REALIZING THE URBAN POTENTIAL IN GEORGIA

National Urban Assessment

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NATIONAL URBAN ASSESSMENT

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Printed in the Philippines.

ISBN 978-92-9257-352-2 (Print), 978-92-9257-353-9 (e-ISBN)
Publication Stock No. RPT168254

Cataloging-In-Publication Data

Asian Development Bank.
Realizing the urban potential in Georgia—National urban assessment.
Mandaluyong City, Philippines: Asian Development Bank, 2016.

1. Urban development. 2. Georgia. 3. National urban assessment, strategy, and road maps.
I. Asian Development Bank.

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Notes:
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Acknowledgments

The Georgia National Urban Assessment (NUA) was led by Bertrand Goalou, senior urban development specialist (Transport), and Ramola Naik Singru, urban development specialist, Central and West Asia Urban Development and Water Division, Central and West Asia Department (CWUW-CWRD), and prepared with a team consisting of Vaideeswaran Sankaran, senior environmental engineer and climate change specialist; Joseph Salukvadze, professor, Tbilisi State University; and Marc Popesco, urban planner, Group Huit. The first stage of the assessment was conducted between late 2012 and March 2013 by Marc Popesco through numerous consultations with the Government of Georgia. Giorgi Gigauri provided support for the cartography and graphs. The second stage conducted from October 2014 to February 2015 covered an urban visioning and stakeholder consultation workshop involving central ministries and local governments, stakeholders, donors, and civil society; consultations at the Sustainable Urban Integrated Transport Forum; and secondary data review and analysis based on further discussions with relevant agencies.

The ADB team thanks the Ministry of Regional Development and Infrastructure (MRDI), the Ministry of Economy and Sustainable Development (MOESD), the Municipal Development Fund (MDF) of Georgia, the Ministry of Energy (MOE), Tbilisi City Hall, Tbilisi City Assembly, and the National Statistics Office of Georgia (Geostat). The team also thanks Nodar Javakhishvili, minister, MRDI; David Narmania, mayor of Tbilisi; Ilia Darchiashvili, first deputy minister, MRDI; Juansher Burchuladze, executive director of MDF; and Revaz Gigilashvili, project coordinator, MDF. The team particularly appreciates the support provided by the participants of the visioning and stakeholder workshops held in Tbilisi in December 2014 for their valuable inputs in the preparation of this assessment, especially David Gigineishvili, head, Urban Development and Construction Policy Department, MOESD; Kakha Potskhishvili, deputy head, Urban Development and Construction Policy Department, MOESD; Marita Arabidze, head, Energy Efficiency and Renewable Energy Division, MOE; Alexander Papunashvili, head, Analytical Division, Environmental Permits Department, MOE; Teal Melkadze, associate banker, European Bank for Reconstruction and Development; Shalva Kokochashvili, project specialist, MDF; Ucha Dzimistarishvili, deputy head, Investment Project Development Unit, United Water Supply Company of Georgia; Nino Ghoghoberidze, head, Architecture Service, Tbilisi City Hall; Otar Nemsadze, head, Urban Development Department, Architecture Service, Tbilisi City Hall; Murman Katsitadze, project implementation specialist, Roads Department, Tbilisi City Hall; Mariam Tsereteli, finance officer, Women's Information Center; and Tatia Gurchumalidze, lawyer. ADB is grateful for the information shared by all donor partners, the AFD, the European Bank for Reconstruction and Development, the European Investment Bank, GIZ and KfW (implementing agencies for projects funded by the

Government of Germany), the Japan Bank for International Cooperation, the Swiss Agency for Development and Cooperation, the Swedish International Development Cooperation Agency, the United States Agency for International Development, and the World Bank.

The authors thank Anand Chiplunkar, director, CWUW-CWRD, and concurrent chair, Urban Sector Group, for his guidance; Gil-Hong Kim, senior director, Sector Advisory Services Division, Sustainable Development and Climate Change Department (SDAS-SDCC) for enabling this assessment; Kathie Julian, advisor, CWRD, for her valuable insights; and Yesim M. Elhan-Kayalar, country director, Georgia Resident Mission (GRM-CWRD). The team thanks the peer reviewers Vijay Padmanabhan, technical advisor, Urban and Water Sector Groups; Sanjay Joshi, senior urban development specialist, CWUW-CWRD; and Arnaud Heckmann, senior urban development specialist, Urban Development and Social Sectors Division, East Asia Department (EASS-EARD) for their constructive review. The team is grateful for the support of Jingmin Huang, principal urban development specialist, Urban Development and Water Division, South Asia Department; Massimo Petrone, senior urban development specialist, CWUW-CWRD; Irakli Chkonias, senior project officer, GRM-CWRD; Carina Soliman, project officer, CWUW-CWRD; and Michelle Tan, operations analyst, CWUW-CWRD. Special thanks to Tea Papuashvili, associate project analyst, GRM-CWRD, for coordinating the consultations and supporting the team. The authors are grateful to the publishing team of the Department of External Relations especially Rodel Bautista for overall coordination of the publication, Anthony H. Victoria for coordinating the graphics and editors for editing support, Abraham Villanueva, ADB cartographer for the country map, and to Jenevieve Javier, senior operations assistant, CWUW, and Joanne G. Pabis, operations assistant, CWUW, for assisting with the coordination of production.

Abbreviations

3E	economy, environment, and equity
ADB	Asian Development Bank
ADF	Asian Development Fund
CPS	country partnership strategy
EBRD	European Bank for Reconstruction and Development
ESG	environmentally sustainable growth
EU	European Union
FDI	foreign direct investment
GDP	gross domestic product
GEM	gender equity and mainstreaming
Geostat	National Statistics Office of Georgia
GHG	greenhouse gas
GIS	geographic information system
GTU	Georgian Technical University
GWP	Georgia Water Power
HDI	human development index
HOA	homeowners' association
IDP	internally displaced person
IFC	International Finance Corporation
JICA	Japan International Cooperation Agency
MCC	Millennium Challenge Corporation
MDF	Municipal Development Fund
MFF	multitranche financing facility
MOESD	Ministry of Economy and Sustainable Development
MRDI	Ministry of Regional Development and Infrastructure
NEAP	National Environmental Action Programme
NSDP	National Spatial Development Plan
O&M	operation and maintenance
PPP	public–private partnership
PSD	private sector development and private sector operations
RCI	regional cooperation and integration
SMEs	small and medium-sized enterprises
STP	sewage treatment plant
SWM	solid waste management
TA	technical assistance
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
UWSCG	United Water Supply Company of Georgia
WSS	water supply and sanitation
WWTP	wastewater treatment plant

Weights and Measures

h	hour
ha	hectare
km	kilometer
km ²	square kilometer
m	meter
m ²	square meter
m ³	cubic meter
mg	milligram

Currency Equivalent

(as of 9 October 2015)

Currency Unit = lari (GEL)

GEL1.00 = \$0.4184

\$1.00 = GEL2.390

Country at a Glance

4.4905* (2014) Population (million)

1.1752 (2014) Population of capital Tbilisi (million)

0.5% (2008–2012) Average annual population growth rate

11.6% (2014) Share of population under poverty threshold

69.700 (2014) Area (square kilometers)

16.2 (2014) Gross domestic product (\$ billion)

3,604.51 (2014) GDP per capita (\$)

* Final results of the population census were awaited at the time this publication was finalized in November 2015..

Sources: ADB. 2015. *Global Competitiveness Report 2014–2015*. Manila; Geostat. 2015. <http://www.geostat.ge/index.php?action=0&lang=eng>

Executive Summary

National Urban Assessments Framework

ADB under its Urban Operational Plan, 2012–2020 supports developing member countries (DMCs) in developing their urban economies, in improving environmental sustainability, and in making pro-poor investments. This provides a critical opportunity for the urban sector to play a potentially integrative role, providing a way to focus ADB operations beyond traditional urban investment sectors to maximize impact. The *ADB Manual on Undertaking National Urban Assessments* provides a framework and toolbox for conducting rapid urban sustainability assessments at both the national and urban region levels for DMCs. This study on Georgia is based on the National Urban Assessments framework for developing an urban profile, establishing an urban vision, and identifying strategic priorities for targeted investments in the urban sector through a cross-sector understanding of the issues and challenges that affect urban development in the country. This document is not a strategy but the basis for developing a national urban strategy and road map for investments (Figure E1).

The Georgia NUA is a rapid assessment of the urban sector to understand the key urbanization trends and patterns of growth and to analyze challenges and opportunities. The outputs of the assessment are designed to give a snapshot view of the state of urban affairs at the national level with an urbanization profile; governance and urban management profile; capacity needs assessment; urban finance matrix; and a 3E assessment covering economic, environmental, and social equity profiles.

Methodology for Undertaking the Georgia National Urban Assessments

The Georgia NUA was undertaken using the framework outlined in the *ADB Manual for Undertaking National Urban Assessments* (2015) and is aligned with the methodology used for city development strategies outlined by the Cities Alliance. The framework is articulated through the following three key analytical phases:

- (i) **Urban profile and analysis.** This phase ensures that the assessments take into consideration the existing urban realities and the future needs of the growing urban population, including the political and legislative dimensions of urban development that are critical in the creation of an enabling environment

Figure E1: Methodology Based on National Urban Assessments and City Development Strategies

and the governance and institutional structures that are the mechanisms for implementation along with a 3E analysis of economy, environment, and equity.

- (ii) **Urban vision and strategic prioritization.** This phase aligns and builds consensus for identifying strategic development priorities at the national and the urban region level.
- (iii) **Urban action.** This phase establishes specific objectives for investment programming to support the attainment of the urban vision. The NUA provides recommendations for targeted investments in the urban sector.

The Georgia NUA was undertaken in two stages. The first stage consisted of initiating the process to relate to the existing institutional structures and processes and to establish the parameters of the scope of the assignment. The initial assessment was conducted between late 2012 and March 2013 through numerous consultations with the Government of Georgia—central ministries and local governments, relevant stakeholders, donors, and the civil society. The second stage was conducted from October 2014 to February 2015 covering the urban vision and the SWOT analysis stakeholder workshop, with additional consultations at the Sustainable Urban Integrated Transport Forum, secondary data review, and analysis based on further discussions with government agencies and development partners.

Geographic Profile

Georgia is located in the Southern Caucasus, at the crossroads of Europe and Asia, making it an important nodal point for regional trade flows. It is an important transit corridor for many countries in Central and West Asia, especially Armenia and Azerbaijan. The country has an East–West corridor connecting Azerbaijan to the Black Sea. The main economic activities and accordingly the main infrastructure are concentrated in the midland bordered by the foothills of the North Caucasus and South Caucasus (Map 1). The location of Tbilisi, the capital, at the crossing point of East–West and North–South must be considered an exceptional asset.

Key findings: Tbilisi has not yet taken full advantage of its strategic location as a logistic pole for other urban and rural areas because of inadequate development of transport and logistics infrastructure. The topography of Georgia presents a challenge for transport and communication, which are critical development aspects in the context of its strategic location.

Political System

Georgia is a democratic republic, headed by the president. The Parliament consists of 150 members, elected via a mixed electoral system comprising 84 constituencies. All members are elected for 4-year terms. During most of the 20th century, Georgia was among the former Soviet republics. In 1991, Georgia declared independence. Shortly after independence, the country faced a severe economic crisis and grave social problems. The government has since then liberalized trade and implemented a series of liberal economic reforms, including land and property privatization, an overhaul of the banking system, and the introduction of a new national currency, the lari (GEL), to overcome the crisis.

Key findings: Georgia is progressively maturing as a democracy. The political transition shows a positive trend in this path. Georgia is in the process of decentralizing authority, streamlining bureaucracy, and combating corruption.

Map 1: Map of Georgia

Source: ADB. 2015. This map was produced by the cartography unit of the Asian Development Bank. The boundaries, colors, denominations, and other information shown on this map do not imply, on the part of the Asian Development Bank, any judgment on the legal status of any territory or area, or any endorsement or acceptance of such boundaries, colors, denominations, and information. This applies to all maps and graphs used in this publication.

Urban Facts

4.4905 (2014) Total population (million)*

1.1752 (2014) Tbilisi population (million)

11.6% (2014) Share of population under poverty threshold

* Population census has been undertaken and final results are awaited.

