



## URBAN SPACES – PUBLIC AND PRIVATE

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Guest Editor: Lado Vardosanidze

## Housing in Georgia

By Irakli Zhvania, Tbilisi

### Abstract

Georgia's housing situation is typical for the South Caucasus region. Detached houses make up nearly 93 per cent of households in the countryside, whereas flats comprise 67 per cent of the households in urban areas. These numbers should be kept in mind when assessing the existing housing stock, as more than half of the residents of Georgia are in urban areas. The capital city, Tbilisi, is home to one quarter of the total population of Georgia.

### Privatization

In 1992, the government transferred ownership of apartments to residents by decree. Accordingly, no legislative framework defined the privatization of housing stock. Moreover, the privatization process was not well planned; it did not draw on any vision of housing policy or urban development strategy. Municipal authorities carried it out and transferred the housing almost for free, charging citizens only a tax on the transfer. This decree did not specify the legal status of the land plots under or next to multi-storey houses or the obligations of the owners. There was no attempt to envision the future of the housing sector after privatization was complete. The state did not provide any information about rights and management. Laws in the Civil Code regulate the privatization of houses, land and enterprises, but none of them say anything about the ownership of multi-flat buildings. The existing laws regulating housing ownership are not enough to manage this important part of the housing stock.

In 2004 the share of private ownership of dwellings was 94.5%. Only 1.7% of stock was occupied by renters. After the privatization of the housing stock, essentially a "give away" scheme, residents became owners overnight, without having any experience and capacities to fulfill

the obligations of property owners in terms of the maintenance and management of facilities. Although there are many similarities and common trends in the housing sector in post-socialist states, the scale of privatization in Georgia is very different from the situation in other transition countries. In many countries 20–30% of the stock could not be privatized, despite the fact that privatization programs gave properties to tenants almost for free. One of the reasons was the unwillingness of residents to take ownership of dilapidated housing units. The high costs of repairs, leaking roofs, broken lifts and numerous other problems reduced their desire to take over responsibility for maintenance.

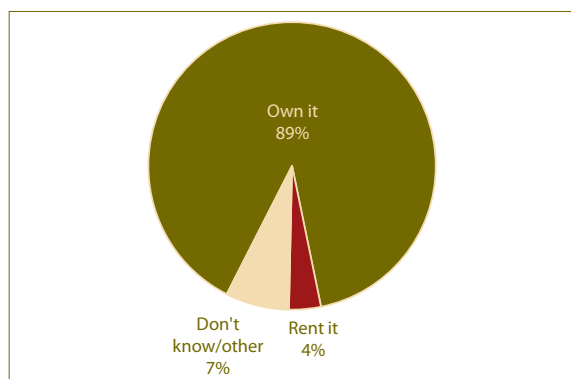
The process of privatization was not supported by technical surveys or relevant documentation of the flats and housing blocs. In fact most property lines remain undefined. Additionally, there were no clear provisions for the management of common property.

Most people and official bodies understood privatization as the complete transition from common ownership to private property. Common ownership was regarded as a remnant of the collapsed socialist system. Under Soviet rule, common ownership was a product of communist ideology. After the collapse of the USSR, everything connected to the "bad old system" was regarded as wrong, and something that should be discarded. Private ownership was seen as an achievement, a positive characteristic of the new and "good" capitalist system. For many, these two different kinds of ownership did not seem to work together. At the same time, the public sector did not pay attention to such important "details" of the housing sector. Acute socio-economic and political problems overwhelmed everything else. The newly-formed state structures did not have enough experience and institutional capacity to address these new legislative and regulatory problems.

### Technical Conditions

In 1989, in order to lower the intensity of protests against the Soviet system, the last Communist government issued a legal act permitting residents to improve their living conditions by expanding their living areas

Figure 1: Do You Own the Place Where You Live?



Caucasus Research Resource Centers. 2009 "Caucasus Barometer". Retrieved from <http://www.crrccenters.org/caucasusbarometer/> on 17 December 2010

by enclosing balconies, loggias and verandas or adding extensions to their apartments. The individuals who took advantage of this decree mainly lived in the Soviet-built block-housing units. As a result, residents added numerous structurally and aesthetically questionable extensions to their flats, adding unsafe structures in a region prone to earthquakes. Inhabitants erected private chimneys for fireplaces and gas-stoves on the facades of their apartment buildings, and redesigned windows and balconies. Buildings thus acquired a makeshift look, with structural extensions that exceeded a building's planned dimensions. It remains to be assessed how many of these extensions were actually carried out with proper permission and followed safety standards. Several of these "initiatives" remain unfinished due to socio-economic difficulties the owner encountered after they started work. In general, a major part of the housing stock in Georgia—regardless of its ownership—requires massive reconstruction. At the same time, some of the housing stock is naturally deteriorating, due to a lack of maintenance and the activities of residents. In fact, some damaged houses should be demolished.

The technical conditions of most buildings in Tbilisi deteriorated significantly in the thirty years since 1980. Mainly these buildings were erected during the first wave of mass construction, were designed to last 25 years and are now obsolete. Multistory houses constructed more recently have aged better.

The issue of technical conditions is very acute in the historical city center, where the main housing stock was constructed in the 19<sup>th</sup> century. In the majority of these cases, living conditions do not meet modern standards. In high-occupancy residential houses, residents expand kitchens, build out utility cores and add additional living space. Such construction has a negative effect on the technical conditions of houses. In 2009, the municipality in partnership with the private sector started a program to rehabilitate and reconstruct residential houses in the old part of the city. The residents there lack the financial means to better their living conditions. The aim of the project is to improve the architectural and urban image of the old district and attract private investors to these buildings in the hope that they will take responsibility for their maintenance. Unfortunately, this process includes removing some of the inhabitants to other locations.

### Construction Boom

In the mid-1990s, housing construction took off and became one of the most profitable markets of the early transition period. The necessity to renovate Soviet housing caused a boom in the number of brokerages. Private companies and developers bought entire apart-

ment buildings, demolishing them and constructing new houses up to four times taller. Constantly rising prices for construction materials forced them to build cheap and fast. To keep costs and prices low, builders did not pay attention to the aesthetic result of the materials and construction practices they used. In the 1990s and early 2000s, making a quick profit was the only aim at a time when the public authorities were weak and corruption and nepotism blocked the enforcement of laws. Because of these tendencies, many flats stayed empty while speculators bought and sold them.

The construction boom resulted in a low quality and poorly planned housing stock. Housing developments from this period suffer from low architectural quality. Poorly built new high-rise buildings do not fit into the historically established urban fabric of the city. Frequently, they significantly exceed heights allowed by official regulations, creating thousands of square meters of de facto illegal living space. The appearance of new commercial housing buildings has become a problem for the city. They stand as alien bodies within the urban grid. Building 10–15 stories in place of 4–5 drastically changed the environment of neighborhoods.

