) does not ensure the implementation of mandatory standards. Furthermore, even such low fees are not collected at a satisfactory rate. The average collection rate of mandatory payments does not exceed 70 per cent.

Under the five-year strategic programme aimed at improving management, maintenance and exploitation of the multi-apartment housing stock, there are plans to increase the amount of mandatory payments up to 200 drams/m² (USD 0.42/m²) for the implementation of mandatory standards. Many serious problems hamper the implementation of this resolution. The major

²⁴ Government Decree No. 1161 of 4 October 2007 "on Establishment of Mandatory Standards for the Maintenance of Common Property of the Homeowners in Multi-apartment Buildings".

problem is the low income level of the population. According to 2014 statistics, 30 per cent of the population are "poor", and 2.3 per cent of them are "extremely poor".²⁵ Thus, a third of the population is not able to pay the economically feasible fees for the maintenance of common shared property in MABs without financial support from the State. Armenia does not provide targeted subsidies to "poor" households to pay for housing and utility services. The poverty relief subsidies currently paid to families will not be enough to compensate for the increase in the mandatory payments. The fact that a large percentage of homeowners fails to make mandatory payments has an adverse effect on the payment discipline of other homeowners, whose income is sufficient to make payments at a higher rate.

In practice, the ongoing maintenance of the common property in MABs is mostly carried out by the regular staff of condominiums and municipal enterprises. Such system results in a large part of homeowners' payments being spent on the salaries of the regular staff rather than on improving the condition of the buildings. Moreover, homeowners in large condominiums are not sure if their payments are being spent on the maintenance of their own apartment and not on someone else's property. Under the terms of agreements, only specialized organizations can be contracted to service elevators and make certain types of repairs (in Yerevan, specialized organizations also provide the services of domestic waste removal). Thus, private businesses have limited access to maintenance and repair activities in MABs, which has an adverse effect on the efficient spending of homeowners' funds.

B.3 Information support for multi-apartment building management

Currently, different persons and government authorities have different types of information related to MABs and the management of common property:

- Local divisions of the National Real Estate Register are developing a data bank of real estate, and the rights and restrictions related to it, which is a part of the Register's informational system. Thus, the public administration authority and its local divisions have information on residential and non-residential premises in MABs, homeowners (and other rightsholders), homeowners' shares in the common shared property in MABs, and land that belongs to the building (as a part of its common property).
- The head of a municipality maintains a register of common property management authorities of a MAB, containing information about the type of management authority in each MAB, and the management authority elected by the homeowners, including the authority's term of office, vested powers, and the terms of the agreement.
- Pursuant to the 2002 Law "on Apartment Building Management", a building management authority ensures the certification of buildings for compliance with mandatory standards, carries out an annual inventory of common shared property in the building, makes regular inspections of common property, and, therefore, has (should have) information on the composition of the common property, and its quantitative and qualitative characteristics.

To enable homeowners to make decisions on the common property, full information about the entire building, homeowners, and composition and characteristics of the common property (including its earthquake resistance and energy efficiency) should be provided to them. The same should be provided to the building management authority (a condominium, a managing organization) to enable it to develop proposals for the management of the building and to arrange all necessary services and activities in accordance with the mandatory standards and

²⁵ Republic of Armenia, NSS, *Statistical Yearbook of Armenia 2015*. "Table 85. Poverty Indicators". Available from <http://www.armstat.am/file/doc/99493608.pdf>

homeowners' decisions. Currently, neither the homeowners nor the management authorities are provided with full information, and it takes a lot of time and financial cost to receive it.

Local self-government authorities need summarized information on MABs and updated information on the building management authority elected by the homeowners, to plan housing support programmes. Public administration authorities need aggregated information on MABs in municipal entities to plan support programmes for local self-government authorities and homeowners. Government control authorities need information for monitoring the implementation of mandatory safety requirements in MABs.

B.4 Renovation, reinforcement and modernization of existing housing stock

Since the 2007 survey, the Government and experts have been discussing the need to renovate and reinforce the MABs, and improve their energy efficiency. More than half of residential buildings are in need of renovation and/or reinforcement.

Residential buildings recognized as unsafe during inspection for significant damage and having low earthquake resistance, and where reconstruction is not feasible for technical and economic reasons, are demolished on a regular basis. The land on which the demolished buildings were erected is returned to productive use (for new construction).

Various technical solutions were developed for buildings that require reinforcement because of insufficient earthquake resistance. However, large-scale activities are hampered by lack of funds both at national and local levels.

Pursuant to the Law, apartment owners are obliged to implement mandatory norms as part of their responsibilities in the maintenance of common shared property. However, renovation is not included in the mandatory standards cited in the Law. The mandatory payments for the maintenance of the common property do not include funds for renovation, and there are no savings funds to cover emergency repairs. As previously stated, the amount of payments established for the implementation of mandatory standards is not even sufficient to pay for regular maintenance works. The established opinion in Armenian society is that renovation cannot be carried out at the expense of the owners, and must be completed by the State.

Currently, there is no targeted programme concerning the renovation of MABs, even though such initiative was specified in the five-year strategic programme focused on the improvement of MAB management.

Regions are provided with funds from the state budget to resolve urgent problems. Every year, Yerevan receives public subsidies. Some funds of the state budget and of the municipalities are spent on the renovation of residential buildings. Tables 5 and 6 contain data on the number of residential buildings renovated and the cost involved.

Most apartment buildings in Yerevan are renovated annually (from 300 to 1,000 buildings each year). The mayor's office selects the dwellings for renovation from submitted applications and prepares renovation plans based on damage reports. Typically, roofs and elevators are the subjects of repair. In 2014, 79,321 m² of flat roofs, 52,869 m² of sloping roofs, and 959 elevators were repaired, and 700 entrance doors to apartment buildings were installed.²⁶

In practice, renovations charged to public/budget funds do not require the engagement of homeowners in multi-apartment buildings in the decision-making and financing. In Yerevan,

²⁶ Yerevan Municipality. Available from <https://www.yerevan.am/ru/communal-services/>

condominiums co-finance 10-20 per cent of the costs but this is intended mainly as payment for the maintenance of common property, rather than contributions for the renovation itself. The mayor's office independently selects the contractors and pays for the completed works.

When using budget funds, neither Yerevan nor regions make competitive selection of the dwellings that will receive the funding, so budget funds do not encourage homeowners to take decisions on making repairs and to invest their internal funds, which, along with the technical condition of the building, is a typical condition for providing budgetary subsidies in other countries.

Table 5
Renovated residential buildings, 2009-2014

	2009	2010	2011	2012	2013	2014
Yerevan	537	683	1 126	920	742	378
Aragatsotn	-	-	-	5	4	4
Ararat	1	1	2	1	1	1
Armavir	-	6	28	31	17	15
Gegharkunik	56	81	59	66	70	69
Lori	-	12	60	34	10	1
Kotayk	13	22	13	18	21	6
Shirak	-	-	126	24	2	-
Syunik	-	-	-	-	-	-
Vayots Dzor	-	-	-	-	-	-
Tavush	-	1	-	-	-	-
Total	607	806	1 414	1 099	867	474

Source: Armenia, NSS, *Statistical Yearbook of Armenia 2015*. Available from <http://armstat.am/en/?nid=45&year=2015>

Table 6
Costs of residential buildings renovation, 2009-2014
(Thousands of drams)

	2009	2010	2011	2012	2013	2014
Yerevan	303 038.3	529 177.1	550 253.3	492 111.7	451 519.2	348 358
Aragatsotn	-	-	-	48.0	49.0	63.0
Ararat	1 542.0	1 520.0	17 109.0	2 488.0	5 015.0	31 569.4
Armavir	-	23 095.0	20 569.0	18 537.1	23 546.0	1 530.0
Gegharkunik	2 833.8	5 204.6	2 521.4	2 726.3	4 039.8	1 618.7
Lori	-	25 376	357 017.3	239 406.4	63 001.0	5 451.5
Kotayk	2 130.8	5 121.2	2 337.4	2 248.7	1 835.9	3 195.3
Shirak	-	-	786 000.0	269 046.8	200.0	-
Syunik	-	-	-	-	-	-

Vayots Dzor	-	-	-	-	-	-
Tavush	-	12 875.0	-	-	-	-
Total	309 594.9	579 530.5	1 735 807.4	1 026 613.0	549 205.9	391 786.2

Source: Armenia, NSS, *Statistical Yearbook of Armenia 2015*. Available from <http://armstat.am/en/?nid=45&year=2015>

Percentages may not total 100 due to rounding off.

Despite difficult general conditions for the renovation, it should be noted that there are initiatives from individual homeowners to improve their houses; owners raise additional funds and organize the works. There are success stories of single-house condominiums restoring heating systems in their houses.

Pilot projects of international organizations use new approaches to financing of capital repairs and energy-efficiency improvements. The Habitat for Humanity of Armenia, in partnership with INECO Bank, implemented a program that provides loans (in Vanadzor) and microloans to condominiums (in Yerevan) for repair of buildings and improving their energy efficiency. This has demonstrated that renovations or repairs are possible with combined funding sources such as personal funds of homeowners, budget subsidies, and loans.

Large scale renovation and modernization of multi-apartment buildings require an approach that includes improvement of legislation, establishment of an easy-term loan system that promotes budgetary subsidies, raising awareness, and providing guidance to homeowners and condominiums with regard to planning, organization and financing of renovation activities.

C. Housing availability

Statistics show that Armenia has a high rate of housing availability - 31.6 m² per person in 2014 (Table 7). It is significantly higher than the rate in Russia (23 m²) and Ukraine (23 m²), and is close to the rates in Europe. Housing availability rates in rural areas are 1.5 times higher than those in urban areas.

Table 7
Housing availability, 2009-2014
(Square metres per person)

<i>Housing floor space</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>
In urban areas	23.5	24.5	25.9	26.2	26.7	26.9
In rural areas	36.7	37.3	38.8	39.0	39.4	39.8
Total	28.3	29.2	30.6	30.9	31.4	31.6

Source: Armenia, NSS, *Statistical Yearbook of Armenia 2015*, Table 145, "Provision of Population with Housing Stock." p. 145. Available from <http://armstat.am/en/?nid=45&year=2015>

The high rates of housing availability (in terms of floor space) in Armenia are due more to emigration than to an increase in housing construction. However, statistics do not reflect the real housing availability situation. The "number of dwellings per 1,000 inhabitants" indicator testifies to insufficient housing. According to this indicator, Armenia (286) is far behind Russia (426),

Ukraine (425) and the European countries.²⁷ It also indirectly indicates a significant housing squeeze.

Statistics estimate the average floor space of dwellings in Armenia at 109.8 m² (Table 8). This figure is comparable to the average in European countries, and higher than that in Russia and in Ukraine. The average floor space of a dwelling in rural areas is more than 1.5 times larger than that in urban areas, and the average floor space of a private (single-family) house is twice as large as that of an apartment in a MAB.

Table 8
Average size of a dwelling
(Square metres)

<i>Average total floor space</i>	<i>Floor space</i>		
	<i>Total</i>	<i>Urban areas</i>	<i>Rural areas</i>
Of a multi-apartment dwelling	63.2	62.6	73.1
Of a single-family house	156.6	159.4	155.0
Of all dwellings	109.8	89.9	148.4

Source: Calculations based on data from the Statistical Yearbook of Armenia 2015.

Housing need

Despite the high statistical rate of housing availability, there is a significant housing need according to experts. Results of the 2011 census show that about 16,000 households (or 2% of the total number of households) live in slums or in buildings unfit for housing, of which 8,500 are in urban settlements.²⁸ It is estimated that approximately 30,000 families are in need of better housing conditions.

There is no official register of those needing better housing conditions. However, according to representatives of the Mayor's Offices of Yerevan and Goris, municipalities keep a register of families living in temporary dwellings, and in unsafe and unfit houses.

Information about poor housing conditions is an integral part of the registration system for citizens who need social support, which is the responsibility of the Ministry of Labour and Social Affairs (MLSA). This particular registration system started in 2001. Registration is carried out by local social services centres based on applications filed by citizens; the MLSA keeps a unified database of such citizens. At the beginning of 2014, there were approximately 127,000 families who registered to receive social benefits. To be included in said database, applicants are assessed according to a number of approved criteria on a points-based system. Among these criteria, the assessment of the housing conditions of an applicant gives the most points.

The housing provision policy focuses on satisfying the housing needs of citizens using the housing market, and on implementing targeted programmes to provide housing to the homeless and the most vulnerable citizens. The priority for the State is to provide the homeless with "a roof over their head" in accordance with approved regulations.²⁹

²⁷ Institute for Real Estate Construction and Housing Ltd., Vienna, Austria, Housing Review 2013 on 23 countries in Europe and Central Asia.

²⁸ Habitat III National Report, Annex to Government Protocol Decision No. 38 of 11 September 2014.

²⁹ Interview with A. Minasyan, Ministry of Labour and Social Protection, Yerevan, 9 April 2015.

According to expert assessment, out of the total needing improvement of housing conditions about 10 per cent are covered by public housing programmes, while another 10 per cent can buy housing on the market at their own expense. The remaining 80 per cent are left with their housing issues.³⁰ This implies an urgent need for a social and affordable housing sector to be established.

Government and municipal housing programmes

Government housing programmes are primarily aimed at providing housing for the homeless and some socially vulnerable groups of citizens, as well as at assisting certain categories of citizens to purchase (construct) housing.

The provision of housing to families or citizens in need and belonging to special groups is seen as part of the social services system, and is jointly administered by the Ministry of Urban Development (MUD) and the MLSA. Government support for improving housing conditions is provided to citizens and families listed in the register of social security beneficiaries after a thorough inspection of the grounds for such support.

Between 2000 and 2015, about 23,000 families were able to improve their housing conditions with government support; these include 9,000 refugee families left homeless because of earthquakes, landslides and military activities. 275 families out of the 300 registered families of former political prisoners were given low-interest loans for the purchase of housing (2001); and 310 out of the 390 registered orphanage leavers and children left without parental care were provided with housing (2006). In 2008, a large-scale programme aimed at resolving the housing problems of the 7,000 citizens who were still homeless 20 years after the Spitak earthquake was launched. 81 billion drams (USD 170 million) was allocated for the implementation of this programme. MUD selected the applicants for the programme among the persons who went through a special registration process. 5,363 households were recognized as beneficiaries of the programme, and 4,413 of them improved their housing conditions by the end of 2015. This was achieved through the provision of apartments in newly constructed residential houses and the provision of subsidies for the purchase of housing on the market. The remaining families are scheduled to be provided with housing within the next 1-1.5 years. Although the implementation of the housing policy is vested in MUD, special government housing programmes are also implemented by various other ministries – such as the Ministry of Sport and Youth Affairs (housing for young families) and the Ministry of Defence (housing for military personnel) - the Armenia Fund, and other funds which are also involved in housing provision.

Aid programmes for improving the housing conditions of young families, young professionals, civil servants and military personnel are focused on providing more preferable terms to acquire ownership of housing, as compared to the market terms. Measures of support include mortgage loans for housing purchase or housing construction with subsidized interest rates, and income tax relief for citizens making payments towards housing loans.

A cross-sectoral government commission was created to coordinate various government housing programmes. Over the past years, the commission identified basic problems in the implementation of housing programmes - insufficient budgetary resources; and the lack of a single public authority responsible for the implementation of housing programmes and pilot projects related to the construction of social and affordable housing, and the coordination of the activities of all participants, including international donors. These problems show both a lack of support to government priorities and a lack of consistent approaches to supporting vulnerable social groups in improving their housing conditions.

³⁰ Interview with Ara Nazinyan, Executive Director of the National Social Housing Association, Yerevan, April 2015.

Housing provision to categories of citizens and families who are not supported by government programmes could be implemented within municipal programmes. According to the 2002 Law “on Local Self-Government”, interested municipalities can develop their own housing programmes and apply for government support for their implementation. The state budget may provide assistance up to an amount that does not exceed 50 per cent of the cost of the municipal programme. Municipalities provide the remaining funds themselves, notably by attracting donors and private businesses.

Yerevan is financially more capable of carrying out independent programmes of housing provision, including for families living in unsafe houses. The land released after the demolition of unsafe houses, especially in the city centre, is a valuable resource for new construction. Former residents of demolished houses are provided with housing under the joint project of the Yerevan municipality and developers.

International donors, in cooperation with the Armenian Government, provide financial support for programmes focused on satisfying the housing needs of the most vulnerable groups. Some housing projects were implemented in the provinces of Armavir and Kotayk with the support of the Office of the High Commissioner for Refugees. The Swiss Agency for Development and Cooperation (SDC) in Armenia funded three pilot projects for the construction of social houses in Yerevan and Goris between 2006 and 2012.

Construction of social and affordable housing

Currently, no legislation regulates the construction, provision and use of social and affordable housing. The law does not specify the category of persons eligible for social housing provision, the terms of social tenancy agreement, and other issues. There is no definition of “affordable housing” as housing leased at prices lower than those in the market (a non-profit lease).

In response to the current high demand for social housing, the Government adopted the Strategy on Developing Social Housing Stock. For citizens who have been provided with social housing that is owned by the State, support is given through the 2005 Law “on Social Assistance”, which exempts them from paying for housing maintenance for 10 years, but they must pay their utility bills.

The construction of social housing is considered to be the preferred way of fulfilling the constitutional provision supporting the right of households to adequate housing, including those households who cannot afford to improve their housing conditions at their own expense. So that the population does not have unrealistic expectations with regard to the provision of social housing, the Strategy identifies priority categories of citizens whose housing problems will be addressed by the programme. These categories include homeless people who lost their housing for various reasons, and households that belong to special social groups:

- Orphaned children left without parental care;
- Orphanage leavers;
- Single pensioners;
- Single-parent families – families with one of the parents deceased or a single person with an adopted child;
- Children who lost both parents;
- Foster families assisting single-parent pensioners with children under 18.

Social housing provision to these categories of the most vulnerable citizens is focused not only on improving their housing conditions, but also on providing other conditions that ensure guardianship, and assistance in overcoming loneliness and limited capacities. These foster

families are selected precisely to this end; they take care of other families that reside in social housing.

A state non-profit organization for social housing management was established and it is responsible for providing various social services to the residents of social houses.

The largest government social housing project is being carried out in the Spitak earthquake area, in the town of Maralik. After the collapse of the Soviet Union, there remained nine uncompleted MABs; the union republics continued their construct in 1989 to assist the victims of the earthquake. The construction of five MABs was completed between 2009 and 2012, and the apartments were provided as social housing. Four other MABs were not completed, as the citizens of other regions refused to move to Maralik. From this experience, it is evident that, when planning the construction of new social housing, it is necessary to bear in mind not only the requirements of the people who need housing, but also their location preferences associated with their habitual place of residence, the availability of public services, employment and other living conditions, which depend on the social and economic development of the settlement.

There is a successful experience of constructing social housing with the support of international donors. For example, three MABs, two of them social housing, were built in the town of Goris, funded by the SDC, with the financial participation of the Government, the administration of the Syunik province, and Goris municipality.

The United Nations Development Programme (UNDP)/Global Environment Facility (GEF) project "Improving energy efficiency in buildings" financed the redesign and implementation of measures to improve energy efficiency in a 20-apartment social building. Work on the heat insulation of the polyurethane layering of the outer walls, columns, lateral and cross beams and floors was carried out. In addition, energy-efficient lighting and heat allocators were installed in every apartment in the building. For the first time in Armenia, trickle vents were also installed. Energy audit and monitoring of the efficiency of these energy measures were carried out. As a result of these measures, energy costs for the residents decreased by more than 60 per cent and energy demand was reduced by about 58 per cent.³¹ It is worth noting that the building was the first to receive energy-efficiency certification in the country.

The National Social Housing Association (hereinafter, ASBA), an Armenian non-profit foundation established in 2010 in partnership with the Dutch, makes use of the European experience on social and affordable housing construction. Housing construction projects for social rent and non-profit lease are focused on fast-growing municipalities, which create new jobs and attract young people and professionals (Dilijan, Vanadzor, Hrazdan, and Ashtarak).

The first investment project for social and affordable housing construction is being implemented by ASBA in collaboration with the municipality of Dilijan and with the financial support of some Dutch social housing organizations through the provision of loans. The municipality allocates land and unfinished MABs for the project on preferential terms and provides the necessary utilities infrastructure for the new housing. The new residential complex will consist of several semi-detached two-storey houses and 20 apartments in the reconstructed four-storey MAB, with the necessary social infrastructure. The community discussed in depth the residential complex project improvements were made to it based on the results of those discussions. During the first phase of the investment project, 16 apartments were completed in December 2014. During the second phase 38 apartments, including 20 apartments in unfinished buildings, will be completed. In the third phase, 150 more apartments will be constructed. The project used energy-saving

³¹ UNDP in Armenia, *Improving Energy Efficiency in Buildings*. Available from http://www.am.undp.org/content/armenia/en/home/operations/projects/environment_and_energy/improving-energy-efficiency-in-buildings.html (accessed 9 June 2016).

solutions and technologies. Some of the apartments in the residential complex are meant to be provided as social housing, and the rest will be for rent or sale to households with medium and low incomes. The decision to sell some dwellings resulted from the need to cover the investment costs of the project. Households that are provided with non-profit rental housing or preferential terms for the purchase of apartments are selected from certain categories (young families, young professionals, etc.) provided they agree to maintain their MAB. Once ASBA completes the residential houses, it reserves the right to manage them (the entire housing complex). The tenants or homeowners shall clean the surrounding area and carry out the simple ongoing maintenance of the building to contribute to its maintenance. A manager shall employ contractors for renovation activities.

Rental housing

Housing leasing is regulated by Articles 660-676 of the Civil Code of the Republic of Armenia. Homes suitable for permanent residence – apartments, houses, part of an apartment or of a house – can be rented out. Citizens, legal entities, Armenia, and communities (municipalities) can be tenants. The housing rental agreement is made in writing and must be certified by a notary. The right to use a dwelling on the basis of a rental agreement is subject to state registration. A tenant is obliged to pay the rent and utility bills. The mutually agreed rental rate should be specified in the agreement. The term of the rent is specified in the agreement. If the latter is not specified, the agreement is considered to be concluded for an indefinite period. The rental agreement may be terminated by the court in the event that the tenant: does not pay the rent for more than two payment periods established by the agreement; causes destruction of, or damage to, the rented dwelling; or violates the neighbours' rights. Upon the decision of the court, the rental agreement is terminated and the tenant, along with other persons living with the tenant, is evicted from the dwelling.

There is no special legislation that regulates the construction and use of non-profit rental housing. Currently, commercial housing is a shadow market in Armenia as well as in other former Soviet republics: rental housing is provided by homeowners who privatized dwellings in public housing stock or constructed them at their own expense. Rental agreements are not registered in order to avoid taxes, and, as a result, the rights of tenants and landlords are poorly protected.

Commercial leasing is characteristic of Yerevan because it is where people go in search of work. The cost of renting a one-room apartment in Yerevan is 50,000-60,000 drams (USD 120-144) a month, which is higher than the minimum wage³² and is 30-40 per cent of the average monthly nominal wage.³³

Currently, the economic climate in Armenia is not good for the creation of a non-commercial sector, or for a commercial rental housing sector by constructing new residential buildings.

D. Communal infrastructure and public services

Citizens' access to utility services

According to the Habitat III National Report of the Republic of Armenia, 97.8 per cent of the urban population in Armenia have access to adequate housing.³⁴

³² According to statistics, the minimum wage was 45,000 drams (USD 95) in October 2013.

³³ According to statistics, the average monthly nominal wage was 146,524 drams (USD 308) in October 2013.

³⁴ Habitat III National Report, Annex to Government Protocol Decision No. 38 of 11 September 2014, Chapter VII "Indicators".

Public demand for electricity and gas is fully satisfied. A centralized heat supply is still available in only few MABs. Hot water and heat are supplied by heaters run on electricity or gas; in newly constructed houses, in some cases, they are from local boiler plants.

100 per cent of the population have access to drinking water;³⁵ 96.2 per cent of the urban population and 78.2 per cent of the rural population use sewage systems.³⁶

In recent years, more citizens were able to gain access to the centralized water supply system as compared to 2008, especially in rural areas, where 95.5 per cent of the population had access to the system in 2014 (Table 9). The percentage of households in rural areas who have to use imported water has been substantially reduced. The average duration of water supply during the day increased in 2011 as compared to 2008, from 3.6 hours to 16 hours. More than 50 per cent of the population have continuous access to the centralized water supply.

Table 9
Households' access to drinking water, 2008 and 2014
(Percentage)

<i>Main source of water</i>	<i>Total</i>		<i>Cities</i>		<i>Rural areas</i>	
	<i>2008</i>	<i>2014</i>	<i>2008</i>	<i>2014</i>	<i>2008</i>	<i>2014</i>
Centralized water supply	97.1	98.3	99.5	99.7	92.4	95.5
Less than 1 hour	0.7	0.0	0.1	0.0	1.9	0.1
1 to 5 hours	31.3	12.8	31.2	8.6	31.4	21.5
6 to 12 hours	28.6	16.2	32.6	14.3	20.5	20.0
13 to 23 hours	5.7	8.8	5.9	10.1	5.3	6.2
24 hours	33.7	62.2	30.2	67.0	40.9	52.2
Springs, wells	1.2	0.5	0.1	0.3	3.1	0.8
Private water supply system	0.5	0.8	0.1	-	1.3	2.7
Imported water	1.1	0.2	0.2	-	3.0	0.5
Other sources	0.1	0.2	0.1	0.0	0.2	0.5

Source: Armenia, 2008 and 2014 Household Integrated Living Conditions Survey.

The duration of water supply still varies in different regions. Water is supplied continuously to 67 per cent of households in the cities, and to 52.2 per cent of households in rural areas. However, 12.8 per cent of households only have water supplied for 5 or less hours a day.

On average, 68.5 per cent of the population is provided with a centralized sewage system: 94.9 per cent in the cities and 16.5 per cent in rural areas.³⁷

99.3 per cent of the urban population and 63.3 per cent of the rural population have access to adequate sanitation. Garbage disposal and sanitation services in urban areas are better than in

³⁵ United Nations, Statistics Division, "Proportion of population using improved drinking water sources", Sustainable Development Goals Indicators, updated in UN Data 28 July 2016. Available from http://data.un.org/Data.aspx?q=improved+drinking+water+datamart%5bSDGs%5d&d=SDGs&f=series%3aSH_H2O_IMPR

³⁶ United Nations, Statistics Division, "Proportion of population using improved sanitation facilities", Sustainable Development Goals Indicators, updated in UN Data 28 July 2016. Available from http://data.un.org/Data.aspx?q=improved+sanitation+datamart%5bSDGs%5d&d=SDGs&f=series%3aSH_SAN_IMPR

³⁷ 2008 and 2014 Household Integrated Living Conditions Survey.

rural ones.³⁸

D.1 Quality of municipal infrastructure and public services and role of different stakeholders in their provision

Before the collapse of the Soviet Union, the Armenian energy system was part of the Transcaucasian integrated energy system, which formed part of the integrated energy system of the USSR. Armenia's energy sector used fuel (gas, oil, nuclear fuel) imported from other Soviet republics (Russia, Azerbaijan and Turkmenistan); only 5 per cent of the demand was met by the country's own resources. At the same time, Armenia was an exporter of electrical power. Armenia's major thermal power plants (TPP) were constructed between 1960 and 1970 and its nuclear power plant (NPP), Metsamor Nuclear Power Plant (popularly known as Armenian NPP), was constructed in 1976.

In the 1990s, after the collapse of the Soviet Union and territorial isolation, Armenia experienced a severe energy crisis, unlike any other post-Soviet republic. Taking into account the lessons learned from the crisis, Armenia formulated the following basic energy policy principles in its strategic documents:³⁹

1. Diversification of primary energy sources, their supply routes and the generating capacities structure;
2. Transformational development of the nuclear energy industry;
3. Use of local renewable energy sources, energy-efficiency improvements; and
4. Active regional integration.

Despite significant efforts to diversify primary energy sources, over 70 per cent of electrical power is from nuclear sources (about 30%) and two thermal power plants – Hrazdan and Yerevan TPPs (42%), which operate on imported fuels (nuclear fuel from Russia, and gas from Russia and Iran). Water and wind power plants currently produce about 30 per cent of all electrical power.