Urban Profile

Stable Urbanization

- Georgia had a population of 4.4905 million in 2014, with 53.70% classified as urban population (Table E1).
- Since the mid-1970s, Georgia's population has had more than 50% urban population and has been experiencing a stable growth in urbanization with marginal fluctuations in the past two years. Georgia's urban population is not expected to reach 60% before 2030 (Figure E2).
- Georgia predominantly consists of small urban settlements and one large city, Tbilisi, where almost half of the urban population is located.
- Rustavi, a big city-municipality, is part of the Tbilisi urban area, with functional links through mobility, economic connections, cultural exchange, and a commuting population for work, studies, and services.
- The Tbilisi–Rustavi agglomeration includes the city-municipalities of Mtskheta and Gardabani.
- The Tbilisi–Rustavi–Mtskheta–Gardabani urban area dominates the current national urban hierarchy with only the city-municipalities of Kutaisi and Batumi having more than 100,000 inhabitants; all other settlements are much smaller in size.
- The population of Georgia by municipalities reflects the uneven distribution of population across the country.

Table E1: Population of Georgia
(million)

	2006	2007	2008	2009	2010	2011	2012	2013	2014
Population as of 1 January	4.4013	4.3947	4.3821	4.3854	4.4364	4.4692	4.4976	4.4838	4.4905
Urban	2.3104	2.3089	2.3038	2.3091	2.3505	2.3713	2.3917	2.4108	2.4117
Rural	2.0909	2.0858	2.0783	2.0763	2.0859	2.0979	2.1059	2.0730	2.0788

Source: Asian Development Bank, based on data from National Statistics Office of Georgia (Geostat) 2014.

Figure E2: Urban Population in Georgia

Sources: Sakartvelos Geografia [Geography of Georgia]. 2003. *Part II: Economic Geography*. Tbilisi. [in Georgian]; United Nations Department of Economic and Social Affairs, Population Division. 2010. *World Urbanization Prospects: The 2009 Revision*. New York; for 1959 and 1970. <http://www.indexmundi.com/facts/indicators/SP.URB.TOTL.IN.ZS/compare?country=am>

Urban Hierarchy and Population Densities by Regions

- Urban growth and development has been uneven, concentrated in the Tbilisi–Rustavi urban area, Kutaisi, and Batumi, leading to a disproportionate distribution in the national urban system.
- Urban settlements differ significantly by their population, economic profiles, and infrastructure provision.

Key findings: Lack of large cities and underrepresentation of medium-sized cities emphasize wide gaps observed in the existing urban hierarchy.

The uneven spatial distribution of the population highlights the need for a flexible and differentiated approach to the decentralization process, given the varying capacities of the local government. This is highlighted in the lack of adequate coverage of regions and the entire territory by hierarchical systems of commodities, services, and labor markets that should attract the population and businesses, and thereby ensure the economic development of urban places. Growth prospects will remain uncertain for Georgia's secondary cities unless concrete measures are taken to support their growth and development.

Migration

The 1990s (1992–1996) saw dramatic population outflows from Georgia (Figure E3), the majority of which were urban dwellers. In the absence of precise migration data, it is estimated that more than 1 million people migrated from Georgia between 1990 and 2006.¹

According to the population census of 2002, around 64.5% of Georgian emigrants tried to settle in the Russian Federation.² Since then, the migrant flow from Georgia has shifted mostly to the European Union, Turkey, and the United States. These outflows resulted in loss of human capital in the urban areas. Urban–urban migration from the smaller towns and cities to Tbilisi was larger than rural–urban migration in the early 1990s. One reason for this was land reforms implemented since 1992, which granted small agricultural plots (around 1 hectare [ha]) to almost 800,000 rural households, providing a base for subsistence farming. This retained many rural families, while urbanites preferred to migrate during the severe economic downturn.

The past 2 decades saw an influx of internally displaced persons (IDPs) into the larger cities because of ethnic and political conflicts. Tbilisi accounts for almost 38% of the registered Georgian IDPs. The total number of IDPs amounts to more than 250,600 or more than 87,000 families, of which 92.5% were displaced in 1992–1993 during the ethno-political conflicts, and the remaining 7.5% after the 2008 conflict.³ Another major

Figure E3: Net Transnational Migration of the Population in Georgia, 1990–2011
(’000)

Sources: Asian Development Bank, based on data from Geostat 2012; G. Meladze. 2007. *Sakartvelos Demografiuli Gamotsvebi* [Demographic Challenges of Georgia]. Tbilisi: Universal (in Georgian). p. 95.

¹ Sakartvelos Geografia [Geography of Georgia]. 2003. Part II: Economic Geography. Tbilisi [in Georgian]; G. Meladze. 2007. *Sakartvelos Demografiuli Gamotsvebi* [Demographic Challenges of Georgia]. Tbilisi: Universal. p. 95 [in Georgian].

² G. Meladze, 2007. *Sakartvelos Demografiuli Gamotsvebi* [Demographic Challenges of Georgia]. Tbilisi: Universal. p. 100 [in Georgian].

³ World Bank. 2014. *Georgia Urbanization Review: Towards an Urban Sector Strategy Georgia's Evolving System and Its Challenges*. Washington, DC. p. 7.

IDP concentration is found in the Samegrelo–Zemo Svaneti region, adjacent to the Abkhazia (almost 85,000 IDPs), with Zugdidi municipality alone accommodating nearly 50,000 IDPs.

Key findings: Prevalent positive annual addition from the mid-2000s, including rural–urban migration, could neither balance the deficit in qualified urban labor nor compensate for the huge losses incurred through international migration in the 1990s. The long-term consequences on demographic and socioeconomic development persists and, twinned with a stagnant natural growth of the population in the past 2 decades, are likely to affect the future demographics of the country.

Land Use

Georgia's topography is predominantly mountainous, which means very scarce land resources for economic activities. Only 43% of the entire territory is usable for agriculture, of which only 35% is arable and usable for cultivation (Figure E4).

Since independence, the most radical changes were seen in land reforms and land market development through privatization of state-owned agricultural and nonagricultural land. Land was distributed to rural households free of charge on equity basis according to predefined norms: up to 1.25 ha to the farming households in villages and up to 5 ha of pastureland to the farmers engaged in animal breeding in the highlands. Former state land has undergone heavy fragmentation with over three million smaller agricultural land parcels being created and distributed among rural households. This process allowed newly emerged landowners to create small subsistence farms with limited economic potential.

The civil code, adopted in November 1997, declared that nonagricultural land parcels attached to individual houses and apartment buildings, including urban sites, came

under the purview of private ownership. The ownership rights for industrial land could be obtained by applying with a one-off symbolic payment equal to the annual land tax. As a result of these processes, over half of the urban land has been privatized, giving a strong push for the establishment and the relatively quick development of urban land markets. There is room for improvement in the introduction of transparent systems to regulate the privatization processes both in rural and urban areas.

Key findings: Fragmentation of agricultural land led to subsistence farming in small parcels of land, which is insufficient to tap the economic potential. Large-scale privatization limited to a great extent the land resources available to the state and the local communities for implementing spatial development projects in keeping with the interests of the public.

Urban Governance

Since the early 1990s, the government has undertaken a series of reforms to improve municipal service delivery systems. The first phase of reforms culminated in 2005 with the adoption of the “Georgian Law of Local-Self Government.” In February 2014, the new “Local Self-Government Code” was adopted, giving seven more cities the self-governing status (equal to municipality status), raising the total to 12.⁴ The new code defines the responsibilities of self-governing bodies, covering spatial-territorial planning and approval of urban planning documents, including the land-use master plan, the regulation plan for landscaping, and the regulation procedures for the use and landscaping of urban areas. Municipalities are also responsible for the improvement of the municipal area and the development of the relevant engineering infrastructure, issuance of building permits, and supervision of constructions within the municipal area. The collection of income tax is reassigned to the central government, while local governments continue to collect property taxes, fees, charges, and income from the rent, lease, or sale of public real estate. A newly created “equalization transfer” was introduced to equalize fiscal disparities between the rich and the poor municipalities, such that the central government can guarantee a minimum of 70% of the expenditure of poor municipalities from the incomes of the wealthier ones.⁵

Key findings: The UN-Habitat urban review (2013) states, “Urban and community management in Georgia still shows relatively strong vertical but weak horizontal vectors. Less attention is paid to governance efficiency and enhanced services provision associated with local self-governance.” It is expected that reforms in the system of self-governance based on the new code would gradually strengthen the role of local governments versus the central government, and would increase their credibility and trust among local citizens. The Georgia National Urban Assessment (NUA) analyzed the institutional, financial, and socioeconomic situation and the living

⁴ The local self-government code repealed the “Organic Law on Local Self-government” of 2007 and three other laws, including the “Law of Georgia on the Capital of Georgia—Tbilisi” The previous organic law on local self-government also contained provisions similar to the aforementioned provisions. ([Source: Transparency International Georgia. 2014. *The New Local Self-Government Code: Overview of the Main Novelties*. <http://transparency.ge/en/blog/new-local-self-government-code-overview-main-novelties>)]

⁵ UN-Habitat. 2013. *The State of European Cities in Transition: Taking Stock after 20 Years of Reform*. Krakow: Institute of Urban Development. p. 236.

conditions linked to the level of urban infrastructure. It revealed and confirmed the gulf between urban institutions in terms of local capacity and the human, technical, and financial means.

Institutional Structure

At the central government level, currently, the Spatial Planning and Construction Policy Department of the Ministry of Economy and Sustainable Development (MoESD) of Georgia is the principal responsible entity for urban development issues at the national level (Figure E5). It has 20 permanent staff and comprises two structural units: Division of Urban Development and Division of Construction. The tasks of the department as prescribed by the Charter of the Ministry are to define, implement, coordinate, manage, and monitor the policies, regulatory legislation, strategies, and technical standards for spatial planning and construction. It includes a large number of issues that are difficult to be undertaken, given the limited human and financial resources of the small department. According to the head of the department, the capacities of the units need substantial improvement.⁶ The Ministry of Regional Development and Infrastructure (MRDI) is responsible for regional development policy, water supply systems, and secondary road networks.

Key findings: The local self-government code decentralized infrastructure planning and implementation responsibilities. There is a lack of commensurate financial and human resources as well as capacity to implement the spatial planning and urban development mandates at both the national and local levels.

Key Urban Development Framework

The existing system of spatial planning in Georgia is based on the 2005 Georgian law on “territorial arrangement and urban planning.” It defines the general principles and conceptions of urban planning and development, including the definition of planning types and hierarchy, balancing public and private interests in planning and construction processes; citizens’ participation; types and compatibility of planning documentation; general rules of land-use planning in settlements; and fixing principles and parameters of land-use (functional) zoning and building regulations. The creation of “space of equal opportunities,” guaranteeing equal conditions for housing and business activities is also one of the main objectives. Priority of public over private interests, and protection and maintenance of natural environment and cultural heritage are not sufficiently clarified to enable incorporation into practice.⁷ “The Local Self-Government Code” defines the responsibility of local self-governments to prepare spatial planning documents for the territories under their jurisdiction. After independence, Georgia neither prepared nor adopted regulatory norms for construction and development. To address this gap, a decree on the “Prolongation of the Terms and Validity of Construction Norms and Rules and

⁶ Interview with David Gigineishvili, the head of the Spatial Planning and Construction Policy Department, on 22 January 2015.

⁷ V. Vardosanidze. 2009. Social Dimensions of Urban Development in Post-Soviet Georgia: The Quest for Participatory Planning in Shattered Social Landscapes. In K. Van Asche, J. Salukvadze, and N. Shavishvili, eds. *Urban Culture and Urban Planning in Tbilisi: Where West and East Meet*. Lewiston: Edwin Mellen Press. pp. 189–208; and articles 6.1 and 6.2 Georgian law. “On Territorial Arrangement and Urban Planning” of 2005.

Figure E5: Institutional Structure for Urban Development

Other Normative Acts” was issued on 5 February 2002 by the minister of urbanization and construction of Georgia. However, compliance with this decree has been slow.

Key findings: Most cities in the country need to prepare or update master plans but have insufficient funding and capacity to do this. Insufficient regulatory norms exist in the construction industry, with limited compliance with existing decree for standards and norms. There are no clear procedures to aid citizens’ right of participation in the urban development process.