These negative processes have slowed or stopped since 2003–2004. The state has strengthened construction regulations and monitoring and made strong efforts to reduce corruption in these spheres. Now the main actors in the private development sector are big development companies, which carefully guard their reputation, use higher quality materials and generally rely on highly skilled professional architects. Nevertheless, many problems remained unsolved and the uncontrolled wild housing developments of the past damage the city's image, architectural heritage, environment and other aspects of the urban identity.

These changes and new developments in the housing market are most notable and problematic in Tbilisi, as it is the capital and the largest city with the most economic activity. It houses a large part of the country's population and is attracting new residents. The second most quickly growing city is probably Batumi, the harbor city with a large tourist industry, followed by Kutaisi, the second largest city in Georgia.

More and more Georgians are hoping to move from old Soviet-style flats into new apartments and improve their living conditions. Total residential stock per capita is one of the lowest in the Eastern Europe and average household size in Tbilisi is much higher than in any other Eastern European capital. According to the last census in 2002, the average household size was 3.5 persons. Most of the existing residential stock was built between 1945 and 1985 and is not of good quality. With the progressive increase of GDP per capita and dispos-

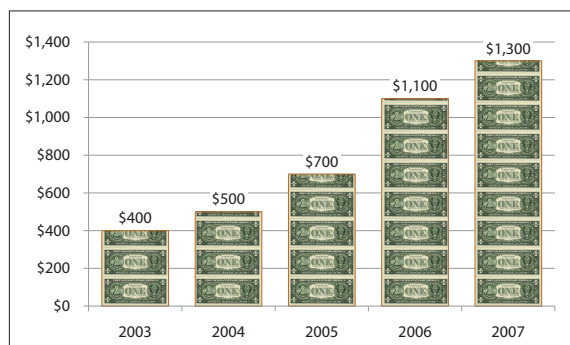
able income, the trend of abandoning old Soviet apartments accelerated and the demand for new residential property has been increasing.

The main actors in Tbilisi's real estate sector are domestic developers. Based on the data of the Georgian Statistical Department, the average living space per person in Tbilisi for the year 2002 was 12.2 m<sup>2</sup>. Based on this and Tbilisi City Hall information on completed residential projects from 2003 to 2006, the average living space per person does not exceed 17 m<sup>2</sup>. Real estate developers seek to buy land for their projects, but the boom in residential construction has reduced the number of available locations in attractive districts of the city. Housing construction activity is shifting to the mountain and forest areas surrounding Tbilisi. Developers now try to avoid complicated negotiations with the residents of the remaining small land plots in the city. They instead want better access to land for development. Regional expansion is a key strategic objective for developers. They try to benefit from low competition and gain first-mover advantage.

### Affordability

Prices for residential real estate properties significantly increased during 2003–2007. Figure 2 shows the growth of newly constructed “white frame” prices. During the years 2005–2007 selling prices of Tbilisi's residential properties, especially in the downtown area, increased considerably, compared to rental prices, which grew at a slower rate. Part of the price growth was fuelled by purchases for investment rather than of a place to live.

Figure 2: Average Price of White Frame Developments in Tbilisi



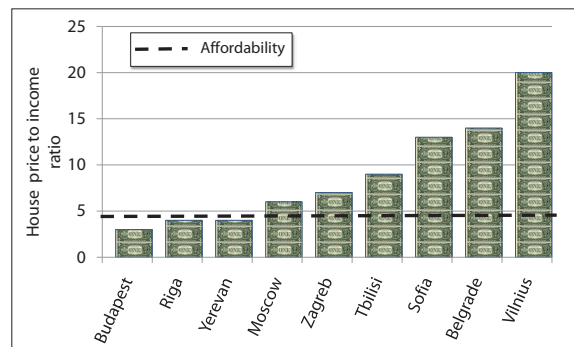
Source: Deloitte & Touche estimates

In western European countries, housing real estate generates 4–7% annual profit in the long term. In Georgia profit from sales varies from 50 to 100% with much shorter time horizons. Tbilisi, competing to be the business center of the Caucasian region, is open for investment and the real estate market is characterized by constant price growth. The prices were almost doubling every year until 2008. The global economic crisis

and short war with Russia decreased investments and stopped the price increases for residential areas and in some cases prices even began to drop. The number of apartments sold also fell. Most apartments continue to be sold in white frame, which is the standard product of Georgian developers, but competition is forcing them to offer additional services as well.

Due to very high prices, hundreds of thousands of people cannot afford to purchase newly constructed apartments. Housing units command high prices which continue to grow at a rapid rate. These increases are not accompanied by increases in income. In Tbilisi, house price to income ratios are extremely high in international comparison. Since a price to income ratio of approximately 4 or 5 is considered to be fairly acceptable, it shows that the level of affordability is low. Figure 3 shows that the house price to income ratio in Tbilisi, among other eastern European capitals, already in 1998 was above average. Since then, prices increased 6–8 times, while incomes have not kept pace.

Figure 3: House Price to Income Ratio



Source: 1998 UN Habitat Global Urban Indicators

Some analysts claim that privatization helped households accumulate some savings to soften the economic problems of the transitional period, or, in other words, the formation of the private housing market has provided some wealth to residents since they could command high market prices from their property after privatization. Indeed, some people sold their property to improve their living conditions and at the same time meet other basic needs, such as food or education, and moved to less desirable locations. Housing in better locations and conditions has become affordable only for well-off families, while the lower-middle income population filtered to outskirts areas or stayed in their previous homes but without the ability to improve their living conditions. Privatization and the private housing market in this way have enhanced the spatial concentration of low-income groups in less attractive districts of the city.

For households that moved, the main problems come a few years after they sold their original flat. When the money from the sale runs out, they again face the same financial problems and at the same time are living in worse locations with a much lower market price for their property. What they need is old building in a lively district, which some among them can help make livelier.

New residential buildings are not an unadulterated good for the city since they bring many disadvantages. The value placed on various advantages, or the penalties accruing from certain disadvantages, are given different weights by different people. Some people prefer more space for the money or equal space for less money to apartments in new houses offered by developers. Some

people would rather pay for improvements in their living conditions by selecting which improvements are most important to them, instead of being forced to buy a variety of improvements which all cost a lot of money.

High price housing developments cause social segregation and gentrification when the public sector does not intervene in housing issues. It is regrettable that in such a situation there is no governmental policy on housing and lower income groups are not provided financial mechanisms to be able to improve housing conditions. The housing sector should be a higher political priority. A national housing policy needs to be elaborated and the concept of social housing should be introduced.

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## Public Green Space in Armenian Cities: A Legal Analysis

By Arsen Karapetyan and Anush Khachatryan, Yerevan

### Abstract

This article examines the state of urban green spaces in Armenia. Overall, the amount of land devoted to green space is shrinking as a result of new construction. Armenia's existing legislation dealing with this issue is inadequate and should be updated to encourage more inventories of existing areas, monitoring of development, and participation, particularly by local government officials and the public.