The epicentre of the 1988 Spitak earthquake was 75 km away from the Armenian NPP. Although it was not damaged, both of its nuclear reactors were closed down in 1989 due to safety concerns. Because of a severe energy crisis that resulted from the isolation of Armenia due to the Nagorno-Karabakh conflict, one of the reactors (Unit 2, built in 1980 with a design life of 30 years) of the Armenian NPP was put back into operation. There have been various demands from different stakeholders to shut down the Armenian NPP because it is built in an earthquake-prone area. This is a special concern for the EU, neighbouring Turkey and Azerbaijan. However, the country is very dependent on the NPP because it is capable of producing up to 50 per cent of the country's electrical power. Russia, on the other hand, offered to develop a project to extend the operation of the Unit until 2026, during government talks in 2014. The service life of Unit 2, which generates 2.49 billion kWh per year, has been extended from 2016 to 2026. If the Armenian NPP is closed down in 2016, Armenia may again experience power shortages. Armenia is interested in the development of its nuclear energy industry and in attracting international investors to build a new nuclear power plant.

³⁸ Ibid.

³⁹ Analitikaua, "Armenian Energy and Eurasian Integration", 11 February 2014. Available from <http://analitikaua.net/2014/energetika-armenii-i-evraziyskaya-integratsiya/>; Ministry of Energy Infrastructures and Natural Resources of the Republic of Armenia. Available from <http://www.minenergy.am/ru/page/493>; Presentation, Yerevan 2014. Available from http://www.minenergy.am/storage/files/pages/pg_0732707265_MoENR_Presentation_June3.pdf

There are 2 operating TPPs in Armenia (the Vanadzor TPP is not currently operating):

- Hrazdan TPP: capacity of 1,110 MW, with the new fifth unit (480 MW);
- Yerevan Central Heating and Power Plant: total generating capacity of the new unit commissioned in 2010 is 271.7 MW, power generating capacity is 243.2 MW, heat generating capacity is 434.9 gigajoule/hour.⁴⁰

The Hrazdan TPP, the largest in Armenia, became the property of the Russian Federation in 2004, as a result of an intergovernmental agreement signed in 2002. The plant was transferred to Russian ownership to repay Armenia's national debt of USD 31 million. The plant is controlled by Russian PJSC Gazprom through PJSC ArmRosGazprom. In 2006, the unfinished fifth unit of Hrazdan TPP was turned over to Gazprom in order to raise capital to complete its construction and to modernize the energy industry of Armenia. The investment was estimated at USD 150–170 million. The fifth unit was put into operation in 2013.

Armenia has good potential to generate electric power from renewable sources, rivers, wind, and the sun. The use of hydropower could provide 50 per cent of the country's energy needs, which would protect Armenia against potential energy crises.

Where it is technically possible, the capacity of two large rivers (the Vorotan and the Hrazdan) is used almost to the fullest. Only Dzoragets HPP (26 MW) has so far been put to use in the relatively large river system of Pambak–Dzoraget–Debed.

Under the programme of the Ministry of Energy Infrastructures and Natural Resources (MENR), it is planned to put into operation several large hydroelectric power stations (Meghri, Lori Berd, and Shnogh stations) with a total power generating capacity of up to 1,300 million kWh per year⁴¹. Construction of the Meghri HPP on the Araks River, near the town of Meghri on the border of Armenia and Iran, began on 8 November 2012. Its operation will depend on the schedule of investments.⁴² The HPP will generate 793 million kWh of electrical power annually. The designed capacity of the Meghri HPP will be 130 MW.⁴³

Government Decision No. 3 of 22 July 2009 approved the “Small Hydro Power Plants (SHPP) Development Scheme” project, where it is planned to construct 126 SHPPs with a total installed capacity of 147 MW. As of January 2016, electricity is produced by 174 SHPPs, with an aggregate design capacity of around 311 MW and actual average annual energy supply of around 877 million kWh. Under the project, 45 more SHPPs are under construction with a total design capacity of 90 MW and a projected average annual energy supply of about 315 million kWh.⁴⁴

The theoretical capacity of wind power stations in Armenia is more than 10,000 MW. The construction of wind power plants with a total capacity of 200 MW is economically feasible. Such stations could produce about 525 million kWh of electricity per year.

The “Lori-1” is the first wind power station not only in Armenia, but also in the South Caucasus. It was commissioned in December 2005 in the Lori region at Pushkin Pass, and consists of four wind turbine generators with a total capacity of 2.64 MW. Its highest annual generation rate was 4.25 million kWh, while the lowest was 1.93 million kWh. In the summer of 2015, it was connected

⁴⁰ Ministry of Energy Infrastructure and Natural Resources of the Republic of Armenia (MENR). “Yerevan TPP” CJSC. Available from <http://minenergy.am/en/page/531>

⁴¹ MENR.

⁴² Ibid.

⁴³ Wikipedia, “Meghri Dam,” Available from https://en.wikipedia.org/wiki/Meghri_Dam

⁴⁴ MENR.

to the “Aracena” network of wind power plants, located near the town of Kajaran in the south of Armenia, with a capacity of 250 kW and a power generation of 0.82 million kWh.⁴⁵

Armenia has significant geothermal energy reserves and solar energy capacity. The use of these renewable sources of energy will become increasingly economically attractive because of the rising costs of electricity. Thus, the energy sector in Armenia today is a fast growing sector of the economy.

According to MENR, the country produced 7,750.0 million kWh of electrical power in 2014. This is slightly less than in 2012 (8,036.2 million kWh), but the produced energy is still more than enough for domestic needs.

Official statistics show that the internal market in Armenia consumed 5,416 million kWh of electrical power in 2014 (5,404 million kWh in 2013). Armenia remains a country with a low level of energy consumption.

According to the International Energy Agency (IEA), an average citizen of the country consumes 1,678 kWh a year, which is significantly less than the global average (2,933 kWh) and is comparable with countries such as neighbouring Azerbaijan, Uzbekistan, Egypt, and Mongolia.

Due to the significant surplus of electrical power production, Armenia is in a good position to export it to neighbouring countries. In 2013 and 2014, energy supply to foreign markets totalled 1,305.3 million kWh (about 17 per cent of total production).

Armenia has the following interstate transmission lines, which can be used for the development of regional integration:

- Ararat—Nakhichevan (Azerbaijan), 220 kV, 100 km;
- Agarak (Meghri)—Ahar (Iran), 220 kV, 110 km;
- Alaverdi—Marneuli (Georgia), 220 kV, 65 km;
- Gyumri—Kars (Turkey), 220 kV, 65 km; and
- Hrazdan TPP—Aghstafa (Azerbaijan), 330 kV, 108 km.

The construction of the Iran–Armenia high-voltage transmission line made it possible to export electrical power to neighbouring countries, notably to Georgia and Iran. Thus, Georgia can partly cover its electrical power shortage, while Armenia can use its existing energy production capacities.

At present, electrical power is shared with Iran. In summer months, electrical power is transmitted to Iran, and in winter from Iran to Armenia. Importing electrical power makes it possible to straighten the load curve, which creates favourable conditions for NPPs and TPPs in the Armenian energy system. Moreover, Armenia could export electricity to Turkey and Nakhichevan, but the current political climate is unfavourable.

There was a large-scale modernization of the high voltage facilities in the country in recent years. A third high voltage power line with Iran (400 kV class) is currently under construction.

The Armenian electrical power distribution system was privatized in 2002. In 2005, the CJSC Electric Network of Armenia (ENA) was handed over by its owner (the British company Midland Resources Holding Ltd) in trust management to Interenergo B.V., a subsidiary structure of the

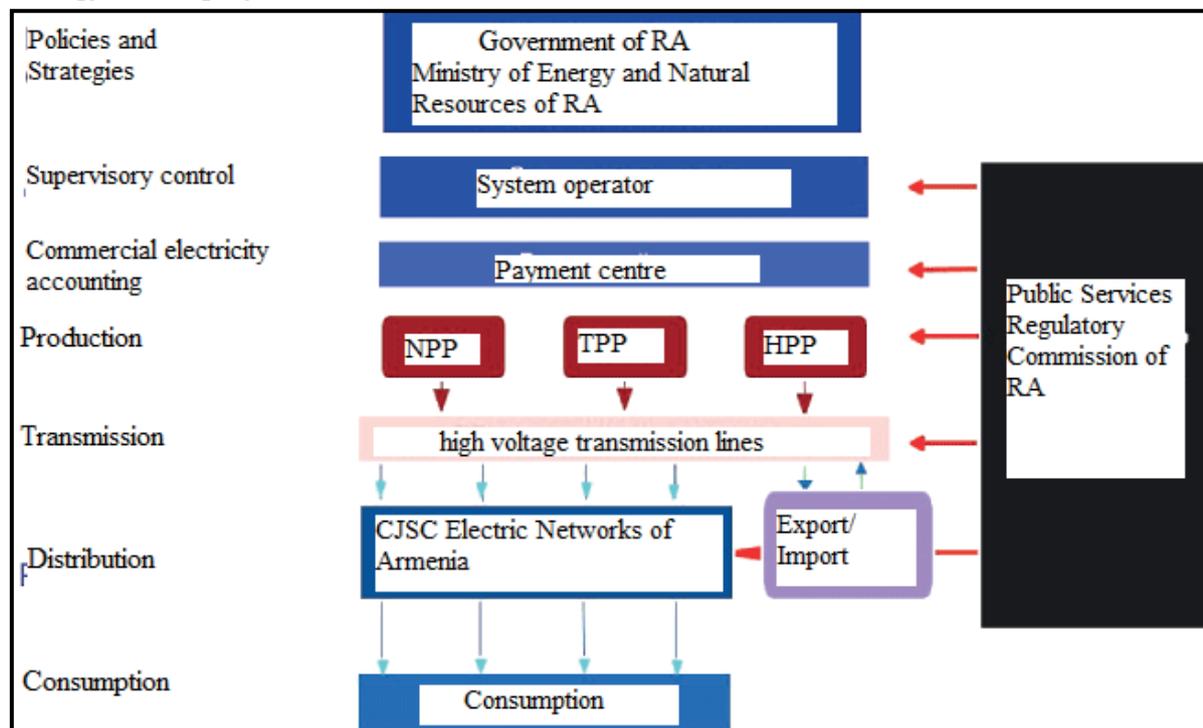
⁴⁵ MENR and the Public Service Regulatory Commission.

Russian Inter RAO UES. In 2005, the company was sold to Interenergo for more than USD 70 million.⁴⁶ In September 2015, ENA was purchased by the Tashir group.

Currently, ENA is the sole operator for distributing electricity in Armenia. It has the exclusive license to operate and, therefore, has the monopoly.

ENA is implementing investment projects aimed at reducing the frequency and duration of interruptions in the electrical power supply to the consumers, reducing the incidence rate and duration of electrical voltage deviations, and expanding power distribution networks. Under the projects, the largest investments are made in the modernization, improvement and expansion of the distribution networks, and the introduction of an automated electric power metering system.

Figure IV
Energy sector players in Armenia



Source: Sergey Tanakyan, "Armenian energy at critical point", 25 June 2015 (with reference to m-economy.ru). KAVPOLIT. Available from http://kavpolit.com/articles/energetika_armenii_u_kriticheskoy_cherty-17806/

Gas supply

Natural gas was originally imported from Russia. However, since the construction of a gas pipeline from Iran to Armenia was completed in December 2008, Armenian consumers are currently supplied with gas from both Russia and Iran.

As part of its gas distribution system, Armenia operates 14,097 km of high, medium and low pressure gas pipelines, and auxiliary facilities. Gazprom Armenia was formerly the ArmRosgazprom. It is a 100% subsidiary of PJSC Gazprom. Its gas transmission system includes

⁴⁶ New Europe, "Interenergo to Control Armenian Electricity Distribution Grid", 2 October 2005. Available from <https://www.neweurope.eu/article/interenergo-control-armenian-electricity-distribution-grid/>

1,685 km of mains and branch pipelines. Its distribution system includes 14,600 km of high-, medium-, and low-pressure pipelines and auxiliary facilities⁴⁷.

CJSC Gazprom Armenia was established in 1997 to supply Russian natural gas to the Armenian domestic market, as well as to ensure gas transit through Armenia. Prior to its establishment, the social gas distribution network (gas supply to the population) had not been used for almost a decade and it was not possible to check it for leaks. In this regard, CJSC Gazprom Armenia was given the task to fully replace the existing gas distribution network, and to ensure gas supply to areas without it.

Between 2000 and 2007, CJSC Gazprom Armenia has invested about USD127 million in the Armenian distribution network, which made Armenia a CIS leader in gas infrastructure development.⁴⁸

Heat supply

During the energy crisis in the Armenian housing sector, the centralized heating supply system was almost completely destroyed. The population independently switched to individual heating systems: electric or gas stoves and dwelling heating systems. Unlike legislations in other countries, the 2002 Law "on Apartment Building Management" established a homeowner's right "to equip their dwelling with mechanical, electrical, engineering, plumbing and other facilities without the consent of other homeowners (including cases where they are fully or partly laid across common shared property, or above it, or by making use of it), if such actions do not decrease the load bearing capacity of the building, do not interfere with the normal operation of engineering facilities, mechanical and other equipment in the building and if they do not consequently violate the homeowners' rights of ownership, use and disposal of their homes, as well as the right to the use of common property."

The design of newly constructed MABs envisages individual heating systems or a local (single-house) boiler plant that runs on gas or electricity.

There is ongoing discussion about the restoration of district heating systems as an environmentally friendly and cost-effective solution.

A pilot project for the restoration of the district heating system was implemented in the Avan district in Yerevan, with technical assistance from the local UNDP office, and with financial support from the GEF. Under the project, an independent thermoelectric power plant No. 1 was constructed; and heat and hot water supply was restored in 76 neighbouring MABs.

The station capacity is 2 MW of electrical power and 2.2 of heat energy. The natural gas utilization ratio is 85 per cent. Almost all operations at the plant are automated; safety systems are highly reliable. All the apartments in the system have been equipped with heat consumption meters. The residents have the right to choose whether to use an individual or the centralized system. There are apartments with both individual and centralized systems in place.

Another prototype district heating system project in the Avan district is funded by the joint Russian-Armenian company ArmRoskogeneratsiya, established by the EuroSibEnergio Engineering Company on the Russian side. The company has invested more than USD 10 million in the construction of an independent thermoelectric power station, and the replacement and

⁴⁷ Gazprom Armenia. Available from <http://armenia-am.gazprom.com/>

⁴⁸ ARMENPRESS – Armenian News Agency, "ArmRusgasprom Becomes Gazprom Armenia", 17 January 2014. Available from <http://armenpress.am/eng/news/746561/>

restoration of the main and domestic networks. It is planned to fully restore the district heating system in the remaining MABs not covered by the GEF pilot project in the Avan community.⁴⁹

Despite the economic and environmental benefits of restoring a centralized heat supply system for the Armenian housing sector, many are against it. The main argument is the high cost of network renovation, which is almost equal to the cost of constructing a thermal power generating facility.

Water supply

In contrast with the energy sector, the major part of the water supply and wastewater disposal infrastructure in Armenia is owned by the State or by communities.

Over the past ten years, the Government implemented major structural reforms in the water supply and sewerage sector. The State Committee of Water Economy under the Ministry of Territorial Administration and Development (MTAD) was established in 2002, and it became part of the Ministry of Agriculture in 2015. Management and lease agreements were made with private operators; and large investment was made in water infrastructure modernization. As a result, the quality of services improved significantly, operating costs decreased, and profits of enterprises increased.

Currently, five water supply and sewerage service companies in the Armenian water sector are managed by three private operators⁵⁰:

- Yerevan Water Supply and Sewerage Company (YWSSC) provides services to approximately 1 million people, it is operated under a lease contract by CJSC Yerevan Djur, established by Veolia, a French operator;
- Armenian Water and Sewerage Company (AWSC) CJSC provides services to 0.62 million people in 37 cities and 270 rural settlements in 10 regions of Armenia; it is operated by the Saur Group (a French company) under a management contract; and
- Three regional water service companies (Lori Water Supply And Sewerage Company, Shirak Water Supply And Sewerage Company, and Nor Akunk) provide services to 0.32 million people; they operate under a management contract (since 1 January 2014) by a Saur-led consortium, which also includes companies such as MVV decon, MVV Energie, and AEG Service.

Currently, approximately 560 rural communities with a population of about 650,000 are beyond the reach of private operators' activities. Water supply and sewerage services are provided by non-specialized and non-licensed organizations.

The engagement of private operators brought about significant improvements in the water supply and sewerage sector. The share of the population having access to adequate drinking water in urban communities reached 99.5 per cent; in rural communities it is 93.7 per cent. The share of consumers with individual water meters increased to 97.75 per cent. Between 2006 and 2013, a total of 83 km of water pipes with a diameter of 50–800 mm, and 11.7 km of sewer pipes with a diameter of 200–1,200 mm were laid or renovated. Out of the 566 existing pumping stations, 315 were reconstructed: 276 latest models of self-regulating pumps and 39 pumps with

⁴⁹ Noev Kovcheg (Independent International Paper), "Accident Tsentralki". Available from <http://noev-kovcheg.ru/mag/2012-18/3470.html#ixzz3jGkTj8cy>

⁵⁰ Miasin, "The Quality of Water Supply in Five Years in Armenia has Significantly Improved – WB", 19 May 2011. Available from <http://www.miasin.ru/news/arm/item12850.html>

adjustable speed were installed, which made it possible to adjust the pressure in the water supply network and to ensure continuous water supply in MABs.⁵¹

However, the sector is still facing serious challenges, such as:

- Suboptimal utility pricing, which cannot ensure the financial stability of water service companies and the necessary investment in infrastructure renovation;
- Low quality of services and high demand for investment in the communities which are beyond the reach of private operators;
- Significant water losses in the systems;
- Lack of strategic planning in the sector; and
- Poor coverage of the country with regards to sewerage and wastewater treatment services.

In accordance with the Armenia Development Strategy for 2014–2025 (hereinafter, Development Strategy)⁵², the drinking water supply system will be in the focus of public investment programmes. During the entire period of the implementation of the Strategy, the annual investment will amount to 0.4 per cent of GDP.⁵³ Investment policies will aim to increase the efficiency of the water supply system, notably to reduce water losses, to reconstruct sewerage systems in the majority of settlements and to construct wastewater treatment plants. Public investment programmes will embrace the communities which are currently beyond the reach of specialized agencies.

In August 2014, the Government decided to restructure the water supply and sewerage management system. This involves having a single operator under a public-private partnership agreement once the existing management and lease agreements of the largest water service companies (YWSSC and AWSC) are completed at the end of 2016.⁵⁴ The operator's sphere of activities will also cover water supply companies in rural areas.

The implementation of public investment programmes will be carried out with the support of international financial institutions such as the European Bank for Reconstruction and Development (EBRD), the World Bank, KfW (a German government-owned development bank), the Asian Development Bank (ADB) and the European Investment Bank. It is planned that total international investment will amount to EUR 80 million in the next ten years.

D.2 Provision of utility services

Engagement of private operators in the provision of public services

During the energy crisis in Armenia, the utility services infrastructure suffered greatly. The infrastructure in the heating sector was almost completely destroyed, and the quality of utility services provided to consumers dropped to a disastrously low level.

The state privatization programme from 1998 to 2000 included the CJSC Electric Networks of Armenia (ENA). Midland Resources Holding Ltd. became its operator in 2002. In 2006, CJSC ENA

⁵¹ Habitat III National Report, Annex to Government Protocol Decision No. 38 of 11 September 2014.

⁵² Approved by Government Resolution No. 442-N of 27 March 2014.

⁵³ Habitat III National Report, Annex to Government Protocol Decision No. 38 of 11 September 2014.

⁵⁴ Analitikaua, "CJSC 'Armenian Water and Sewerage' and 'Yerevan Water' Will Be Merged and Transferred to Concession Management – Prime Minister", 20 February 2015. Available from <http://analitikaua.net/2015/zao-armvodokanal-i-erevan-dzhur-budut-obedinenyi-i-peredanyi-v-kontsessionnoe-upravlenie-premer-ministr/>

was purchased by a Russian investor (Inter RAO). CJSC ENA serves approximately 985,000 electric utility consumers.

In 2004, following a resolution to engage a private operator to manage CJSC AWSC, residential houses were supplied with water on the following schedule: in the morning and in the evening, the total duration of water supply did not exceed 5 hours per day, and in some areas 3 hours per day. At the same time, water consumption was more than 15 m³ per person per month. This was accounted for by the fact that citizens made huge water reserves during the supply period, and if they failed to use it up by the next supply period, they poured the water down the drain and filled their water tanks with fresh water. Citizens refused to pay for water and wastewater disposal services. The average annual payments collection rate was at 12% of the assessed amounts. At the same time, the country had legislation stipulating that adequate quality services were to be provided to citizens continuously.

To restore its utilities infrastructure, Armenia raised funds from international financial institutions and international investors; the country used various mechanisms of public private partnership. The water sector has the best examples of engaging private operators in public services provision in Armenia.

The initial conditions in the sector were so serious that it was impossible to engage an operator who would take responsibility for the quality of water supplied to the consumers. Eventually, a management agreement was made with SAUR (France), an international private operator, selected on a competitive basis, to manage the activities of CJSC AWSC.⁵⁵

Under the management contract, the operator was paid a fixed monthly fee and an annual bonus, which was calculated on the basis of the operator's progress level. The main responsibility of the operator was to manage the enterprise activities. Under the agreement, most commercial risks and all the risks related to investments were assigned to the State. The World Bank provided a loan for the investment in the networks and company facilities, procurement, works and services required for the operation of the enterprise, and the operator's remuneration.

Under the management agreement with the AWSC, the private operator was obliged to:

- Improve the standards and efficiency of the water supply and sewage services of the AWSC in order to ensure a continuous, reliable and bacteriologically safe water supply;
- Increase the payments collection rate for water supply and sewage services by improving the quality of services and tailoring them to the consumers' needs;
- Improve the financial results of the enterprise's activities and to increase its financial sustainability;
- Train and ensure the advanced training of the enterprise staff in order to maintain the improvements in governance, activities and financial results until the termination of the contract;
- Purchase equipment; maintain and repair the equipment; and reconstruct and modernize facilities and infrastructure; and
- Develop and implement investment programmes for the provided capital funds during the agreement validity period and for longer-term investment needs.

⁵⁵ Promoting the use of performance-based contracts with water and sewerage companies in EECCA (Eastern Europe, Caucasus and Central Asia) countries. Case study 2: Armenian Water and Sewerage Company - OECD, 2008, and Guidelines for Performance-Based Contracts between Water Utilities and Municipalities: Lessons Learnt from Eastern Europe, Caucasus and Central Asia. OECD, 2010.

By the end of the four-year management contract, the private operator arranged the provision of municipal water supply and sewerage services. More than 80 per cent of the population were supplied with water around-the-clock; and the payments collection rate exceeded 82 per cent of the assessed amounts. The next competitive tendering was called for a lease contract for the water supply and sewerage systems; the manager had to meet very strict requirements and take responsibility for the quality assurance of utility services.

In recent years, the quality of water supply and sewerage services significantly improved. The average duration of water supply in Yerevan is 95.9 per cent, or 23 hours a day. 73 per cent of consumers in the capital city have around-the-clock water supply, 23 per cent are supplied with water for 17 hours (from 7 a.m. to 12 a.m.), and 4 per cent have a 12-hour water supply. A computerized customer call centre was introduced, which is capable of sending 10,000 telephone alert messages in the event of a water outage.⁵⁶

Another successful example of attracting private operators to provide public services is Yerevan's experience of garbage collection and removal, and sanitary cleaning in urban areas. These activities involve 1,600 employees in 12 specialized companies who use 300 units of special equipment. Garbage is collected from 4,876 MABs and about 53,200 private houses, which are home to 1.2 million people.⁵⁷ The total cleaned area is over 23 million m².

In 2014, two private operators were selected to provide garbage collection and disposal services, and sanitary cleaning of the city, including in winter months, on a competitive basis. The international consortium of Ecogroup Ltd. and LL Milieuconsult AB are to operate in the eastern part of the capital and Sanitek s.a.r.l (Lebanon) in the western part of the city. The contracts are for a 10-year term.⁵⁸ Sanitek started its operations on 1 December 2014.

Engaging private businesses in public services provision is aimed at improving the quality of services based on international experience and standards, attracting private investment, and introducing modern, efficient systems of quality service management. Requirements regarding the quality of public services that must be met by the private operator are defined in the contract, which is concluded with the operator at the end of the competitive tendering.

Quality standards of utility services

Armenia has government-approved regulations for utility services provision. These regulations establish service quality indicators and the permissible duration of interruptions in the provision of services, which correspond to European standards. Utility services providers may pay fines for defects in quality. For example, in case of interruptions in the electrical power supply exceeding the established limits by 20 per cent or more, there is a fine of USD 4 per household. The next month's electricity bill is reduced by the amount of the fine. The penalty for excessive interruptions in service provision is calculated automatically. According to the Public Services Regulatory Commission (PSRC), 26,000 electricity consumers were compensated for interruptions in power supply in 2014.

⁵⁶ Municipality of Yerevan, "Utilities". Available from <https://www.yerevan.am/ru/communal-services/>

⁵⁷ Ibid.

⁵⁸ Habitat III National Report, Annex to Government Protocol Decision No. 38 of 11 September 2014.

Utility services provision to household consumers

Armenia has a system of direct contractual relations between the end-users of public services (the population) and network companies that supply electricity, gas and water to residential buildings.

Organizations managing MABs are not engaged in the provision of public services, although the 2002 Condominium Act specifies that one of the main objectives of the establishment of condominiums is "to conclude agreements between building management authorities and public services providers".

On commissioning a new MAB, it is possible to make agreements between the developer and the network companies for a certain interim period prior to the registration of apartment ownership but, later, the agreements shall be renewed with homeowners.

Bills are calculated on meter readings in the individual apartments. Few flats have not yet been equipped with water meters.

The installed meters are applicable only for visual readings. Significant investment will be required to replace current metering devices with automatic remote meter reading. Water meters are the property of dwelling owners, which makes it difficult to service, check, and replace them. According to utility services providers, about 10 per cent of the water consumed is not accounted for because old mechanical meters are still in place. Power distribution companies have recently begun to install new electronic metering devices in consumers' dwellings. Such devices are owned by the distribution companies. Currently, approximately 30 per cent of electrical power meters are electronic. There is a discussion about whether the responsibility of installing water meters should be transferred to the water companies, and, accordingly, whether water meters should become their property.

Currently, the non-payments by consumers for public utilities is virtually impossible in Armenia. Very strict rules are set forth in the utility resources supply contracts: it takes just a few days' delay of payment for electricity, gas or water to shut off the provision of utility services.

D.3 Utility rate policies

Armenian utility rates policies state that the rates should fully cover all operating costs of the utility resources producers.

Utility services rates in Armenia are set by the PSRC in accordance with certain regulations. Rate of return and depreciation allowances were identified and taken into account in the current rates. The procedures for setting gas rates were specified in a separate agreement with Gazprom.

The general approach to setting rates is that no subsidies to the population are provided at the expense of public funds. Tariffs for electricity vary depending on the voltage of the electric current used by consumers. The daytime and night-time rates differ. Gas rates depend on the monthly volume of gas consumption. In the water and sewerage sector, the rates for services provided by CJSC Yerevan Djur, AWSC, Lori Water and Sewerage Company, Shirak Water and Sewerage Company and Nor Akunk are the same for all consumers. CJSC Yerevan Djur also provides wholesale water and sewerage services to other companies and communities, and services for diverting subway ground water. For both services, the company has established corresponding tariffs. For AWSC, only tariffs for the provision of water and sewerage services for companies and communities have been established.

Since 2013, electricity rates have been revised annually (Table 10). Between 2009 and 2015, the daytime electricity rate increased by 62 per cent, while the night-time rate increased by 94 per cent. The increase in electricity rates in July 2015 has led to a surge in social discontent. The PSRC and the ENA explained that this was caused by the devaluation of the dram at the beginning of the year, which resulted in an increase of fuel costs for the major producers of electrical power – NPPs and the largest TPPs⁵⁹; and compensation for the difference in the estimated and actual tariff margins set by the PSRC.

Table 10

Electrical power rates for the population (including VAT), 2009-2014
(Drams/kWh)

	<i>1 April 2009 – 6 July 2013</i>	<i>7 July 2013 – 31 July 2014</i>	<i>1 August 2014 – 31 July 2015</i>	<i>From 1 August 2015</i>
Daytime rate	30	38	41.85	48.78
Nighttime rate	20	28	31.85	38.78

Source: PSRC.

Gas rates are set for a period of over one year, and the amount depends on the Russian-Armenian intergovernmental agreement on the cost of the gas supplied to the country. The current gas rates were established on 7 July 2013.