Urban Finance Matrix

In June 2006, the government adopted a new law on local budgets, introducing a formula-based equalization grant system and created a subnational fiscal database that enabled the Ministry of Finance to monitor budget execution, thus strengthening central and local capacity to implement an integrated system of municipal budgeting, monitoring, and financial reporting. The government's second phase of reforms articulated in the Main Principles of the Strategy on Decentralization and Self-Government Development of the Government of Georgia for 2013–2014, adopted in April 2013, set out a preliminary framework for the public financing of municipal and regional development.

The Urban Finance Matrix provides a snapshot of the entities involved in the urban sector in relation to Asian Development Bank (ADB) investments (Figure E6). Local self-governments are supported by legal entities of public law created under the various ministries to provide specific public services. They charge service fees retained for their needs. Their operations are not integrated with the national budget. Urban finance needs are presently met through the budgets made available to (i) the local self-government

Figure E6: Urban Finance Matrix

CAPEX = capital expenditure, O&M = operations and maintenance.

Source: Authors based on the concept in R. Naik Singru and M. Lindfield. 2016. *Manual for National Urban Assessment*. Manila: Asian Development Bank.

through the MRDI, (ii) the projects directly handled by the MRDI, and (iii) the national companies with specific mandates, such as the United Water Supply Company of Georgia, Solid Waste Management Company of Georgia, and the Municipal Development Fund (MDF), which are also entities under the MRDI. External funding assistance from the multilateral and bilateral funding organizations is being sought for budget support such as the Development Policy Operations of the World Bank, for specific projects directly implemented by the ministries and for projects implemented by the national companies with specific mandates. Budgets of the local self-governments include own revenues (local taxes and duties, transfers, and other revenues) and external revenues (special and target transfers).

Urban investment initiatives are implemented through either the national companies or demand-driven projects that are funded by the MDF. The initiatives of the national companies are identified through preparation studies, followed by preparation of plans and designs, and detailed project reports, and finally by implementation.

Key findings: Revenues of the local self-governments are enough to meet only the operation and maintenance costs. For capital investments to meet the urban needs, the local self-governments are dependent on other financial sources through the national ministries or the national companies established by these ministries. The MDF supports demand-driven projects that are presented for funding by the local self-governments.

Enabling Environment

Creating an enabling environment is key to developing urban competitiveness in a global economy. The *Doing Business Report 2015* ranked the economy of Georgia 15th of 189 economies surveyed worldwide for “ease of doing business.”⁸ The World Bank Urbanization Review 2014 states that Georgia’s land registration system is highly rated and its planning legislation is gradually progressing, intergovernment fiscal transfers are regular and transparent, and the government is in the process of financing several highway infrastructure projects to improve intercity connectivity and reduce regional disparities.

Business Environment

Georgia has successfully implemented reforms in each of the diagnostic pillars of urban development and has made significant progress in streamlining administrative procedures and urban planning processes. In the *Doing Business Report 2015* rankings, Georgia consistently ranks number 1 among all 189 economies surveyed in terms of registering property, and number 3 in terms of getting a construction permit (Figure E7). Georgia’s ranking dropped to number five worldwide in “starting a business.” Tbilisi has implemented a “single window” mechanism for residents to submit planning applications, which allow applicants to submit applications to a single place, avoiding potential delays or the hassle of having to interact with multiple agencies.⁹

⁸ World Bank. 2005–2015. *Doing Business Reports*. Washington, DC. <http://www.doingbusiness.org/>

⁹ World Bank. 2012. *Georgia Poverty Update*. Washington, DC.

Figure E7: Georgia's Ranking on Doing Business Indices

Note: Rank 189 center, Rank 1 outer edge

Source: World Bank. 2005–2015. Doing Business Report. Washington, DC. <http://www.doingbusiness.org/>

Global Competitiveness

Georgia became more globally competitive by moving from position 72 to 69 worldwide in the *Global Competitiveness Report 2014–2015*.¹⁰ The Global Competitiveness Index is defined by the World Economic Forum.

Georgia ranked 48th for basic requirements constituting the pillars of institutions, infrastructure, macroeconomic environment, and health and primary education, with a score of 4.88 out of 7, improving by nine places (Figure E8). On the downside, the challenge lies in meeting the physical infrastructure and institutional needs while improving labor market efficiency if Georgia is to improve its competitiveness within the region.

Competitiveness of Cities

The competitiveness of cities in Georgia is linked to their geographic proximity to the national markets of the five main cities, connectivity to transport networks, and proximity to international borders. The World Bank Urbanization Review 2014 stated that the “economic performance of cities in Georgia is closely linked to market access indicators

¹⁰ World Economic Forum. 2015. *Global Competitiveness Report 2014–2015*. Georgia Country Profile. Geneva. <http://reports.weforum.org/global-competitiveness-report-2014-2015/economies/#economy=GEO>. “Competitiveness” is defined as a set of institutions, policies, and factors that determine national competitiveness based on the level of productivity of a country, conditions of public institutions, and technical conditions. The level of productivity, in turn, sets the level of prosperity that can be reached by an economy. The productivity level also determines the rates of return obtained by investments in an economy, which in turn are the fundamental drivers of its growth rates. Thus, a more competitive economy is one that is likely to grow faster over time.

Figure E8: Georgia's Global Competitiveness Index Rating for All Pillars

GCI = Global Competitiveness Index.

GGSources: World Economic Forum. 2015. *Global Competitiveness Index 2014–2015*. Georgia Country Profile. Geneva; Ministry of Economy and Sustainable Development. 2015. Presentation. <http://www3.weforum.org/docs/GCR2014-15/Georgia.pdf>

thus allowing greater opportunities for producers, extending the market for their products and opens new job opportunities for workers.”

Economic Profile: Competitive Base

- Georgia is classified as a lower-middle-income economy. Georgia's gross domestic product (GDP) recovered to an estimated 4.6% in 2014 from 3.3% in 2013, although the current account deficit widened to 9.5% of GDP.¹¹
- Recovery reflected mainly gains of 8.5% in industry, particularly in construction, and 5.4% in services, particularly for financial intermediation and tourism, until the end of the third quarter of 2014.
- The weight of industry, including construction and trade, represented about 43.1% of GDP in 2013.
- Agriculture grew by 1.3% in the third quarter of 2014. The agriculture sector in 2011 accounted for 53% of employment and contributed to 8.8% of the GDP.
- Tbilisi alone contributes almost 70% of total GDP of Georgia, which is in line with its share of urban population.
- Fragmented municipalities operate within administrative directives as best as they can, as they are reliant on financial transfers from the center.¹²

¹¹ ADB. 2015. *Economic Trends and Prospects in Central Asia: Georgia*. Asian Development Outlook. Manila.

¹² UN-Habitat. 2013. *The State of European Cities in Transition: Taking Stock after 20 Years of Reform*. Krakow: Institute of Urban Development. p. 236.

Constrained Economic Growth in Medium-Sized Cities and Rural Areas

- Corresponding to the urban population distribution, contribution to Georgia's GDP is very uneven at the regional level and is influenced by the urban–rural variation.
- General trends in employment confirm a decrease of unemployment during the past 3 years. In 2014, unemployment rate fell from 15.1% in 2011 to 12.4 at the national level, and Tbilisi was ranked last with an unemployment rate of 22.5%, which was much more than in the Autonomous Republic of Adjara, which was ranked second to last with 15.8%.
- Labor retrenchment in the public sector exceeded job creation in the private sector.
- The unemployment rate rose from 11.5% in 2003 to 16.9% in 2009, before moderating to 12.4% in 2014.¹³
- Unemployment in 2013 was about four times lower in rural areas (6.5%) than in urban areas (25.6%).¹⁴ However, an estimated one-fifth of the labor force is underemployed.
- The low rate of employment per enterprise suggests that self-employment, represented by individual enterprises, is the most widespread activity in Georgia.
- The agriculture sector is declining because of underinvestment.
- The manufacturing sector has the potential to grow.
- Medium-sized cities in rural areas are unable to capitalize on market opportunities because of lack of infrastructure and industrial growth.

Environment Profile: Resilience Base

Vulnerability to Negative Impacts of Climate Change

- Changes in the absolute minima and the absolute maxima of air temperature demonstrated a warming tendency during both the warm and the cold periods of the year. The process of reverse changes in temperature and precipitation will be sharpened in summer when both tendencies are more distinct than in the other seasons.
- Three priority areas of the Black Sea coastal zone, as well as the Dedoplistskaro and Kvemo Svaneti regions will be affected. Rise in sea level, particularly in the R. Rioni Delta; desertification; and landslides and floods are the key implications.
- Extreme weather events, such as drought, high winds, and thunderstorms significantly affect agriculture.
- The energy sector and the use of fuel for transport account for the major part of greenhouse gas (GHG) emissions.

¹³ ADB. 2015. *Country Partnership Strategy: Georgia, 2014–2018*. Manila; and Geostat. 2014.

¹⁴ Geostat. 2014; World Bank. 2014. *Georgia Urbanization Review: Towards an Urban Sector Strategy Georgia's Evolving System and Its Challenges*. Washington, DC.

Urban Environmental Challenges

- Except for areas where infrastructure rehabilitation works in water supply and sanitation (WSS) and solid waste management (SWM) have been completed, urban infrastructure is outdated and partly functional.
- On the whole, quality, continuity, and coverage of services still remain suboptimal. Municipalities and water companies lack sufficient capacity or incentives to ensure proper road maintenance, to rationalize tariffs to ensure cost recovery, or to deliver WSS in a commercially viable manner.
- Sufficient water resources and water supply is a challenge because of the deficient pipeline network. The situation is being progressively improved with donor-supported projects.
- Maintenance of the sewerage collection and treatment network has been a major problem since 1991. This has resulted in the release of untreated wastewater in natural bodies, causing major environmental issues.
- Solid waste management is identified as an acute problem of national, regional, and local concern in Georgia, where on average about 2,100 tons of waste is generated every day. Fifty-four landfills have been legally identified and are progressively being improved. New state-of-the-art facilities are being planned. There is no segregation of waste at source and no formal system to process the recyclables separately.
- Air pollution is a phenomenon found only in Tbilisi, and this is because of its large vehicle population.

Land Fragmentation

- The land reforms postindependence resulted in land fragmentation and mass privatization.
- Unregulated and unplanned land conversions, as well as inefficiencies in legal and regulatory processes, have reduced the efficiency of land use.
- Subsistence farming in small parcels of land is unable to tap the economic potential.

Equity Profile: Inclusive Base

- The human development index (HDI) 2014 places Georgia in the “high human development” group; Georgia is ranked 79th HDI (human development index = 0.744) worldwide. Georgia recorded a positive trend over the past decade and has moved up from the “medium human development” level because of its points in education and health care.¹⁵
- The relative poverty level, referring to people living under 60% of the median consumption level, is 21.4% at country level in 2013.

¹⁵ United Nations Development Programme. 2014. *Human Development Report*. Geneva.

Table E2: Poverty Indicators
(% share of population)

	2007	2008	2009	2010	2011	2012	2013	2014
Registered poverty: under poverty limit/beneficiaries of subsistence allowance	6.4	8.4	9.9	9.7	9.2	9.7	9.7	11.6
Relative poverty: under 60% of the median consumption	21.3	22.1	21.0	22.7	23.0	22.4	21.4	21.4

Note: Data of 2014 are calculated according to preliminary results of the Population Census of 5 November 2014. Recalculation of the population during 2007–2013 will start after the final results of the 2014 Population Census are published. Thereafter, the share of population under the poverty threshold will be recalculated.

Source: Geostat. 2014 and 2015. http://www.Geostat.ge/index.php?action=page&p_id=188&lang=eng

- The government's statistical database Geostat 2014 shows an increase in the registered poverty level in Georgia over the past 8 years (Table E2).
- The Gini coefficient by total consumption expenditure equaled 0.40 in 2013.
- Rural areas are characterized by underemployment contributing to hidden poverty.
- Infrastructure gaps, agricultural stagnation, and an entrenched skills mismatch in the labor market have dampened the impact of growth on poverty reduction.