### Overview

Armenia's population is distributed unevenly across its 49 cities, as Table 1 on p. 8–10 shows. At one extreme is the small town of Dastakert with 300 people; at the other is the capital Yerevan, with 1.11 million people. The level of economic activity also varies significantly across cities. Some urban areas have a high level of economic activity, which requires new construction that inevitably fills up increasingly scarce urban land plots.

The price of urban land is rising from year to year in Armenia, making the land currently devoted to green space particularly valuable. Since this green space is considered communal property, the municipalities control it and they are willing to issue construction licenses to build on this space. Typically, the municipalities permit construction of temporary buildings in these areas, which in practice become permanent structures. Ultimately, of course, it does not matter, whether the building is temporary or permanent—the green space is

destroyed once the construction takes place. The most important losses of green space are taking place in the central parts of cities as a result of in-fill construction.

The existing legal framework in Armenia regulating procedures and methodologies for maintaining green space does not meet the minimal requirements for preserving these sites. Similarly, the implementation of measures to compensate for damage to green space is inadequate.

Since the quantity of green space is constantly shrinking in Armenian cities, the situation is critical. In many cities (Yerevan, Gjumri, Vanadzor, Hrazdan, Sevan, etc.), park lands and squares are being converted to other uses. As a result, the state of the environment and the quality of life for townspeople is deteriorating.

### Statistical Analysis

To develop a systematic picture of the situation, we examined the existing statistical data on Armenia's green



spaces and the regulatory framework protecting these areas. Our research shows that the current situation is a result of the inadequacy of the state's legal framework, the lack of personnel to address the problems, and poor operational maintenance of the green space. Figures 1–3 and Tables 2–4 on p. 10–12 provide statistical data on urban land, green zones and public use green zones.

Using the data of the National Statistical Service of Armenia on the area of city green zones within the administrative borders of cities, and also the area of built-up territories, it is possible to calculate the share of planted area as a percent of the total area of land within cities. These data are presented in Figure 4 and Table 5 on p. 13.

According to the calculations in Table 5, the norm of green space within cities is lower than 40% in all regions except in Aragatsotn and Vayots Dzor. This violates governmental decree #1318-N “On the statement of the law and order for technical requirements for the sizes of green zones in urban areas”, issued October 30, 2008, which requires that green zones should make up 40% of all city territory (point 8). In Aragatsotn (for 2005–2007) the areas of green plantings were verified by the National Statistical Service, providing a set of reliable figures.

We also calculated the share of public green zones from the total area of the land within city administrative borders (Figure 5 and Table 6 on p. 14).

As it is evident from Table 6, the situation with the public green zones is deteriorating in the capital city of Yerevan. The share of public green zones within the total area of the city dropped from 19.1 percent in 2006 to 7.3 percent in 2009. The drop resulted mainly from inappropriate urban development practices in Yerevan.

To calculate per capita green space in square meters, distributed per urban community within the regions, we used National Statistical Service population data from 2002 to 2007. The results are listed in Figure 6 and Table 7 on p. 15.

According to the 2008 government order mentioned above, the norm for areas devoted to planted trees and shrubs per capita should be between 8 to 21 m<sup>2</sup>/person. Table 7 shows that only two regions meet this norm: Aragatsotn and Vayots Dzor.

### Legal Issues

The following legal acts are important for policy-making in this area:

- the Republic of Armenia Law “On flora”,
  - the Land Code of the Republic of Armenia,
  - the Republic of Armenia Criminal code,
  - the Republic of Armenia Law “On administrative offenses”,
  - and Governmental decree #1318-N “On the statement of the law and order for technical requirements for the sizes of green zones in urban areas”, issued October 30, 2008.
- Our analysis of these texts shows that there are a variety of terminological errors, contradictions among points in the different laws, discrepancies in the formulations, and loopholes that allow local governments to use the land at their own discretion.
- To address the problem of preserving the green space within Armenia's cities, it is necessary to:
- adopt a republican law “On green spaces in cities and settlements”;
  - expand the powers of the regional department state inspectors of the Ministry of Nature Protection so that they can function like an ecological police;
  - conduct an inventory of green spaces among the communities of the republic, to make a catalogue of each tree, bush, and lawn with data about their specific features, measurements, and conditions, including photos;
  - specify the borders of green spaces, and map them;
  - conduct regular monitoring of the green spaces;
  - establish adequate penalties for damage caused by local authorities, citizens and legal bodies to urban green spaces, taking into account the categories of green spaces to which the damage has been done;
  - conduct an economic assessment of the land areas occupied by green spaces to establish rents and land taxes for using the territories;
  - involve the population by establishing community gardens, and in the maintenance and protection of green plantings in yards;
  - support social movements that work to protect urban green spaces;
  - provide the public easy access to information concerning the expenses required for carrying out environmental activities and community gardening programs at various levels;
  - discuss with local governmental bodies, the population, business structures, and experts gardening questions, such as reconstruction, uprooting, restoration;
  - create midterm and long-term communal target programs on the preservation and development of territories protecting planted trees and shrubs;
  - form an ecological fund regulating financial streams in this sphere, which will collect receipts from fees for removing plantings, penalties (transferred by the state), voluntary payments and so on. These funds will be used for other expenses except gardening;
  - exert public control over the creation of green zones, including use of a hot line to ensure quick reaction

- to legislative infringements, using the “Aarhus centers” as a model;
- create public precedents for the full implementation of legal mechanisms through the mass-media, public hearings, and different types of information centers and other actions;
- print and disseminate a management guide for townspeople on “How to protect green spaces”;
- and demand that deputies in the National Assembly raise the question of protecting urban green spaces.