Water supply and sewerage services rates in Yerevan increased by 65 and 58 per cent, respectively, from 2009 to 2014, while the rates of the AWSC, the Lori Water and Sewerage Company, the Shirak Water and Sewerage Company and Nor Akunk have not changed since 2009 (for AWSC) and 2010 (for the others). The merger of all water and sewerage companies under the management of a single operator from 1 January 2017 is aimed at, among other things, setting equal rates for water supply and sewerage services, which will ensure the funds to repay the government loans provided for the modernization of the infrastructure of the two largest water companies. However, this will mean higher tariffs for consumers.

The Government's tariff policy on water supply and sewerage is aimed at gradually increasing the level of tariffs to recover costs incurred by utility service providers but taking into account affordability of households in the lowest income group. A maximum affordability threshold for the cost of water supply and sewerage services will be established and, in cases of services provided with higher tariffs than the maximum threshold, poor families will be subsidized by the State to cover the difference.⁶⁰

Currently, water utility companies are subsidized by the State budget for maintenance and operating costs that are not covered by revenues from tariffs. Customers do not get specific subsidies for water supply and waste water removal services.

The population is especially sensitive about the increases in electricity and gas rates, because these energy resources are used for heating and hot water provision in dwellings where a centralized heating system is not available. The problem is not so much that the rates are high, but that the majority of the population have low incomes (30 per cent of households are poor),

⁵⁹ Sergey Tanakyan, "Armenian energy at critical point", 25 June 2015. *KAVPOLIT*. Available from http://kavpolit.com/articles/energetika_armenii_u_kriticheskoy_cherty-17806/

⁶⁰ Habitat III National Report, RA, 2014. Annex to the Government Protocol Decision No. 38 of 11 September 2014.

and there is no targeted government programme to assist low-income households in paying utility bills.

Between 2011 and 2014, a government programme compensated part of gas costs to citizens (families consuming less than 300 m³ of gas per month paid a preferential rate of 100 drams or approximately USD 0.25 for every 1 m³ of gas), but it was discontinued in 2015 because of a lack of public funds.⁶¹

E. Energy efficiency and energy savings in housing

Buildings are one of the major energy consumers in Armenia. According to the 2010 cadastre statistics of greenhouse gas emissions, almost 28 per cent of primary energy resources are consumed in buildings, mainly in the residential sector.

Armenia has a continental climate, with a long heating season. The average winter temperature is -5°C, while temperatures can go as low as -42°C in places. Thus, energy consumption and greenhouse gas emissions in buildings are mainly related to the heating of dwellings.

The power consumption of the housing stock is 180-200 kWh/m² a year. This figure is significantly different from the EU level.⁶² According to experts, energy-efficiency improvements may save over 50% of energy.

Recent studies indicate that 30 per cent of households in Armenia are in energy poverty.⁶³

Legal framework

Energy-efficiency improvements in buildings have been given priority in the development of climate, energy and housing policies in Armenia. Essentially, this is specified in the provisions of the National Energy Efficiency Programme (2007), the National Security Strategy (2007), the National Energy Security Concept (2013), and the Action Plan of the Energy Security Strategy (2014). All these documents emphasize the importance of the energy-efficiency improvement capacity in buildings, and provide a general plan of essential technical activities/solutions. Moreover, ten cities in Armenia, which acceded to the Covenant of Mayors, give priority to the housing sector as the sector with the most capacity for the reduction of energy consumption. Since 2004, Armenia has been involved in the European Neighbourhood Policy (ENP). The ENP Action Plan for Armenia was approved in 2006. This Plan guides the harmonization of Armenian legislation, regulations and standards with European standards, including those on energy efficiency.

In 2013, Armenia was included in the Organisation for Economic Co-operation and Development (OECD) Eurasia Competitiveness Programme, aimed at improving the competitiveness of key economic sectors of the country. Within the framework of this initiative, the report “Linking multinational enterprises and SMEs of Armenia in the field of construction materials industry” was prepared and published. The report refers to one of the components of the UNDP’s energy-efficiency improvement project, relating to the use of energy-efficient materials.

⁶¹ MLSA.

⁶² UNDP Armenia, Improving Energy Efficiency in Buildings. Available from http://www.nature-ic.am/res/pdfs/projects/CP/EBB/ProDocENG%20_FINAL.pdf

⁶³ R2E2 – Armenia Renewable Resources and Energy Efficiency Fund, “Preparation of SREP Investment Plan for Armenia”, Powerpoint presented at the workshop on the Climate Investment Funds’ Scaling Up Renewable Energy Program (SREP) Investment Plan for Armenia, Yerevan, September 2013. Available from <http://r2e2.am/wp-content/uploads/2013/09/SREP-09.16.pdf>

Recommendations of the report on Armenia's challenges in the construction materials industry are being taken into consideration by the Government.

In 2014, the Government of Armenia, with assistance from the UNDP, developed an "Energy Efficient Public Buildings and Housing in Armenia" (2014)⁶⁴ plan for the Nationally Appropriate Mitigation Actions (NAMA). The document is included in the NAMA database of the United Nations Framework Convention on Climate Change (UNFCCC). One of the objectives of the NAMA plan is to attract investments for the promotion of energy efficiency in public buildings, with a focus on new construction, renovation, and the maintenance of public buildings.

According to the first National Energy Efficiency Action Plan (2010), the aggregated target of the 2020 Government Energy Saving Strategy in residential buildings is 23 per cent.

Energy efficiency in buildings is regulated by a number of Armenian laws and regulations, as well as by international legal obligations of Armenia.

Pursuant to the recently adopted Intended Nationally Determined Contribution (INDC) of Armenia (Protocol Decision No. 41-11 of 10 September 2015), the country's main international commitment with regard to energy-efficiency improvements in buildings is the UNFCCC. Energy efficiency in Armenia is regulated by two main laws - the 2001 Law "on Energy" and the 2004 Law "on Energy Saving and Renewable Energy".

Article 5 of the Law "on Energy Saving and Renewable Energy" states that: "*The State policies on energy saving and renewable energy should be based on the principle of the voluntary participation of stakeholders*".

Existing documents, "*Construction Thermophysics of Building Envelopes. Design Standards*" RACN II-7.02-95 and "*Handbook of Construction Thermophysics of Building Envelopes*" CNM II-7.102-98, do not meet modern requirements of an integrated approach to energy efficiency in buildings with a flexible design concept.

In recent years, the Government has been taking action to improve the legal and regulatory framework for energy-efficiency improvements, notably in the housing sector. The Resolution No. 1504-N "on Energy Saving and Energy Efficiency Improvements in Facilities under Construction (reconstruction, renovation) with Public Funding", adopted by the Government on 25 December 2014, is a step forward. On 10 September 2015, Government Decision No. 1026-N was adopted to improve energy audit procedures (developed with the support of UNDP-GEF).

Some draft laws are under development and are undergoing adoption procedures:

- Law "on Amendments to the Law on Energy Saving and Renewable Energy" (National Assembly, developed with the support of UNDP-GEF);
- Law "on Housing Development in Downtown Yerevan" (National Assembly);
- Law "on Amendments to the Law on Urban Development" (National Assembly);
- Technical Regulation "on Safety of Buildings and Facilities, and Construction Materials and Products" (developed under the UNDP-GEF and submitted for consideration to the MUD);
- Technical Regulations "on Energy Efficiency in Buildings" (developed under the UNDP-GEF project, submitted for review to the MENR).

⁶⁴ NAMA, Country Pages. Available from <http://www4.unfccc.int/sites/nama/SitePages/Country.aspx?CountryId=8>

Institutional framework

At the institutional level, the main national agencies responsible for energy efficiency in the construction sector are: the MUD; the MENR; the Ministry of Nature Protection (MNP) (on the aspect of climate and environmental policy); and the PSRC (controls energy efficiency by setting utility rates).

The Ministries cooperate on energy efficiency in the construction sector in the following areas:

- Requesting opinions and feedback on draft laws, regulations, programmes and other documents under development;
- Participating in interdepartmental discussions and establishing working groups (such as the interdepartmental coordination council on the performance of the requirements and provisions of the UNFCCC; the Energy Efficiency Council, headed by the MENR; etc.); and
- Voicing opinions during the weekly meeting of the Government headed by the Prime Minister.

Pursuant to Government Resolution No. 225-N of 13 March 2013, the MUD is the responsible authority for carrying out the functions for improving energy efficiency and energy savings in the urban development sector, namely:

- To promote the design and construction of energy-saving and energy-efficient buildings and urban development systems, ensuring the development of the necessary legislative framework;
- To initiate and implement measures to improve the legislative base in the sphere of urban planning, especially that relating to energy efficiency and energy savings in urban development; and to develop normative documents in conformity with new European and international standards; and

To develop and coordinate programmes and projects aimed at improving energy savings and energy efficiency of buildings, and to cooperate with relevant international organizations within the scope of the above-mentioned tasks to ensure the provision of information on energy-saving technologies.

Activities and ongoing projects to improve energy efficiency in housing

The UNDP-GEF “Improving Energy Efficiency in Buildings” project⁶⁵ aims to reverse the existing trends and reduce the consumption of electrical and thermal energy, and associated greenhouse gas emissions in new and renovated buildings in Armenia, primarily residential buildings. This project was supported by the MUD in the preparation of government decisions and in their consideration; in the approval of 11 energy-efficiency standards; and in the development and publication of several building codes and manuals/guides:

- Advisory guidance on technical solutions for the thermal insulation of envelope structures of residential, public and industrial buildings (approved by the Minister of Urban Development);
- Database of heat-insulating building materials;
- Project documentation for model energy-efficient houses, etc.; and

⁶⁵ More information about the project available from http://www.am.undp.org/content/armenia/en/home/operations/projects/environment_and_energy/improving-energy-efficiency-in-buildings-.html

- Bilingual textbook of “green” architecture, etc.

Within the framework of the project, one laboratory building for testing the thermal-physical parameters of construction materials was opened, making it possible to test and certify thermal insulation materials in Armenia. The products of a number of importers and manufacturers of insulation materials have been tested and issued with certificates of compliance.

As part of the pilot project funded by UNDP-GEF, the external walls of a nine-storey apartment building in Yerevan were insulated, and doors and windows were installed in hallways (90 per cent of financing came from the UNDP and 10 per cent from the municipality of Yerevan). The pilot building was monitored for two years and a comparative analysis of energy data with similar types of buildings was conducted. Results clearly demonstrate that, due to energy-efficiency improvements, it is possible to have significant savings on the thermal energy used for heating (consumption decreased from 178 to 74 kWh/m² in the pilot building) and to reduce the energy consumption cost (the heating cost decreased from USD 620 to USD 255 for each apartment during the cold season). Savings derived from the reduced cost of heating can be directed, for example, to repaying the loan provided for the modernization of the house.

For all the buildings in this UNDP-GEF energy-efficiency project, subsequent monitoring of benefits was conducted, including an energy audit.

Since 2013, Habitat for Humanity (HfH) Armenia has been implementing the “Residential Energy Efficiency for Low-Income Households” (REELIH) project. The project partners are USAID and the municipality of the city of Yerevan. The main objectives of the project are: (i) to develop and test sustainable financing models for energy-efficiency improvements in residential houses; (ii) to reduce energy consumption costs for low-income households; and (iii) to improve institutional skills and housing and public utilities management.

For this project, HfH Armenia is collaborating with municipalities and financial institutions that provide loans. The municipality of Yerevan is providing a subsidy of 40 per cent of the total costs, while CJSC Inecobank is providing 60 per cent as a preferential loan. The project covers 15 different buildings. Energy-saving improvements have already been implemented in six of them, while the remaining nine are at various stages of project completion.

Since December 2014, HfH Armenia has been implementing the "Access to Renewable and Efficient Energy in the municipalities of Vayk and Spitak" (AREEM) project. The partners of the project are the European Union (EU) and the municipalities of Spitak and Vayk. In the context of the project, it is planned to improve energy efficiency in 45 residential houses (3,800 dwellers) and 2 public buildings, to support the municipalities in implementing energy-saving measures specified in the Sustainable Energy Action Plan (SEAP). By the end of the project in 2018, energy consumption should be significantly reduced by as much as 30 per cent, and CO₂ emissions by about 600 tons. This will be done by:

- Improving energy efficiency (changing roofing, thermal insulation of the top floor ceiling and external walls, and changing entrance doors and windows in entrance hallways);
- Installing 145 photovoltaic solar panels to illuminate entrance hallways and courtyards of apartment buildings; and
- Installing solar heaters and photovoltaic solar panels in order to provide a kindergarten in Spitak with hot water.

The role of commercial banks and international organizations in enhancing energy efficiency and energy savings in the residential sector

The World Bank energy-efficiency project in Armenia, implemented by the Armenia Renewable Resources and Energy Efficiency (R2E2) Fund, is providing concessional loans for energy efficiency improvements in 44 public facilities, which will result in 40-50 per cent energy savings. The aim of the project is to reduce the energy consumption of social and other public facilities.

There are many available energy efficiency financing schemes. Some local banks offer several financial products to individuals and businesses. The Green for Growth Fund and the EBRD offer loans to commercial banks for energy efficiency improvements.

From the consumers' point of view, the most attractive loan is the one provided by the French Development Agency (AFD): 11 per cent for loans of more than 10 years, which, however, focuses only on the renovation of apartments, houses and other residential buildings or the installation of equipment to improve energy efficiency. Loans are available in both the local currency and in United States dollars. Due to the recent depreciation of the national currency, foreign currency loans have become less popular.

As noted earlier, some activities are aimed at improving and upgrading energy efficiency, but none of them provide the necessary funding for modernization at MAB level. Moreover, even though several commercial banks have energy-efficiency loan portfolios for small and medium enterprises and private entrepreneurs, no action was taken with regard to MABs because of the perceived risks associated with collective decision-making and utility bills payment discipline.

F. Housing market

The housing market is the main mechanism for ensuring citizens' constitutional right to housing in Armenia.⁶⁶ The basis for the housing market was established by the privatization of the public housing stock. Legislation established citizens' rights to purchase, lease and construct dwellings, and to receive mortgage loans for housing purchase or construction. Private developers created conditions for housing construction. Housing purchase in the market is the focus of various government programmes aimed at improving the housing conditions of young households, young professionals, civil servants and military personnel through the provision of concessional mortgage loans.

According to the State Registry of Real Estate, the number of real estate transactions is increasing annually. It totalled 214,000 in 2014. This is 38.5 per cent more than the number of transactions in 2009 (Table 11). In 2014, 33 per cent of all transactions were made in Yerevan.⁶⁷ The share of transactions involving the disposal of dwellings is rather stable at 25-27 per cent per year. The annual share of dwellings where the owner changed as a result of disposal was 5-5.65 per cent of the total number of dwellings. This suggests a significant increase in residential mobility compared to the early 2000s, when only 2-3 per cent of dwellings changed owners annually.⁶⁸

In 2014 and early 2015, the average cost of an apartment in Yerevan was USD 570 per m². The average cost of an apartment (a suite) in newly constructed buildings is higher, at USD 660 per m². The highest average cost of real estate is in the Yerevan Kentron district, at USD 890 per m²,

⁶⁶ Habitat III National Report, Annex to Government Protocol Decision No. 38 of 11 September 2014.

⁶⁷ PRIAN, "Real Estate Yerevan has Risen", 18 March 2015. Available from <http://prian.ru/news/30172.html>

⁶⁸ Struyk, R., Roy, F., Rabenhorst, C., and Kopeikin, A., "Emerging Mortgage Finance in Armenia", Housing Finance International (Dec. 2004) pp. 3-10. Available from http://www.housingfinance.org/uploads/Publicationsmanager/0412_Arm.pdf

while the price of luxury apartments in newly constructed buildings is USD 3,130 per m².⁶⁹ The cost of apartments in the cheapest area of the city was USD 220-325 per m².

Table 11
Real estate transactions

	2009	2010	2011	2012	2013	2014
Total transactions	154 462	173 983	191 767	173 713	190 690	214 168
of which: disposal	41 766	45 353	48 107	47 014	48 716	52 277
Share of disposal transactions out of total transactions, percentage	27.0	26.0	25.0	27.0	25.5	24.4
Share of disposed dwellings in the total number of dwellings ⁷⁰ , percentage	5.01	5.36	5.63	5.47	5.65	6.06

Source: Armenia, NSS, *Statistical Yearbook of Armenia 2015*; State Committee of Real Estate Cadastre.

The average price of a private (single-family) house in Yerevan, from the end of 2014 to the first quarter of 2015, was USD 590 per m². The highest prices for private houses in Yerevan were registered in the districts of Kentron and Arabkir, at USD 990 per m² and USD 790 per m², respectively. The lowest price for houses (in the Nubarashen district) was USD 310 per m².

In early 2015, not including Yerevan, the highest prices for apartments were registered in Tsakhkadzor, at USD 600 per m². The lowest prices were in Dastakert, at USD 17 per m².⁷¹

Prices in the housing market increased by 6 per cent in 2014 compared to 2013. However, compared to 2008 (USD 980 per m²), the average market price of an apartment in Yerevan decreased by 40 per cent in 2014. The market's response to the limited purchasing power of the population and to the demand for very expensive luxury housing for a small group of buyers was to offer housing at prices affordable to a wider circle of customers, including beneficiaries of various government programmes.

The general trend of a wider price range in the housing market and a decrease in the average cost of housing over the last five to seven years improved the house-price-to-income ratio. This was equal to 15-25 average annual incomes of households in 2008.⁷² By 2013, it was approximately 7-8 average annual incomes.

The house-price-to-income ratio is 7.4 years. This implies that the price of an average three-room apartment is equivalent to more than 7 years of the income of an average sized household. It was

⁶⁹ PRIAN, "Real Estate Yerevan has Risen", 18 March 2015. Available from <http://prian.ru/news/30172.html>

⁷⁰ The total number of dwellings was calculated according to the data in 2014 Statistical Yearbook, as the grand total of apartments in multi-apartment buildings and private houses

⁷¹ PRIAN, "Prices for Apartments in Yerevan Remain Stable", 6 May 2015. Available from <http://prian.ru/news/30497.html>

⁷² Wolfgang Amann, "Armenia: Renovating and Securing Multi-Apartment Housing Stock", Institute for Real Estate, Construction and Housing Ltd., Vienna, Austria (prepared for the World Bank), 20 March 2010. Available from <http://iibw.at/documents/2010%20Amann.%20WB.%20Armenia.pdf>

calculated on the basis of the average number of household members being 3.92, the average monthly actual wage being 138,491 drams⁷³ (USD 291), factoring in two working people in the family, the area of a three-room apartment being 76 m², and the average market price of economy-class housing being USD 570 per m².

G. Housing construction

Construction procedures

Housing construction procedures are regulated by the 1998 Law “on Urban Development” (with subsequent amendments).

Housing is constructed pursuant to approved urban development documentation. Developers perform construction activities in accordance with architectural and construction design documents by virtue of a construction permit.

The construction permit is produced simultaneously with architectural and construction design documents. Pursuant to procedures prescribed by the law and other government regulations, a construction permit is issued by the head of a municipality. In the city of Yerevan, it is issued by its mayor or the head of an administrative district, pursuant to the procedures established by the Council of Elders of Yerevan.

A construction permit is not required for minor repair works, interior finishing of buildings and structures, or the improvement of areas, if they do not interfere with the intended use of real estate or violate existing easements.

To improve the business environment in the construction sector and to remove obstacles for developers, the Government carried out significant reforms in 2011-2015 to simplify the procedures and requirements for obtaining construction permits. The reform process has significantly reduced the number of procedures required to obtain a construction permit, as well as the time duration of these procedures and the cost involved.⁷⁴ Currently, pursuant to legal requirements, to obtain a construction permit of the second risk (average) category, it takes the developer 27 days using a 5- to 7-stage procedure, compared to 137 days and the 20-stage procedure before the reforms were implemented.⁷⁵

In 2011, the MUD initiated the development of an electronic system to issue construction permits, which was implemented in 2015. This electronic system significantly improved the quality of service of site developers and the transparency of procedures, decreased corruption risks, and ensured better control over authorization procedures.⁷⁶

An exclusive license is required for construction activities. According to the 2001 Law “on Licensing”, there are two types of licenses: non-exclusive and exclusive (or automatic and non-automatic). A non-exclusive licence is issued within 3 days after the documents are filed, and does not require the approval of the Licensing Commission. An exclusive licence is issued within 30 days after the documents are filed, and may only be issued by the Licensing Commission. Urban

⁷³ Republic of Armenia, National Statistical Service, *Statistical Yearbook of Armenia 2014*, « Table 65 : Average Monthly Nominal and Real Wage”. Available from <http://armstat.am/file/doc/99489188.pdf>

⁷⁴ Government Resolution No. 257-H of 3 March 2011.

⁷⁵ Armenia Today, “In Armenia, a Building Permit Will Now be Available in 27 Days”, 4 March 2011. Available from http://armtoday.info/default.asp?Lang=_Ru&NewsID=39918&SectionID=4&RegionID=0&Date=03/10/2011&PagePosition=1

⁷⁶ Habitat III National Report, Annex to Government Protocol Decision No. 38 of 11 September 2014.

development activities are licensed by an authorized urban development administration body, and the issued licence is perpetual. There is also an electronic system for licensing, which makes it possible to apply for a license and follow the licensing procedures online⁷⁷.

The following urban development activities are licensed:

- a) Development of urban development documentation (engineering surveys, design projects, expert reports); and
- b) Construction activities (construction and installation works, technical inspection and control of the quality of buildings and structures).

Pursuant to the Law “on Licensing”, an authorized public body issuing licenses for construction activities should provide a list of legislative acts establishing mandatory standards and conditions for the implementation of these activities in the annex to the license, as well as the environmental protection norms and regulations, hygiene and sanitary standards, and epidemiological and fire safety requirements, which are binding for every licensee.

Buildings in Armenia are designed and constructed by applying building codes and regulations, including design standards for earthquake-resistant construction that were updated in 2006.

The government monitoring of urban development activities is carried out by an authorized government urban development authority through the State Urban Development Inspectorate (SUDI). SUDI organizes its activities according to administrative and territorial principles through government urban development inspectors.

SUDI monitors compliance with the requirements of normative acts, urban development documentation and technical documentation, and it provides binding instructions and guidelines aimed at eliminating violations in urban planning.

In urban and rural municipality areas, the head of the municipality oversees the implementation of architectural and planning requirements provided to developers; urban development regulations of settlements; and the use of land and settled property for urban development purposes. The municipality also prevents and suspends unauthorized construction, pursuant to the law, and, if such construction is finished, ensures that it is brought up to construction norms and urban development rules. The Governor supervises the urban development activities of the heads of municipalities. In the city of Yerevan, urban development activities are supervised by the Mayor of Yerevan, within the limits of legislation.

Housing demand and supply

Despite the fact that supply exceeds demand in the real estate market and many apartments are empty because of emigration, there is a pent-up demand for new residential houses and apartments in MABs. This is related to the fact that, in recent years, new development is, for the most part, focused on so-called elite housing, whose supply is focused on external demand (buyers with incomes outside the country). Homes in old buildings, which may be purchased at low prices, are of very low quality and are unappealing for customers, and this is also the case for empty apartments.

⁷⁷ Electronic Government of the Republic of Armenia, “System for Receiving Applications for Licenses”. Available from www.e-gov.am/licenses

Although demand for expensive new housing decreased somewhat in the past few years, housing prices in the primary and secondary markets did not decrease. Experts believe that it is a paradox of the real estate market in Armenia, in which supply and demand mechanisms are rather poor.⁷⁸

The current domestic demand for new housing at prices affordable to customers with average incomes is not satisfied, since such incomes are not sufficient to obtain a mortgage loan at the existing market rate of 11-13 per cent.

Public and private housing construction

The public housing construction policy is aimed at creating a climate for the development of private construction businesses.

Before the global economic crisis, housing construction was the most important sector ensuring the growth of the national economy (35 per cent of GDP until 2008). The construction sector was significantly affected by the crisis, and the situation has been deteriorating in recent years. The share of construction in GDP continues to decline: it was approximately 15 per cent in 2009, and a little over 10 per cent in 2013. More and more, major construction companies are applying for government assistance to complete construction that was started before the crisis⁷⁹.

According to the NSS, the comparative index of funds spent on construction in 2013, compared to the same period in 2012, amounted to 92.3 per cent (131.0 billion drams or USD 275 million). Compared to 2012, the funds provided by the public budget decreased by 26.2 per cent, by the communities by 20.3 per cent, by international loans by 28.7 per cent, and by humanitarian aid by 44 per cent. There was an increase in funding from various organizations (105.8 per cent), and in the funds that the population provided for housing construction (123.0 per cent).⁸⁰

In 2014, the volume of housing construction in Armenia decreased by 15.1 per cent compared to 2013, amounting to 111.2 billion drams⁸¹ (USD 0.27 billion). At the same time, construction financed by citizens amounted to 72.8 per cent of the total construction (down by 15.9 per cent); organizations financed 23.3 per cent (down by 13.6 per cent); 2.5 per cent was financed from the public purse (down by 32.4 per cent); and 0.1 per cent was financed by international funds (a decrease of 36.3 per cent). According to experts, the sharp decline in construction in Armenia is a result of the global economic crisis.

During the construction boom in the country in 2004-2008, remittances from abroad (mainly from the extensive diaspora) went to the construction sector. It was then that luxury houses began to appear one after another in Yerevan, and a luxury neighbourhood called North Avenue was constructed in the city centre. There are opinions that the construction growth during the boom may be related to the implementation of new large-scale projects of affordable housing construction with government support of the buyers in the form of subsidies and preferential rates for mortgage loans⁸². The decrease in economy-class housing construction is accounted for

⁷⁸ REGNUM, "The Real Estate in Armenia: The Paradox Instead of Supply and Demand", 25 November 2013. Available from <https://regnum.ru/news/society/1736499.html>, 25 November 2013, No. 949503.

⁷⁹ Ibid.

⁸⁰ Republic of Armenia, NSS, Construction in the Republic of Armenia, 2011-2015. Available from http://armstat.am/file/article/shinarar_2016_4.pdf

⁸¹ Republic of Armenia, NSS, *Statistical Yearbook of Armenia 2015*, Table 229, "Volume of Construction by Types of Economic Activity." Available from <http://www.armstat.am/file/doc/99493658.pdf>

⁸² REGNUM, "National Statistical Service: The Annual Decline in the Construction Sector in Armenia has Exceeded 8%", 31 January 2014. Available from <https://regnum.ru/news/economy/1761438.html>

by the reduction of funds from the public budget, and the insufficient paying capacity of the population.

In order to stimulate housing construction and activate the primary housing market, some amendments were made to the 2010 Law “on Income Tax” at the end of 2014. Pursuant to these amendments, in cases where apartments are purchased directly from the developers in the context of implemented public and municipal housing programmes, or in cases where the loan is used for the construction of a private house, citizens have the option of using their income tax to repay mortgage loans.

H. Mitigation of natural disaster risks

Armenia is prone to natural disasters, and is located in a high-risk zone. According to the World Bank, Armenia is one of the 60 most disaster-prone countries in the world.⁸³ Out of all known disasters, nearly 110 are typical for Armenia, and some of them are even considered to be frequent and dangerous to life and the health of the population (earthquakes, floods, landslides, rockfalls, mudflows, lightning, hail, droughts, land subsidence, and forest fires). This is caused by the varied landscape of Armenia, which has steep mountain ranges and valleys, and its distinctive feature is a significant variation in elevations above sea level (the difference between the heights is up to 3,500 m).

Risks related to geophysical hazards are very high because it is located in one of the most earthquake-prone regions in the world. According to the Rescue Service of Armenia, under the MES:

- 100 per cent of the area is prone to powerful earthquakes;
- 30 per cent to mudflows and flooding;
- 17 per cent to thunderstorms with hail;
- 15 per cent to droughts;
- 12 per cent to ground frosts;
- 4.1 per cent to landslides; and
- 0.5 per cent to downfalls and rockslides.

More than 80 per cent of the total land area is prone to erosion, salinization or alkalization, excessive moisture and flooding.

In addition to the threats mentioned above, there are also problems regarding the safety of the Armenian NPP (see discussion in section D.1 of this Chapter).

The Rescue Service and Crisis Management National Academy, under the MES, developed a risk matrix for the 10 regions of Armenia and the city of Yerevan. Each region was given a rating of potential damage from each disaster, where 0 means no damage, and 1 means danger (Annex I). This matrix shows that each region is prone to considerable risk of earthquakes, hail damage and flooding. In fact, according to the Natural Hazards Assessment Network (NATHAN), 100 per cent of the land area is vulnerable to earthquakes, 98 per cent is prone to droughts, and 31 per cent is at risk of flooding. The following sections address specific natural disasters.