Key Recommendations

The Georgia NUA recommends the following:

Spatial planning and sustainable urban development will require:

- developing a national urban strategy for a regionally balanced urbanization approach to stimulate economic growth of medium-sized urban settlements and to enable the development of smaller cities for a sustainable urban system;
- building the capacity of local government through peer-to-peer learning for improved urban management to develop and implement integrated urban master plans;
- increasing the efficiency and effectiveness of public sector management, particularly in interagency coordination for urban planning and implementation of projects;
- strengthening decentralization further through commensurate fiscal devolution and decision-making power to the local governments;
- building the capacity of local self-governments in urban infrastructure planning and financial management to meet the responsibilities placed on them by the local self-government code to better support the decentralization process;
- strengthening the regulatory framework with the adoption of the new code on planning and construction and tightening the oversight for compliance during implementation; and

- (vii) supporting cities through structuring urban management programs that build capacity through peer-to-peer learning in developing urban master plans and implementing urban infrastructure.

Building regional competitiveness will require

- (i) improving transport and logistical infrastructure and services to strengthen urban–rural linkages of production sites in the rural areas and the medium-sized cities with Tbilisi, as well as larger markets within the country and transborder to balance regional disparities and to take advantage of Tbilisi’s strategic location and access to international markets;
- (ii) developing a clustered economic development approach to optimize spatial spillovers of regional economic corridors in the country;
- (iii) extending market opportunities and productivity and stimulating the economic growth of medium-sized urban settlements;
- (iv) introducing measures to address underemployment for potentially supporting investments in export-oriented sectors to cater to employment demand in these sectors;
- (v) increasing access to finance for private sector development, particularly for the development of small and medium-sized enterprises (SMEs), providing financial support to public–private partnerships (PPPs), and developing a pipeline of bankable PPP projects; focusing economic policy on resources that enhance the potential of small investors who continue to be the backbone of regional development in the poorest regions;
- (vi) improving access to credit, lowering logistic costs, and promoting SMEs, including those for agrarian-based winemakers; and
- (vii) modernizing farming techniques and improving market access.

Creating resilient cities will require

- (i) **building climate change resilience:**
 - (a) preventing and/or reducing the negative impacts of climate change in the coastal cities, particularly Poti and Batumi; considering riverside cities, such as Tbilisi, for investments resilient to urban climate change;
 - (b) undertaking GHG inventories at the city level and introducing GHG emission reduction priorities in the energy and transport sectors;
 - (c) introducing integrated transport and urban planning for sustainable urbanization adopting the avoid–shift–improve of ADB’s Sustainable Transport Initiative conceptual framework;
 - (d) developing and adopting traffic management systems in the main cities and enhancing integrated mobility systems, including transit system and nonmotorized transport;
 - (e) introducing modern asset management systems;
 - (f) improving urban infrastructure standards resilient to climate change and implementing coastal reinforcement works to protect urban infrastructure, wherever applicable;

- (g) undertaking GHG inventories and introducing GHG emission reduction priorities in transport sector, such as introduction of low-emission technologies (clean buses and transit systems, cable cars);
 - (h) improving investment planning, funding, and financing mechanisms; and
 - (i) improving and/or modernizing early warning systems relevant to climate-induced events.
- (ii) **urban environmental infrastructure:**
- (a) expanding infrastructure and services, particularly modernizing water and sanitation systems, expanding sewage treatment plants, and improving SWM systems;
 - (b) expanding water abstraction and treatment to address gaps in the big cities (particularly outside of Tbilisi) as well as towns;
 - (c) strengthening water demand management (meters, system efficiency, and wastewater treatment);
 - (d) rehabilitating and expanding existing sewage treatment plants, such as Gardabani and Khashuri;
 - (e) establishing new sewage treatment plants in cities and towns where no such plants exist;
 - (f) rehabilitating and reconstructing water and sanitation systems, and establishing public toilets in cities;
 - (g) improving landfills by providing fencing, installing weigh bridges, and streamlining management systems;
 - (h) establishing new state-of-the-art landfills to progressively close down the existing landfills;
 - (i) setting up new recycling and recovery centers to promote recycling culture;
 - (j) improving enforcement of environmental regulations; and
 - (k) establishing a land management system and transparent processes for enabling infrastructure planning and sustainable urban development.
- (iii) **enabling inclusive urban growth:**
- (a) making parallel improvements in the education system along with the creation of job opportunities;
 - (b) undertaking vocational measures to address the existing between the competencies required for available jobs and labor skills;
 - (c) rehabilitating and regenerating the housing stock to meet demands and prevent hollowing out of inner city areas;
 - (d) instituting citizen awareness programs to support participatory planning; and
 - (e) building sustainable road transport networks, ensuring improved maintenance and road safety.

Urban Vision and Strategic Prioritization

Georgia's vision is to leverage its strategic location and develop as a transport and logistics hub. The urban vision for Georgia is to develop regionally competitive, well connected, and livable cities based on integrated urban planning through an inclusive and adaptive approach:

- (i) to respond to the requirements of the cities by building on their individual assets, strengths, and opportunities;
- (ii) to support knowledge transfer through replication of transformational global good practice and experience;
- (iii) to strengthen resilience of the cities and meet international emissions standards through technological innovation;
- (iv) to enable inclusive urban development for the provision of affordable housing and shelter for the urban poor;
- (v) to strengthen institutions at all levels and to build capacity of stakeholder groups, including SMEs, and citizens through peer-to-peer learning and community awareness programs; and
- (vi) to build partnerships between development partners to harmonize approaches.

The strategic urban priorities from the assessments and discussions with stakeholders are outlined in the following.

Enabling Environment: Improving Urban Governance and Management

- (i) Improving systems for urban planning and spatial planning using geospatial data
- (ii) Developing a national urban strategy and spatial development plan based on a balanced regional urbanization approach to realize the potential of the medium-sized cities and rural economies for increased urban–rural integration and reduction of regional disparities
- (iii) Developing integrated urban plans and programs for cities including smaller towns covering all sectors
- (iv) Strengthening urban governance and management through the establishment of an institutional mechanism for coordination across different sectors in major cities to deal with urban infrastructure and service delivery
- (v) Developing the capacity of local self-governments for technical and management skills through training courses and capacity building for integrated urban planning, heritage conservation, building regulations, and financial management
- (vi) Developing an enabling framework for investments in the urban sector, including legislative reforms, revision of planning and building codes, and environmental standards and regulations
- (vii) Strengthening tax revenues to ensure adequate resources for social and physical infrastructure development for sustainable economic growth

Economy: Building Regional Competitiveness

- (i) Investing in transport and tourism infrastructure to improve access and economic prospects of rural communities and small towns dependent on agribusiness, such as horticulture, nuts, fruits, cheese, and wine making
- (ii) Developing integrated transport system for main cities and improving regional connectivity

- (iii) Consolidating and developing smaller towns and cities through clustered development to stimulate economic growth
- (iv) Building on existing transport investments such as the East–West Highway to link tourism development through clustered development as a pilot initiative
- (v) Promoting industrial development, including SMEs and agroindustries, such as cheese, nuts, and wine; supporting the development of logistics for export-oriented horticulture and agribusiness
- (vi) Providing incentives to investors to promote growth in regional centers and address regional disparities, and urban imbalance
- (vii) Enhancing credit finance to foster entrepreneurship for SME development and support social infrastructure
- (viii) Improving the domestic investment climate and legislation to encourage the domestic banking sector and the private sector to invest in infrastructure to attain long-term development goals
- (ix) Improving investment planning, funding, and financing mechanisms; increasing the capacity of the MDF to support cities in developing bankable projects for PPP

Equity: Inclusive Growth

- (i) Providing services at affordable prices with explicit service obligations and cost-recovery tariffs where affordable
- (ii) Promoting public and community awareness programs, including mechanisms for community participation through schools
- (iii) Developing a robust industry sector to create more productive job opportunities for unskilled labor; linking education, vocational training, and skills development to employment creation with provision of supporting infrastructure facilities
- (iv) Ensuring strategic investments in cross-sector initiatives, such as agricultural and cultural tourism, are supported alongside skills development
- (v) Introducing inclusive urban development policies to enable affordable housing and shelter for the urban poor; ensuring the protection of rights and promoting compliance of regulations by all agencies the responsible for delivery of housing, including the private sector
- (vi) Promoting urban renewal as a mechanism for rejuvenating old and dilapidated building stock through a participatory planning process for mixed-use developments

Environment: Green Resilient Cities

- (i) Targeting investment in urban environmental infrastructure for climate change adaptation and mitigation; infrastructure with environmental considerations with improvements in water supply and water quality; sanitation and solid waste management; education and roads; sustainable public transport, mobility, and transport management; and public space management
- (ii) Improving the managerial, operational, and financial capacity of the utilities; strengthening the institutional and regulatory environment to facilitate sustainable investments; and upgrading service quality norms

- (iii) Developing a national policy and program for WSS and SWM to improve services by concentrating on comprehensive system improvements in urban growth centers as opposed to scattered investments; improving the planning process, management, and monitoring practices (management contracts); introducing structure alternative modes of financing, including PPPs; and applying up-to-date technological solutions for upgrading WSS and SWM systems
- (iv) Undertaking GHG inventories and introducing GHG emission reduction priorities in the power and transport sectors; expanding and renovating the existing monitoring stations for air quality, measurement methodologies, and data-processing systems
- (v) Reviewing land-use and land conversion policies and establishing transparent and accountable systems that enable organizational reforms to bring in good governance in the real estate and construction market
- (vi) Consolidating data on urban land use; developing a centralized land-use database system with geographic information system (GIS) mapping to aid government in tapping land value and increasing efficiency in property tax collection
- (vii) Enhancing energy efficiency and technological support for renewable energy, waste-to-energy options, and others; developing and expanding district heating systems across the different regions
- (viii) Developing national strategy, policies, programs, and operational plans to tackle flood events; investments to prevent and/or reduce the negative impact of floods and flash floods from river basins, including the modernization of early warning systems

Policy and Programming

The government works closely with ADB and other international financing institutions. The country operations business plan, 2015–2017 of ADB is consistent with the country partnership strategy (CPS), 2014–2018 for Georgia, the findings from the recent Midterm Review of ADB’s Strategy 2020, and the Socio-economic Development Strategy of Georgia (Georgia 2020) approved by the government in June 2014.¹⁶

The CPS 2014–2018 and Georgia 2020 share a common goal of fostering inclusive economic growth through measures to (i) enhance private sector competitiveness; (ii) improve public sector management, including domestic resource mobilization for investment; and (iii) finance priority infrastructure that is essential for connectivity and broader access to economic activity.

The strategic thrust of the country operations business plan, 2015–2017 is consistent with the CPS priorities. The plan will support the government to (i) improve internal and regional market connectivity to enhance private sector competitiveness and to broaden community access to economic opportunities; (ii) make essential drinking water, sewerage, and sanitation services more accessible and reliable, particularly in smaller towns and secondary cities that are potential hubs for agribusiness and tourism; (iii) improve the security and

¹⁶ ADB. 2014. *Midterm Review of Strategy 2020: Meeting Challenges of a Transforming Asia and Pacific*. Manila; ADB. 2014. *Country Operations Business Plan: Georgia, 2015–2017*. Manila.

stability of power systems, especially for communities in lagging regions; (iv) strengthen public sector management for domestic resource mobilization and investment in business and infrastructure; and (v) increase access to finance and promote financial inclusion, particularly for micro, small, and medium-sized enterprises.

Strategic Urban Infrastructure Investment Plan

Meeting the challenges and opportunities identified under the national urban assessments will require the government to adopt and support multiple strategies, new initiatives, and innovative funding mechanisms. The key challenge for the government is the lack of institutional coordination among agencies. Building on ongoing investments under the multitranche financing facility, ADB can support the government to develop livable cities (competitive, socially inclusive, and environmentally resilient) through investments for infrastructure and improved policy and institutional arrangements for delivering urban services. The national urban assessments have identified some key investment areas that ADB could target:

Integrated urban planning. City development plans or integrated urban plans for towns to focus on integrated transport and land-use planning, urban environmental infrastructure, reducing environmental degradation; preserving cultural heritage; fostering financially sustainable development; and strengthening institutional, organizational, and technical capacities of the urban development agencies.

WSS and SWM services. To be provided in a professional, businesslike manner, with a focus on providing quality services to consumers.

Sustainable urban transport. To strengthen urban transport systems, Georgia needs to streamline policy and regulatory frameworks, rationalize and improve public transport, reinforce network structures, optimize technologies and services, and develop links with diversified supply elements (public and private service providers).