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### *Internet Sites*

- [www.armstat.am](http://www.armstat.am) Site of the National Statistical Service of the Republic of Armenia

### *Legal Texts*

- Constitution of the Republic of Armenia; Civil Code of the Republic of Armenia; Land Code of the Republic of Armenia; law of the Republic of Armenia “On flora”; law of the Republic of Armenia “On town-planning”; law of the Republic of Armenia “On administrative offenses”; law of the Republic of Armenia “On ecological formation and population education”; Criminal Code of the Republic of Armenia; Governmental decree of the Republic of Armenia “On the statement of an order of informing about planned changes of inhabitancy and the participation of representatives of the public in discussions about the published town-planning programs and projects and decision-making”, 10/22/1998, number 660; Governmental decree of the Republic of Armenia “On the establishment of conditions, terms and revision and announcement procedures voiding the expert judgment of examination environmental impacts”, 6/18/2003, item 623 number 701; Governmental decree #1318-N “On the statement of the law and order for technical requirements for the sizes of green zones in urban areas”, issued October 30, 2008

## STATISTICS

## Data on Public Green Space in Armenia

Table 1: Population and Main Economic Activities of Armenian Cities

No.	Marz (Region)	City	Population (thousand persons)	Main economic activities
1	Syunik	Dastakert	0.3	Copper and molybdenum mines
2	Lori	Shamlugh	0.7	Copper and silver mines
3	Lori	Tumanian	1.8	Brick factory
4	Gegharkunik	Chambarak	7.4	Agriculture, food industry
5	Lori	Akhtala	2.4	Mining industry (manufacture of copper concentrate)
6	Syunik	Agarak	4.8	Mining industry (non-ferrous metal production), copper and molybdenum production
7	Syunik	Meghri	4.9	Food and beverage production
8	Tavush	Noyemberian	5.5	Agriculture (field-crop cultivation and animal husbandry)
9	Tavush	Ayrum	2.4	Railway station, retail trade
10	Tavush	Berd	8.5	Agriculture (small-scale cattle husbandry and field-crop cultivation)
11	Vayots Dzor	Vayk	5.9	Mineral water, alcohol-free beverages, building materials and carpet-making
12	Syunik	Goris	23	Manufacturing industry (production of food and beverages, textile and products, machines and equipment, electricity production and distribution)
13	Shirak	Maralik	6	Textile industry, mining of building materials, agriculture
14	Gegharkunik	Vardenis	12.7	Food industry
15	Syunik	Qajaran	8.5	Mining industry (non-ferrous metallurgy, copper and molybdenum)
16	Lori	Spitak	15.1	Small and medium-sized industrial fabrics, agriculture
17	Gegharkunik	Martuni	12	Machinery, building materials, chemical and food industry
18	Vayots Dzor	Jermuk	5.2	Sanatoriums, mineral water, whole milk products, carpets and electric power
19	Vayots Dzor	Yeghegnadzor	8.2	Wine, manufacture of electrical equipment, manufacture of fabricated metal products
20	Syunik	Sisian	16.7	Mining industry (non-metal mineral produce), manufacturing industry (food and beverages, textiles)
21	Aragatsotn	Aparan	6.6	Food production
22	Armavir	Metsamor	10.3	Nuclear power station
23	Lori	Stepanavan	15.8	Food, furniture and electrical equipment manufacture
24	Tavush	Dilijan	15.6	Resort town, manufacturing (food and beverage production)
25	Tavush	Ijevan	20.5	Manufacturing (particularly, woodworking, production of food, mineral water and wine), carpet making
26	Shirak	Artik	17.4	Mill, glass moulds production
27	Aragatsotn	Talin	5.7	Precious goods production

(continued on next page)



**Table 1: Population and Main Economic Activities of Armenian Cities (Continued)**

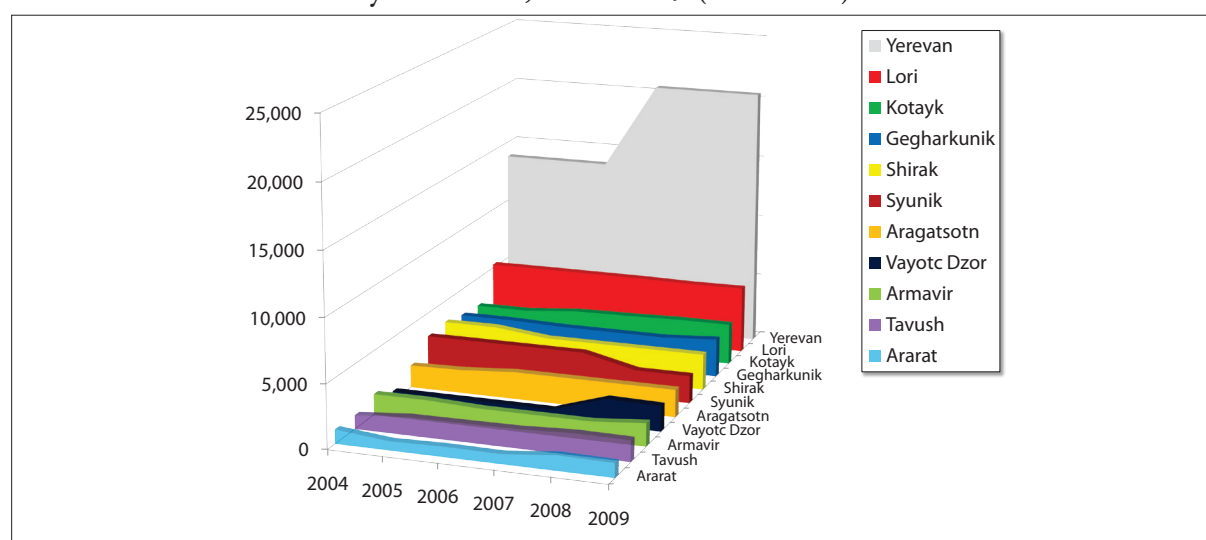
No.	Marz (Region)	City	Population (thousand persons)	Main economic activities
28	Lori	Tashir	8.6	Milk processing, whole milk dairy products
29	Kotayk	Yeghvard	12.2	Production of food and beverages (distilled alcoholic beverages (cognac), milk products, flour production), leather articles and shoes, agriculture
30	Lori	Alaverdi	15.9	Copper-smelting factory
31	Gegharkunik	Gavar	25.7	Agriculture, machinery, building materials, light and food industry
32	Gegharkunik	Sevan	21.7	Tourism, building materials, chemical, food and machinery production
33	Kotayk	Byureghavan	8.4	Production of non-metal mineral and other produce (glass, porcelain and glazed earthenware industries)
34	Ararat	Vedi	13.5	Manufacture of materials from natural stones, electrical equipment and control apparatus, manufacture of plastic building materials, agriculture
35	Kotayk	Nor Hachn	10.3	Manufacturing (jewelry and diamond production)
36	Kotayk	Charentsavan	24.8	Manufacturing (metallurgy and finished metal products; production—steel and iron casting)
37	Syunik	Kapan	45.5	Mining industry, especially non-ferrous and noble metals production. Manufacturing (production of food, clothing, non-metallic construction materials, aluminum and plastic products, wood and wood products, furniture and equipment) and electricity production
38	Shirak	Gyumri	146.2	Knitwear articles, hosiery products
39	Armavir	Armavir	33.6	Food products, alcoholic beverages, building materials
40	Ararat	Ararat	20.7	Manufacture of non-metallic mineral products (manufacture of cement, lime carbonate, asbestos cement products)
41	Aragatsotn	Ashtarak	20.8	A satellite town of Yerevan, food and beverage production
42	Kotayk	Tsaghkadzor	1.6	Sanatoriums
43	Kotayk	Hrazdan	53	The Hrazdan thermo-power station is located here—the most powerful in the republic. Also: manufacturing (non-metal mineral and other products, in particular, cement production)
44	Ararat	Masis	22.2	Big railway and freight transit station, manufacture of wood and wood products (planking, unassembled wooden flooring including parquet), manufacture of chemicals and chemical products, manufacture of paints, varnishes and similar coatings, printing ink, and manufacture of tobacco products
45	Ararat	Artashat	25.3	Manufacture of food products and beverages (processing and canning of fruit and vegetable, manufacture of distilled alcoholic beverages and flour) as well as manufacture of other non-metallic mineral products (manufacture of household-domestic articles from porcelain, manufacture of cover materials from natural stones), agriculture