⁸³ Disaster risk mitigation and emergency management in Armenia: the Global Facility for Disaster Reduction and Recovery (GFDRR).

Earthquakes

Armenia is situated at the crossroads of major tectonic faults in a seismically active region. According to historical and paleoseismic estimates, the magnitude of earthquakes may be up to $M=7.1$. The average depth of an earthquake centre is 10 kilometres. All seismic sources are located on active faults with an average slip rate of 1cm per year. The duration of seisms during devastating earthquakes may be one minute under adverse conditions. The average recurrence interval of powerful earthquakes ($M>5.5$) is approximately 30 to 40 years. The above-mentioned characteristics of the seismic regime testify to a high level of seismic hazard, and Armenia ranked first among the countries susceptible to earthquakes. Relative susceptibility calculations were based on the number of victims per million citizens between 1980 and 2000.⁸⁴ The Armenian index is 76,532, while the index of Turkey, which also experienced devastating earthquakes over those years, is only 346. These figures depend on the number of citizens who suffered from the earthquakes, as well as the average number of victims per year.

According to historical data, the following devastating earthquakes were registered in Armenia:

Year	Location	Magnitude
893	Dvin	6.5
1679	Garni	7.0
1827	Tsakhkadzor	6.5
1840	Ararat	6.7
1988	Spitak	7.0

The Spitak earthquake in 1988, with a magnitude of 7 on the Richter scale, took the lives of 25,000 people, of whom 6,000 were school children, and 517,000 people were left homeless. Since that year, this area has experienced 66 earthquakes with magnitudes ranging from 4.5 to 7. Eight of these earthquakes occurred in Armenia and 58 in neighbouring countries.

After the Spitak earthquake, the Government reorganized its emergency management system. It established, among other things, the MES and the National Survey for Seismic Protection. It appointed a minister responsible for disaster response. It also adopted important laws and resolutions on seismic hazards reduction and emergency management.⁸⁵ In addition, design and construction regulations were revised and updated to reflect the actual seismic hazards and to ensure more accurate identification of the seismic load on buildings and structures during the development of design and cost estimate documentation.

The National Strategy on Natural Disaster Reduction, adopted in 2012, ensures the creation and development of an effective system for disaster risk reduction as one of the most important factors for the sustainable development of the country. The aim of this Strategy is to strengthen disaster resilience, to improve the safety of individuals and society as a whole, and to contribute to sustainable development. The Strategy defines seismic hazards as the main risk of major disaster for the country.

⁸⁴ United Nations Development Programme, *Reducing Disaster Risk: A Challenge for Development*, (New York, USA, John S. Swift Co., 2004). Available from http://www.preventionweb.net/files/1096_rdenglish.pdf

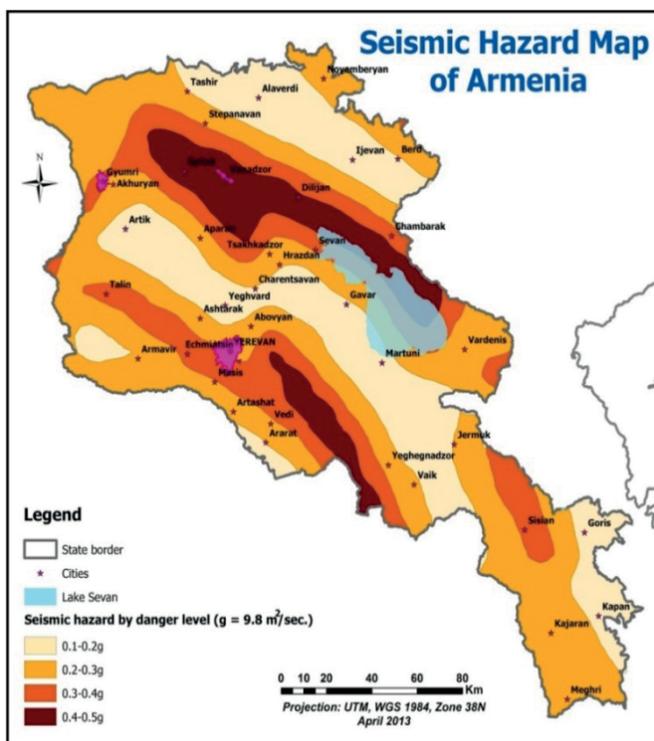
⁸⁵ Law "on Seismic Protection", of 12 June 2002; Law "on Rescue Service of Armenia", of 8 July 2005; Resolution No. 237 "on Designation of the List of Facilities of Critical, Significant and General Importance in the Sphere of Seismic Protection" of 2003; and Resolution No. 392 "on an Integrated Programme for Seismic Risk Reduction in the Territory of the Yerevan" of 1999.

Earthquakes are a major threat to social and economic development in many countries. The number of victims of recent earthquakes in the urban areas of the region exceeds the number of victims of other disasters.

The unprecedented rate of urbanization in Armenia makes cities more vulnerable to natural disasters, especially because in urban areas the risk of disaster is higher and, since the urban population is poor, they are more at risk. Consequently, 2,541,200 people in 48 cities of Armenia live in seismically active areas.⁸⁶ Notably, 40 per cent of the population lives in Yerevan. The latest estimate of seismic hazards in Yerevan showed that earthquakes with a magnitude of 7.3 can cause serious damage to 15 per cent of the housing stock of the city, along the Garni fault, thereby potentially increasing the number of possible victims and people who could suffer severe injuries to 8 per cent of the population of Yerevan (approximately 90,000 people).⁸⁷

The objective of Armenia should be the creation of an earthquake-resistant infrastructure and the reduction of expected losses. This task is difficult because there is limited knowledge of real seismic hazards and of the vulnerability of the infrastructure. It is necessary to have precise estimates of seismic hazards to protect the population and to ensure sustainable economic development of Armenian cities.

Figure V
Seismically hazardous areas in Armenia



Landslides and mudflows

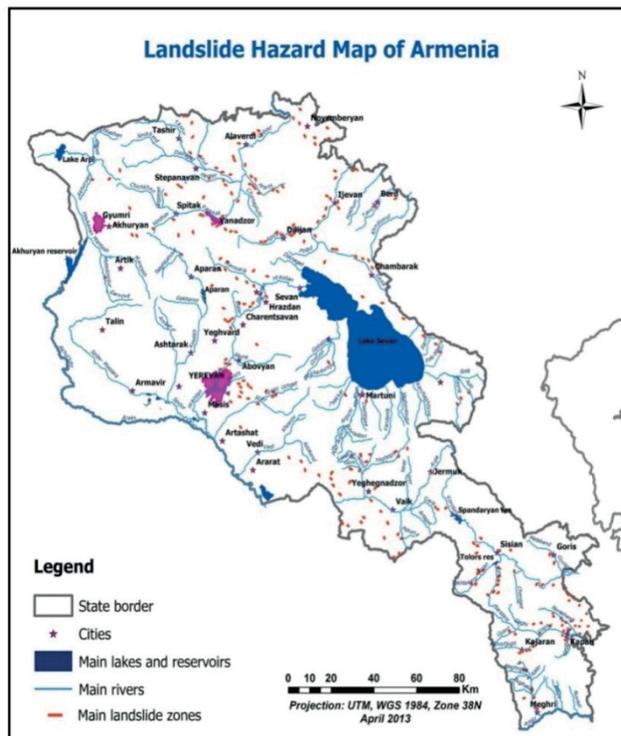
The most dangerous natural disasters (such as landslides, floods, rockfalls and flash floods) are directly or indirectly related to specific environmental conditions. Climate change may affect the frequency and geography of these disasters in Armenia.

⁸⁶ The Armenian Red Cross Society, Emergency Situation Plan, final draft. (Yerevan: Red Cross, 2007).

⁸⁷ Institute of Geological Sciences, National Academy of Sciences of Armenia, Scenario for the city of Yerevan, 2013.

Recently, landslides have occurred more often and over a larger area of the country due to the impact of changing external factors, notably meteorological factors. A comprehensive study of the landslides showed that an area of 122,000 hectares, which is 4.1 per cent of the total land area with 35 per cent of the total population, is prone to landslides. According to recent studies by the Japan International Cooperation Agency (JICA), 233 communities (approximately 25 per cent) are fully or partly situated in a landslide area. Landslides affect residential houses, public infrastructures and important institutions in hundreds of communities, including 1,774 hectares of residential areas (5.2 per cent of the total residential area), 240 km of roads/highways (3.2 per cent), and 4.8 km of railways (0.5 per cent of the total length).

Figure VI
Landslide-prone areas in Armenia



Calculations show that social and economic losses caused by the 2004 landslides were more than USD 43 million. The landslides occur mainly because of heavy rainfall. The JICA studies showed that leaking domestic and irrigation water supply systems may also cause landslides. The United Nations Environment Programme (UNEP) arrived at the conclusion that water leaks, caused by the improper operation and maintenance of irrigation, water supply and sewage systems, create conditions conducive to the occurrence of landslides in Yerevan and nearby towns.⁸⁸

Reactivation of landslides is related to changes in the balance of water circulating in the layers of soil. Flows mainly originate in the river valleys of Ehegisa, Azat and Vedi on the north-eastern shore of Lake Sevan, in the neighbourhood of Ijevan and in other areas of the country. In 2007, abundant spring rainfall, which oversaturated unstable layers of soil, provoked landslides in the administrative area of Urtsadzor (ground water caused a severe landslide). The landslide moved 8 km down the slope and created ten-meter mounds of stones and dirt.

⁸⁸ UNEP, *Caucasus Environment Outlook (CEO)* (Tbilisi, Georgia, New Media Tbilisi, 2002). Available from <https://wedocs.unep.org/rest/bitstreams/17437/retrieve>

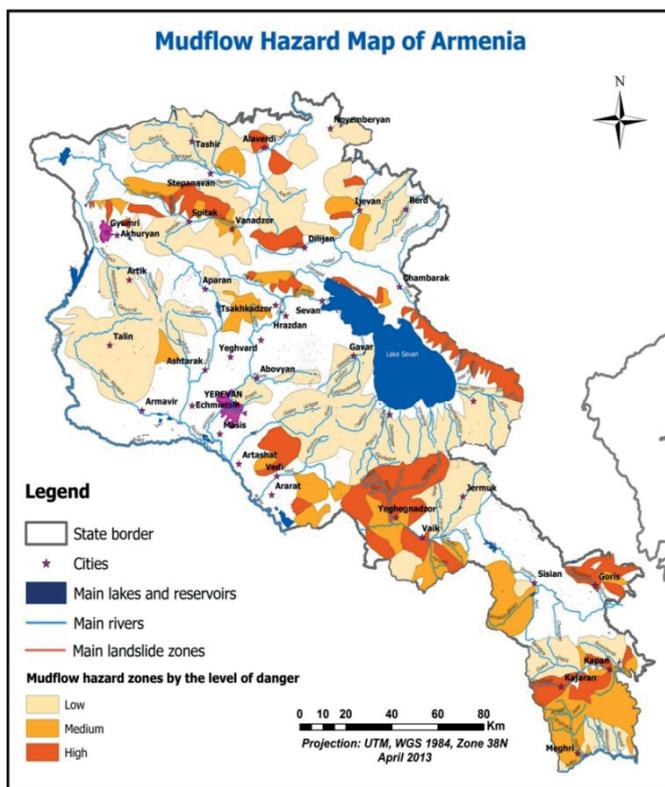
Basically, landslides occur over large areas. This is due to the influence of changing external factors, notably meteorological ones. One example is a landslide on the M-6 highway near Ayrum, in which several people were killed. This devastating landslide was the result of heavy rainfall, which dramatically increased the level of groundwater. Such a situation could also occur on a stretch of railway tunnel in Djadjur, an area prone to landslides.

More than half of the land area of Armenia is prone to mudflows, especially in mountainous areas at medium altitude. Mudslides threaten Yerevan, Vanadzor, Gyumri, Kapan, Goris, Alaverdi, and several other settlements. Rural communities, highways and railways also periodically suffer from them. Between 2004 and 2007, mudslides caused damage to about 200 settlements and 600 sections of major transportation routes.

Average annual losses caused by mudflows over the past four years amounted to USD 2.9 million (at the December 2011 exchange rate).

Mudslides are activated by heavy rainfall, as well as by denuded and weathered masses on steep slopes. It is necessary to address the problem of mudflow proneness, and develop measures to adapt to them.

Figure VII
Mudflow-prone areas in Armenia



Flash floods and floods cause serious harm to almost all the regions, particularly to the economy of the northern regions. Flooding caused the Aghstev River to overflow, and a landslide near Haghartsin blocked the riverbed causing the flow of the river to alter its direction. This flooded parts of the M-4 highway, residential areas and orchards.

Floods are directly associated with high levels of ground water and their hydrodynamic characteristics, which result from atmospheric precipitation. Floods periodically occur in the valleys of Ararat and Shirak, as well as in some areas of the following regions: Tavush, Vayots

Dzor, and Syunik. Most of the flood-prone areas are located in the Ararat Valley, where the groundwater level ranges from 0 to 2m.

According to the 2010 statistics of the MUD, there are 45 rockslide-prone cities. The most vulnerable cities are Vanadzor, Alaverdi, Akhtala, Gavar, Kapan, Meghri and Agarak. The risk area includes 703 single-family houses and 6 MABs in cities and rural communities. Rockfalls also occur in the administrative district of Yerevan, especially in the gorge of the Hrazdan River.

Despite the fact that there are few avalanches in Armenia, they pose a threat to settlements and transportation routes. The most vulnerable areas are the highlands of Zangezur, Vardenis, Bazum and Aragats, which have following characteristics: five avalanches per km², one occurrence per year, and a maximum volume of 100,000 m³. This natural phenomenon also affects the basin of the Yeghegis river, the area around Yeghegis, and the villages of Arates, Sers and Shishkert.⁸⁹

Technological (man-made) disasters

Technological (man-made) disasters are an important source of risk to the lives of people, the environment, property, etc. Armenia has 26 chemical factories that use ammonia, chloride, chloric acid, nitric acid and other chemicals. More than 1,500 companies are vulnerable to fires and explosions. The Armenian NPP is located in a seismically active area. Armenia also has more than 80 water reservoirs, 21 waste repositories (7 of which have been mothballed), etc, which, if damaged, could be a risk.

Thus, a large number of settlements and infrastructures in Armenia are prone to natural disasters. These can be described as being in vulnerable areas, since their spatial location (in terms of natural disasters) is considered to be unfavourable because of their geography. Extraordinary atmospheric phenomena are growing in number and intensity, increasing the frequency of high-risk situations. In recent years, the Government adopted a number of decisions as the basis for the development of programmes and projects for risk assessment, and for methods of forecasting and preventing disasters. These are also aimed at taking protective engineering actions in Armenia.

Over the last five years, disaster recovery actions were carried out throughout the country; they were based on the de facto concept. Some of these actions taken were: the reconstruction of the interstate Vanadzor–Alaverdi road, which was destroyed by the Ayrum landslide; measures to prevent rockfalls in the Hrazdan gorge in the Yerevan administrative region; protection of the banks of the Arax against spring floods in the Ararat Valley, etc. However, it should be noted that, in recent years, the Government has not taken coordinated, comprehensive and consistent actions to protect all settlements and infrastructures.

⁸⁹ Republic of Armenia, *Third National Communication (TNC) on Climate Change of the Republic of Armenia* (Yerevan, Armenia, Lusabats Publishing House, 2015). Available from <http://unfccc.int/resource/docs/natc/armnc3.pdf>

CHAPTER III

Urban Development and Urban Planning

A. Main drivers of urban development and historical trends in urbanization

The growth of the urban population in Armenia has closely reflected the country's changing social and economic circumstances over the past century. Industrialization during the Soviet period from the 1920s onwards, combined with the mass influx of refugees from Eastern Turkey and, later, from the Armenian diaspora in the Middle East, led to rapid urban population growth until the late 1980s.

The fall of the Communist regime and collapse of the USSR in the 1990s led to the closure of industrial enterprises and the privatization of land in villages, and an increase in the rural population as people moved back to the countryside. This was exacerbated by high rates of emigration, causing the urban population to fall by almost 600,000 between 1991 and 2011. However, rates of emigration have decreased drastically in recent years, the population decline has slowed, and a moderate influx of Armenians returning to Armenia has contributed to the renewed growth in urban population.

Table 12 shows recent trends in the urban and rural populations of Armenia, which underline the decline in the total population of the country and that of its urban areas which has now stabilized.

Table 12
Urban and rural population dynamics

Year	<i>Population, thousands, at the beginning of the year</i>			<i>Percentage of total population</i>	
	<i>Total</i>	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>
1991	3 574.5	2 473.6	1 100.9	69.2	30.8
1995	3 260.3	2 166.4	1 093.9	66.4	33.6
2000	3 226.9	2 095.8	1 131.1	64.9	35.1
2001*	3 213.0	2 066.1	1 146.9	64.3	35.7
2011*	3 018.9	1 911.3	1 107.6	63.3	36.7
2014	3 017.1	1 914.1	1 103.0	63.4	36.6

Source: Armenia, NSS.

*According to population census of this year.

Patterns of urbanization across the country

In spite of Armenia's recent downward trend in urbanization, it remains highly urbanized with over 63 per cent of its population in urban areas. More than half of the country's urban population (1,068.3 million as of 1 January 2014) is concentrated in the capital of Yerevan.

Urban areas in the country can be divided into four broad categories:

- The capital, Yerevan, which is a community in its own right as confirmed in the Armenian Constitution and the Law “on Local Self-Government in Yerevan City” adopted in 2008;
- Secondary cities such as Gyumri, Kapan and Vanadzor;
- Cities with industry and agri-processing potential such as Armavir, Artashat, Ashtarak and Ararat; and
- Cities with high tourism potential such as Dilijan, Jermuk, Sevan and Tsaghkadzor.

These 12 cities generate around 90 per cent of Armenia’s GDP.

Of the country’s secondary cities, only two – Gyumri (121,976) and Vanadzor (86,199) - had populations of more than 80,000 at the time of the 2011 census. All of the remaining cities have populations of 50,000 or below.

The dominance of Yerevan compared to the rest of urban Armenia is striking, and raises issues about whether more can be done to achieve a better spatial balance between cities in other regions of the country.

Armenia’s smaller and medium-sized towns play an important role in their regions but have also experienced a major reduction in their populations since Soviet times. The population of Gyumri, which suffered a catastrophic earthquake in 1988, has decreased by over 100,000, from a peak of 222,000 in 1984. Vanadzor saw a fall of over 62,000 until 2011, from a population of 148,876 in 1979.

Armenia has 12 towns with populations of between 20,000 and 50,000, including Vagharshapat, Abovyan, Kapan, Hrazdan and Goris. A further 12 towns have populations of between 10,000 and 20,000, and 13 of between 5,000 and 10,000. These smaller and medium-sized towns perform a variety of roles, mostly as service centres for the surrounding rural areas but some of them are also mining centres, like Kapan, or were planned as new industrial settlements during the period of Soviet rule, such as Hrazdan.

The remaining nine urban areas have populations of under 5,000. Table 13 shows the distribution of the urban population and 49 urban settlements by different size bands.

Table 13
Cities of Armenia by population size group

<i>Population size group</i>	<i>Number of cities</i>	<i>Name of cities</i>
Over 1 million	1	Yerevan
100 000 – 1 million	1	Gyumri
50 000 – 100 000	1	Vanadzor
20 000 – 50 000	12	Vagharshapat, Abovyan, Kapan, Hrazdan, Armavir, Artashat, Ijevan, Gavar, Goris, Charentsavan, Ararat, Masis
10 000 – 20 000	12	Ashtarak, Artik, Sevan, Dilijan, Sisian, Alaverdi, Stepanavan, Martuni, Spitak, Vardenis, Yeghvard, Vedi
5 000 – 10 000	13	Byureghavan, Nor Hachen, Metsamor, Berd, Yeghegnadzor, Tashir, Karajan,

Aparan, Vayk, Chambarak, Maralik,
Talin, Noyemberyan

Below 5 000

9

Jermuk, Meghri, Agarak, Ayrum,
Akhtala, Tumanyan, Tsaghkadzor,
Shamlugh, Dashtakert

Source: Armenia, NSS, 2011 Population Census.

Impact of urbanization – key challenges and opportunities

The pattern of urbanization in Armenia has resulted in Yerevan, as the capital and largest city in the country, dominating its economy and society. As a primate city, it hosted over 35 per cent of the country's total population in 2011 and accounted for over 60 per cent of its GDP. It hosts many of the national cultural, scientific, artistic and sporting institutions, as well as being an industrial centre and the seat of national government. It is also a major educational centre, hosting 45 of the country's 56 universities. The city has undergone a major transformation since Soviet times. Many parts of it have benefitted from new construction since the early 2000s, with new commercial and residential districts which have helped revive the city.

The concentration of economic, cultural, academic and governmental institutions in Yerevan has brought urban agglomeration benefits in terms of increased growth and productivity. However, it has also brought increased traffic congestion, poor air quality, excessive noise, lost green areas and urban sprawl, putting pressure on an ageing urban infrastructure and increasing housing costs.

Outside of Yerevan, the next 11 largest cities generate 30 per cent of the country's GDP, but many are dependent on one industry and lack a strong economic base, which has led to unbalanced economic growth and development around the country.

Some secondary and smaller cities share common transport problems: poor and inappropriate road infrastructure; highly inefficient urban transport systems; and pollution. They need to revamp their urban services, particularly transport infrastructure, to boost competitiveness, provide more stable platforms for economic growth, serve growing and diverse urban mobility needs, and stimulate private sector investments.

Some of the overall challenges faced, resulting from the country's rapid urbanization are:

- Meeting the costs of retrofitting the older housing areas built (often to a low standard) in Soviet times, which are now owned by their tenants who can no longer pay for their upkeep. This is a major challenge not only in Yerevan but also in other Armenian cities that have lost their economic rationale with the collapse of their original economic base.
- Addressing the consequences of both rapid urban growth in the capital and urban decline in some smaller urban centres. Policy attention needs to focus on making all of them sustainable and desirable places with improved infrastructure.
- Ensuring that the growth that occurs in the future is sustainable, embodying best practices and addressing economic, environmental and social challenges in an integrated way.
- Addressing the continuing dominance of Yerevan in the national urban hierarchy. A review of how the Government wishes to shape the future of the country's whole urban system, including how investment will be made in Yerevan and in cities in other parts of the country, is needed for the promotion of balanced urban development.

These different challenges will need different responses. But many of the responses will be directly affected by political decisions made about urban areas. This constitutes a general challenge for governance at national, regional and local level, as well as for specific policy instruments to tackle these challenges.

There has been some decentralization, with growing responsibilities given to local community councils, and the direct elections of councils and mayors during the 1990s. These measures are a step in the right direction towards a more decentralized system. There have been some successes. It has been argued that fiscal decentralization has improved the flexibility and quality of local public services. But many observers and some interviewees argued that the process has a long way to go before it is complete.

Many ministries of the central Government were only established in the 1990s/early 2000s. Although, in the short term, capacity constraints required them to focus more on developing their role and policies at the national level, in a hierarchical rather than a bottom-up manner, many minor functions have been delegated to local governments. In the medium to long term, greater cooperation and coordination between national, regional and local government levels is needed, to empower regional and local economies to promote self-sustaining growth and to help reduce regional differences.

The Government has recognized the need to reform the policymaking machinery. It is exploring new principles and practices for future urban policy as part of its Habitat III preparations, with a proposed “New Urban Agenda”⁹⁰ which will address many of these concerns. Some of the proposed policy responses to these challenges are aimed at reducing the significant differences in income levels between the regions and increasing economic and cultural activities in urban areas by:

- Reducing technology gaps and raising the level of productivity in regions.
- Introducing IT in all spheres of social life and enhancing capacities for using them.
- Enhancing public-private sector partnerships in regions, particularly to improve infrastructure.
- Promoting and developing small and medium-sized entrepreneurship and tourism.
- Enhancing local government support for entrepreneurship in regions.
- Establishing branches of higher education state institutions in regions, to support innovation systems and infrastructure.
- Developing mechanisms for financing development programmes in regions, including establishing territorial development corporations and forming a local tax base.
- Developing large-scale territorial programmes, involving public and private investors, to support infrastructure development.
- Establishing environmentally-friendly small industrial enterprises processing agricultural products.
- Shifting from natural resource and labour driven development to investment driven development and, in the long term, to knowledge-based and innovation driven development.
- Improving the productivity of mineral and chemical industries, and creating large, higher added value centres based on high technology.
- Enhancing the tourism potential of the regions.

⁹⁰ Habitat III National Report, Annex to Government Protocol Decision No. 38 of 11 September 2014.

B. Urban development and spatial planning - including planning at national, regional and municipal levels

Legal and institutional framework governing urban and spatial planning

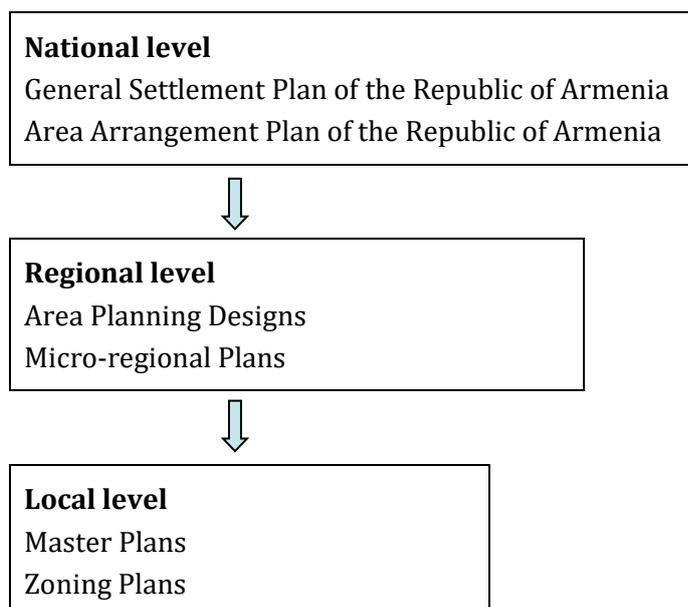
Spatial planning is a key instrument in establishing long-term frameworks for economic, territorial and social development within countries. The spatial planning system in Armenia has been influenced by the command economy and administrative arrangements established during the Soviet period. This imposed a planning structure that conformed with the role that was given to Armenia as part of the USSR's economic system. Now that Armenia is an independent state, its spatial development has had to adapt to the move from a centrally-planned to a market economy, with new economic, social and territorial priorities, including that of creating more effective conditions for decentralization and multipolar development.

Master Plans that were approved after the 1990s take account of market conditions and the fact that residential, commercial and most productive land is now in private ownership.

The Law "on Urban Development", adopted in 1998, sets out the rules and regulations governing both the development process and the spatial planning documents that must be developed at different levels - national, regional and local (Figure VIII).

Figure VIII

Spatial planning documents at different levels



Source: Habitat III National Report of the Republic of Armenia, September 2014.

At national level, the Armenian General Settlement Plan, approved in 2003, sets out the broad strategic direction of the Government's national urban development policy. It is an analytical document that draws on other legislation affecting urban development and the settlement system, and on relevant social, economic and territorial development programmes. It aims to create a safe and healthy living environment, sustainable development and the conservation of natural, historic and cultural heritage. The main provisions of the Plan have to be taken into account in the preparation of plans at other spatial levels, and in designing other social, economic and territorial development programmes in urban and rural areas.

The Plan is introducing a policy of restricting urban development in intensively developed areas, where 90 per cent of Armenia's 49 urban communities are located, where this could be harmful to the natural ecology of an area, to create a more balanced settlement structure.

The MUD was established in 1995 as the government department that oversees urban development and spatial planning. It is tasked with monitoring the operation of the General Settlement Plan, but this has not yet been undertaken.

At regional level, Area Planning Designs have been prepared for selected areas including the water catchment basin of Lake Sevan (2004), the Shriak region (2005) and the Vayots Dzor region (2010). Monitoring of these documents is undertaken at regional level. This work is funded by the state budget.

Responsibility for preparing Master Plans and Zoning Plans at the local level rests with local authorities. This is set out in the 2002 Law "on Local Self-Government", which sets out all of the rights and responsibilities of local authorities, including local planning and development. Urban development activities within the administrative boundaries of communities are regulated by both the Master Plan of the Community (Settlement) and the urban development Zoning Plan, which constitute "urban development project documents".

The general principles at national level underlying the production of planning documents are to achieve:

- a balance between development and nature conservation;
- social cohesion and support for a diversity of functions; and
- cost-effective management of urban communities.