Targeted 3E Program

Targeted investments require a geographical focus to identify urban strategic areas or locations for ADB interventions. These are based on government policy documents, other donor agency reports, and ADB sources. The 3E (economy, environment, and equity) framework provides the platform for ADB to leverage the drivers of developing cities and to apply these to highlighted urban priorities. Cities must become more competitive, inclusive, and environmentally responsive, incorporating the current sectors of focus in the CPS—transport, energy, water supply and other municipal services, and public sector management—if they are to become more economically dynamic and livable places. Table 3 outlines recommendations for investments.

ADB Sector Focus	Green Cities	Competitive Cities	Inclusive Cities
Urban Development	<p>Policy: Target investment in urban environmental infrastructure for climate change adaptation and mitigation</p> <p>Prioritize strategic investment in urban infrastructure with holistic approach toward water management, especially water, wastewater (sanitation); solid waste management; and storm water management to reduce flood risks</p> <p>Address issues of utility service provision</p>	<p>Policy: Develop smaller towns and cities near major growth centers to stimulate economic growth to capture benefits of urbanization</p> <p>Institutions and regulatory systems</p> <p>Diversify export-oriented agribusiness and support development of robust industry sector to create more productive job opportunities for unskilled labor</p> <p>Establish vocational education</p> <p>Enhance local outlets for credit finance investment in SME promotion through industry associations and e-governance to reduce transaction costs and support SME development</p>	<p>Policy: Provide incentives to promote growth in medium-sized cities and towns to address urban imbalance</p> <p>Human resource development</p> <p>Link education, vocational training, and skills development to employment creation in small towns and medium-sized cities</p> <p>Provide vocational education and supply chain capacity development for agroindustries</p> <p>Introduce local revenue-generating activities</p>
Land Management	<p>Address urban renewal through targeted investments for rehabilitation of housing stock and provision for low-income communities</p> <p>Review land-use and land conversion policies</p> <p>Establish transparent and accountable systems that enable organizational reform to bring in good governance in the real estate and construction market</p>	<p>Consolidate data on urban land use</p> <p>Develop a centralized land-use database system with GIS mapping for transparent and efficient land-use and infrastructure planning</p> <p>Ensure an integrated transport and land-use planning to facilitate land optimization</p>	<p>Empower communities to increase accountability and transparency in monitoring and implementation of housing rehabilitation and upgrading strategies for poor urban communities</p> <p>Ensure protection of rights and promote compliance of regulations by all agencies, including private sector, responsible for delivery of housing</p> <p>Address housing affordability</p>
Solid Waste Management	<p>Operationalize the existing landfills and the new state-of-the-art landfills so that there are no harmful impacts on the environment</p>	<p>Increase efficiency through involving the private sector in waste management</p> <p>Exploit cross-sector synergies, such as waste recycling (material reuse) and recovery (waste-to-energy options)</p>	<p>Improve access of urban population to adequate solid waste collection and disposal</p> <p>Encourage urban community initiatives to reduce and segregate waste-at-source</p>
Water Supply and Municipal Services	<p>Ensure water recycling and waste recovery</p> <p>Develop a watershed plan with a combination of restoration and protection measures, as a superset of the land-use plan</p>	<p>Improve planning process, management, and monitoring practices</p> <p>Strengthen institutional and regulatory environment to facilitate sustainable investments</p> <p>Structure alternative modes of financing, including PPPs</p>	<p>Improve access of urban population to piped water on premises</p> <p>Provide services at affordable prices with explicit service obligations and cost-recovery tariffs, wherever applicable</p>

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Table continued

ADB Sector Focus	Green Cities	Competitive Cities	Inclusive Cities
		Promote local revenue-generating activities Support infrastructure-led development Apply up-to-date technological solutions for upgrading WSS and SWM systems	
Transport and Tourism	Establish public transport, land-use and/or transport synergies Incorporate greenhouse gas inventories and emission reduction priorities in transport sectors Measure and reduce infrastructure bottlenecks Increase densities and growth among corridors	Invest in transport and tourism infrastructure to improve access and economic prospects of geographically dispersed regions Establish intercity connectivity through proper linkages with the national road investment program Develop and adopt traffic management systems in the main cities Introduce modern asset management systems Enhance integrated mobility systems Improve investment planning, funding, and financing mechanisms	Promote strategic investments in cross-sector initiatives, such as agricultural tourism and cultural tourism, alongside alternative livelihood opportunities
Energy	Address climate change Mitigate greenhouse gas emissions Enhance energy efficiency in urban services Plan energy-efficient building construction Provide reliable and secure electricity services at competitive rates that are essential to improve the investment climate and distribution management Invest in clean production technology Increase technological support for renewable energy Consider waste-to-energy options, and others	Provide reliable and secure electricity services at competitive rates to improve the investment climate	Provide affordable electricity Provide rural electrification Provide renewable energy for community-led development

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Table continued

ADB Sector Focus	Green Cities	Competitive Cities	Inclusive Cities
Urban Governance and Public Sector Management	Establish governance mechanisms for coordination of planning and implementation of projects Establish building codes and certification	Strengthen tax revenues to ensure adequate resources to develop social and physical infrastructure to facilitate sustainable economic growth Strengthen property rights Promote PPPs Improve the domestic investment climate to encourage the domestic banking sector and the private sector to invest in infrastructure to attain long-term development goals Ensure regional planning and coordination Provide innovative financing alternatives Facilitate capacity development of local self-governments to develop technical and management skills	Address project partnerships Reform local government institutions Encourage microfinance Address climate change and facilitate adaptation Ensure asset management and community-based budgeting

ADB = Asian Development Bank, GHG = greenhouse gas, GIS = geographic information system, PPP = public-private partnership, SMEs = small and medium-sized enterprises, SWM = solid waste management, WSS = water supply and sanitation.

Source: Asian Development Bank.

Introduction

The Asian Development Bank (ADB) launched its Urban Operational Plan, 2012–2020 at the Asian Urban Forum in November 2011.¹ Under the plan, ADB will support developing member countries (DMCs) in developing their urban economies, improving environmental sustainability, and making pro-poor investments. To maximize development impact, the urban sector can play an integrative role to focus ADB operations beyond traditional urban investments. The *ADB Manual for Undertaking National Urban Assessments* (Naik Singru and Lindfield 2016) provides an integrated framework for conducting rapid urban sustainability assessments at both the national and urban region levels for developing member countries to develop strategic policy options and targeted investments in the urban sector. This case study on Georgia is based on the thematic areas of the national urban assessment framework shown in Figure 1.

Figure 1: National Urban Assessments Framework

¹ See ADB (2013c).

Country Profile

Location

Georgia is located in the Southern Caucasus, at the crossroads of Europe and Asia, making it an important nodal point for regional trade flows. It is an important transit corridor for many countries in Central and West Asia, especially Armenia and the Republic of Azerbaijan. The country has an East–West corridor connecting the Republic of Azerbaijan to the Black Sea. The main economic activities and therefore the main infrastructure are concentrated in the midland bordered by the foothills of the North Caucasus and South Caucasus (Maps 1 and 2). The location of Tbilisi, at the crossing point of East–West and North–South corridors (Map 2), must be considered an exceptional asset. However, Tbilisi has not yet taken full advantage of its strategic location as a logistic pole for other urban and rural areas because of inadequate development of transport and logistics infrastructure. Map 3 (second picture) highlights the logical densification of the existing or under construction road networks along the East–West axis, starting at the boundary of the Republic of Azerbaijan and leading to Poti, the main commercial port on the Black Sea. Even if this midland bordered by summits exceeding 5,000 meters (m) to the North and 3,000 m to the South is considered as the lowest area of the country, its profile shows hilly terrain that makes the construction of roads difficult (third picture of Map 3). At about 150 kilometers from the sea, the transport project of the East–West highway supported by five donors, including the Asian Development Bank (ADB), is a high priority of the government.

Summary:

- The topography of Georgia presents a particular challenge for transport and communication, which are critical development aspects in the context of the country's strategic location.

Recommendations:

- Improve transport and logistical infrastructure and services to strengthen urban–rural linkages of agro–horticultural industries in rural areas with larger markets within the country and Tbilisi to take advantage of the capital's strategic location and access to international markets. Transborder connectivity can improve access to regional markets to balance regional disparities.
- Develop secondary cities and rural towns to build on strategic geographic location to enhance economic competitiveness.

Map 1: Map of Georgia

Source: ADB. 2015. This map was produced by the cartography unit of the Asian Development Bank. The boundaries, colors, denominations, and other information shown on this map do not imply, on the part of the Asian Development Bank, any judgment on the legal status of any territory or area, or any endorsement or acceptance of such boundaries, colors, denominations, and information. This applies to all maps and graphs used in this publication.

Map 2: 3D Representation of the Relief: Five Cities—East-West Highway and North-South Main Road

Source: Asian Development Bank map based on Google Earth satellite picture 2012 + extract of highways map MRDI.

Map 3: Contour Lines and Road Maps

Strategic regional location of Tbilisi

Densification of the existing or under construction road networks along the East–West axis

Hilly zones make construction difficult in the incomplete section of the East–West highway

Source: Asian Development Bank map GIS based on Google Earth satellite image 2012 + extract of highways map MRDI.

Political History

During most of the 20th century, Georgia was one of the former Soviet republics. It declared independence in 1991 and shortly thereafter was faced with a deep economic crisis and grave social problems. To overcome this, the government liberalized trade and implemented a series of liberal economic reforms, including privatization of landholding and property, an overhaul of the banking system, and the introduction of a new national currency, the lari (GEL). Some progress was achieved in the realm of foreign policy with the initiation of large regional projects such as the Baku–Supsa oil pipeline.

A nonviolent change in 2003 brought to power the United National Movement government, which embarked on a far more comprehensive range of reforms, many of which aimed to restore the rule of law and fundamental state authority. The successful fight against petty corruption, introduction of police reforms, improvements in the education system, development of infrastructure and services, and strengthening of public institutions were among the achievements of the transition that helped reconstitute state authority. However, the 2008 armed conflict with the Russian Federation displaced more than 200,000 people and demonstrated the fragility of the Caucasus, adding to political risk perceptions, interrupting investment flows, and challenging the country's territorial integrity. Political relations with the Russian Federation remain strained but have been improving since 2013 (ADB 2015b). The parliamentary elections of 2012 saw the emergence of the Georgian Dream–Democratic Georgia coalition. The peaceful transition was seen as a sign of the maturing of society and the political institutions (Gogsadze 2014, p. 49).

Political System

Georgia is a democratic republic, headed by the president. The Parliament consists of 150 members from a mixed electorate consisting of 84 constituencies. Of the members, 77 are elected based on party lists and the remaining 73 members are elected directly from voting districts in a first-past-the-post-system from single-mandate majoritarian constituencies. All members are elected to 4-year terms.

Until 2013, presidential power was stronger compared with the parliamentary and judiciary branches of the government. However, after the presidential election of 2013, the new Constitution came into force, and Georgia became a parliamentary republic. In 2012, the Parliament was relocated from Tbilisi, the capital, to Kutaisi, the country's second largest city.

Over the past decade, the government has implemented far-reaching initiatives to deregulate the economy, streamline bureaucracy, and combat petty corruption. The government's priority going forward is more sustainable and inclusive economic growth, with a specific focus on macroeconomic stability and effective public administration, private sector competitiveness, human resource development, and promoting access to finance.

Summary:

- Georgia is progressively maturing as a democracy. The political transition shows a positive trend toward this path.
- Georgia is decentralizing, streamlining bureaucracy, and combating petty corruption.

Recommendation:

- Further strengthen its institutional capacity to enhance the effectiveness of its ongoing initiatives.

Urbanization Profile

Demographic Analysis: Population Change and Urbanization Rates

Georgia had a population of 4.49 million in 2014, of which 53.70% was classified as urban population (Table 1).² While the population has been stable over the past decade, it has been fluctuating marginally in the last 2 years. It went down to 4.48 million in 2013 from about 4.50 million in 2012, and Georgia's urban population is not expected to reach 60% before 2030 (Figure 2).