*(continued on next page)*

**Table 1: Population and Main Economic Activities of Armenian Cities (Continued)**

No.	Marz (Region)	City	Population (thousand persons)	Main economic activities
46	Kotayk	Abovian	46.1	One of the fast growing towns and big industrial centers of the republic, especially beer production.
47	Lori	Vanadzor	104.8	Chemical complex, many small and medium-sized industrial fabric factories function in the town as well, trade and service rendering.
48	Armavir	Echmiadzin	57.3	Food products and alcoholic beverages
49		Yerevan	1112.1	Manufacture of food products, including alcoholic beverages and chemical and metallurgy industry

Source: *Marzes of the Republic of Armenia in Figures, 2008, National Statistical Service of Armenia*

**Figure 1: Distribution of Total Area of Urban Built-up Land Per Region of the Republic of Armenia and the City of Yerevan, 2004–2009 (in hectares)**

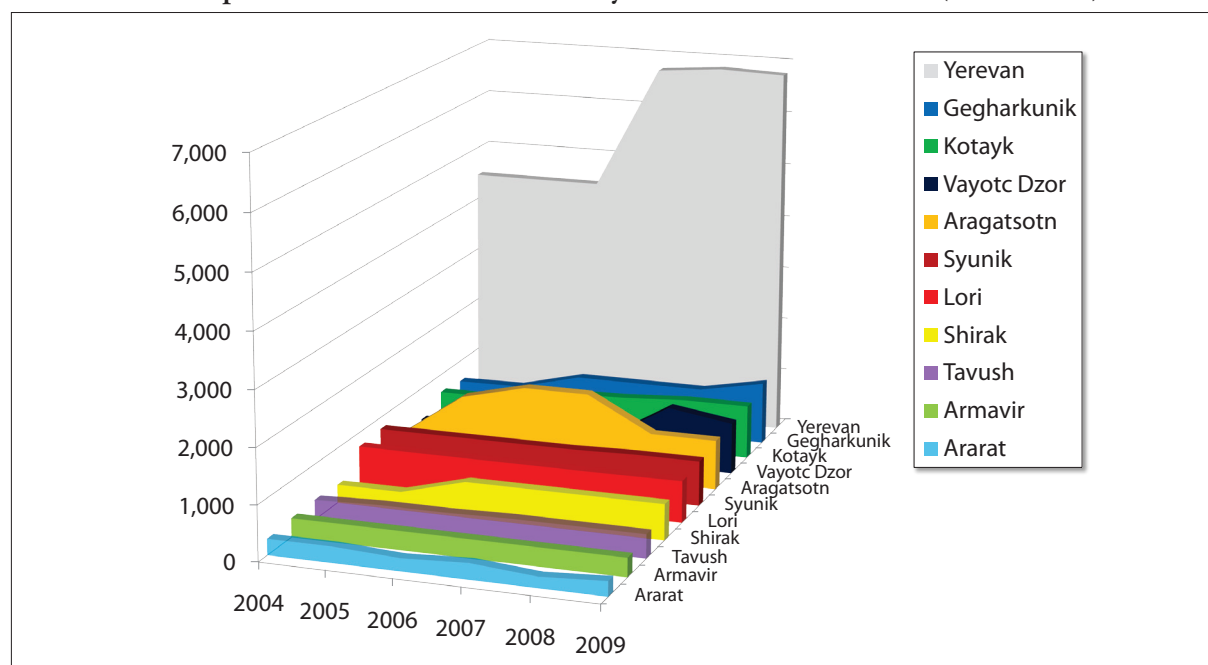
Source: *National Statistical Service of the Republic of Armenia.*

**Table 2: Distribution of Total Area of Urban Built-up Land Per Region of the Republic of Armenia and the City of Yerevan, 2004–2009 (in Hectares)**

	Region	2004	2005	2006	2007	2008	2009
1	Yerevan	13,778	1,3778	1,3778	20,540	20,540	20,540
2	Aragatsotn	1,776	1,861	2,160	2,160	2,159	2,160
3	Ararat	1,118	716	808	768	1,191	1,122
4	Armavir	1,632	1,632	1,450	1,450	1,450	1,805
5	Gegharkunik	2,879	2,877	2,760	2,760	2,760	3,037
6	Lori	5,298	5,310	5,310	5,311	5,256	5,288
7	Kotayk	2,702	2,702	3,074	3,137	3,245	3,245
8	Shirak	3,291	3,291	2,826	2,826	2,826	2,826
9	Syunik	3,131	3,131	3,131	3,131	2,166	2,166
10	Vayots Dzor	760	760	760	760	2,077	1,996
11	Tavush	1,083	1,421	1,452	1,494	1,688	1,651
	<b>Total</b>	<b>37,448</b>	<b>37,479</b>	<b>37,509</b>	<b>44,337</b>	<b>45,358</b>	<b>45,836</b>

Source: *National Statistical Service of the Republic of Armenia.*

**Figure 2: Distribution of Total Area of Green Zones Within Urban Communities Per Region of the Republic of Armenia And the City of Yerevan, 2004–2009 (in Hectares)**