The Master Plan provides the strategic spatial planning document for communities, and sets out:

- the main direction of spatial development of communities;
- the mandatory requirements for, and the limitations on, the use of land for urban development activity in a community;
- primary (up to 5 years), medium-term (5-10 years) and longer-term (10-15 years) stages for land use development; and
- the designated use of land parcels within the administrative borders of communities and/or the land use changes permitted by legislation.

By the end of 2009, the concept of reforming the development and approval processes of draft Master Plans was approved by the national Government and later, in June 2011, by the Armenian National Assembly through amendments to the Law "on Urban Development" and Law "on Local Self-Government". In order to facilitate the process of agreement, an inter-agency commission was established by the Prime Minister in 2009 to ensure that all of the relevant departments and institutions that need to be consulted on the documents have the opportunity to participate in the process at an early stage to help speed up decision-making. This commission is coordinated by the MUD and includes representatives of all the key agencies that need to be consulted.

The production of a Master Plan starts with the preparation of terms of reference (ToR) by the community leader. The ToR are submitted to the MUD for approval, which, in turn, consults the inter-agency commission. Once all the agencies have responded, the Ministry summarizes their conclusions and decides whether to approve the ToR of the Master Plan or suggests making some minor changes.

The process of approval by the inter-agency commission only applies to the ToR, and not the Master Plan itself. Once the ToR are approved, the community leader will then issue a call for competitive tender for the preparation of the Master Plan. Only special license holders are allowed to undertake this work.

According to the Law “on Urban Development”, regional and local authorities are required to hold public consultations on the provisions and ToR of the Master Plan, and on the Master Plan itself. The inter-agency commission acts as a coordinator for the involvement of relevant statutory bodies in the production of the Plan at all stages, and it can participate in public hearings. Once the Plan is finalized, it undergoes an expert Environmental Impact Assessment and, when this is finished, the Plan is sent to the organizations involved in the inter-agency commission for their agreement. If they disagree, they must substantiate their objections. Once the commission and the community organizations have all given their consent, the community leader holds a council meeting to approve the document.

So far, 43 out of 49 urban communities and 52 out of 866 rural communities in Armenia have approved Master Plans. Yerevan is a community regulated by a special law. The Master Plan of the city of Yerevan for the period up to 2020 was developed in 2005 and approved by Government Decision No. 443 of 24 March 2005.⁹¹

Enforcement of the Master Plan rests with the SUDI, which has responsibility for ensuring that development is in line with its provisions. At regional level, the head of the office of the region oversees compliance with Area Planning Designs.

The Master Plan arrangements in Armenia contain features that are consistent with the principles underlying spatial planning in Europe⁹², in particular:

- the parallel application of “top-down” and “bottom-up” principles in the hierarchy of spatial planning documents in the General Settlement Plan and Master Plans and Zoning Plans are similar to the arrangements in many European countries;
- spatial plans in many European countries are not always restricted by administrative boundaries but can be applied to areas that cut across administrative boundaries where there is an economic, environmental or geographic reason for planning on such a scale. The Area Planning Design for the Lake Sevan region is an example of this;
- in Europe, priority is given to securing effective public participation in all stages of developing planning documents. The need for public participation is recognized in the Armenian spatial planning system in accordance with the “Guiding Principles for Sustainable Spatial Development of the European Continent”, adopted in 2000 by the European Conference of Ministers responsible for Regional Planning (CEMAT)⁹³;
- the terms used in spatial planning in Armenia have their equivalents in international planning terminology but could be brought more into line with international best practice. The term “Master Plan”, for example, is less widely used in Europe these days. As spatial

⁹¹ UNDP, *Strategic Environmental Assessment of the Yerevan City Master Plan* (Yerevan, November 2005). Available from https://www.unece.org/fileadmin/DAM/env/eia/documents/SEA_CBNA/Armenia_SEA_Yerevan_en.pdf

⁹² Information based on interviews at the MUD; Sargis Tovmasyan, “On Possibilities of Application of German Spatial Planning Methodology in Armenia”, *Zvf*, Jg. 140, No. 1/2015 (January 2015), pp. 11-15. Available from <http://geodaesie.info/zfv/heftbeitrag/4328>

⁹³ Council of Europe, Guiding Principles adopted at the 12th session of CEMAT, Hanover, 7-8 September 2000. Available from http://www.coe.int/t/dgap/localdemocracy/cemat/VersionPrincipes/Default_en.asp

planning at the local level also includes rural settlements, perhaps Local Plan might be more appropriate.⁹⁴

Land-use zoning is the responsibility of local authorities. There is no separate law in Armenia governing this aspect of spatial planning. The basic provisions governing this sphere are contained in the Law “on Urban Development”, which includes Article 14.1 - Principles of spatial zoning; Article 14.2 - Types of zoning; Article 14.3 - Regulation of urban development activities in administrative borders of the community; and Article 17 - Urban planning documentation. Further legislative regulations and details of matters regarding the development of spatial planning documents are set out in a number of resolutions of the Government (N408 of 14 May 2001, N2164-H of 19 December 2002, N997-H of 08 August 2003, and N1920 of 29 December 2011).

It is unclear to what extent comprehensive land use zoning plans developed by local communities have been subject to public consultation process. Lack of financial resources hampered the development of master plans and the drafting of zoning plans in many communities, and, thus, land-use zoning tended to be a response to land development proposals, rather than being based on a “plan”. Nowadays, the development of land-use plans is included in Master Plans. There were problems of illegal, uncontrolled development in some communities, which was difficult to monitor. The MUD developed a draft amendment to the Code “on Administrative Infractions”, toughening the sanctions for non-compliance with the conditions of spatial planning documents. The bill was adopted by the Armenian Government and was sent for approval to the National Assembly in November 2015.

C. Development, management and basic principles of the five-year⁹⁵ Community Development Programme

Since the collapse of the Soviet Union, local government in Armenia has made great strides to develop strong public institutions that are close to the people and capable of providing quality services, and that address the needs of local residents.

The 2002 Law “on Local Self-Government” regulates the roles of local government bodies, including the mayors’ and councils’ responsibilities. It also regulates the relations between State authorities and local self-government bodies. Local governments (mayor and local community council) are elected for a five-year term. One of the major documents that direct the activities of the local government is the five-year development programme. This document contains the strategy of the local council for its term of office.

On election, the Community Leader or Mayor sets out a five-year Community Development Programme, and submits it for the approval of the newly elected Community Council. The Community Development Programmes are of crucial importance. They are intended to express the needs of the community, and serve as the basis for the annual budgets awarded to the local council.

The Programme is medium-term and is a part of strategic planning. It includes the surrounding environment which affects the development of the community, and should provide:

⁹⁴ In the UK, for example, Local Plans produced in consultation with the community are the cornerstone of spatial planning and can cover both urban and rural areas. Source: “Local Plans”, *GOV.UK*, 1 January 2012. Available from <https://www.gov.uk/guidance/local-plans>

⁹⁵ In accordance with the amendments to the Constitution (Chapter 9, Article 181) approved by the referendum on 6 December 2015.

- a general analysis of socio-economic conditions in the community;
- a community strategy and the main goals of the programme;
- a list of community projects including those to be funded from local and state budgets;
- cost estimates for each individual project;
- an assessment and prioritization of sectoral problems and projects for implementation;
- basic indicators for reviewing the implementation of the Programme.

The Programme should involve the local community in its preparation, so that their needs and concerns can be properly reflected in it. A statement on how it will be implemented has to be agreed by the Community Council, which also scrutinizes how the budget is spent and checks that projects funded by it are undertaken effectively and efficiently. An annual report on budget expenditure is submitted to the Council at the end of each year.

A review and analysis of Programmes in 2012⁹⁶ suggested a number of shortcomings that need to be addressed to improve the process:

- Programmes are often simply a repetition of a Mayor's or Community Leader's election campaign programme or "wish list", rather than providing the strategic direction required for effective community and spatial planning. They also often lack a project feasibility analysis and a realistic assessment of the funds needed to implement them.
- Programmes are often repeated year after year without any revision and have no role in the actual formulation of municipal budgets.
- The formal budget process, which the Programme is meant to influence, is not always respected, and Community Leaders sometimes take decisions without consulting the Community Council.

In order to improve the development process and the implementation of the five-year Programme, several activities were carried out. In particular, the Law "on Local Self-Government" had a number of amendments and changes. The notion of Community Development Programme was defined, and its approval and amendment processes were clarified. The Programme prerequisites are now fixed, and a methodology has been developed and provided to communities to develop and manage their Programme. The methodology is on the official website of the MTAD.

D. Regional development in Armenia

The transition from a centrally-planned to a market economy has caused an increase in regional disparities in Armenia. This process has been characterized by the disproportionate growth of Yerevan's share of national GDP compared to most other regions.

In 2012, Yerevan had a GDP per capita level almost 52% above the national average level. The only other region with an above average level was Syunik – with more than 33% above. All other regions had levels that were significantly below the mean national figure - on average around 67% (Table 14). The most unfavourable situation was recorded in the regions of Lori, Tavush,

⁹⁶ Tatevik Teroyan, "Local Government in Armenia: Review and Analysis of Four-year Community Development Programs", an internship policy paper submitted to the faculty of the Graduate School of Political Science and International Affairs for partial fulfillment of the degree of Master of Arts, American University of Yerevan, June 2012. Available from https://dspace.aua.am/xmlui/bitstream/handle/123456789/548/Tatevik_Teroyan.pdf?sequence=1

Vayots Dzor and Shirak, where per capita GDP in 2012 was between 53% and 63% of the national average figure.

Table 14
Per capita GDP ratio of Yerevan and regions of Armenia to country average, 2009-2012

<i>Region</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2012 Per capita GDP Index (2009 = 100)</i>
Yerevan	172.3	162.3	148.7	151.7	117.6
Aragatsotn	65.0	95.4	78.6	82.6	169.8
Ararat	68.2	74.2	73.8	71.1	139.2
Armavir	67.4	62.1	70.6	67.0	132.9
Gegharkunik	63.9	68.2	74.6	69.7	145.7
Lori	42.4	47.5	59.3	52.7	166.1
Kotayk	66.9	65.3	70.5	78.4	156.5
Shirak	57.6	54.4	65.0	59.7	138.4
Syunik	97.1	133.9	140.2	133.5	183.6
Vayots Dzor	52.1	55.1	59.5	57.7	147.8
Tavush	39.5	46.4	54.8	62.6	212.0
Total	100.0	100.0	100.0	100.0	133.5

Source: Calculated and estimated based on NSS data. Extract from Armenia Development Strategy 2014-2025.

This uneven economic development reflects the dominance of Yerevan in the national economy. Some regions – Syunik and Tavush – saw rapid economic growth between 2009 and 2012, but in most others, economic conditions were much less favourable, reflecting their relatively weaker economic situation and geographic remoteness from Yerevan. Many of these regions rely heavily on agricultural production, with a less well developed business environment, low productivity levels and high unemployment rates that exacerbate levels of inequality and poverty.

Yerevan dominates the country’s economic growth performance and has the highest levels of non-agricultural employment and the lowest poverty rates in Armenia. Community-level disparities contribute to disproportionate development. These reflect unfavourable socioeconomic and demographic conditions, including a lack of infrastructure to support development, especially for settlements located far from the capital, those located in border regions and in mountainous areas, and those with unfavourable climatic conditions.

The Armenia Development Strategy for 2014-2025 highlights a range of challenges that need to be addressed by a targeted regional development strategy. They include:

- Deepening regional economic development disparities;
- Deepening disparities in social development and wellbeing/poverty levels;
- The need to improve the quality, accessibility and effectiveness of infrastructure, and the delivery of local and public services in regions, particularly rural communities;

- The need to coordinate and improve the effectiveness of public, private sector and donor investment in regional development and the implementation of relevant programmes;
- The need for reforms in regional administration, particularly the expansion of intercommunity cooperation and the enlargement (consolidation) of rural communities to form bigger administrative units;
- The need for financial and institutional capacity-building of regional administration and local self-government bodies;
- The application of principles and best practice in local government development programmes; and
- The need for a multidimensional review of the credit needs of administrative and regional bodies to support their socioeconomic development.

On the urban development side, efforts are already underway to address some of these issues.

Improvements have been made to the business and investment environment, with the consistent regulation of services and administrative procedures for businesses. Some of the initiatives taken were the streamlining of procedures to obtain permits and licenses, and the introduction of an electronic system for obtaining construction permits and granting licenses. These electronic systems provide simpler and more transparent procedures, with less control by others, which reduce the risk of corruption. Continuous reforms are being made to improve the business and investment environment in Armenia. In this regard, a decree on approving the programme of business environment improvement in Armenia was approved (Government Decree N 240-A), containing a number of initiatives on reforms. Moreover, the Development Strategy specifies that the improvement of the business and investment climate remains a priority. The Armenian National Assembly also adopted corresponding amendments to the 1998 Law “on Urban Development” in March 2011.

The draft Law “on Site Development of Yerevan Downtown”⁹⁷ (sub-point 1 of point 19) was approved by the Government in September 2015⁹⁸. This is intended to prevent the growing threat of over-urbanization of “downtown” Yerevan by setting building density limits that will allow for investment in development projects to be directed to other areas of Yerevan, particularly suburban areas, where there is also a need for development.

The ADB and the Government of Armenia have developed the “Sustainable Urban Development Investment Program” (website- <http://www.sudipyerevan.am/en/>) – a USD 400-million financing facility to help boost urban development, particularly in urban transport, by supporting priority infrastructure projects. The first project financed by the investment programme is the construction of a north-south road in Yerevan to relieve traffic congestion in the city.

Moreover, the ADB is working with the MTAD on a technical assistance project to help four secondary cities in Armenia – Gyumri, Vanadzor, Dilijan and Jermuk – to improve their Urban Development Investment Plans (UDIP). These Plans will focus on developing a strategic vision for each city in the medium and long terms, with particular emphasis on tackling challenges and promoting projects relating to urban transportation, water supply and wastewater collection, solid waste management, district-based central heating, housing, economic development, logistics, tourism, and street lighting. The UDIPs will last 10 years. They are being developed within the framework of the Sustainable Urban Development Investment Programme, and projects identified in the UDIPs may be financed by it.

⁹⁷ Republic of Armenia, Law “on Site Development of Yerevan Downtown” of 7 March 2013 (draft).

⁹⁸ This law should also be approved by the National Assembly.

Gyumri and Vanadzor were selected as the Government has identified them as strategic cities for industrial renewal. Jermuk was selected as a priority for tourism development, and the ADB's technical assistance programme in Dilijan will complement other ongoing initiatives there. In the case of Gyumri, the information technology (IT) industry has been identified as a priority sector for economic development.

Other policies that are helping to reduce regional disparities are efforts being made to improve agricultural productivity and export production. There have been positive trends in the production of key crops that are helping the country to become more self-sufficient in food production and to increase exports in such areas as the production of wine and brandy.

The tourism sector in Armenia has much unused potential, both as a tool for supporting regional economic development and for fostering economic growth by developing a high-quality visitor economy. The Government has taken a number of decisions in recent years to declare selected cities around the country as tourist centres, including Tsaghkadzor, Jermuk, Tatev (and its eight nearest villages), Dilijan and Goris. Relevant action plans have been developed to promote tourism in these locations.

One of the challenges facing regional development and the efforts to decentralize more powers and responsibilities to the local level is the relatively small size of many towns and rural communities. Efforts are being made to address this issue by encouraging greater inter-municipal cooperation and enlargement (consolidation) of communities.

The legal framework governing the development of inter-municipal cooperation and the consolidation of communities is stipulated in the following documents:

- Articles 189 and 190 of the Constitution of the Republic of Armenia, amended in December 2015;
- 2002 Law “on Local Self-Government”; and
- 1985 European Charter on Local Self-Government, ratified by the government in January 2002.

The Law “on Local Self-Government” has been revised in recent years to encourage the creation of inter-municipal associations with the aim of encouraging municipalities to form voluntary associations to help to reduce the cost and improve the effectiveness and quality of delivery of services such as drinking water and the irrigation water supply, the repair of school buildings/ kindergartens/ hospitals and the improvement of inter-community roads.

Many of Armenia's disadvantaged smaller communities with small populations and limited budgets use inter-municipal associations for service provision and for such things as tax collection and waste disposal. There does not appear to have been a comprehensive assessment of the effectiveness of these inter-municipal associations but, according to popular opinion, there is a need to increase the institutional capacity and accountability of these associations to improve their ability to take on both voluntary and mandatory powers for a wider range of functions, such as social welfare delivery, training, environmental and nature protection, and natural hazard risk protection.

E. Smart cities

The “Smart City” concept, which has emerged in recent years, is closely linked to other types of city visions. It incorporates elements of the sustainable city (with its emphasis on sustainable development), the eco-green city (with an emphasis on environmental sustainability), the

resilient city (with its emphasis on adaptation and risk management) and the inclusive city (which emphasizes equitable placemaking and social inclusion).

The concept has a broad meaning but, in a nutshell, a Smart City is a one that is dynamic in implementing sustainable initiatives. It is, or should be, able to grant affordable and healthy housing, and reduce its consumption of energy and emission of pollutants. It also incorporates green, inclusive, healthy, compact, “smart” and resilient human settlements; promotes investment in its different sectors; and effectively manages its financial resources.

It presents an integrated approach to planning and construction, while supporting environmentally clean, affordable public transport, higher air and water quality, and efficient waste management. It supports the sustainable management of urban land, and transparent land and property registration. Its efficiency is improved by the use of innovative technologies and ICT within the different sectors. Furthermore, it encourages the cooperation of different partners in the public and private sectors, academics, NGOs, regulators, local authorities and citizens.

The City of Goris, in the Syunik region, has been selected as a pilot for a Smart City concept application within the framework of the UNECE’s “United Smart Cities” project (<http://www.unece.org/housing/smartcities.html>). This project is aimed at promoting sustainable urban development, especially in transition economies and developing countries. It envisages a better city through the use of intelligent planning and technological assistance. The UNECE describes the Smart City concept as a “city that is dynamic in implementing sustainable initiatives”.

The Smart City initiative in Goris was launched in February 2015 with an initial assessment mission by UNECE experts who are elaborating the main indicators for the project, in cooperation with the MUD, the Municipality of Goris, the UNECE, the UNDP, and the Regional Environmental Center for Caucasus, Armenia National Office.

Project experts, in cooperation with the local authorities and other local partners, have collected data and prepared city profiles for Goris. Further activities within the project’s timescale will be held in Goris City in partnership with national, local (authorities) and international bodies, including the European Acoustics Association (EAA), the UNECE, UN-Habitat, and the International Society of City and Regional Planners (ISOCARP). Seminars and presentations have been organized to raise awareness and build capacity to support the innovative concept.

The comprehensive Smart Cities initiative aims to improve key dimensions of cities, including:

- urban environment (construction, transportation, water supply and waste removal systems, energy services, and ICT);
- governance (intersectoral cooperation; cooperation between national, regional and local authorities; cooperation between other stakeholders; and the establishment of a multi-stakeholder platform);
- support for networking with other cities;
- social capital (education, social and gender equality);
- economic conditions (poverty reduction and employment generation);
- urban tourism; and
- protection and rehabilitation of architectural heritage, and cultural and natural landscapes, which is an important part of sustainable development, not only for Goris, but also for the whole country.

Goris provides an interesting demonstration for the application of the Smart City concept, and how it might be applied more widely in the country. However, there are issues that need to be considered in its application:

- focus on the Smart City concept must take full account of possible negative impacts, including costs, for the development of the new technological and networking infrastructure needed for a city to be “smart”;
- a focus on a long-term strategy is essential, as is a business model that supports this and secures buy-in from private sector as well as public sector investors;
- the high level of Big Data collection and analysis can sometimes raise concerns about levels of surveillance in “smart” cities and the potential loss of privacy by individuals and specific groups of people unless proper safeguards are built in;
- a focus on “smart” cities should not lead to ignoring other promising avenues for securing sustainable urban development.

F. Urban sprawl and its management

Following the collapse of the Soviet Union, unauthorized development in urban areas has contributed to urban sprawl. This has been exacerbated by the growth in private car ownership, micro buses and taxis, which was not anticipated when the Master Plan of the city of Yerevan was developed by academician Alexander Tamanyan in 1924. The Plan was the basis of the urban organization of the Armenian capital. These new circumstances have added greatly to air pollution and traffic congestion in the capital and in other Armenian cities.

The issue of sprawl is being addressed by spatial planning documents, which are being developed at the national level through the General Settlement Plan, and by cities and municipalities through the individual Master Plans. These are explained in an earlier section.

The SUDI has an important role to play in ensuring that the requirements of urban development comply with legally-agreed urban planning documents, so that wrong or illegal development is prevented. SUDI operates according to the 1998 Law “on Urban Development”, the Law “on Oversight and Control of Urban Development Activities” and the Charter of the Inspectorate, approved by the Government.

The concept of the compact city is one element of sustainable urban development for tackling urban sprawl. Urban sustainability is not just about environmental concerns, but also about economic viability, liveability and social equity. In recent years, there has been an increasing focus on the relationship between urban form and sustainability – the idea that the shape and density of cities can have implications for their future. Strong arguments have emerged from this debate that the compact city is the most sustainable urban form⁹⁹.

A compact city can be defined as a high-density urban settlement that has the following main characteristics:

- central area regeneration and renewal;
- high-density development;
- mixed-use development, including commercial and residential; and

⁹⁹ OECD, “Compact City Policies: A Comparative Assessment”, in *OECD Green Growth Studies* (Paris, OECD Publishing, 2012). Available from <http://dx.doi.org/10.1787/9789264167865-en>

- services and facilities such as schools, hospitals, parks and leisure facilities within walking distance or a short ride on public transport or bicycle from residential areas.

Within Europe and North America, policymakers and developers are increasingly looking at compact city policies in order to achieve a more sustainable urban form. Such policies involve the promotion of urban regeneration, revitalizing city and town centres, higher-density residential and commercial development, mixed-use development, the promotion of public transport, and the concentration of urban development at public transport nodes (transit-oriented development).

Compact cities have many potential benefits over urban sprawl, such as lower carbon emissions from reduced car dependency, reduced energy consumption, better public transport services, and increased overall accessibility. The re-use of infrastructure and previously developed (brown field) land, and the regeneration of existing urban areas, can contribute to increased urban vitality and a higher quality of life with the preservation of green space, and a more attractive environment for business and trading activities.

By European standards, most Armenian cities are already relatively compact given their relatively small size (apart from Yerevan), but unauthorized development on the outskirts of cities since independence is changing this through the growth of urban sprawl.

There is no single universal model for delivering compact cities. Approaches to promote urban intensification need to take into account different local opportunities and drivers. Some possible approaches that could be considered are:

- Greater decentralization of the powers and levers that Armenian cities need to drive development and growth in a more sustainable way¹⁰⁰;
- Involving local people and communities actively and creatively in decisions to enhance and improve places¹⁰¹.

G. Sustainable cities / green architecture

The principle of supporting sustainable urban development is already recognized in Armenian Government policy. The Armenia Development Strategy for 2014-2025, for example, highlights the role that cities can play, particularly in addressing the disparities in regional economic development and in promoting growth outside Yerevan, and the benefits that can flow from this in terms of well-being, employment and human development.

Armenia's Habitat III National Report, issued in 2014, also outlines current and future policy and action at city level that will help to address climate change and support urban and national sustainability. Some of the actions highlighted include:

¹⁰⁰ In the UK, the Localism Act 2011, for example, has reformed the UK spatial planning system to make it more democratic and effective, and devolved more powers from central to local government and local communities. An important provision is the "duty to cooperate" amongst neighbouring local authorities or groups of local authorities on spatial and land use planning issues. Such an approach can help to enforce policies of compact cities by encouraging public bodies to work together to enforce them and make a common cause.

¹⁰¹ Under the UK's Localism Act 2011, local communities now have the right to draw up neighbourhood development plans, saying where they think local housing, businesses and shops should go and what they should look like, provided this is in line with national planning policy and local authority strategies and local plans for the area. Local and city authorities must provide technical advice and support to local communities in drawing up their proposals. Neighbourhood plans do not take effect until there is majority support in a local referendum. This can help to ensure compact city policies not only reflect local conditions but have the support and endorsement of local communities.

- the ratification of the 2002 Kyoto Protocol to the Convention on Climate Change that has as its objective the mitigation of climate change by reducing greenhouse gas emissions and adaptation to predicted climate change;
- while Armenia has not committed to any specific quantitative reductions in greenhouse gas emissions, it has expressed a willingness to implement programmes of “low carbon development” where appropriate financial and technological support is available;
- measures for reducing carbon emissions in settlements, under the "Armenia: Improving the energy efficiency of urban heating and hot water supply" (2005-2012) project, funded by the Global Environment Facility (GEF) and supported by the UNDP. This, among others, resulted in the construction of a centralized heating system in the Avan district of Yerevan. The R2E2 Fund, under World Bank and GEF funding, has supported heating system rehabilitation and EE projects in public buildings;
- a landfill gas capture project, and a biogas plant – a methane utilization and combustion project - are being implemented in Nubarashen and Lusakert, respectively, under the Kyoto Protocol CDM mechanism;
- ten cities (Aparan, Hrazdan, Tsaghkadzor, Artik, Ashtarak, Dilijan, Gyumri, Spitak, Vayk and Yerevan) have joined the “Covenant of Mayors” Initiative, launched for the cities of the EU, are committed to reducing greenhouse gas emissions in their cities by 20 per cent by 2020, and have to develop sustainable energy action plans for that purpose.

All of these developments are welcome but there are further actions that should be taken, in addition to compact city policies, that would help generate a national framework for sustainable urban development.

Policies need to focus on economic competitiveness, social cohesion and environmental sustainability to achieve balanced and sustainable city development. An integrated approach is crucial. This is highlighted in the “Reference Framework for Sustainable (European) Cities” (RFSC) toolkit, endorsed by the EU and being implemented by a range of cities across Europe. The RFSC is an online toolkit designed to help cities promote and enhance their work on integrated sustainable urban development. It is available free of charge to all European local authorities, and offers practical support in integrating sustainability principles into local policies and actions.

Spatial planning guidance issued by central Government and local authorities can play an important role in helping to strike the right balance between supporting growth whilst protecting the environment for future generations. The UK’s National Planning Policy Framework¹⁰² sets out the Government’s planning policies and how these are expected to be applied. It has a presumption in favour of sustainable development, and refers explicitly to the key principle of the UK’s sustainable development strategy.

Policies need to recognize the importance of “liveability” or quality of life as crucial to economic success and urban sustainability, as this influences peoples’ choice of where they want to live. Central to this is good design and architecture, which is an essential element in making a compact, sustainable city. This is not just about making places visually attractive but it is crucial to how places function and the services they provide, and how we can help ensure we maintain sustainable cities.

Sustainable buildings/green architecture can play a key role in supporting low carbon development/climate change resilience in cities. Exemplar green architecture projects can show what can be achieved, and offer training in modern methods of construction/providing

¹⁰² United Kingdom, Department for Communities and Local Government, *National Planning Policy Framework*, London, March 2012. Available from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

opportunities for the exchange of learning/best practice in delivering low carbon development.¹⁰³

H. Architectural, historical and cultural heritage conservation

Armenia has an extensive legal framework on the regulation of urban activities, which makes it possible to ensure the preservation of the historical and cultural heritage and the historical environment, including the preservation of the country's architectural heritage. It includes the:

- Law “on Urban Development” (1998). This was the first law to address issues concerning the built environment;
- Law “on Preservation and Usage of Historical and Cultural Monuments and Historical Environments” (1998);
- Law “on Basis of Cultural Legislation” (2002). This elaborates cultural policy at national level;
- Law “on State-Owned and not for Alienation Historical and Cultural Monuments” (2003).

Four government ministries have responsibility for policies affecting the country's architectural and cultural heritage: the MTAD (dealing with regional development and local authorities), the MUD (responsible for urban planning and other aspects of the built environment), the Ministry of Culture (responsible for the preservation of historical and cultural monuments), and the Ministry of Economy (for tourism).

The country has a rich heritage of historical and cultural monuments, but this has been put under pressure from political changes, massive privatization following the Soviet period, and economic growth with the redistribution of wealth. This pressure has become evident in two ways:

- development pressures and new construction which has not always been sympathetic to some of the historical buildings; and
- damage to the landscape and settings of historical and cultural monuments and sites in urban and rural areas because of demographic and economic changes.

These issues are being addressed in a number of ways:

- National Guidelines on the State Assessment, Study, Preservation, Restoration and Use of Historical and Cultural Monuments have been approved by the Government. These define the procedures regarding the recovery/restoration of historical sites, and development in protection zones.
- National Guidelines for Developing Master and Zoning Plans set out the requirements for most of the local planning documents in the country. These also contain guidance on the preservation of historic and cultural buildings within the Plan area.
- Guidelines on the Implementation of National Landscape Policy. These were approved by the Government after Armenia joined the European Landscape Convention.