Until the 20th century, Georgia was largely rural. Full-scale urban growth occurred only at the beginning of the 20th century through industrialization, military expansion, and the establishment of new urban settlements. Between 1926 and 1959, the urban share of the population almost doubled (Figure 2) because of high rates of natural population increase, rural-urban migration, and in-migrations from other Soviet republics. Urban growth continued, albeit at lower rates from 1950 onward. Since the 1970s, natural growth rates relatively declined and migration from other Soviet republics reversed. Hence, rural-urban migration remained the main source of urban growth, especially for the larger cities. By the end of the 1970s, more than half the population lived in urban settlements.

Table 1: Population of Georgia
(million)

	2006	2007	2008	2009	2010	2011	2012	2013	2014
Population as of 1 Jan	4.4013	4.3947	4.3821	4.3854	4.4364	4.4692	4.4976	4.4838	4.4905
Urban	2.3104	2.3089	2.3038	2.3091	2.3505	2.3713	2.3917	2.4108	2.4117
Rural	2.0909	2.0858	2.0783	2.0763	2.0859	2.0979	2.1059	2.0730	2.0788

Source: Asian Development Bank, based on data from National Statistics Office of Georgia (Geostat) 2014.

² A population census has been undertaken and preliminary results indicate a lower population than the Geostat 2014 data. However, in the absence of final results, the data available have been used for this report.

Figure 2: Urban Population in Georgia

Sources: Sakartvelos Geografia [Geography of Georgia]. 2003. *Part II: Economic Geography*. Tbilisi. [in Georgian]; United Nations Department of Economic and Social Affairs, Population Division. 2010. *World Urbanization Prospects: The 2009 Revision*. New York; for 1959 and 1970. <http://www.indexmundi.com/facts/indicators/SP.URB.TOTL.IN.ZS/compare?country=am>

Georgia experienced a decrease in urban population since independence in 1991, as a significant number of people, mostly urban dwellers, migrated abroad in search of secure living conditions, as political turmoil and civil tensions turned into numerous armed conflicts, resulting in the collapse of the economy. Rural–urban migrations could not make up for these international outflows. The situation stabilized only in the mid-2000s, turning into slight growth from 2010 onward (Figure 2).

Urban Hierarchy and Population Densities by Region

Georgia predominantly consists of small urban settlements and one large city, Tbilisi, which with a population of 1.175 million and steadily increasing accounts for almost half of all urban citizens (Table 2). Only three other cities (Kutaisi, Batumi, and Rustavi) have more than 100,000 inhabitants. Rustavi, a big city-municipality of the Kvemo Kartli region, is part of the Tbilisi urban area, with functional links through mobility; economic connections; cultural exchange; and a commuting population for work, studies, and services. The average urbanization rate of the country is less than 27%. However, the urbanization rates for the regions vary considerably, with 48% for Imereti compared with only 19% for the Racha–Lechkumi and Kvemo-Svaneti regions. Urban growth and development has been uneven, with a concentration in the cities in the Tbilisi–Rustavi urban area, Kutaisi, and Batumi, which account for population change above the national average (Figure 3). Growth prospects remain uncertain for Georgia’s secondary cities.

According to the Local Self-Government Code approved in February 2014, a city must be the domicile for at least 5,000 citizens and should have an urban economy and act as an

Figure 3: Population Change by Region, 2009–2011
(%)

Source: Asian Development Bank, based on Geostat 2012 data.

economic-cultural center.³ City status can also be granted to a settlement with less than 5,000 citizens, provided it is a self-governing entity or has an “immediate perspective of economic and population growth.”⁴ Another semiurban settlement or form of township called *Daba* should host a minimum of 3,000 inhabitants and have industrial enterprises, communal services, networks of health care, and sociocultural establishments for fulfilling the functions of a local economic and cultural center. There are 110 urban settlements in Georgia, of which 62 are cities and 48 are townships. The urban system of Georgia is strongly determined by its territorial-administrative arrangement and system of governance. Regions and districts are drawn and listed in Map 4.

Most of the urban settlements are acting as centers of municipalities, which are the basic entities of the self-government system. Twelve large settlements in terms of size and economic weight have a status of self-governing cities. These are Tbilisi, Batumi (Autonomous Republic of Adjara), Kutaisi (Region of Imereti), Rustavi (Region of Kvemo Kartli), Poti and Zugdidi (Regions of Samegrelo and Zemo Svaneti), Gori (Region of Shida Kartli), Telavi (Region of Kakheti), Akhaltsikhe (Region of Samtskhe-Javakheti), Ozurgeti (Region of Guria), Ambrolauri (Region of Racha-Lechkhumi and Kvemo Svaneti), and Mtskheta (Region of Mtskheta-Mtianeti). There are 79 municipalities, including eight city-municipalities, that is, municipalities consisting of a single urban settlement. Each

3 The Local Self-Government Code repealed the Organic Law on Local Self-Government of 2007 and three other laws including the Law of Georgia on the Capital of Georgia—Tbilisi. The previous organic law on local self-government also contained provisions similar to the aforementioned provisions (Transparency International Georgia 2014).

4 However, it is not explained what could be considered as such a perspective.

Map 4: Administrative Divisions by Region and District

A Adjara Autonomous Republic 1 Bataumi City 2 Kobuleti Municipality 3 Khelvachauri Municipality 4 Keda Municipality 5 Shuakhevi Municipality 6 Khulo Municipality	3 Tkibuli Municipality 4 Tskaltubo Municipality 5 Bhagdadi Municipality 6 Vani Municipality 7 Zestaphoni Municipality 8 Terjola Municipality 9 Samtredia Municipality 10 Sachkhere Municipality 11 Kharagauli Municipality 12 Khoni Municipality	E Shida Kartli 1 Gori Municipality 2 Kaspi Municipality 3 Kareli Municipality 4 Khashuri Municipality	H Samtskhe–Javakheti Region 1 Akhaltsikhe Municipality 2 Adigeni Municipality 3 Aspindza Municipality 4 Akhalkalaki Municipality 5 Borjomi Municipality 6 Ninotsminda Municipality
B Kakheti 1 Telavi Municipality 2 Akhmeta Municipality 3 Gurjaani Municipality 4 Dedoplistskaro Municipality 5 Lagodekhi Municipality 6 Sagarejo Municipality 7 Sighnaghi Municipality 8 Kvareli Municipality	D Samegrelo and Zemo Svaneti 1 Zugdidi Municipality 2 Poti City 3 Abasha Municipality 4 Martvili Municipality 5 Mestia Municipality 6 Senaki Municipality 7 Chkhorotsku Municipality 8 Tslenjikh Municipality 9 Khobi Municipality	F Kvemo Kartli 1 Rustavi City 2 Bolnisi Municipality 3 Gardabani Municipality 4 Dmanisi Municipality 5 Tetritskaro Municipality 6 Marneuli Municipality 7 Tsalka Municipality	I Mtskheta–Mtianeti Region 1 Mtskheta Municipality 2 Akhlagori Municipality 3 Dusheti Municipality 4 Tianeti Municipality 5 Stepantsminda Municipality
C Imereti 1 Kutaisi City 2 Chiatura Municipality		G Guria Region 1 Ozurgeti Municipality 2 Lanchkhuti Municipality 3 Chokhatauri Municipality	J Racha–Lechkhumi and Kvemo Svaneti Region 1 Ambrolauri Municipality 2 Lentekhi Municipality 3 Oni Municipality 4 Tsageri Municipality

Source: Asian Development Bank, based on the administrative map of the National Statistics Office of Georgia.

city, district, or municipality is set up with a representative body called *sakrebulo* matching the regional level; and an executive body called *gamgeoba*, comparable to a city hall council. The municipalities are grouped into 11 regions submitted directly to the president, defined predominantly on historical-geographic parameters, which are special operational nonadministrative territorial units, with coordination functions in respective territories.

Urban Hierarchy

Urban settlements differ significantly by their population, economic profiles, and infrastructure. The population of Georgia by municipalities reflects the uneven distribution of the population across the country (Appendix 1). The lack of large cities and underrepresentation of medium-sized cities emphasizes the wide gaps in the existing urban hierarchy. This is reflected in the lack of adequate coverage of regions and the entire territory by hierarchical systems of commodities, services, and labor markets that should attract people and businesses, and also ensure economic development of urban places.

At the municipality level, there is great disparity in population, with Tbilisi (1,175.2 million) largely ahead of the next largest municipality of the city of Kutaisi (less than 200,000 people) (Appendix 2 and Table 2). There are no large cities with populations between 0.5 million and 1 million. There are six municipalities in Georgia that have a population of over 100,000 and these include the three “big” city-municipalities of Kutaisi, Batumi, and Rustavi. Other 18 municipalities are “medium-sized” with populations between 50,000 and 100,000. The largest group comprises 30 “small” municipalities with populations between 20,000 and 50,000, and finally eight “tiny” municipalities with populations less than 20,000.

Tbilisi accommodates almost half of all urban citizens, and this is typical of several smaller ex-Soviet countries (e.g., Armenia, the Republic of Azerbaijan, Latvia, and Moldova), and a key consideration for policy makers in planning approaches for economic measures and urban policies. The Tbilisi–Rustavi–Gardabani–Mtskheta urban area dominates the current national urban system with only the city-municipalities of Kutaisi and Batumi having more than 100,000 inhabitants. The dominance of the Tbilisi urban area and the lack of second-tier cities closer in scale to the primary city generates a disproportionate distribution in the national urban system.

Territorial Spread of the Population

Georgia is characterized by strong differences in population distribution at the district level, determined by a complex topography, as well as by other geographic factors, such as vicinity to big urban settlements and the major transportation routes. The intermountain valley with the most fertile soils, located on the main transportation routes, such as the major highway and railroad, along with the Black Sea coastline, traditionally accommodate relatively large numbers of population, and consequently are characterized by high population density. In such areas, the population density significantly exceeds the national average rate of about 65 persons per square kilometer (km²), reaching 200 or more in some cases (e.g., Zugdidi and Khelvachauri). The high density rates in such areas are, naturally, due to the substantial urban population, though the density of the rural population is also quite high. In contrast, the mountainous municipalities of the Minor Caucasus and especially the Greater Caucasus are thinly populated, with population density rates below 10 persons per km². The Tbilisi–Rustavi urban area and Kutaisi have population densities above 1,000 persons per km², with some central neighborhoods of Tbilisi reaching 30,000 persons per km².

Distribution of Urban and Rural Population

The regions and municipalities are very different by settlement composition, population, and urban–rural population balance (Map 5). Table 2 reflects general characteristics of the population distribution in the existing territorial system of regions and municipalities. Tbilisi, which is by far the most populous of all municipalities or regions in Georgia, has the status of both municipality and region. The Tbilisi–Rustavi agglomeration includes the cities of Mtskheta and Gardabani, both city-municipalities. Mtskheta is the regional center of the Mtskheta–Mtianeti region and Gardabani belongs to the Kvemo–Kartli region. The population of the mountainous Mtskheta–Mtianeti and Racha–Lechkhumi regions, as well as that of Guria, is quite limited even by modest Georgian standards. This reveals huge regional differences in the population distribution in Georgia (Map 6). The population of Tbilisi at 1.175 million is six times the population of Kutaisi, the second largest city, and nine times that of Batumi, the third largest city. Among other regions, only two—Imereti and Kvemo–Kartli—have populations exceeding 0.5 million, with the region of Samegrelo–Zemo Svaneti having a population in the vicinity of 0.5 million.

Spatial Analysis

The national urban hierarchy is unbalanced in Georgia largely because of huge disparities between the dominant urban agglomeration of Tbilisi–Rustavi–Mtskheta–Gardabani in

Map 5: Population Change by Region, 2010–2015

Source: Asian Development Bank, based on Geostat 2014 accessed from Geostat 2015 official website www.Geostat.ge

Table 2: Distribution of Urban Settlements by Regions and Municipalities

Region	Population Numbers ('000)	Number of All Municipalities	Number of City-Municipalities	Number of Other Cities and Towns	Number of Central Townships	Number of Other Townships
Tbilisi	1,175.2	1	1	0	0	0
Adjara	396.6	6	1	1	4	3
Guria	138.8	3	0	2	1	4
Imereti	703.3	12	1	10	1	2
Kakheti	405.0	8	0	9	0	0
Kvemo Kartli	513.1	7	1	6	0	6
Mtskheta–Mtianeti ^a	108.8	5	0	2	3	3
Racha–Lechkhumi and Kvemo Svaneti	45.9	4	0	3	1	1
Samegrelo–Zemo Svaneti	476.3	9	1	7	2	0
Samtskhe–Javakheti	213.7	6	0	5	2	5
Shida Kartli ^b	313.8	9	1	4	1	4
Total	...	79	8	54	16	32
Number of urban settlements = 110						
Territories controlled by the Government of Georgia	4,490.5	64	5	49	13	26
Number of urban settlements = 93						

... = not available.