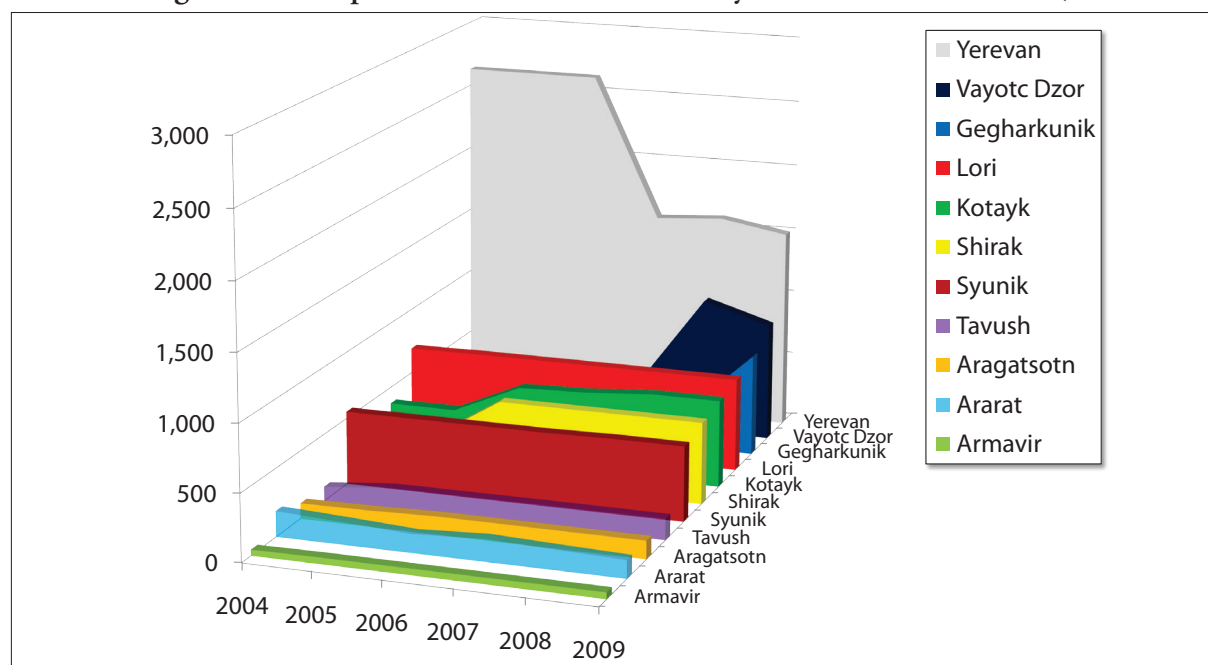
Source: National Statistical Service of the Republic of Armenia.

**Table 3: Distribution of Total Area of Green Zones Within Urban Communities Per Region of the Republic of Armenia And the City of Yerevan, 2004–2009 (in Hectares)**

	Region	2004	2005	2006	2007	2008	2009
1	Yerevan	4,469	4,469	4,469	6,739	6,838	6,798
2	Aragatsotn	414	1,240	1,525	1,525	906	906
3	Ararat	295	295	235	295	204	272
4	Armavir	344	344	344	344	344	344
5	Gegharkunik	603	618	913	913	913	1,147
6	Lori	748	744	744	745	746	759
7	Kotayk	663	663	884	911	985	985
8	Shirak	334	334	650	650	650	650
9	Syunik	788	788	788	788	817	817
10	Vayots Dzor	403	403	403	403	1,115	936
11	Tavush	363	404	404	432	432	432
	<b>Total</b>	<b>9,424</b>	<b>10,302</b>	<b>11,359</b>	<b>13,745</b>	<b>13,950</b>	<b>14,046</b>

Source: National Statistical Service of the Republic of Armenia.

**Figure 3: Distribution of Total Area of Public Use Green Zones Within Urban Communities Per Region of the Republic of Armenia And the City of Yerevan, 2004–2009 (In Hectares)**



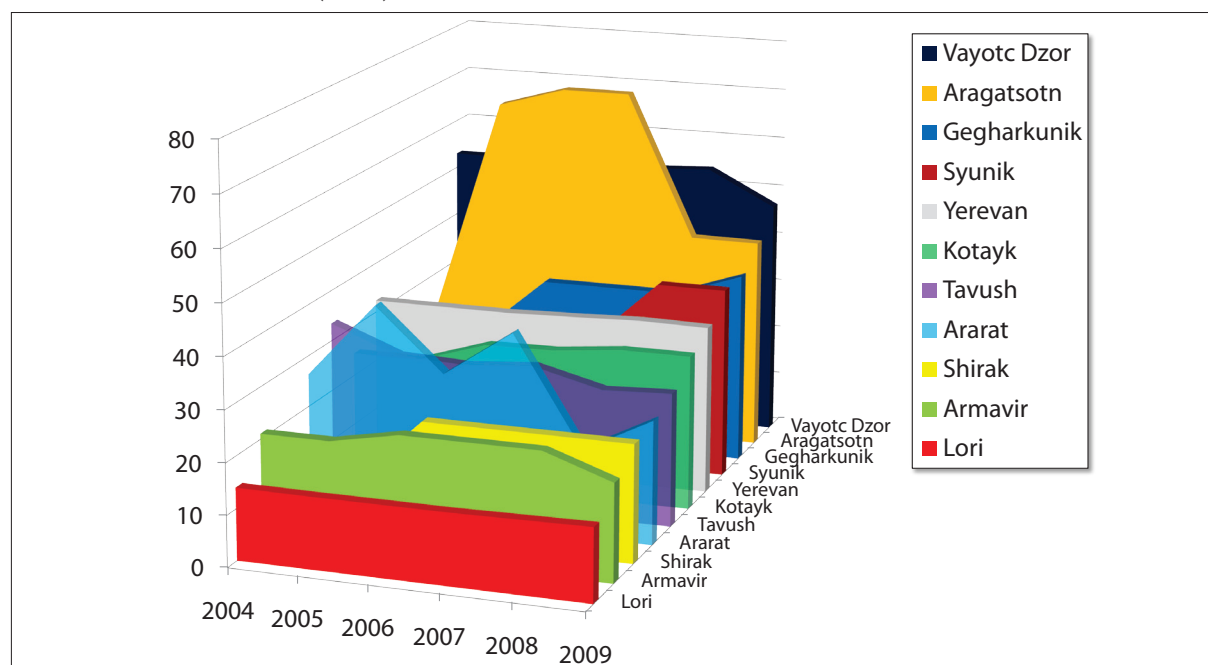
Source: National Statistical Service of the Republic of Armenia.

**Table 4: Distribution of Total Area of Public Use Green Zones Within Urban Communities Per Region of the Republic of Armenia And the City of Yerevan, 2004–2009 (In Hectares)**

	Region	2004	2005	2006	2007	2008	2009
1	Yerevan	2,630	2,630	2,630	1,556	1,592	1,507
2	Aragatsotn	115	121	135	135	135	135
3	Ararat	191	167	140	167	150	135
4	Armavir	45	49	49	49	49	49
5	Gegharkunik	308	333	294	294	294	764
6	Lori	694	698	698	698	698	698
7	Kotayk	376	376	601	617	655	655
8	Shirak	296	296	612	612	612	612
9	Syunik	553	553	553	553	561	561
10	Vayots Dzor	349	349	348	348	1,039	890
11	Tavush	108	154	155	158	158	158
	<b>Total</b>	<b>5,665</b>	<b>5,726</b>	<b>6,215</b>	<b>5,187</b>	<b>5,943</b>	<b>6,164</b>

Source: National Statistical Service of the Republic of Armenia.

Figure 4: Share of Green Zones Within the Total Area of the Land in the Administrative Borders of Cities (in %)



Source: National Statistical Service of the Republic of Armenia, authors' calculations.