¹⁰³ Examples of sustainable/low carbon initiatives from the UK include the “Beddington Zero Energy Development” (BedZED) - an environmentally friendly housing development in south London, designed to create zero carbon emissions. It was the first large scale community in England to do so. (Source: <http://www.zedfactory.com/bedzed?q=node%2F102>). The “Smart LIFE” project in Cambridge offers professional and vocational training in sustainable and modern methods of construction, and provides practical demonstration projects and exhibitions. (Source: <http://www.kier.co.uk/case-study/view-all/smartlife-low-carbon-centre-cambridge/case-study.aspx>).

- The system of spatial planning documents at national, regional and local level also covers architectural and conservation issues including the General Settlement Plan of Armenia, Regional Plans for Marzes, and Master Plans and Zoning Plans for communities.
- Yerevan has a Master Plan for Historical and Cultural Monuments, developed for the capital. Another plan on similar lines is now being developed for Goris. In spite of the legislative framework, guidelines and system of planning documents, concerns are still being raised about the destruction of historic buildings and structures.

I. Spatial planning and urban development impacts on the environment and resilience to disasters

As discussed earlier, Armenia is located in a seismically active zone. Disaster risk reduction, particularly in relation to seismic risk and emergency management, is a key priority for all levels of government - national, provincial and local - including large cities.¹⁰⁴

A range of measures have been taken to address this issue and minimize the risk of environmental disasters and their impact. These include:

- Policies for disaster risk reduction have been developed for the whole country based on levels of disaster risk and how they should be tackled. In March 2012, the Government adopted Decision No 281-N “on Approving the National Strategy for Disaster Risk Reduction in the Republic of Armenia and the Action Plan for Implementation of the National Strategy for Disaster Risk Reduction”¹⁰⁵.
- Seismic hazard assessment maps are prepared based on guidance issued by the “Seismic Protection Service” of the MES. After their approval, they are being provided free of charge to the governors and heads of communities concerned. The seismic zoning maps at a micro level provide base data for use in the preparation of Master Plans and Zoning Plans.

In addition to seismic risk policy, climate change adaptation is a priority issue. As a mountainous, landlocked country, Armenia is characterized by vulnerable ecosystems, an arid climate, desertification processes, and frequent natural disasters. These make the country more sensitive to current and projected climate change impacts which affect urban as well as rural areas.

The Government is active in implementing public awareness-raising campaigns on climate change issues to reduce risks and enhance capacity-building to promote adaptation to climate change. The Government’s Third National Communication on Climate Change, published in 2015¹⁰⁶, sets out a wide range of measures, both implemented and planned, for addressing climate change issues.

Experience from Western Europe and North America shows that the Government alone cannot tackle the serious threat posed by climate change. A range of partners are needed at all levels if countries are to be successful in meeting the challenge of climate change head. Regions, cities, towns and neighbourhoods all have an important role to play.

¹⁰⁴ PreventionWeb, “National Survey for Seismic Protection of Armenia”. Available from http://www.preventionweb.net/files/30427_armenianationalsurveyseismicprotect.pdf; Republic of Armenia, Law “on Seismic Protection” of 12 June 2002. Available from <http://www.nssp-gov.am/Pdf/Law.pdf>

¹⁰⁵ Republic of Armenia, Government Decree N281-N of 7 “on Approval of the National Strategy for Disaster Risk Reduction in the Republic of Armenia and the Action Plan for Implementation of the National Strategy for Disaster Risk Reduction” of 7 March 2012.

¹⁰⁶ Republic of Armenia, MNP, *Third National Communication on Climate Change*, (Yerevan, Lusabats Publishing House, 2015). Available from <http://unfccc.int/resource/docs/natc/armnc3.pdf>

Chapter IV

Land Administration

Armenia declared its independence on 21 September 1991. That year, the Government launched timely decisive agrarian reforms countering the centralized, planned economy, in order to create the climate for a free market driven by private enterprise.

Several important projects funded by the World Bank and the Swedish International Development Cooperation Agency (SIDA), adopted in the early years of independence, laid the foundation for effective land administration in Armenia, and contributed to the privatization of almost the entire land stock. This transformation was the most comprehensive compared to all other former republics of the Soviet Union. Almost all agricultural land was transferred to private ownership, the cartographic coverage of Armenia was completed, all real estate was registered in the cadastre, property rights were secured, and a real estate transfer system was formed based on the effective registration of property rights. There is strong evidence that basic elements of stable land management system have been well implemented.

A. Regulatory and legal framework

The following documents provide the basis for land ownership rights in Armenia:

The Constitution of the Republic of Armenia (2005)

Article 31 - "Everyone has the right to own, use, dispose of and inherit property at their sole discretion. The right to property should not damage the environment or violate the rights and lawful interests of other persons, society or the State.

No one may be deprived of property except in the cases prescribed by the law under a judicial procedure."

Disposition of private property for the needs of society and the State may be carried out only in exceptional cases of prevailing public interest, pursuant to the law and with prior equivalent compensation. The Constitution restricts land ownership only in the following cases: "Foreign citizens and stateless persons cannot own land, except in cases provided by the law".

The Civil Code of the Republic of Armenia (1998)

"Property may be owned by citizens, legal entities, the Republic of Armenia or municipalities.

Laws establish special aspects of the acquisition and termination of property ownership, and its possession, use and disposition, depending on whether the property is owned by a citizen, a legal entity, the Republic of Armenia or a municipality.

The laws establish the types of property that can be owned only by the State or municipalities. The rights of all owners are equally protected."

The Land Code of the Republic of Armenia (2001)

"The Land Code takes into account environmental protection, and the economic and social significance of land for the population. It defines the basic directions of the state regulatory

system for improvements concerning land, the development of various organizational and legal forms of land economy, the fertility of the land, increasing land-use efficiency, and the protection and improvement of the environment, favourable for human vitality and health, and the legal framework concerning the protection of rights to land. Ownership, use and disposition of land must not harm the environment, or the security or defendability of the State; and must not violate the rights and legally defined interests of citizens and other entities.”

Furthermore, there are laws and decrees on land tenure and land management that arise from the above-mentioned Code:

- “on Property Tax” (2002);
- “on Land Tax” (1994);
- “on State Registration of Rights to Property” (1999);
- “on Electronic Document and Electronic Signature” (2005);
- “on Apartment Building Management” (2002);
- “on Geodesy and Cartography” (2001).

Despite the lack of a housing code in the land and property legal framework, the legal system has all of the following attributes of a fully functional system of land administration:¹⁰⁷

- Secured right to property and right to life tenure;
- The support of land and property tax;
- Loan security;
- Developed and controlled land market;
- Protected public lands;
- Decrease in land disputes;
- Simplification of land reforms;
- Improved urban development planning and infrastructure development;
- Support of environmental protection measures;
- Provision of accurate public statistical data for correct future forecasting and the preparation of possible solutions.

The law on land and property rights is comprehensive and fair: “A legal framework has also been established that eliminates the need for title insurance and the costs to property owners of paying lawyers’ fees involved in handling property transactions.”¹⁰⁸

In terms of reducing the costs of land transactions, it is difficult to overestimate the benefits the citizens of Armenia get from this legislative activity. Impartiality, combined with this law on land ownership, makes it accessible to everyone, regardless of their financial status.

B. State land cadastre of Armenia

An active and well-functioning land market needs authoritative and reliable public organizational structures to support its activities through good governance, reliable information, trust and transparency. Armenia has approximately 2.5 million land parcels, about 97 per cent of which are registered. The majority of unregistered land parcels belong to the State. The State Committee of

¹⁰⁷ *Land Administration Guidelines: With Special Reference to Countries in Transition* (United Nations publication, Sales No.E.96. II.E.7). Available from <http://www.unece.org/fileadmin/DAM/hlm/documents/Publications/land.administration.guidelines.e.pdf>

¹⁰⁸ Gavin Adlington and Anu Saxen, “Armenia Title Registration Project”, *Agricultural & Rural Development Notes*, Issue 39 (February 2008), p. 2.

Real Estate Cadastre (SCREC) is a public authority established by the 1999 Law “on State Registration of Rights to Property”. According to Article 6 of this Law: “The body authorized for the conduct of the state unified cadastre of real estate is the national body of public administration (hereinafter, State Register of Real Estate¹⁰⁹), which is responsible for the development and implementation of the overall real estate market policy within the territory of the Republic of Armenia, the state registration of rights to a property for the purpose of recognizing and guaranteeing rights and encumbrances to the property, and the establishment of an information system on property, the provision of information, and the management and supervision of the system’s activity.”

The SCREC is one of the six bodies under the executive structure of the Government. Registration, which is carried out by it, is guaranteed by the State, and the cadastre registry is open for public inspection. The SCREC is actually a separate ministry, and its head is accountable personally to the Prime Minister.

The Register of Land Cadastre is open for public inspection. It is used by citizens, local and regional authorities, and the central Government in the following manner:

- The central Government uses it for the adoption of decisions on the development of the regions and communities to promote effective economic policies. It is also used for the preparation of measures to be taken in the event of natural disasters, and for traffic management.
- Local authorities use it to collect fees for property taxes, land use and transport planning.
- Infrastructure providers of household services use the cadastre data for the coordination of provided services and infrastructure improvements.
- Property owners use the Registry to carry out property transactions.

The SCREC consists of a head office in Yerevan and a network of 44 service offices, which accept and process applications for registration of real estate ownership rights in performance of the functions of SCREC and provide the registration titles to owners. According to Article 8 of the Law “on State Registration of Rights to Property”, the SCREC shall establish its territorial subdivisions to implement the state registration of property within their territories. Each of these territorial subdivisions will be called Territorial Subdivision of SCREC (hereinafter, Territorial Subdivision). Databanks on real estate, and rights and encumbrances to it, shall be established in the Territorial Subdivisions and shall be considered part of the information system of the SCREC. The state registration of rights to immovable property shall be carried out in eight Territorial Subdivisions. Table 15 shows the composition of the SCREC staff.

Table 15
Composition of the SCREC staff

<i>Position</i>	<i>Location</i>	<i>Job Description</i>
Head of the State Committee Deputies Managers	Headquarters, Yerevan	
Expert	Geodesy centre Customer service centre	Land management (mainly land distribution) and cadastre activities (land

¹⁰⁹ The State Register of Real Estate is now the State Committee of Real Estate Cadastre (SCREC).

Registration Centre	surveying, development of a technical cadastre of buildings, apartments, formation of real estate and creation of cadastral files), maintenance of the State land cadastre, the State cadastre of buildings and structures, state registration of rights to immovable property (maintenance of the property rights registry)
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Source: SCREC

In 2013, the SCREC processed the following applications:

Table 16
Applications processed by the SCREC in 2013

<i>Type of business operation</i>	<i>Number of applications</i>
Disposition	48 716
Rent	8 542
Mortgage	24 055
Inheritance	20 754
Legalization	1 369
Other	87 254
Total	190 690

Source: Statistical Yearbook of Armenia, 2014.

Both seller and buyer can apply for registration. They can do this in person by visiting any service office of the SCREC, regardless of the location of the property, or apply online. Electronic filing of registration applications was approved by the Decision of the Government No. 165-N, dated 9 February 2012. This Decision makes it possible to file 10 different online applications for the registration of rights and restrictions, as well as other required documents, provided that the applicants have:

- a digital signature issued by the electronic digital signature certification centre in accordance with the legislation of Armenia; and
- registered on the www.e-cadastre.am website in accordance with the requirements for the electronic filing of applications for the registration of real estate rights and restrictions.

As a result of this Decision, applications, and documents enclosed therewith, as well as requests for real property titles and restrictions can also be provided as electronic documents by notaries through an electronic service between the notary e-management system (e-notary) and the automated e-system for real property registration, where a relevant notary certifies with an electronic signature the fact that the e-copies of the documents provided online match their

original copies. Final documents are passed on to the e-notary system, and applicants or registered title holders are provided with documents with a relevant notary's seal affixed.

Upon payment, the application is accepted and automatically placed in a queue for review by an employee of the SCREC, who completes the registration process.

Feedback from users of these e-services is encouraged. Before leaving the the Customer Service Centre, citizens are entitled to file a complaint or leave their positive feedback on the provided services.

The law stipulates that the rights resulting from the transactions (with the exception of unilateral transactions) related to the creation, variation, and transfer of real property titles should be submitted for state registration not later than 30 working days after the notarial certification of such transactions. Failure to meet this requirement shall render the transaction invalid, and such transaction shall be considered void. However, in practice, the documents mentioned above are submitted much sooner.

State registration of the creation, variation, and transfer of real property titles is completed on the fourth day after the submission of an application. Moreover, the SCREC provides its customers with fast-track services:

- four working days (standard procedure);
- three working days (fast-track procedure);
- two working days (emergency procedure);

The calculation of time periods starts with the date of registration of an application.

The review of simple applications is usually completed the day the payment is received, while that of more complex types of applications takes three days from the receipt of payment. This level of service means that Armenia is in a very favourable position compared to other state registration authorities in the world.

The SCREC widely promotes the procedure of filing complaints. It encourages feedback from customers at Customer Service Centres. Complaints must be filed in writing (e-mail applications are also available) to the Central Office of the SCREC. After reviewing the complaint, it is sent to the SCREC management of the respective Division for further action.¹¹⁰

Annual operating costs of the SCREC are approximately to EUR 5.7 million. SCREC activities are funded entirely by the fees received for the services it provides. Most of the information services are provided free of charge, for example, inspection of the register and the cadastral map. To update the cadastre, the SCREC set a fixed fee for the submission of applications.

The relevant fixed fee depends on the speed of service chosen by the client. Registration fees may be paid:

- online through the SCREC web portal (www.e-cadastre.am);
- through terminals in SCREC registration centres; or
- at any commercial bank.

¹¹⁰ UNECE, *Survey on Land Administration Systems*, Geneva, United Nations, 2014. Available from <http://www.unece.org/fileadmin/DAM/hlm/documents/Publications/survey.land.admin.systems.pdf>

The simplicity of this system of payment is another important factor in the consistently high rankings of Armenia in the World Bank's annual Doing Business report.¹¹¹

To fulfil its legal obligations, the SCREC has a modern IT infrastructure which includes publicly available online services to manage the transfer of electronic documents:

- Electronic signatures (provided through the cadastre);
- Automatic registration of the working procedures and information systems;
- Departmental information resources and databases;
- Interdepartmental relations to simplify the distribution of information and update separate databases;
- Website of the agency.

C. Geodetic network of Armenia and topographical maps

Pursuant to the 2001 Law “on Geodesy and Cartography”, the SCREC is the highest authority of the national mapping and cadastral administration.

The major geographic information system (GIS) was introduced on 20 January 2005. Its main components were as follows: the creation and management of a data bank, which contains map and text data for geographical names, and information on land resources, real estate, terrain and linear infrastructure such as pipelines, etc. About EUR 202,000 is spent annually on national cartographic base maintenance.

The national geodetic network was established as a result of a project that was sponsored by SIDA 13 years ago. It was created in the Geodetic System WGS-84 (ARMREF-02). In 2013, Armenia established a network of 12 permanent reference stations under the code name ARMPOS, which covers the entire territory and was included in the European system EUPOS. The Main Elevation Base was fully reconstructed. The established networks made it possible to carry out compilation surveys for mapping and other geodetic activities. Since 2005, Armenia has been developing a GIS (see detailed diagram in Annex III).

Thanks to the project, which was implemented between 2002 and 2007, Armenia has full cartographic coverage, and national maps are managed by the SCREC. There is a series of national topographic maps with the following scale ratios: 1:10,000, 1:25,000, 1:50,000, 1:100,000, 1:200,000, 1:500,000, and 1:1,000,000. In accordance with the location of a land parcel, individual cadastral maps with a scale ratio of 1:2000 or 1:500 may be produced. The accuracy of topographic maps and drawings corresponds to a graphical accuracy of 0.2 mm adjusted to the scale ratio of a map or drawing.

Armenia has a national spatial data infrastructure, which consists of six groups and 16 subgroups.

Groups

1. Administrative borders
2. Geographical names
3. Real estate
4. Hydrography
5. Terrain

Subgroups

- A. Mathematical basis
- B. Geodetic points
- C. Buildings
- D. Railroads
- E. Railway structures

¹¹¹ World Bank, *Doing business, 2014: Understanding Regulations for Small and Medium-Size Enterprises*. Washington, D.C., World Bank Group, 2013. DOI: 10.1596/978-0-8213-9615-5.

6. Linear infrastructure, such as roads, cables and pipelines
- F. Roads
 - G. Road structures
 - H. Hydrography
 - I. Hydrographic structures
 - J. Water pipes and sewerage systems
 - K. Communication
 - L. Power lines
 - M. Terrain
 - N. Vegetation
 - O. Legends and explanations
 - P. Cadastre

Table 17
Cadastral Register

<i>Section #</i>	<i>Filing Name</i>
1	Record number
2	Cadastre code of the land parcel
3	Owner's or rightholder's name
4	Postal address of the land parcel
5	Type of land title
6	Document title, name of authority that grants property rights, and issue date
7	Purpose of the acquisition of land parcel
8	Restrictions on land ownership
9	Easement
10	Coordinates of the centre of the land parcel
11	Land area in hectares or in square meters
12	Cadastral assessment as of (date) – assessment of soil
13	Cadastral assessment as of (date) – cost
14	Data on buildings and structures
15	Taxation area, date
16	Disputes – dates and details

Source: SCREC

Article 13 of the 1999 Law “on State Registration of Rights to Property” states:

“For the purpose of organizing state registration, in accordance with the administrative division (into marzes), the territory of the Republic of Armenia has been divided into cadastral territories, where each is assigned an individual cadastre code.

Cadastral territories are divided into cadastral sub-territories, which cannot violate the borders of the communities, and each is assigned an individual cadastre code.

Cadastral sub-territories are divided into separate sectors, districts, and units, and each is assigned an individual cadastre code.”

Since its foundation, private surveyors have played an important role in the management of cadastral maps. Before the SCREC officially agrees to approve the registration of a land parcel, a cadastral examination of the parcel, which is a part of the initial registration, is carried out by a contract surveyor. There are approximately 100 such surveying companies in Armenia. They are responsible only for surveying new boundaries. These companies operate on the basis of contracts concluded with the SCREC.¹¹²

The SCREC provides an efficient property and land rights registration services. Consumers may select the speed of the service, and registration is carried out quickly and accurately at a cost commensurate to the service provided. Moreover, there are widely publicised mechanisms for complaints and dispute resolution mechanisms.

However, to ensure maximum effectiveness of the system, the taxation, valuation, registration and administration elements of land management must be supported by accurate and updated maps. Several surveys conducted in April 2005 raised fears that the re-examination of national maps was only partly carried out. The initial examination was carried out more than 10 years ago. As such, the maps are outdated. This situation resulted from several factors:

- Almost 50 per cent of the territory of Armenia is remote, mountainous area (therefore, the studies entail exorbitant costs and they are difficult to implement, especially with the use of traditional methods);
- The conflict with a neighbouring country limits or even hinders safe access to the border areas;
- The economic crisis, which has had a significant impact on the country’s economy since it became independent, severely limits the possibility of carrying out repeated studies.

In current conditions, it will be challenging for the SCREC:

- to optimize the process of updating the geospatial database; and
- to achieve an acceptable balance between the cost and speed of data collection on the one hand, and the quality of the obtained information (and its use) on the other.

Geospatial information will accurately reflect the status of the land if this latter balance is kept. Any changes (for example, construction of new buildings or deforestation) will be immediately entered into the database. It is hard to estimate the financial benefits of updating the maps for the State, and the private and civil sectors. It may be compared with the data from a study called “The Economic Contribution of Ordnance Survey – GB”, conducted in 1999 by the Oxford Economic

¹¹² UNECE, *Survey on Land Administration Systems*, Geneva, United Nations, 2014. Available from <http://www.unece.org/fileadmin/DAM/hlm/documents/Publications/survey.land.admin.systems.pdf>

Research Associates Ltd (OXERA).¹¹³ This study showed that GBP 100 billion of economic activities, which is 10 per cent of the United Kingdom's GDP, was provided by the Ordnance Survey.

D. Land administration

The landscape of Armenia is mainly dominated by farmland, mountains, wetlands, tundra and forests.

After proclaiming independence and restoring the right to real estate for the population of the country, the Government pursued policies focused on the elimination of collective farms, and farmlands were given to individual families. The area of the allocated land parcel depended on the number of family members. In order for the land parcels to be distributed fairly, a land parcel allocated to each family consisted of arable land of both good and average quality.¹¹⁴

“During the land disposition, both the quality and the category of land were taken into account. Thus, every family got land from each quality and category. And the size of the privatized land directly depended on the family size. Respectively:

- for families of not more than three members - one land parcel;
- for families of from four to six members – two land parcels;
- for families of seven or more members – three land parcels.”

As a result of the privatization programme in 1991-1993, 324,000 new family farms emerged, while 265 collective farms continued their operations (out of total of 860 before).

The rate at which the land was transferred from public to private ownership inevitably testified to the fact that some aspects of the transition programme lagged behind the others.

“By the end of 1993, land privatization in Armenia was completed. However, the effective land management, and the formation and development of a land market, were hindered by some factors. Examples are as follows:

- Economically unviable land fragmentation;
- The absence of a land policy-implementing institution;
- The absence of cadastral values (assessed values) and valuation principles corresponding to the current situation.”¹¹⁵

The establishment of the SCREC in 1997 contributed to the resolution of the last two issues, but the problem of fragmentation of land parcels is still relevant and has worsened because of the inheritance rights of family members.

In 2001, and from 2004 to 2006, the Food and Agriculture Organization of the United Nations (FAO) provided technical assistance to the SCREC in addressing the problems related to the

¹¹³ Oxford Economic Research Associates Ltd, “The Economic Contribution of Ordnance Survey GB: Final Report”. OXERA, 24 September 1999. Available from https://www.nsgic.org/public_resources/British_Ord_Survey_Economic_Paper.pdf

¹¹⁴ Manuk Vardanyan et al, *Rural Land in Armenia: Formation Peculiarities and Development Trends*, FAO, January 2005. Available from <http://landportal.info/resource/research-paper/rural-land-market-armenia>

¹¹⁵ Ibid.

fragmentation of land parcels. According to this Organization, the main challenges were as follows:

- limited investment opportunities;
- farmers were allocated land parcels which were either very small, or did not border on each other, or had a curved shape. All these factors hindered productivity.

In 2004, the FAO and the SCREC launched a pilot project of land consolidation in the village of Nor Erznka. During the project, 162 land parcels were consolidated into 67 parcels, so that the average number of parcels that belonged to families decreased from three to two. As a result of this project, a draft national land consolidation strategy document was prepared. This latter was an input into the Land Consolidation Concept Paper prepared by the SCREC in 2011.

The FAO recommended that the country's legal framework be realigned to take account the Land Consolidation Concept Paper. In 2011, the Government decided to transfer the responsibility for land consolidation from the SCREC to the Ministry of Agriculture as part of its approval of the Concept Paper. However, due to lack of available funding, no further land consolidation projects have been initiated.

Despite the challenges of the fragmentation of land parcels, agricultural productivity is currently growing. The actions taken by the Ministry of Agriculture, in combination with the commissioning of unused land, testify to positive changes in agricultural productivity since 2009.

The land management laws and regulations are clearly specified in the Land Code. However, the application of the law is ambiguous. In rural areas, land parcel fragmentation is a major obstacle to further growth of rural productivity. There is evidence of a lack of proper control in permitting and managing construction activities, especially in urban areas.

Table 18
Gross agricultural output, 2010-2014
 (Billions of drams)

	2010	2011	2012	2013	2014
Agriculture,	636.7	795.0	841.5	919.1	993.5
of which:					
Crop production	392.7	465.1	516.0	572.8	605.7
Share of crop production in agriculture, percentage	61.7	58.5	61.3	62.3	61.0
Animal farming	244.0	329.9	325.5	346.3	387.8
Share of animal farming in agriculture, percentage	38.3	41.5	38.7	37.7	39.0

Source: NSS, Statistical Yearbook of Armenia, 2015, Table 207, "Gross agricultural output by farms." Percentages were calculated.

E. Land valuation

The 1996 UNECE Guidelines¹¹⁶ state that the most optimal requirements for efficient valuation of areas and tax systems are the international valuation standards, and the implementation of these standards benefits international markets, and consequently facilitates domestic investment. The same Guidelines further note that the valuation of areas entails:

- “Classification of property in accordance with specified characteristics relating to the use, size, type of construction, and improvement of property;
- Collection and analysis of relevant market data, including data on sale prices, rent, and maintenance costs for buildings, as well as the exact date of their application;
- Determination of the value of each property item in accordance with the announced procedures. Where possible, price is calculated on the basis of market prices and computerized mass valuation systems;
- The need to differentiate between the market, use, investment and assessed values of land, and to recognize that price is an accomplished fact while value is only an estimate;
- The adoption of a method of valuation that depends on the purpose for which the value is required.”

Since 1997, Armenia has been using a system of mass valuation of land (based on the cadastral value). The system was adopted by the Decision of the Government of the Republic of Armenia No. 234 and carried out by the SCREC, which is responsible for the database with information on the characteristics, valuations and owners of real estate. Objects valued are land parcels and buildings, for example:

- Private houses;
- Residential buildings;
- MABs;
- Garages;
- Dachas; and
- Land parcels (without public lands).

Land parcels and buildings are evaluated separately and at different times. Details of the valuation are available to the public. Complaints about valuations can be sent to the SCREC.

The principle of comparable evidence is fundamental to all real estate valuations. The process of identifying comparable evidence, analysing it, and applying it to the property to be valued is therefore fundamental to producing an accurate valuation that can stand scrutiny from the client, the market and the courts.

Other methods of valuation are rarely used. The above method meets not only international standards, but also the 1996 UNECE Guidelines principles of valuation. According to a study¹¹⁷, “Land valuation is not a strong side of this group of countries. The lack of a clear land valuation system can become a source of injustices and subjective decisions, especially when privatizing state property. The most advanced country in this component, Armenia has applied a real property mass valuation system. This, however, is not related to market value/price. This is

¹¹⁶ *Land Administration Guidelines with Special Reference to Countries in Transition* (United Nations publication, Sales No. E.96. II.E.7).

¹¹⁷ Joseph Salukvadze and Olga Medvedkov, “Land Governance in the South Caucasus Region: Comparative Study of Georgia, Armenia and Azerbaijan”, paper presented at the FIG Working Week 2011 “Bridging the Gap between Cultures”, Marrakech, 18-22 May 2011.

mainly due to the fact that there is a lack of information on sales activities, as sales are not reported. Currently, land valuation is mainly used by the state (registry) to define fees”.

F. Real estate taxes and land taxes

“Behind the systems of valuation outlined above is the objective of taxing either the land or the buildings attached to it. Any system of taxation should:

- Serve clearly defined social objectives;
- Raise significant amounts of revenue;
- Be exclusively under the control of the government authority;
- Be administered in a way that the public understands and sees as fair;
- Be relatively simple and cheap to collect;
- Be designed to make it difficult to avoid making payments;
- Distribute the tax burden equitably across the community; and
- Encourage the good use of resources.”

In Armenia, property and land ownership are charged separate taxes that are determined by local authorities. Legislative provisions for land and property taxes are set out in national legislation, in land tax and property tax laws.

Land tax

The land tax is paid by landowners, as well as by permanent and temporary users of lands owned by the State (1994 Law “on Land Tax”).

Legal entities must provide land tax calculations to the State Tax Service before September of the reporting year. They must also pay land tax to the local budget on a quarterly basis, by the 25th day of the month after the reporting quarter. Land tax for individuals is estimated by the municipal authorities on an annual basis.

Table 19 contains the tax rates applied to different categories of land.

Table 19
Land tax rates

<i>Category of land</i>	<i>Tax rate, percentage of approximate net cadastral value</i>	<i>Notes</i>
Agricultural	15.0	According to the Law "on Land Tax", the Council of Elders of the community may also be exempt from paying taxes, but under adverse agricultural conditions the exemption from land tax is not available.
Urban	1.0	
Industrial, as well as land used for infrastructure or defence	1.0 0.5	Inside settlements Outside settlements

Forestry	1.0
Unused lands	1.0

Source: PricewaterhouseCoopers, *Armenia Pocket Tax Book*, 2011 edition. Available from www.pwc.com/am/en/publications/assets/armenia_pocket_tax_book_2011_edition.pdf

Real estate tax

Every natural and legal person owning real estate in Armenia is considered to be a taxpayer.