Notes:

^a One municipality with one central township is outside of control of the Georgian government.

^b Five municipalities, including one city-municipality, with one central and two other townships are outside of the control of the Georgian government.

Source: Geostat 2014 and 2015 accessed from Geostat 2015 official website www.Geostat.ge

relation to all other settlements. The most pronounced is the degree of urban primacy of the Tbilisi urban area that started emerging in the late 19th and early 20th centuries and remained so until the present time. Prior to independence, Tbilisi and its metropolitan region received federal investments to promote urban growth and agglomeration.

Figure 4 shows the relative population size of Tbilisi in comparison with other urban settlements. Tbilisi accounts for more than 49% of the country's urban population with only 20 cities having a population above 15,000 (Figure 5). Although Tbilisi has sustained this urban primacy even after independence, despite economic crises and population outflows, it is essential to rebalance the national and regional distribution of human capital, economic strength, financial viability, and infrastructure development. There is only a very slight and arbitrary margin between urban and rural areas in Georgia, as many urban settlements in Georgia look and function very similar to villages. Hence, the existing modest rate of urbanization can be contentious, as several settlements with urban status do not perform urban functions.

Map 6: Urbanization Rate per Region, 2014

Source: Asian Development Bank, based on Geostat 2014 accessed from Geostat 2015 official website www.Geostat.ge

Migration

International Migration

The 1990s (1992–1996) saw dramatic population outflows from Georgia (Figure 6). In the absence of precise migration data, it is estimated that net migration from Georgia exceeded 1 million between 1990 and 2006 (Sakartvelos geografia 2003, pp. 36–37; Meladze 2007, p. 95). Prevalent positive annual additions from the mid-2000s have not compensated for the huge population losses incurred through international migration in the 1990s.

Urban dwellers constituted the majority of the migrating population. According to the Population Census of 2002, 64.5% of emigrants from Georgia tried to settle in the Russian Federation (Meladze 2007, p. 100). Since then, the flow of migrants from Georgia has shifted mostly to the European Union (EU), Turkey, and the United States. These outflows resulted in loss of human capital in urban areas. Although rural–urban migrations partially made up for urban population losses, they could not balance the deficit in qualified urban labor.

Domestic Migration

Domestic migration has played an important role in the redistribution of the population. Almost all cities and towns have lost part of their population to Tbilisi, which was viewed

City	Number of People (approx.)
Tollaa City	1170
Kumasi City	190
Zugredj	180
Gori	160
Mameull	130
Batum City	120
Rustav City	110
Gardabani	110
Khalechauri	100
Kobuleti	90
Bornisi	90
Zestaroni	80
Takhaltoni	80
Telavi	70
Churpan	70
Amkhiala	70
Khashuri	60
Santredia	60
Sagaredo	50
Mtskheta	50
Chiatura	50
Kopli	50
Kuruli	50
Serekhi	50
Lagodekhi	50
Akhacskhe	50
Sachkhere	50
Port City	50
Tseret	50
Marvili	50
Atkheta	50
Khopi	50
Tsklenikha	50
Lanchkhuti	50
Kvareli	50
Kutlo	50
Ninotomida	50
Dusart	50
Vani	50
Borjomi	50
Chikhorotsk	50
Deoplingaskaro	50
Atkubli	50
Dmianshi	50
Baghshai	50
Tetridakaro	50
Abasha	50
Khvaraguli	50
Shurpalka	50
Shurkheti	50
Chokhatauri	50
Adigeni	50
Koda	20
Tsketi	20
Mestia	20
Amotnauri	10
Tunet	10
Aspndra	10
Lentskhi	10
Oni	10
Kazbegi	10

Note: Brown = Tbilisi municipality, red = big municipalities, orange = medium size, blue = small, green = very small or tiny.
Source: Asian Development Bank, based on Geostat 2012 data.

City	Population (approx.)
Tbilisi	1,200
Kuraisi	200
Batumi	120
Rustavi	120
Zugdidi	80
Gori	60
Poti	50
Samtredia	40
Khashuri	30
Senaki	20
Zestaponi	20
Marneuli	20
Telavi	20
Akhaltsikhe	20
Kobuleti	20
Ozurgeti	20
Tskaltubo	20
Kaspi	20
Gardabani	20

Note: The top 20 cities have populations of over 15,000.
Source: Asian Development Bank, based on Geostat 2012 data.

Figure 6: Net Transnational Migration of the Population in Georgia, 1990–2011
(’000)

Sources: Asian Development Bank, based on data from Geostat 2012; G. Meladze. 2007. *Sakartvelos Demografiuli Gamotsvebi* [Demographic Challenges of Georgia]. Tbilisi: Universal (in Georgian). p. 95.

as the only source of nonagricultural occupations and livelihoods. Urban population decreased as a result of outmigration since 1991.

Urban–urban migration from smaller towns and cities to Tbilisi was larger than rural–urban migration in the early 1990s. One reason might be a land reform, implemented since 1992, which granted small (around 1 hectare [ha]) agricultural plots to almost 800,000 rural households, providing at least a certain base for subsistence farming. This provision prompted many rural families to stay back, while noncapital urbanites preferred to change their living places during the severe economic downturn.

The past 2 decades saw an influx of internally displaced persons (IDPs) because of ethnic and political conflicts in the large cities. Tbilisi alone accounts for almost 38% of the registered Georgian IDPs.⁵ The total number of displaced people is more than 250,600 (more than 87,000 families), of which 92.5% were displaced in the 1992–1993 ethno-political conflicts, and the remaining 7.5% after the 2008 conflict (Eiweida et al. 2013, p. 7). Another major IDP concentration is in the Samegrelo–Zemo Svaneti region, adjacent to the conflict region of Abkhazia (almost 85,000 IDPs), with Zugdidi municipality alone accommodating nearly 50,000. Jvari, a former settlement of construction workers for Enguri dam is now dominated by IDP with little opportunity for improving the quality of life as there is no arable land, employment or petty trade opportunity, and very scarce local resources, in addition to very difficult living conditions and poor social services.⁶ The IDP concentration is also relatively high in the other big cities of Georgia.

⁵ IDPs are defined as “persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or humanmade disasters, and who have not crossed an internationally recognized State border.” See Guiding Principles on Internal Displacement. 1998.

⁶ See Sumbadze and Tarkhan-Mouravi July 2003, p.31 quoted in Internal Displacement Monitoring Centre. 2007. *Georgia: New IDP strategy awaits implementation*. Geneva

Changes in Ethnic Composition

Migration processes, especially transnational ones, have dramatically changed the ethnic composition of Georgia and its cities. Although after independence the outflow of the population has occurred among all ethnic groups, including Georgians, the share of emigrants among some nationalities, such as Armenians and Russians, was quite high (Figure 7). The major waves of emigration occurred immediately after the collapse of the Soviet Union. The lower rates of economic development in the country, twinned with dramatic and fast deterioration of living conditions, and certain difficulties of social integration and career growth for ethnic minorities, served as pullout factors for unprecedented outflow of Georgia's population, in which almost half of emigrants were of non-Georgian origin.

The changes in the ethnic structure of the population became most obvious in the large, formerly multiethnic "cosmopolitan" cities. For instance, in Tbilisi, Georgians were only the third-largest ethnic group (26%) after Russians (30%) and Armenians (29%) in 1897, while now they account for more than 80% of the population. Such a process of strong homogenization of the population is not unusual for the post-Soviet independent states and their capitals. It is strongly manifested in the case of Armenia and the Republic of Azerbaijan where the respective nationalities now comprise over 90% of their populations. Although international migration trends have largely stabilized in Georgia, the long-term impact of the 1990s on demographic and socioeconomic development still persists. The

Figure 7: Changes in Ethnic Composition of the Population in Georgia, 1926–2002
(‘000)

Source: General Population Census of Georgia. 2003. Chapter 3. The Results of the First National Universal Population Census of Georgia of 2002. Book 1. Tbilisi. 2003. [in Georgian] http://www.geostat.ge/cms/site_images/_files/georgian/census/2002/1%20tomi%20-%20saqarTvelos%20mosaxleobis%202002%20wlis%20pirveli%20erovnuli%20sayovelTao%20aRweris%20Sedegebi.pdf

Summary:

- Loss of human capital because of international migration for better living conditions and job opportunities has to be reckoned with.
- Prevalent positive annual additions from the mid-2000s, including rural–urban migration, could neither balance the deficit in qualified urban labor nor compensate for the huge losses incurred through international migration in the 1990s.
- The long-term consequences on demographic and socioeconomic development persist and, twinned with a stagnant natural growth in population in the past 2 decades, are likely to affect the future demographics of the country.

Recommendations:

- Increase job opportunities and improve quality of life to retain qualified labor.
- Prioritize social integration of the internally displaced persons through inclusive urban development.
- Consider existing demand and future scenarios in the areas for intervention in terms of capacity of infrastructure.

migration process, twinned with a stagnant natural growth of the population, in the past 2 decades affects the future demographics of the country.

Land Use and Land Management

Georgia's largely mountainous topography results in very scarce land resources for economic activities, with only 43% of the entire territory usable for agriculture. Furthermore, only 35% of the agricultural land is arable and suitable for cultivation (Figure 8).

Since the early 1990s, Georgia started transitioning to a market economy, including the establishment of a new land management system. The land policy changed dramatically in response to changes in the political and economic framework of the country. The most radical changes were introduced through land reforms. Privatization of state-owned agricultural and nonagricultural land laid the foundation for land reforms and for land market development. By the end of the 1980s, more than 1,000 large state-owned and collective farms possessed over 1.2 million ha of agricultural land.⁷ These farms were abolished and a “privatized stock” of 0.8 million ha (covering over 25% of the entire agricultural land) was established during the first phase of privatization under the aegis of agricultural land reform (1992–1999). Land was distributed to rural households free of charge on an equity basis according to predefined norms: up to 1.25 ha to farming

⁷ See J. Salukvadze. 2006. Geoinformation Technologies in Land Management and Beyond: Case of Georgia. Shaping the Change. *Proceedings of XXIII International FIG Congress, 8–13 October 2006, Munich, Germany.* <http://www.fig.net/pub/fig2006>

Figure 8: Land Structure
(%)

Source: J. Salukvadze. 2006. Geoinformation Technologies in Land Management and Beyond: Case of Georgia. Shaping the Change. *Proceedings of XXIII International FIG Congress*. 8–13 October, Munich, Germany. Frederiksberg, Denmark. <http://www.fig.net/pub/fig2006>

households in villages and up to 5 ha of pastureland to farmers engaged in animal breeding in the highlands.

As a result, the former state land has undergone heavy fragmentation with over three million smaller agricultural land parcels being created and distributed among rural households. This process allowed newly emerged landowners to create small subsistence farms with limited economic potential. Only a small number of farms succeeded in increasing their spread through short-term leases of state-owned land: "... in 1998, about 4% of Georgian farms (42,900 entities) were leasing nearly 1 million ha from the state, i.e., 22 ha per lease contract on average" (Lerman, Csaki, and Feder 2004, p. 83), while more than 80% of small farms (less than 1 ha) possessed only one-third of the privatized land stock. Consequently, in Georgia, big and medium-sized farms, which make up only 6% of all farms but occupy over 60% of the total farming area, account for more than 80% of agricultural production. Since the mass privatization of agricultural land in 2000, further privatization became possible only through auctions. To avoid further fragmentation of land, the minimum size of a land parcel was set at 3 ha.

The civil code, adopted in November 1997, declared that nonagricultural land parcels attached to individual houses and apartment buildings, including urban sites, came under the purview of private ownership. The ownership rights for industrial land could be obtained by application, with a one-off symbolic payment equal to the annual land tax. As a result of these processes, over half of the urban land has been privatized giving a strong push for the establishment and relatively quick development of urban land markets. However, the privatization processes both in rural and urban areas were characterized by some violations and nontransparent transactions. Large-scale privatization limited to a great extent the land resources available to the state and the local communities for implementing spatial development projects in keeping with the interests of the public.