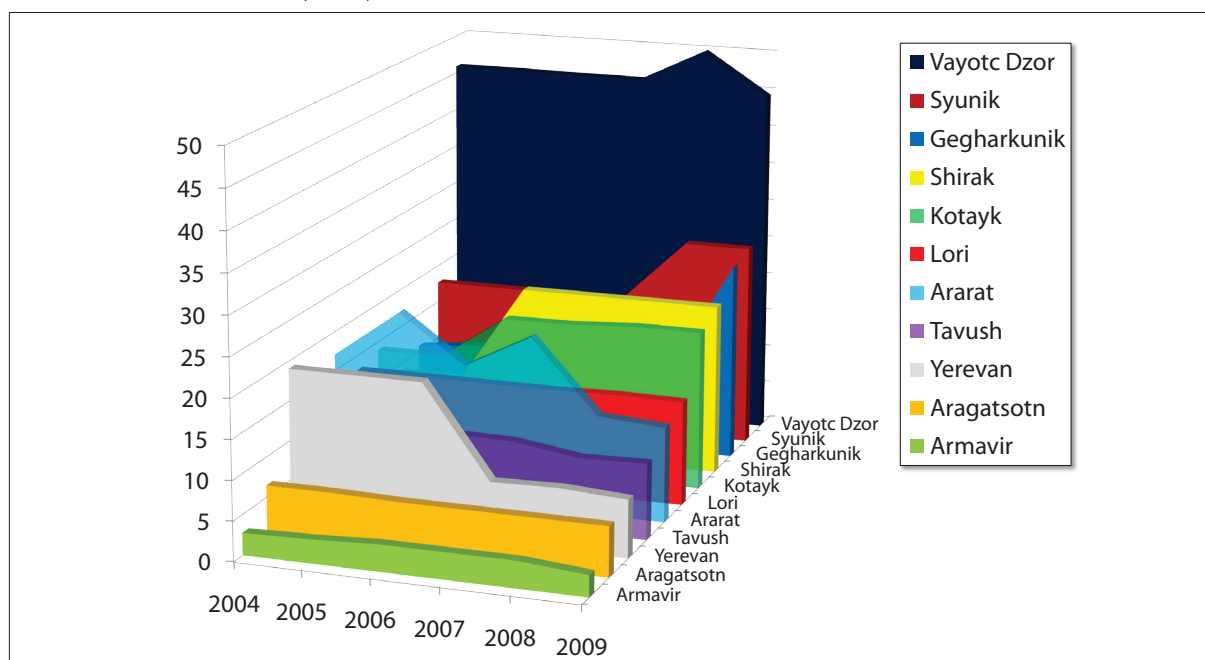
Table 5: Share of Green Zones Within the Total Area of the Land in the Administrative Borders of Cities (in %)

	Region	2004	2005	2006	2007	2008	2009
1	Yerevan	32.4	32.4	32.4	32.8	33.3	33.1
2	Aragatsotn	23.3	66.6	70.6	70.6	42.0	41.9
3	Ararat	26.4	41.2	29.1	38.4	17.1	24.2
4	Armavir	21.1	21.1	23.7	23.7	23.7	19.1
5	Gegharkunik	20.9	21.5	33.1	33.1	33.1	37.8
6	Lori	14.1	14.0	14.0	14.0	14.2	14.4
7	Kotayk	24.5	24.5	28.8	29.0	30.4	30.4
8	Shirak	10.1	10.1	23.0	23.0	23.0	23.0
9	Syunik	25.2	25.2	25.2	25.2	37.7	37.7
10	Vayotc Dzor	53.0	53.0	53.0	53.0	53.7	46.9
11	Tavush	33.5	28.4	27.8	28.9	25.6	26.2
	<b>Average</b>	<b>25.2</b>	<b>27.5</b>	<b>30.3</b>	<b>31.0</b>	<b>30.8</b>	<b>30.6</b>

Source: National Statistical Service of the Republic of Armenia, authors' calculations.



Figure 5: Share of Public Green Zones Area of the Total Area of Land Within City Administrative Borders (in %)



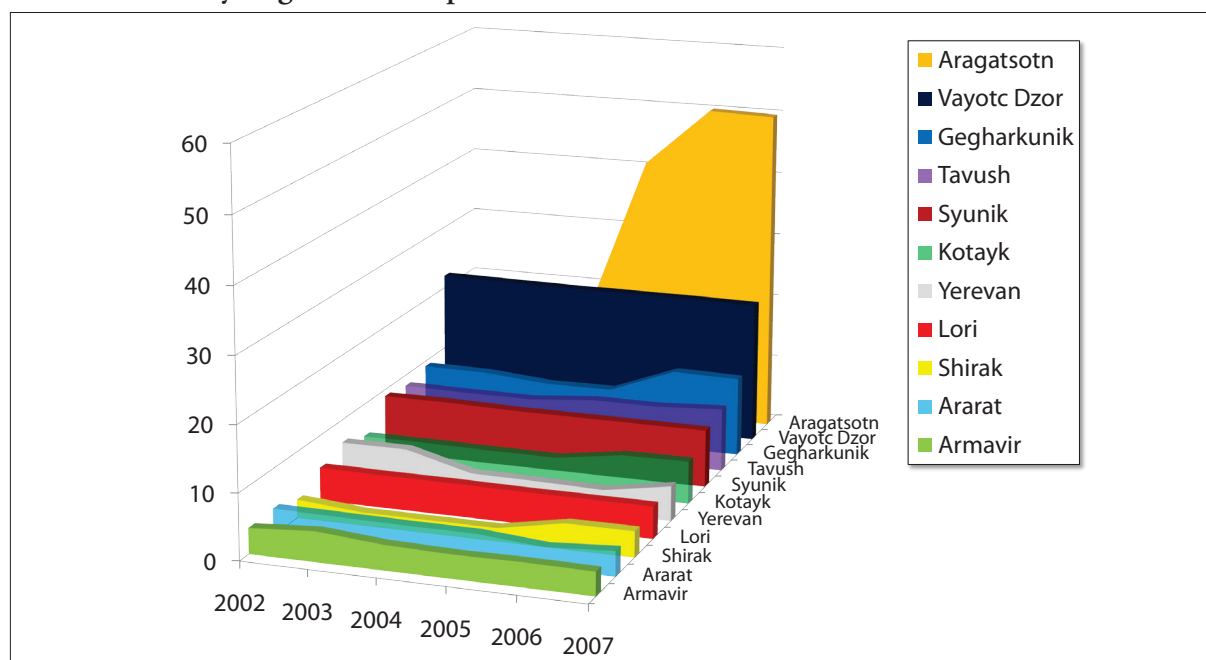
Source: National Statistical Service of the Republic of Armenia, authors' calculations.