The tax base for buildings is determined by the cadastral value. The number of objects of real estate valued for tax purposes are shown in Table 20.

Table 20
Number of objects of real estate valued for tax purposes in Armenia, 2013

Object type	Number(000)	Tax rate (percentage of cadastral value)
Apartments in cities	410 723	Full cadastral value
Apaertments in rural areas	24 704	
Private houses in cities	157 809	
Private houses in rural areas	268 784	
Office space	2 726	0.3

Sources: Statistical Yearbook of Armenia, 2014; PriceWaterhouseCoopers, *Armenia Pocket Tax Book*, 2011.

G. Land policy

According to Enemark 2005, “Land policy is part of the national policy aimed at promoting economic development, social justice and equality, and political stability. Land policies associated with the privatization of land consist of securing the right to home ownership; land markets (notably, land transactions and loans); the taxation of real estate; the sustainable management and control of land, natural resources and environment protection; the provision of land to the poor, ethnic minorities and women; and measures aimed at preventing land speculation and land disputes”.¹¹⁸

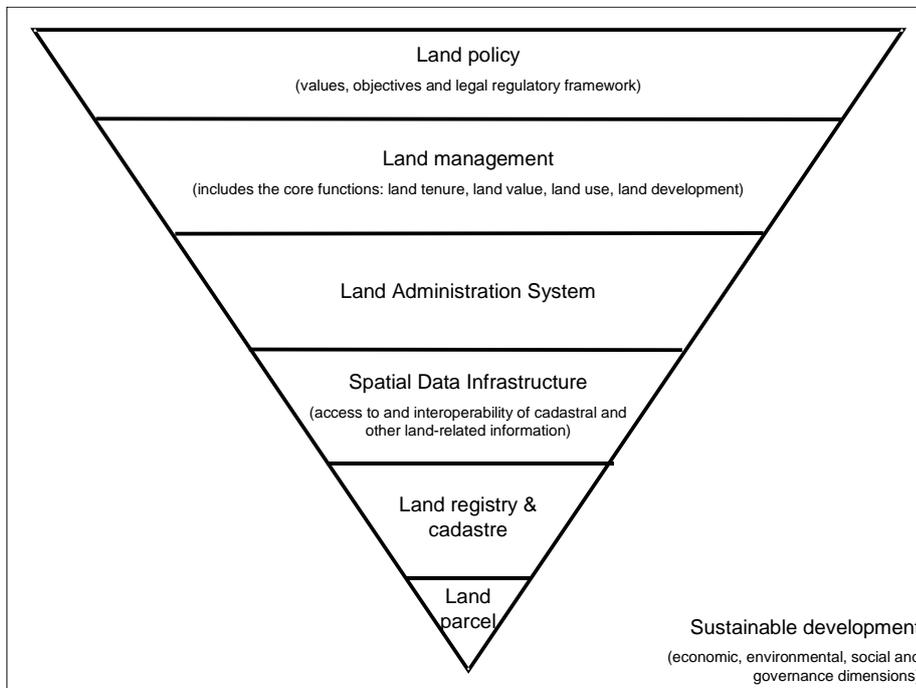
Land issues can be resolved through the hierarchy (vertically) or through increasing complexity (horizontally) (Figure IX).

The conversion of land markets in Armenia is due to political considerations and targeted land policies. Public lands were transferred to private ownership; the current system of land valuation and taxation was introduced; and land ownership was secured. Furthermore, Armenia became one of the world leaders in property rights’ registration and the transfer of real estate rights. The Government had the foresight to adopt a land law to substantiate this. According to internationally accepted standards, Armenia has always been considered a leader among the countries of the former Soviet Union in achieving higher land policy rankings.

¹¹⁸ S. Enemark, I. Williamson and J. Wallace, “Building Modern Land Administration Systems in Developed Economies”, *Spatial Science*, Vol. 50, No. 2 (December 2005).

At the same time, still more could be done. Deficiencies in aspects of land management, in particular land consolidation and market-based land valuation, remain unresolved. These, along with the need to update the national map, are considered to be the remaining challenges and future priorities for the enhancement of land governance in Armenia.

Figure IX
Hierarchy of land issues implemented in sustainable development



Source: World Bank, 2010¹¹⁹.

Armenia is a mountainous country with a semi-arid climate. Approximately 75 per cent of the territory is situated at an altitude of 1,500m above sea level, which severely limits the land area available for development. For this reason, Armenia has rather tough land management policies. The MNP monitors compliance with environmental protection laws.

The new Land Code adopted in 2001, which is still in force, divides the land into nine categories (Table 21). The permitted use of land takes into account environmental protection, and the economic and social dimensions of land management. Pursuant to the Code, the possession, management and disposition of land must not harm the environment, or the safety or defence capability of the State; and it must not violate the legal rights of citizens and legal entities. Different ministries are pursuing policies focused on certain categories of land.

In Soviet times all the land belonged to the State. After Armenia obtained its independence, all the land was transferred to public, community or private management. Under communism, the community management category was not available.

¹¹⁹ Klaus Deininger and Stig Enemark, "Land Governance and the Millenium Development Goals", *Innovations in Land Rights Recognition, Administration, and Governance*, Issue 2, Klaus Deininger, Clarissa Augustinus, Stig Enemark and Paul Munro-Faure, eds., Washington, D.C., World Bank, 2010. Available from <http://siteresources.worldbank.org/INTARD/Resources/335807-1174581646324/InnovLandRightsRecog.pdf>

Table 21
Land categories in Armenia

<i>Land management categories</i>	<i>Area, thousands of hectares</i>	<i>Area, percentage</i>
Agricultural	2 049.4	68.9
Settlements	151.8	5.1
Industrial	36.4	1.2
Energy, transport, communications, and public infrastructure	12.6	0.4
Protected areas	331.7	11.2
Land of special importance	31.6	1.1
Forests	334.3	11.2
Water land	25.9	0.9
Land reserves	0.6	0
Total	2 974.3	100.0

Source: Armenia, NSS, *Environmental Statistics of Armenia for 2014*, "Land balance of the Republic of Armenia". p. 5. Available from http://armstat.am/file/article/eco_booklet_2014..pdf

Approximately 43 per cent of the land in Armenia is located in arid areas, and more than 80% of the land is under the threat of desertification. Therefore, Armenia was one of the first countries to sign the United Nations Convention to Combat Desertification.¹²⁰ In the northern part of the country, illegal felling and logging cause landslides and land degradation. To address this, the country took actions to restrict illegal activities and improve the monitoring of forest management. 80 per cent of agricultural land should be irrigated, of which only half is. Water loss is also a serious problem, and a lot of programmes are aimed at improving the efficiency of irrigation systems. Desalination in the Ararat Valley is another increasingly challenging issue. While fish farming in artificial lakes is quite successful, it entails additional pressures on limited water resources.

There are no well-developed methods for the remediation of degraded lands. Much needs to be done; however, many fragmented private land parcels hinder this process. Armenia implements a number of programmes to protect soil and land; it encourages land consolidation to improve the efficiency of agricultural activities.

Only 3 per cent of the land area in Armenia falls into the category of urban land, which plays an important role in the economy of the country because 67 per cent of the population and approximately 80 per cent of the industrial potential are concentrated in these areas. Urban settlements occupy quite a large area and make up 65.7 per cent of all settlements.

Another aspect of land management is the concentration of 49 urban settlements in intensely developed areas of the country. According to the MUD, 89.6 per cent of urban communities are located in intensely developed areas, while only 10.4 per cent are located in underdeveloped areas. The Government is considering the establishment of a regime that would restrict the

¹²⁰ Republic of Armenia, Ministry of Nature Protection, *Third National Report on the Implementation of the Convention to Combat Desertification in Armenia*, Yerevan, 2006.

development of intensely developed areas to ensure a balance between urban growth and environmental considerations.

The main objective of the Government's strategy is to limit the physical expansion of the cities by establishing limits for the urban population, thus limiting urban neighbourhoods. The Decree “on Approval of the National Security Strategy of the Republic of Armenia” of 7 February 2007 states that the creation of favourable conditions for present and future generations is a major factor in national security and living standards. This provision includes sustainable urban development, the improvement of the spatial balance of the population, and ensuring the high quality of the human environment in all regions of the country.



Source: Cecil Batac, 2015.

Chapter V

Financial Framework for Housing and Land

A. Public and private finance of housing and land

Residential investment

According to the latest available data, housing construction amounted to 284.1 m² in 2014, which is 11.3 per cent less than the previous year. Out of the total commissioned buildings, 53.2 per cent were constructed through funds of citizens, while 46.8 per cent were constructed by developers (legal entities).

Investment in housing construction from the public budget is limited; it amounted to 2.8 billion drams (USD 5.9 million) in 2014, or 2.5 per cent of the total financing. This is 33.8 per cent less than in 2013.

Table 22
Structure of housing construction finance in 2014

<i>Source of financing</i>	<i>Construction (current prices), million drams</i>	<i>Same period in 2013, percentage</i>
Public budget	2 804.7	66.2
Community funds - funds of urban communities (Mayor's Office) and rural communities	1 387.4	339.3
International loans	80.9	62.5
Humanitarian assistance	53.3	94.1
Funds of organizations	25 872.9	84.7
Funds of citizens	81 015.6	82.4
Total	111 214.8	83.2

Source: Statistical Yearbook of Armenia, 2014.

Renovation investment

A significant part of the housing stock was constructed before 1991 (about 89 per cent of the total housing stock), 46 per cent of which was constructed after 1970. 96 per cent of the housing stock in the entire country is privately owned (98 per cent in Yerevan). In many cases, such housing has long been in need of renovation.

As a rule, it is the homeowners' responsibility to renovate the housing stock, but this responsibility has not been legally established. As a result, the citizens, who became homeowners through privatization, still believe that renovation should be financed by the State, which allocates very limited funds for this. According to 2010-2013 data of the MUD, 4,186 buildings were renovated for a budget of 4 billion drams (USD 8.4 million). The lack of a systematic approach to addressing problems of forming investment in renovation activities results in its significant under-funding, which leads to the deterioration of the housing stock.

One of the priorities of public policy is to improve the energy efficiency of industrial and residential buildings in the context of scarce domestic energy resources and their high cost. Currently, the public funding of energy-efficiency improvement programmes is focused on industrial production. In the housing sector, international organizations (the UNDP, the German-Armenian Fund, Habitat, the French agency AFD), with the support of the Government, carry out a number of pilot programmes aimed at financing energy-efficiency improvements in residential buildings.

Rental housing investment

The rental housing sector is not well developed and consists mainly of hostels and apartments leased by private homeowners. The predominant informal sector of commercial rental housing is not controlled by the State;¹²¹ it undermines the incentives to construct commercial apartment buildings because of low rental rates (established without taking into account the need to repay capital investment) and the long payback period of such projects.

Land investment

Pursuant to Article 44 of the Land Code, private ownership of land is acceptable (with the exception of foreign nationals). Moreover, land parcels can be used as mortgage security, which makes it possible to use them as collateral for loans, notably for private housing construction. In practice, however, banks are extremely reluctant to take them as security because of their low official cadastral values. Banks prefer to take either real estate under development or other real estate owned by the borrower as security.

B. Housing affordability, availability of housing construction finance, and funding of housing improvements

According to the SCREC, the cost of housing ranges between 68,000 drams (USD 143) per m² in the Gegharkunik region to 273,600 drams (USD 575) per m² in Yerevan as presented earlier in this report.

Such housing costs are unaffordable for most citizens. The house-price-to-income ratio¹²² across the country is 7.4 years¹²³. Moreover, according to the NSS, the poverty rate was about 30 per cent at the beginning of 2015.

Some categories of citizens¹²⁴ can improve their housing conditions by participating in public housing programmes. In total, according to the MUD, about 30,000 households in the country belong to the category of the homeless, and another 30,000 (excluding those already included in the public programmes) are in need of better housing conditions, but the process of housing provision is slow because of limited budgets.

The State is planning to provide rental housing at affordable rates to citizens who are not able to purchase housing on the market and who do not meet the criteria for participation in government

¹²¹ According to experts, the share of such informal rental sector is around 10-15 per cent of the total housing stock.

¹²² The housing affordability index is the ratio of an average apartment value to an average household yearly income.

¹²³ According to the 2011 census, an average household consists of 3.9 persons, the average monthly income of households per capita was 42,404 drams (USD 89) in 2013, and the estimated weighted average cost of housing was 210,000 drams (USD 441) per m².

¹²⁴ Populations affected by man-made and natural disasters, families of killed and seriously injured soldiers, those who are resettled from old and dilapidated housing, pensioners, orphans and children left without parental care, and citizens who suffered from the Spitak earthquake in 1988.

programmes. Such practices existed in Soviet times but, during mass privatization, almost all public housing stock was transferred to private ownership. The mechanisms of such housing development and finding sources of financing for the project are currently under development.

The main source of financing housing acquisition/construction is the internal funds of the population. Financial products are available to people with stable incomes above the average level. However, because of the poor reliability of mortgage collateral, loans for housing purchase are mainly given for constructed housing on the resale market.

Loans for renovation and energy efficiency have not yet become a commonplace banking product, although there are some successful examples of their promotion. For example, Habitat for Humanity has been successfully operating in Armenia since 2009, and has invested USD 12 million in housing projects. According to experts, energy efficiency in residential buildings may result in 40 per cent energy savings, which, under the conditions of continuous growth of prices for the imported energy sources, may generate a significant demand for the relevant financial products.

B.1 The role of national and local authorities in housing finance

The general framework of tax legislation and types of taxes are stipulated in the Law “on Taxes”, which was adopted in July 1997. There is no unified tax code: features of different types of taxes are determined by separate laws. The development of a unified tax code is currently being discussed.

Taxation of land and property is governed by the 1994 Law “on Land Tax” and 2002 Law “on Property Tax”. According to the former, land parcels used for both agricultural and non-agricultural purposes are subject to taxation. The tax rate depends on the cadastral value and the purpose of the land parcel. For non-agricultural land it ranges from 0.3 per cent of the cadastral value of the land inside settlements to 1 per cent outside settlements. The estimated net income is the subject of taxation for farmland; it is calculated on the basis of the cadastral value of the land. The tax rate is 15 per cent of such income.

Residential buildings (an apartment in a MAB, a garage, a garden house, a house or household outbuildings), as well as public and industrial buildings, are subject to property tax. The tax rate ranges from 0.1 to 0.8 per cent of the cadastral value of the residential property. Owners with properties estimated at less than three million drams (USD 6,300) are exempted from the tax. Cadastral estimation (re-estimation) of residential property is carried out once every three years by the SCREC.

Both taxes are the main source of revenue for local budgets: their share in total tax revenue is 80 per cent¹²⁵. Although, according to the legislation, the powers of local self-government authorities include the implementation of municipal programmes, notably in the field of housing finance, in practice, the capacities of local self-government authorities are very limited. More than 50 per cent of the revenues of local budgets are formed by transfers from the state budget. Theoretically, local budgets may get co-financing for their programmes from the state budget, provided they raise the same amount from their own or private funds.

The amount of funds allocated from the state budget for the implementation of housing programmes under budget item “Housing construction and housing and communal services” was

¹²⁵ Republic of Armenia, NSS, *Statistical Yearbook of Armenia 2014*, Yerevan, 2014.

less than 2 per cent of the total public budget in 2013 (21.7 billion drams or approximately USD 46 million).

B.2 Mortgage market

The market for mortgage loans is rather young, and is regulated by Chapter 15 of the Civil Code. The “Development of Sustainable Housing Market” programme, which was launched by the German-Armenian Fund in 2005, provided significant support in the development of the mortgage market. Under the Programme, the German KfW bank provided the Central Bank of the Republic of Armenia with loans and non-repayable funds for a total amount of EUR 33.5 million to refinance mortgage loans provided by the banks in accordance with the standards of the Programme, including those in rural areas. Pursuant to these standards, a loan may be provided for a term of 10, 20 or even 35 years, at a rate of 12-15 per cent per annum. There is an initial payment of 10-30 per cent of the value of the real estate.

In 2009, in order to increase the affordability of mortgage loans for middle-income families, the Central Bank established a National Mortgage Company, which was given the status of a refinancing organization in 2011. Currently, in addition to its functions as a refinancing organization in the “Development of Sustainable Housing Market” programme, the company is actively developing national mortgage loans for housing construction and reconstruction. It plans to issue its first mortgage-backed securities, and to develop standards aimed at improving housing energy efficiency. As of April 2015, the National Mortgage Company refinanced about 5,500 loans to the amount of 44 billion drams (USD 105.8 million). This amount is about 27 per cent of the total mortgage debt in quantitative terms, and 26 per cent in value terms.

Banks also offer their own mortgage products. According to the Central Bank, 21 banks out of the total of 22 provided mortgage loans as of early 2015. Mortgage loans are provided mainly for the purchase of completed housing with registered property rights under the following conditions: for a payment term of up to 35 years, the minimum first payment is 20-30 per cent of the property value, and the interest rate varies from 13 to 14 per cent per year for AMD loans and from 11 to 12 per cent per year for USD loans. A prerequisite for loan provision is accident and mortgage insurance taken out by the borrower.

In 2010, the “Housing for Young Families” organization was established to increase the affordability of loans, including mortgages, for certain categories of citizens, in particular young households, young scientists, athletes, teachers, doctors, young professionals, and public employees. Mortgage loans are provided from funds allocated from the public budget and are subject to the following conditions: a loan term of 10-20 years, an initial payment of 10-30 per cent, compulsory life and health insurance by the borrower, and insurance for the mortgage item.

As of April 2015, the organization refinanced 2,100 loans for a total amount of 17.6 billion drams (USD 37 million).

Mortgage loans have significant growth potential. The share of mortgage debt in the country's GDP amounted to 3.3 per cent as of the beginning of 2015. However, the high proportion of loans that are actually refinanced by the State (through the National Mortgage Company and Housing for Young Families) is about 40 per cent, which testifies to the fact that market players seriously lack securitization sources. Because of scarce domestic sources for securitization, almost all mortgage loans provided outside of government programmes were denominated in foreign currency – 50 per cent of the total loans, which represents more than 80 per cent of loans provided outside of government programmes.

In the event of depreciation of the national currency, which is heavily dependent on foreign remittances, such lending policies may create additional risks for borrowers whose incomes are in the national currency. The experience of Ukraine, Poland, Hungary and Russia provides examples of such risks.

Mortgage market development is also hindered by the unfavourable forecasts banks make with regard to prospects for the medium-term development of the housing market.

Housing construction loans are underdeveloped even though there is a large demand for them; banks prefer to deal with short-term commercial loans, which bring profit in the short term.

According to the Central Bank, housing construction decreased by 10.7 per cent on a year-on-year basis in the first half of 2014, which is largely due to the reduced access of developers to borrowed funds. Moreover, there was an increase of up to 7.8 per cent in the arrears on loans provided for the construction of residential and non-residential real estate, which will force banks to select new borrowers more carefully.

To support the housing construction industry and stimulate the purchase of housing directly from developers with the assistance of a mortgage loan, in 2015 the Government adopted a tax deduction for income tax that is equal to the interest rates paid for mortgage loans provided after 1 November 2014. The deduction is only available if housing is purchased directly from a developer, or if it is private housing construction.



Source: Cecil Batac, 2015.



Source: Cecil Batac, 2015.



Source: Ministry of Urban Development, Republic of Armenia

Housing

1. Develop a strategic approach for the sustainable development of the housing sector

Regulations in Armenia's housing sector are currently governed by a considerable number of laws; however, the housing legislative framework cannot be considered adequate.

- 1.1 Housing laws should be revised and updated to improve and regulate the housing sector across the board.
- 1.2 It would be necessary to determine long-term strategic goals, including improving legislation, for the development of the sector, taking into consideration changing social and economic conditions.
- 1.3 The obligations of the State, and the role, rights and responsibilities of various actors in housing, should be clear.

2. Improve the multi-apartment building management and maintenance system

The MAB management system is in need of reform. This should begin with legislation to ensure mechanisms of participation by homeowners in the management of common property. These mechanisms should be as simple as possible.

- 2.1 It is recommended to review the legislation on the management of MABs and homeowners associations (HOAs) to create a legal framework for the gradual reorganization of existing MAB management systems and to ensure that owners are fully aware of their rights and responsibilities concerning common property and their participation in the maintenance costs.
- 2.2 When reviewing existing legislation and in developing new ones, it is recommended:
 - 2.2.1 To ensure that any apartment building, in which the premises are owned by two or more owners, has an association of common property owners, which has the right to make decisions related to the management and maintenance of the common property; each homeowner is a member of the association as long as they have a title to their apartment and the right to have a share in the common property;
 - 2.2.2 To provide the association of common property owners with the rights of a legal entity (including the right to have a bank account for the creation of a fund for the management, maintenance and repair of the common property) without being officially registered as a legal entity; if this is already the case, the Cadastre of Real Estate should contain a nota bene entry with information about the association and its elected representatives, and type of common property management;
 - 2.2.3 That, upon the decision of the owners, the association of common property owners may be registered as a legal entity, a condominium, and registered on the basis of the common shared ownership of the common property in a MAB, and each of the homeowners in a MAB is a member of the established legal entity as long as they have the title to their property and the right to a share in the common property; the highest management authority of the condominium is the general meeting of common property owners in a MAB;
 - 2.2.4 That the association of common property owners decides who should carry out routine management of the MAB - an authorized person(s) chosen from the

homeowners; the administration of a legal entity, a condominium, established by the owners and/or a manager; or a managing organization acting by virtue of a contract.

Regarding the latter, if the association of homeowners does not make a decision on the management of the building, the local government should take over the management responsibility. The local government then appoints a management authority and ensures the maintenance and repair of the building.

- 2.3 To ensure that homeowners are responsible for the maintenance of the common property at their own expense, and to eliminate the possibility that these funds may be used for other buildings managed by the same authority, it is recommended that:
 - 2.3.1 Each association of common property owners opens a bank account to create a building management, maintenance and repair fund from membership fees and other sources not prohibited by law;
 - 2.3.2 If the association of common property owners is granted the powers of a legal entity, such a bank account is opened by an authorized homeowner. If the association does not have the powers of a legal entity, that account is opened by a management authority. When a condominium is registered for a MAB, the condominium opens the account;
 - 2.3.3 The fund in the special account is a shared fund of the owners of the common property, and it is earmarked and spent on the management, maintenance and renovation of the common property. No taxes are imposed on legal entities;
 - 2.3.4 The person who opened the special account administers the funds in the account pursuant to the decisions taken by the general meeting of the community, and if no such decision was taken, the funds are administered in accordance with the legal regulations to pay for mandatory housing maintenance activities.
- 2.4 Changes in practices must take place gradually following the homeowners' initiatives to establish under-one-roof condominiums and/or select a professional manager, a managing organization or a contractor for the maintenance of the common property.
- 2.5 To ensure the development of the market for MAB management and maintenance services, it is recommended to establish regulations for persons and organizations offering and providing these services. The rules should oblige them to publicly disclose information on the characteristics and price of each of their services and activities, especially mandatory housing maintenance activities.
- 2.6 It would be premature to introduce a requirement for the professional training of managers in Armenia, as this would create an additional obstacle for the development of non-profit HOAs. However, the establishment of a system of training, retraining, and advanced training of managers is important. It is desirable to provide public subsidies for the training of authorized homeowners' representatives.
- 2.7 Practical changes in the MAB management system should be ensured by a number of activities to promote HOAs and private businesses for the professional management and maintenance services of common areas:
 - 2.7.1 The establishment of a permanent communication system that provides consultations and methodological support to homeowners and condominium;
 - 2.7.2 Training of homeowners' representatives, with the participation of non-profit organizations, which may act as local resource centres across the country;
 - 2.7.3 The identification and dissemination of best practices in MAB management, renovation and energy-saving improvements carried out by condominiums and professional managers with the active participation of homeowners;

- 2.7.4 Encouraging homeowners' initiatives by providing grants for the training of homeowners' representatives, and for renovation and energy-saving improvements with financial participation of the homeowners while facilitating preferential loans;
- 2.7.5 Training through the system of secondary and higher vocational education of property management professionals;
- 2.7.6 Showing preference for new private business engaged in the management and maintenance of MABs.

3. Improve the housing conditions of households that are not able to purchase their own housing in the market

Currently, Armenia has an urgent need for social and affordable rental housing and adoption of the enabling legislation. The need for such legislation was identified during the implementation of pilot projects for affordable rental housing construction.

3.1 Develop legislation to improve social and affordable housing.

When drafting social and affordable housing legislation, it is recommended to benefit from the experiences of other European countries in preparing regulations for the establishment and operation of non-profit housing associations with regard to the social and non-profit lease (notably, the Danish experience).

3.2 Develop the affordable and social rental housing sector

- 3.2.1 Under the conditions of scarce budgetary funds, and taking into account other considerations, it would be appropriate to abandon the construction of public social housing and to redirect all resources to supporting major non-profit rental housing projects to satisfy the housing needs of all those categories of citizens who are not able to acquire ownership of housing on the market, including with the use of mortgage loans on market terms. Such projects may include the construction of housing complexes and residential buildings designed for different categories of users: youth, households with children, the elderly, people with disabilities.
- 3.2.2 It is not recommended to have privately-owned houses (especially those owned by different persons) and state-owned houses in the same residential building. In order to effectively manage affordable rental housing, each residential building should have one owner only – for example, a specialized non-profit organization – that initially acts as a customer, and later as the owner and manager of a residential complex. State and municipal funds, as well as funds from businesses that need housing for their employees, which are invested in the construction of social and affordable rental housing complexes, will enable them to have their share of homes, which may be leased to tenants on their lists. Non-profit rental housing owners could lease homes constructed with the participation of public and municipal funds to citizens from socially vulnerable groups on the terms of social rent.
- 3.2.3 The provision and use of houses in the rental sector as social housing should depend on the incomes of households, and if incomes increase, the terms and conditions of the use of houses should be reviewed.
- 3.2.4 According to international experience, non-government owners of affordable rental housing could also carry out social activities and organize special social services for certain categories of citizens with the support of the Government and

municipalities, in addition to the management and maintenance of residential complexes.

- 3.2.5 The large-scale construction of non-profit rental housing, where some houses can be provided for social rent, should include special measures to ensure government support to non-profit developers. Support for the construction of rental housing could come in the form of tax benefits, the free or subsidized provision of land parcels, access to the municipal infrastructure, subsidies for construction, or subsidized construction loans, which will make housing affordable for the majority of the population.

4. Improve the approach of public funding support regarding renovation and energy-efficiency improvements in multi-apartment buildings, to encourage homeowner participation

There is a need for policies to improve energy efficiency of the housing stock. The majority of MABs constructed in the Soviet era need renovation and energy-efficiency improvements. While this issue will be addressed in the five-year strategic programme focused on the improvement of MAB management, currently there is no targeted programme for MAB renovation and energy-efficiency improvements. It is recommended to:

- 4.1 Change the approach on the use of budgetary funds for the renovation and modernization of MABs. The cost of renovations should be partially subsidized from the public budget, instead of being fully covered. This would compel homeowners to make decisions with regard to the renovation or modernization of their houses, including their participation in the expenses incurred and the procurement of concessional loans for energy-saving improvements.
- 4.2 Implement a new approach to supporting the renovation and modernization of MABs, it would be necessary to improve the legislation, to raise awareness, and to provide organizational and methodical assistance to HOAs for planning, organizing and financing renovation activities.

5. Improve the quality of the provision and affordability of communal infrastructure and utility services

The Government is making great efforts to reconstruct and develop the communal infrastructure, which suffered greatly during the energy crisis, in order to ensure access to quality utility services. In its utility pricing policies, Armenia seeks to fully cover all operating costs of utility services providers from utility rates. Setting economically justified rates is constrained by the low income of a large part of the population. The following actions are recommended:

- 5.1 The development of a system of targeted assistance to households with low incomes, where all utility bills are paid, could be advisable in the case of Armenia. Without such a system, further implementation of utility pricing policies to ensure the financial stability of utility enterprises could escalate social tensions.
- 5.2 When developing a system of targeted subsidies to enable citizens to pay for utilities, it is recommended to use the international experience (including the Russian experience) of providing subsidies based on the assessment of a household's income, and within established limits of utility services use.

6. Establish a centralized information system on multi-apartment building management

There is a need to inform homeowners that, in addition to their own apartment, they also have a share in the maintenance of the common areas of the building. One way to do this is to authorize an authority (the SCREC) to include in the homeowner's certificate of registration of home ownership a relevant entry regarding the owner's share in the common property.

Placing such information in a MAB management system, as part of the real estate databank, could be an alternative to the proposed state registration of common property in a MAB in the real estate cadastre, and maintenance of information register relating to MAB management. This could also ensure consistency of information when changing the management authority of a MAB.

- 6.1 Given the limited resources for the establishment of an MAB management information system, it is recommended to gradually develop it on the basis of the existing real estate databanks of respective Territorial Subdivisions of the SCREC.
- 6.2 In establishing the information management system of apartment buildings, efforts of all stakeholders should be mobilized, and it may be useful to consider the following points:
 - 6.2.1 Information about the MAB should be collected in accordance with unified forms and a common methodology adopted by the authorized state authority. These forms may include a certificate of a MAB, a register of homeowners in the building (with an indication of their share in common shared property), a certificate of the common property in a MAB, an energy performance certificate, an earthquake resistance certificate, etc.
 - 6.2.2 The collection of information should be entrusted to an authority or a person who has such information by virtue of their powers (for example, a relevant Territorial Subdivision of the State Register of Real Estate or a building management authority).
 - 6.2.3 Information must be kept in a single information system. A real estate databank of the relevant Territorial Subdivision of the State Register of Real Estate seems the most appropriate option because it is designed to collect and store information about real estate, including MABs. Moreover, the SCREC, as an organ of public administration, has good technical knowledge about the information system.
 - 6.2.4 Information about a MAB, presented in the form of certificates and other forms, can be enclosed with the cadastral file of a MAB in the Unified Registry.
 - 6.2.5 It is recommended to set an adequate period for the collection of the necessary information (for example, up to three years) and update the information as it changes.
 - 6.2.6 It is recommended to have an established amount of information in the system that will be free of charge for all persons who are responsible for its collection.
 - 6.2.7 It is recommended to have different types of access to different types of information in the system. For example, general information can be provided free of charge to the general public, while some information can be provided on demand (notably on electronic demand) either free of charge or for a nominal fee.

Urban development and urban planning

7. Improve urban development policies

- 7.1 Adopt a more comprehensive approach to policymaking to help align different spatial and sectoral policies. Extensive legal frameworks governing urban and spatial development policy in Armenia, with mechanisms to encourage collaboration between different government departments and different levels of government, already exist. These could be complemented by:
 - 7.1.1 Adopting a more comprehensive approach to policymaking to help align different spatial and sectoral policies. This is already reflected in urban spatial planning policies, but all sectors of public policy have a spatial impact too.
 - 7.1.2 Encouraging sectoral policies to have a more explicit spatial dimension would help to improve their alignment with spatial planning policies by taking account of their interrelationships with other sectoral policies in the same place, to ensuring a more coherent approach to urban development.
- 7.2 Promote sharing of best practices. Many government departments and local authorities have developed plans for urban development, but many of these plans have still to be implemented. More could be done to spread learning and best practice in delivery through case studies of exemplar urban areas and converting that learning into effective practice.
- 7.3 Promote greater integration of public sector agencies. Given the complexity and cross-cutting nature of many of the challenges faced by urban areas, they cannot be solved by one government department alone. This is already recognized in spatial planning legislation but there could be a stronger focus on joint work between government departments and other public agencies in Armenia to develop solutions to specific problems and promote sustainable development. Better joint work by national government and public sector agencies should help to promote better coordination at all spatial levels and deliver more effective outcomes.
- 7.4 Enhance integration within national Government and between national and local governments. Policy integration in Government is central to the success of sustainable urban development but, given the complexities of the issues faced, taking an integrated approach can be difficult.¹²⁶ Lessons should be drawn from experiences in Armenia where such policy integration has already worked, though they may not have been documented with this purpose in mind, and used to promote greater policy integration at national, regional and local levels.
- 7.5 Provide more powers and resources to local government. There has already been substantial progress in decentralization, with the Armenian Government determining policy goals but leaving the implementation to local self-governing authorities. Local authorities, however, often lack the discretion and resources to implement Master Plans and land use Zoning Plans. Further capacity-building is needed, with national and local governments also providing training in the professional and generic skills needed for delivery at the local level.
- 7.6 Promote genuine involvement of the public and community groups in decision-making. More partnership-based work involving local government, the private sector and voluntary and community organizations. There has been good progress in creating the legislative basis for public participation in spatial planning in Armenia, for example, but

¹²⁶ See E/C.16/2015/CRP.2.

more could be done to disseminate best practice in how to make this work effectively and to apply the lessons learned.

8. Develop better regional development policies

Policies should focus on economic competitiveness, social cohesion and environmental sustainability to achieve balanced urban and regional development. To achieve successful cities, they should be integrated and not treated separately. The following is recommended:

- 8.1 The Government of Armenia should develop an overall national regional/urban policy strategy or over-arching framework to help guide development policies, strategies and actions at both urban and provincial level so they complement each other. It is recommended to define roles and responsibilities at each level more clearly so that top-down and bottom-up approaches add value to each other and deliver better outcomes. It should aim to improve vertical and horizontal collaboration at national, regional and local level while remaining responsive to local circumstances. It should recognize the functional interrelationships that exist between Armenia's cities so that action taken to address disparities between Yerevan and secondary cities takes full account of this and the different levels of dependency that may exist between them.
- 8.2 Encourage more voluntary cross-boundary collaboration between municipalities, particularly smaller cities and towns, and surrounding areas including rural communities. Networks and functional collaboration between cities and polycentric patterns of development should also be encouraged. It can also help to deliver services more economically and effectively by sharing costs over a wider area and raising quality standards.
- 8.3 Policies should recognize that the quality or liveability of a place matters to the success of cities and regions. This will make the quality of a place, and of the services found there, a criterion in choosing where to live, and not available economic opportunities alone. Improving the attractiveness of secondary and smaller cities to a richer economic and social mix of people and communities could improve their competitiveness and help reduce outmigration to Yerevan.
- 8.4 Local leadership and capacity-building should be strengthened in secondary and smaller cities and communities to provide the preconditions for the greater devolution of powers and responsibilities to municipalities. This requires resources, and also the training of mayors and community leaders, professionals and others involved in the running of cities. This may require, for example, grouping together different administrative levels of the local government in performing their functions or sharing the delivery of services or functions across several municipalities to achieve economies of scale and to lower costs.
- 8.5 Involve local people and communities actively and creatively in decisions affecting their city and community. They should go beyond just consultation, and aim at creating partnerships that engage, on an equal footing, the public, private and community sectors.
- 8.6 National government ministries should be adequately resourced to carry out their existing and future functions. The MUD appears to be lightly resourced in terms of staffing levels to carry out its current duties. Decisions to enhance the role and functions of ministries need to be supported by a full assessment of roles and responsibilities, to ensure they are well placed to undertake these effectively or can draw on other resources within the Government or outside.
- 8.7 National and regional government and cities should build closer links with universities and research institutions that can provide the evidence base and research capacity to monitor and evaluate the effectiveness of urban and regional development policies in delivering successful outcomes. These can include NGOs and international donors.

9. Further improve the Master Plan implementation

The amendment to the 1998 Law “on Urban Development”, approved by the National Assembly in December 2015, will support greater intermunicipal collaboration in the field of spatial planning at the micro-regional and local planning levels. It is recommended that:

- 9.1 It might be more efficient and cost-effective to prepare common spatial development documents for groups of communities rather than individually, especially for many regions in Armenia with small and underdeveloped communities. The same approach could be applied to settlements that form a single functional economic area, such as the communities of the densely-populated Ararat valley.
- 9.2 During the planning process, public hearings are carried out twice: at the initial design stage, and before final plan approval. Moreover, public hearings are also carried out within the framework of an environmental impact assessment, which is mandatory for spatial planning documents. More could be done to involve local communities and interested stakeholders at all stages in the planning process, from design to implementation. This helps to win trust, and turns potential antagonists into supporters of a development.

10. Improve the five-year Community Development Programme

Longer-term strategic Community Development Programmes should be developed and better integrated with Master Plans and Zoning Plans, which are normally valid for 15 years to ensure consistency between all of a local council’s strategic documents. In drawing up the five-year Community Development Programmes, there is already a legal obligation to include the need to develop spatial planning documents for the community if such documents are absent, as well as to make changes to these Plans where necessary. The following recommendations should also be taken into consideration:

- 10.1 Develop the effective strategic planning capacity of community councils and improve their functioning so Development Programmes can perform their intended role in setting priorities for community development and providing realistic cost estimates and sources of funding for development projects.
- 10.2 The planning process needs to ensure genuine public participation with the help of special mechanisms to increase active citizen participation through polls, surveys, focus groups and public hearings.
- 10.3 The documents should be made more user-friendly to assist with effective community involvement and securing feedback.
- 10.4 Annual monitoring and evaluation of the documents should be improved to track progress in achieving their goals, with the application of the latest project and programme planning techniques to add rigour to the process.

11. Apply the compact city concept with a focus on sustainability

Armenia should adapt the concept of a compact city in a way that best suits local circumstances and makes a contribution to urban sustainability that is acceptable and feasible in the local environment. It needs to develop its own vision of a compact city that is shared between national, provincial and city authorities. State Government has an important leadership role to play in providing an explicit national policy framework and consulting provincial and local city governments to ensure the approach wins support at all levels. The following recommendations should be taken into consideration:

- 11.1 A national statement on compact city policy combined with incentives, such as tax policies, and regulations could be applied at provincial and city level to help improve its

effective delivery. That could go hand-in-hand with decentralizing some of the powers and levers that cities need to drive development and growth, so that they can work within the overall policy grain but have sufficient flexibility to tailor policies to local needs and opportunities.

- 11.2 Regenerate older city centres to provide the kind of environment that will encourage city centre living and provide a focus for the mobile skilled labour needed by the knowledge/creative industries that often thrive in such areas in other cities around the world and to which proximity to related businesses matters. This should embrace other policies like education and health, by providing high quality facilities that will attract people to live in city centre areas, but it needs to be combined with various types of residences that offer ample open space with high quality landscaping including parks and green open spaces.
- 11.3 Retro-fit existing high-rise apartment buildings so they are more sustainable, and improve their surroundings to provide more green space, even if this means demolishing some existing buildings. More needs to be done to make existing residential areas more attractive, and to improve landscaping and green spaces to help create a greater sense of place.
- 11.4 Mixed land use, linked to high residential density, as a core element of the compact city ideal. It has a range of advantages for compact city policy: increasing housing provision, rather than having a strict segregation of residential and commercial areas; reducing the need to travel, so local residents can walk, cycle or use public transport to get to work; and increasing vitality and security by ensuring there are people around during non-working hours. It can also strengthen a city's economic base by improving footfall in local businesses and shops, and accessibility to local facilities, while reducing pressure on fringe and out-of-town sites.
- 11.5 Regenerate old commercial and residential areas to enable control of population density in cities; however, it is necessary to apply the planning policy as soon as possible to prevent unauthorized construction.

12. Improve environmental protection policies

Although Armenia has made good progress in the matter of defining its environmental protection policies, there are further possible measures that could be taken to improve their effectiveness and impact:

- 12.1 Legal, administrative and regulatory frameworks for environmental and land use policy should be kept under review, and further measures developed as appropriate. The proposed new Law "on Environmental Protection Policy" should be adopted.
- 12.2 The country's environmental impact assessment and monitoring systems should be revised to reflect more closely the different impact new development may have on the environment. A lighter touch approach could be applied to businesses that have low environmental impact and employ energy-efficient and environmentally friendly technology.
- 12.3 More incentives should be given to businesses and developers who employ low carbon and sustainable technology and construct environmentally friendly buildings, together with the introduction of environmental rating and labelling.
- 12.4 Water resources governance is a key issue. Water basin management should be enhanced with more local control, both to enhance water quality and to reduce levels of water pollution. This should be closely linked with spatial planning documents, so that land use planning and water governance complement each other.

- 12.5 International learning and best practice in environmental monitoring and evaluation should be adopted, together with the application of international standards in such areas as waste management, water and atmospheric pollution control, particularly in urban areas.

13. Improve architectural and historical heritage conservation

For the future, more needs to be done to strike a better balance between promoting economic and urban growth without irrevocably destroying the settings of cultural and historic monuments or the buildings themselves. Action for the future could involve:

- 13.1 Stronger enforcement of existing regulations combined with a review of the legal framework to see if more powers are needed to bring tangible results in conserving historic buildings and heritage. This could involve strengthening the role of the Agency for Preservation of Historical and Cultural Monuments in the Ministry of Culture that has responsibility for this policy.
- 13.2 Any review should also look at how best to embed the principle of conserving architectural heritage as a core element of sustainable development at national, regional and local levels.
- 13.3 Raise awareness of the value of conserving historic and architectural heritage, and of the need to preserve the settings of heritage monuments and sites.
- 13.4 Avoid new regulations being unnecessarily punitive. It is important to demonstrate that, while historical and cultural contexts should be preserved, local communities and individuals can benefit from these policies by making places more attractive so they support tourism and jobs.

14. Develop further measures to mitigate natural hazards consequences and adapt to climate change

- 14.1 These measures represent important steps in addressing seismic risk by developing practical measures to identify areas most at risk and developing mitigation strategies to tackle seismic hazards. Further measures that might be considered are:
 - 14.1.1 Undertaking a review of disaster/seismic hazard assessment and risk reduction strategies in urban planning and development policies to ensure they reflect the latest learning and best practice on the subject;
 - 14.1.2 Exploring whether more should be done to enhance the role of central and local government in making cities resilient, e.g. through risk assessment, building regulations, land use planning controls, education programmes and training, early warning systems;
 - 14.1.3 Strengthening existing buildings in the most vulnerable areas of the cities most at risk and incorporate seismic risk reduction, using methods that employ conventional and new non-conventional structural concepts;
 - 14.1.4 Ensuring that strategies to address disaster/seismic risk give priority to mitigation and preparedness over recovery, while not ignoring the importance of resilience when disasters do strike; and
 - 14.1.5 Actively engaging local communities in the development of mitigation and preparedness strategies to minimize the risk of fatalities when disasters occur.
- 14.2 Improving the environmental performance of towns and cities, and enabling them to adapt to climate change, needs action across the board: buildings need to work better and consume less energy, transport systems need to promote more efficient means of travel,

and urban land use planning needs to create places where local vitality reduces the need for unnecessary journeys, and where green space mitigates the impact of climate change as well as providing a place for relaxation.

Further initiatives that could help address the challenge of climate change in Armenia are:

- 14.2.1 Encouraging regions, cities and towns to show leadership at local level in tackling climate change;
- 14.2.2 Encouraging larger cities like Yerevan and Gyumri to develop their own climate change action plans to meet local carbon reduction targets;
- 14.2.3 Providing national government support to cities, possibly through a low carbon cities programme, to help them develop city-wide carbon reduction strategies;
- 14.2.4 Encouraging individuals, possibly through a pledge campaign, to reduce their carbon footprint, and to get involved in local low carbon and green energy projects; and
- 14.2.5 Supporting exemplar projects in cities to minimize carbon emissions. These can play a key role in offering guidance and best practice in tackling climate change.

Land administration

15. Update national maps

To give impetus to further economic development, particularly in the industrial and agricultural sectors, and to contribute to the development of efficient infrastructures and environmental protection measures, the Government should have access to updated data and accurate information about the physical and natural resources of the country. It is recommended to:

- 15.1 Carry out full scale repeated studies in Yerevan, Gyumri, Vanadzor and Goris (because of its smart-city status).
- 15.2 It would also be logical to consider methods that use satellites and antennas. These methods are especially suitable for the mapping of inaccessible areas, such as mountains or military conflict zones.
- 15.3 For limited repeat studies, the SCREC may consider investing in unmanned aerial vehicles (drones). The image data may, in turn, be used for the identification of land parcels and property rights. Also, these images can be put to wider use: identification of boundaries between communities, land utilization planning, accurate census, and inventory and management of natural resources.
- 15.4 It is recommended to consider crowdsourcing techniques, or apply for membership in Cooperation in Science and Technology (COST), an intergovernmental framework for scientific and technological research.

16. Improve land administration policies

- 16.1 It is recommended to re-implement the programme of land consolidation set out in the Land Consolidation Concept Paper. The desired outcome would be to consolidate agricultural lands into large areas with more orderly boundaries.
- 16.2 To improve land management as a pillar of effective land administration, the system of agricultural education and agricultural research, methods and tools used for production in a competitive market should be upgraded on the basis of available options.
- 16.3 Monitoring of changes in land management should be more stringent to prevent land degradation and inappropriate management of limited land resources. Regular

monitoring, especially of protected natural areas, should be maintained and improved. This is also the case for other environmentally vulnerable categories of land.

17. Promote investment in the land market

To improve transparency in the land market and to promote domestic investment, it is recommended that:

- 17.1 The valuation of residential land should be carried out with the use of the comparative sales analysis method (the actual prices) instead of cadastral value. This policy will enhance transparency and trust in land valuation.
- 17.2 For non-residential land (i.e. land and buildings used for commercial, industrial and agricultural purposes), a new valuation system is required so that the most appropriate method of valuation can be applied. Thus, a data comparison principle will be introduced to the valuation process.

18. Implement the World Bank/FAO Land Governance Assessment Framework

The Land Governance Assessment Framework (LGAF) is an important diagnostic tool that is used in land administration, notably in registration and cadastre, valuation and property taxation, spatial planning, resolution of disputes, and the creation of standards for the dissemination of spatial and other land ownership information.

This programme was implemented in 30 countries, including some countries of the former Soviet Union, notably Ukraine and Georgia and it is recommended that Armenia implement it as well.

Financial framework for housing and land management

19. Develop a unified approach to the implementation of national policies in the housing finance and housing sectors

The development of a unified government strategy in the housing sector would strengthen the guidelines for the long-term development of the housing finance and utilities sectors, and systematize all existing national programmes, initiatives and planned reforms, and their implementation costs. The MUD would be responsible for its development and implementation. In fact, all reforms and initiatives would be developed and implemented by the MUD. The creation of a single authority for the implementation of the housing policy would ensure the effective implementation of the housing strategy. It is recommended that:

- 19.1 The Government should develop a comprehensive policy framework that would define the structure and implementation of national policies. This strategy should delineate the powers of central and local authorities related to the implementation of specific housing programmes, and enhance the role of local authorities in housing policy implementation.
- 19.2 It would be necessary to allow for an increase in volume, and ensure consistency in allocating funds for new housing construction from state and municipal budgets, in the context of this strategy.
- 19.3 The strategy should implement measures aimed at improving the quality of existing housing (repair and reconstruction of residential buildings) and reducing demand for new housing.
- 19.4 The strategy should also include the assessment of citizens' demand for housing to be constructed under government programmes. Currently, there is no methodology for the selection of beneficiaries of public housing programmes. A preliminary assessment of the

demand for housing constructed under public programmes would make it possible to develop more targeted programmes, whose outcomes will be more in demand.

- 19.5 Budgetary revenues from property tax and land tax should be fully or partly channelled into the needs of the housing sector. Local authorities may use the experience of other countries with regard to the issue of bonds, as they can be used to finance construction programmes.
- 19.6 The development of the strategy should make full use of the UNECE guidelines and recommendations for real estate sector development — Policy Framework for Sustainable Real Estate Markets and Guidelines on Social Housing: Principles and Examples.

20. Ensure a stable flow of long-term investment in the country's economy, a necessary prerequisite for the development of housing finance

Currently, the country receives limited long-term funding from foreign institutional/private investors. Foreign investment is engaged on a short-term basis, on conditions of frequent prolongation of investment agreements under certain projects. The following recommendations should be taken into consideration by the Government of the Republic of Armenia:

- 20.1 The Government should provide incentives to local businesses involved in large-scale housing projects in the housing sector. Foreign investment should be attracted not only for new housing construction, but also for the reconstruction and renovation of existing housing stock, notably to ensure regular EE improvements rather than implement individual projects.
- 20.2 The development of a fully functional pension system will ensure the demand for mortgage-backed securities, and will become one of the sources of long-term funds for mortgage loans.
- 20.3 It would be necessary to develop the local securities and institutional investors markets. Raising the liquidity and transparency of the securities market will serve as the basis for long-term lending improvements, including mortgage lending.
- 20.4 In order to increase investment attractiveness, the Government should take steps to improve the country's investment rankings. It is ranked 35th in the World Bank's Doing Business 2016 report in terms of ease of doing business, and 62nd in terms of dealing with construction permits. However, in terms of obtaining electricity, the country ranked 99th in 2016 compared to 96th in 2015. This emphasizes the need to attract both domestic and foreign investors to improve this area.
- 20.5 Securing long-term funding for mortgage loans in combination with the implementation of risk mitigation measures will help to reduce mortgage rates, which will increase the availability of mortgage loans for the population.
- 20.6 When developing the mortgage loans system, full use of the UNECE guidelines on housing construction finance should be made.

21. Encourage the development of housing finance mechanisms

The Government should take actions to enhance the attractiveness of using land and unfinished construction as security when implementing construction projects. It is recommended to:

- 21.1 Provide banks and developers with assistance in the preparation of the standard documents required for construction loan applications, as well as to encourage the construction industry to increase its transparency.

- 21.2 Construction companies should be given incentives to disclose more information about their activities to increase their transparency and lower risks.
- 21.3 The Government should consider transferring a part of the regulatory powers to a self-regulated organization.

22. Actively promote the development of new financial products

- 22.1 The Government should encourage the development of new credit products, including those focused on EE. Considering the high housing availability and the significant demand for housing renovation, the Government should take into account and support the initiative of private lending institutions focused on the development of accessible products to meet this demand. However, when launching new credit products, special attention should be paid to ensuring they are understandable to inexperienced borrowers.
- 22.2 The creation of a favourable legal regime may be instrumental in addressing the issues related to the renovation and improvement of homes, especially in areas where people have low incomes and in economically disadvantaged areas, by providing residents of such areas with access to vital financial resources. The development of the social housing sector requires targeted subsidies and alternative funding mechanisms, in accordance with the recommendations set out in the UNECE Guidelines on Social Housing.
- 22.3 In order to increase the effective demand for financial services in the housing sector, the Government should organize training programmes for inexperienced borrowers (including commercial developers, municipal enterprises and households) that will focus on the methods of construction project development, marketing analysis and the assessment of potential funding sources for the repayment of loans.

Annex I

Risk assessment in the regions of Armenia and in the city of Yerevan

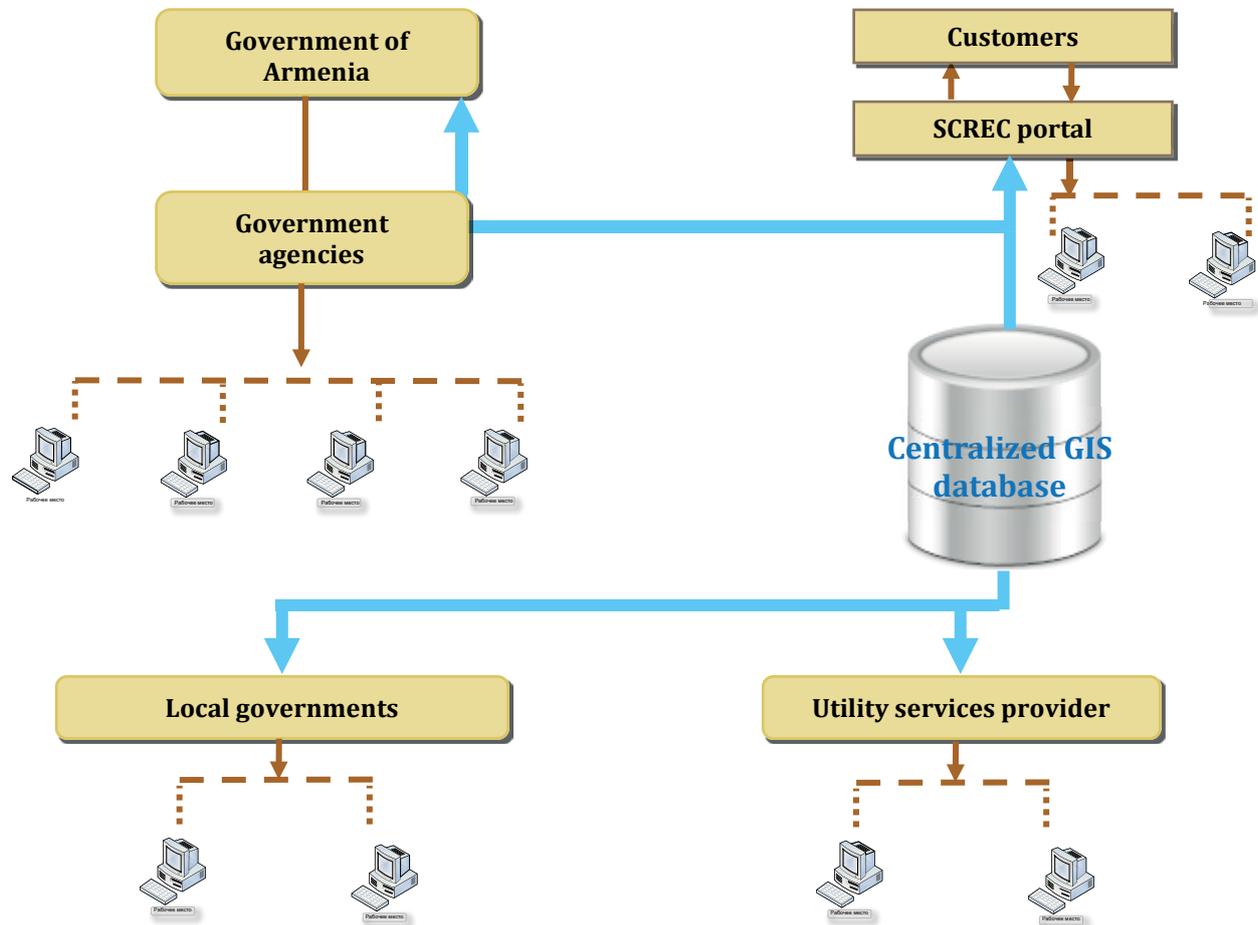
Region	Risk											Average
	Earthquakes	Hailstorms	Floods	Landslides	Chemical emissions	Snow	Storm floods	Frosts	Marshes	Winds	Droughts	
Yerevan	1	0.35	0.7	0.7	0.35	0.35	0.35	0	0.35	0	0	0.37
Shirak	1	0.7	0.7	0.35	0.7	1	0.7	1	0.7	0.7	0	0.68
Kotayk	0.7	0.35	1	0.7	0.35	0	0.7	0.7	1	1	0	0.59
Vayots Dzor	0.7	0.7	0.7	1	1	0.35	0.7	0	0	0.7	0	0.53
Armavir	0.35	0.7	0.35	0.35	0.7	1	0.7	0.7	0.7	0	0	0.5
Ararat	0.7	0.35	0.35	0.7	0.7	0.7	0.35	0.35	0.35	0	0.35	0.44
Lori	0.7	1	0.7	0.7	0.35	0.35	0.7	0	0	0	0	0.4
Syunik	0.35	0.7	0.35	0.35	0.35	0.7	0.35	0	0	0	0.7	0.35
Aragatsotn	0.35	0.35	0.35	0	0	1	0.35	0.35	0	0	0.7	0.31
Gegharkunik	0.35	0.7	0.35	0.35	0.7	0	0	0.35	0	0.35	0.35	0.31
Tavush	0.35	0.7	0.35	0.35	0.35	0	0.35	0	0	0	0	0.22
Average	0.6	0.6	0.53	0.5	0.5	0.49	0.47	0.31	0.28	0.25	0.19	--

Annex II
Key housing construction indicators

	2006	2007	2008	2009	2010	2011	2012	2013	2014
Commissioning of fixed assets, million drams	292 028.4	321 814.0	490 964.1	123 684.8	368 767.5	328 635.0	566 973.2	300 564.8	351 585.0
Volume of construction, million drams	309 745.6	336 881.0	522 113.1	195 031.8	588 807.7	504 824.5	479 415.6	453 449.3	463 858.0
Total floor area of commissioned residential buildings, thousand square metres	385.7	480.5	521.1	435.0	520.3	571.2	425.2	320.2	284.1
Of which from:									
Public budget	11.3	63.5	24.6	10.6	128.7	28.0	212.0	14.4	-
Funds of organizations	65.1	64.3	124.7	89.5	161.0	419.2	73.4	128.1	132.9
Citizens' assets	302.5	348.9	371.8	334.8	229.0	124.0	135.6	166.8	151.2
Other	6.8	3.8	-	0.1	1.6	-	4.2	10.9	-

Source: *Statistical Yearbook of Armenia 2015*, Construction, Table 224, "Main indicators of construction." p. 309.

Annex III
IT infrastructure of the State Committee of Real Estate Cadastre



Source: SCREC.

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