Table 6: Share of Public Green Zones Area of the Total Area of Land Within City Administrative Borders (in %)

	Region	2004	2005	2006	2007	2008	2009
1	Yerevan	19.1	19.1	19.1	7.6	7.8	7.3
2	Aragatsotn	6.5	6.5	6.3	6.3	6.3	6.3
3	Ararat	17.1	23.3	17.3	21.7	12.6	12.0
4	Armavir	2.8	3.0	3.4	3.4	3.4	2.7
5	Gegharkunik	10.7	11.6	10.7	10.7	10.7	25.2
6	Lori	13.1	13.1	13.1	13.1	13.3	13.2
7	Kotayk	13.9	13.9	19.6	19.7	20.2	20.2
8	Shirak	9.0	9.0	21.7	21.7	21.7	21.7
9	Syunik	17.7	17.7	17.7	17.7	25.9	25.9
10	Vayots Dzor	45.9	45.9	45.8	45.8	50.0	44.6
11	Tavush	10.0	10.8	10.7	10.6	9.4	9.6
	<b>Average</b>	<b>15.1</b>	<b>15.3</b>	<b>16.6</b>	<b>11.7</b>	<b>13.1</b>	<b>13.4</b>

Source: National Statistical Service of the Republic of Armenia, authors' calculations.

**Figure 6: Area of Land With Planted Trees And Shrubs Per Capita From 2002 to 2007, Distributed By Regions, Per Capita m<sup>2</sup>**



Source: National Statistical Service of the Republic of Armenia, authors' calculations.

**Table 7: Area of Land With Planted Trees And Shrubs Per Capita From 2002 to 2007, Distributed By Regions, Per Capita m<sup>2</sup>**

	Region	2002	2003	2004	2005	2006	2007
1	Yerevan	6.5	6.5	3.9	3.8	3.6	5.3
2	Aragatsotn	13.8	13.9	13.8	41.1	50.2	49.9
3	Ararat	4.1	4	3.9	3.9	3.1	3.8
4	Aramavir	3.9	4.6	3.8	3.6	3.7	3.6
5	Gegharkunik	9.2	9.1	8.3	8.4	12.3	12.1
6	Lori	5.1	5	5	4.9	4.9	4.9
7	Kotayk	5	5	4.9	4.9	6.4	6.5
8	Shirak	2.8	2	2	2	3.9	3.9
9	Syunik	9	9	8.8	8.8	8.8	8.8
10	Vayots Dzor	22	21.9	21.8	21.8	21.8	21.7
11	Tavush	8.3	8.2	8.2	9.1	9.1	9.7

Source: National Statistical Service of the Republic of Armenia, authors' calculations.

## CHRONICLE

## From 26 November to 15 December 2010

26 November 2010	Armenian Deputy Foreign Minister Karine Kazinian says Armenia will start negotiations on a visa facilitation agreement with the EU in December 2010
28 November 2010	One person dies in two explosions in Georgia's capital Tbilisi
30 November 2010	The Georgian National Bank reports that the inflation rate in Georgia by the end of 2010 is predicted to climb to 10.6%
1 December 2010	The United Kingdom, Germany and Sweden call for the restoration of the Organization for Security and Cooperation in Europe (OSCE) mission in Georgia at the OSCE summit in Astana
2 December 2010	A leading member of Armenian President Serzh Sarkisian's Republican Party denies U.S. claims disclosed in WikiLeaks of Armenian arms transfers to Iran
3 December 2010	The United States donates 74 off-road vehicles worth 2.8 million US dollars to the Georgian Interior Ministry as part of the U.S. post-war assistance to Georgia
4 December 2010	The Georgian police arrest six persons in connection with five explosions in Georgia
6 December 2010	Leaders of the breakaway regions of Abkhazia and South Ossetia Sergey Bagapsh and Eduard Kokoity make non-use of force pledges
6 December 2010	The Georgian Foreign Ministry condemns Russia's reported deployment of Smerch (Tornado) multiple-launch rocket systems in South Ossetia
7 December 2010	The Russian Foreign Ministry hails the non-use of force pledges made by the Abkhaz and South Ossetian leaders as opening the way for a full-fledged legal enshrinement of a non-use of force regime between Tbilisi and Sukhumi and Tbilisi and Tskhinvali.
9 December 2010	The Russian Foreign Ministry accuses Georgia of provocations against Moscow in linking espionage acts and explosions in Georgia to a Russian military officer based in Abkhazia
9 December 2010	Armenian Justice Minister Gevorg Danielian is dismissed for his failure to punish a high-level official in the Justice Ministry allegedly involved in violent conduct
10 December 2010	Armenian President Serzh Sarkisian says that Armenia will recognize the Nagorno-Karabakh region as independent if Azerbaijan should choose to use force to resolve the dispute over the region
10 December 2010	Leader of the breakaway region of Abkhazia Sergey Bagapsh signs a decree to hold local elections in Abkhazia in February 2011
11 December 2010	U.S. Republican Senator John McCain calls again for the United States to resume arms sales to Georgia, at a minimum providing Georgia with early warning radars
11 December 2010	The police in Azerbaijan's capital of Baku break up a demonstration for the right to wear Islamic head scarves in schools
13 December 2010	The Russian Foreign Ministry criticizes a draft resolution initiated by the U.S. senate that calls for the recognition of Abkhazia and South Ossetia as territories "occupied" by Russia
13 December 2010	Armenian President Serzh Sarkisian and Armenia's National Security Council approve a five-year plan to modernize the Armenian army
14 December 2010	The European Parliament approves agreements signed between the EU and Georgia on visa facilitation and the readmission of irregular immigrants
15 December 2010	The Georgian Parliament passes a constitutional amendment making a referendum binding in case the government decides to increase taxes
15 December 2010	The Georgian Parliament passes a draft law on tax breaks for IT companies

## ABOUT THE RUSSIAN ANALYTICAL DIGEST

Editors: Iris Kempe, Matthias Neumann, Robert Orttung, Jeronim Perović, Lili Di Puppò

The Caucasus Analytical Digest (CAD) is a monthly internet publication jointly produced by the Heinrich Böll Foundation in Tbilisi ([www.boell.ge](http://www.boell.ge)), the Research Centre for East European Studies at the University of Bremen ([www.forschungsstelle.uni-bremen.de](http://www.forschungsstelle.uni-bremen.de)), the Resource Security Institute in Washington, DC ([resourcesecurityinstitute.org/](http://resourcesecurityinstitute.org/)) and the Center for Security Studies (CSS) at ETH Zurich ([www.css.ethz.ch](http://www.css.ethz.ch)) with support from the German Association for East European Studies (DGO). The Caucasus Analytical Digest analyzes the political, economic, and social situation in the three South Caucasus states of Armenia, Azerbaijan and Georgia within the context of international and security dimensions of this region's development. CAD is supported by a grant from the Heinrich Böll Foundation.

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