Summary:

- The postindependence land reforms resulted in fragmentation and mass privatization of landholding.
- Fragmentation of landholding resulted in subsistence farming on small parcels of land, which failed to tap the economic potential.
- Large-scale privatization to a great extent limited the land resources available to the state and local communities for implementing spatial development projects in keeping with the interests of the public.

Recommendations:

- Modernize farming techniques and improve market access.
- Establish a sound land management system and transparent processes for facilitating infrastructure planning and sustainable urban development.

Governance and Urban Development Profile

Decentralization and Devolution

Around the late 1990s, during the start of the decentralization process in Georgia, there was no clear demarcation of responsibilities and mandate between the local self-government and regional branches of central authorities. The three-level system included (i) two autonomous republics and nine regions; (ii) five self-governing cities and 65 districts; and (iii) more than 1,000 municipalities comprising small groups of villages and towns. Fragmented municipalities operated within administrative directives reliant on financial transfers from the center (UN-Habitat 2013, p. 236). Prior to the reforms, the majority of municipalities could not manage their own budget and were totally dependent on grants from the district (*rayon*), while all communal and public services were provided by the district administration.

Since the early 1990s, the government has undertaken a series of reforms to improve the municipal service delivery systems. The first phase of reforms culminated in 2005, with the adoption of the Georgian Law of Local Self-Government. In the past 10 years, several changes were made to the local governance system in Georgia. The Organic Law on Local Self-Government of 2007 eliminated the lowest tier of subnational governments and consolidated them into 65 municipalities. Cities earlier under the central government were given the status of municipalities. In February 2014, the new Local Self-Government Code was adopted, giving the status of self-governing cities (equal to municipality status) to seven more cities, raising the total to 12 (Transparency International Georgia 2014). The new code defines the responsibilities of self-governing bodies, covering spatial-territorial planning and approval of urban planning documents, including the land-use master plan, the regulation plan for landscaping, and the regulation procedures for the use and landscaping of urban areas. Municipalities are also responsible for the improvement of the municipal area and development of the relevant engineering infrastructure, issuance of

building permits, and supervision of construction within the municipal area.⁸ The collection of income taxes is reassigned to the central government, while local governments continue to collect property taxes; fees; charges; and income from rents, leases, or sale of public real estate. A newly created “equalization transfer” was introduced to equalize fiscal disparities between the rich and the poor municipalities, wherein the central government was authorized to expend a minimum of 70% of the income of a wealthy municipality in relatively poorer municipalities (UN-Habitat 2013).

The UN-Habitat urban review (2013, p. 236) states, “Urban and community management in Georgia still shows relatively strong vertical but weak horizontal vectors. Less attention is paid to governance efficiency and enhanced services provision associated with local self-governance.” It was expressed that reformation of the self-governance system based on the new code would gradually strengthen the role of local governments versus the central government, and would increase their credibility and trust among local citizens.

Summary:

- The uneven spatial distribution of the population highlights the need for a flexible and differentiated approach to the decentralization process, especially considering the varying capacities of the local self-governments.

Recommendation:

- Further strengthen decentralization through the devolution of commensurate fiscal and decision-making powers to the local governments.

Institutional Structures for Urban Development

At the central government level, currently, the Spatial Planning and Construction Policy Department of the Ministry of Economic and Sustainable Development of Georgia is the principal responsible entity for urban development issues (Figure 9). It has 20 permanent staff members and consists of two structural units: Division of Urban Development and Division of Construction. The tasks of the department as prescribed by the Charter of the Ministry are to define; implement; coordinate; and manage and monitor the policies, regulatory legislation, strategies, and technical standards for spatial planning and construction. It includes a large number of different issues (see Box 1) that are difficult to be undertaken given the limited human and financial resources of the small department. According to the head of the department, the capacity of the units needs to be enhanced substantially.⁹ In 2014, the 5-Year Action Plan for the Implementation of EUROCODES—European Technical Standards was prepared by the department to align with best international practice.

⁸ See World Bank (2015).

⁹ Interview with David Giginishvili, the head of the Spatial Planning and Construction Policy Department, on 22 January 2015.

Figure 9: Institutional Structure for Urban Development

Regional development policy, introduction of water supply systems, development of integrated state policy on development, design of networks of secondary and international roads, and scientific-technical progress fall under the field of management of the Ministry of Regional Development and Infrastructure (MRDI).

Certain aspects of housing policy are delegated to several other ministries, such as the Ministry of Refugees and Accommodation, the Ministry of Finance, the Ministry of Health and Social Protection, and the Ministry of Culture and Monuments Protection. On the legislative side, the following parliamentary committees are concerned with housing issues: Budget and Finance, Human Rights and Civil Integration, Sector Economy and Economic Policy, Regional Policy, Self-Government and the Mountainous Region, Legal Issues, and Health Care and Social Issues (UNECE 2007). According to the Law On Territorial Arrangement and Urban Planning and the Local Self-Government Code,

Box 1: Main Functions of the Spatial Planning and Construction Policy Department

- Define, implement, coordinate, manage, and monitor the policy in the field of spatial planning and construction activities
- Initiate, organize, analyze, implement, and monitor the fulfillment of regulatory legislation of spatial planning and construction activities, including technical regulations
- Initiate, organize, coordinate, agree to, and monitor the fulfillment of regulatory design documentations of spatial planning at transborder, national, regional, and local levels
- Define the short-, medium-, and long-term strategies of internal territorial development and spatial planning
- Take part in international, state, and regional program projects in the field of spatial planning and construction activities
- Cooperate with state, autonomous republics, and local self-governments; and initiate, implement, coordinate, and monitor the programs and projects of spatial planning and construction and other activities determined by legislation
- Organize and agree to land-use master plans and development regulatory plans in recreation areas and zones subjected to special construction regulations
- Take part in the administrative proceedings on issuing construction permits to the buildings in recreation areas
- Take part in the process of policy determination of land management countrywide, in the framework of their responsibilities; develop the methodologies for spatial planning tasks at the department or with the help of the group set up at the department; and support local self-government bodies to set up planned groups and coordinate and monitor their work
- Prepare and publish annual report regarding the development of spatial planning documents countrywide
- Propose recommendations for improvement of housing conditions on the basis of relevant surveys
- Compile housing sector characteristics; and ensure public and business sector involvement in the process of defining the policy in the field of spatial planning and construction activities
- Support the educational process, including further training of specialists in the field of spatial planning and construction activities, and take part in regulation of professional qualifications of the specialists in this field
- Discuss and agree on the candidates for compulsory expertise of particularly important buildings, and develop uniform experts list and ensure its publicity
- Support the development and implementation of new technologies and production of construction materials in the field of construction activity according to the requirements of modern demand
- Create a database and prepare an annual report in the field of construction activity countrywide
- Cooperate with international organizations; organize meetings, seminars, and conferences; and implement the experiences in the field of construction activity

Note: These tasks are defined by the Charter of the Ministry, dated 15.07.2010 #191.

Sources: Ministry of Sustainable Economic Development. <http://www.economy.ge/en/minister/deputy-minister-328/spatial-planning-and-construction-policy-department>; http://www.economy.ge/uploads/files/debuleba/ekonomikisa_da_mdgradi_ganviTarebis_saministros_debuleba_24.03.2014.pdf

exclusive responsibilities are assigned to self-governments—both self-governing cities and municipalities. They are responsible for land use and territorial and/or master planning, zoning, construction permits and supervision, social housing, communal infrastructure development, building management, and maintenance and new construction. In reality, the implementation of the legislation is quite difficult given the lack of resources, including lack of financing, insufficient capacity of personnel in many places outside Tbilisi and a few big cities, and weak institutions in the provinces. So far, only Tbilisi and the region of Adjara has tried to tackle problems related to urban development, such as spatial arrangement of the region, and the provision of affordable housing. In the field of spatial planning and housing, the municipalities of Rustavi, Poti, Zugdidi, Ambrolauri, Ckhorotsku, Kaspi, and others have expressed an interest in developing land use and master plans. Besides the public entities, there are other organizations representing the private sector and civil society that are playing an increasingly important role in Georgia's urban sector. Among the professional associations, the most important entities are the National Union of Architects of Georgia, Association of Urbanists of Georgia, Federation of Constructors, and Developers' Association.

Summary:

- The Local Self-Government Code decentralized infrastructure planning and implementation responsibilities.
- There is a lack of commensurate financial and human resources as well as capacity to implement the spatial planning and urban development mandates at both the national and local levels.

Recommendation:

- Build the local self-government's capacity in urban infrastructure planning and financial management to meet the responsibilities placed on them by the Local Self-Government Code.

Key Urban Development Framework

Legislation on Spatial Planning and Urban Development

The existing system of spatial planning in Georgia is based on the 2005 Georgian law On Territorial Arrangement and Urban Planning. It defines the general principles and conception of urban planning and development, including a definition of planning types and hierarchy, balancing of public and private interests in the planning and construction process, citizens' participation, types and compatibility of planning documentation, general rules of land-use planning in settlements, and building regulations. The creation of "space of equal opportunities," guaranteeing equal conditions for housing and business activities is also one of the main objectives. Priority of public interests over private ones as well as the protection and maintenance of the natural environment and cultural heritage are not

sufficiently clarified to enable incorporation into practice.¹⁰ There are no clear procedures to aid citizens' right of participation in the urban development process.

The Local Self-Government Code defines the responsibility of local self-governments to prepare spatial planning documents for the territories under their jurisdiction. However, the majority of local governments neither prioritize the creation of new master plans nor have sufficient funds and capacity to update existing plans to meet current socioeconomic realities. After independence, Georgia did not prepare nor adopt regulatory norms for construction and development. To address this gap, a decree on the Prolongation of the Terms and Validity of Construction Norms and Rules and Other Normative Acts was issued on 5 February 2002 by the Minister of Urbanization and Construction of Georgia, the relevant entity in charge of urban issues. Compliance with this decree was a problem.

Tbilisi prepared the Regulatory Rules of Land-Use and Territorial Development, approved by the city council in 2001. The rules were based on clear zoning principles to determine: the types of planning zones; and the main parameters for building development in each zone, including development indices. Based on Tbilisi's experience, the Ministry of Economy elaborated and approved the bylaw (normative legal act) Main Provisions on Land-Use and Building Regulation in Settlements in 2008. This document provided local self-governments guidelines for developing rules for spatial development. The government's second phase of reforms were articulated in the Main Principles of the Strategy on Decentralization and Self-Government Development of the Government of Georgia for 2013–2014, adopted in April 2013. In 2014, a new code on planning and construction was drafted by the Ministry of Economy and Sustainable Development. This is to implement modern international standards in this field. It is yet to be adopted by the Parliament.

Summary:

- Most cities in the country need to prepare or update master plans but have insufficient funding and capacity to do this.
- There are insufficient regulatory norms for the construction industry and limited compliance with existing decree for standards and norms.

Recommendation:

- Strengthen the regulatory framework with the adoption of the new code on planning and construction, and tighten oversight for compliance during implementation.
- Support cities through structuring of urban management programs that build capacity through peer-to-peer learning in developing urban master plans and implementing urban infrastructure.
- Put in place citizen awareness programs to support participatory planning.

¹⁰ See Vardosanidze (2009) and articles 6.1 and 6.2 of the 2005 Georgian law On Territorial Arrangement and Urban Planning.

Urban Finance Matrix

In June 2006, the government adopted a new law on the local budget, which introduced a formula-based equalization grant system and created a subnational fiscal database that enabled the Ministry of Finance to monitor budget execution. These actions strengthened central and local capacity to implement an integrated system of municipal budgeting, monitoring, and financial reporting. The Main Principles of the Strategy on Decentralization and Self-Government Development of the Government of Georgia for 2013–2014, adopted in April 2013, sets out a preliminary framework for the public financing of municipal and regional development.

The Urban Finance Matrix provides a snapshot of the entities involved in the urban sector in relation to ADB investments (Figure 10). In providing city municipal services, the local self-governments are supported by entities that are collectively referred to as legal entities of public law. These are entities created under the various ministries to provide specific public services for which they can charge service fees which can be retained for their needs. Their operations are not integrated with the national budget. Urban finance needs are

Figure 10: Urban Finance Matrix

CAPEX = capital expenditures, O&M = operations and maintenance.

Source: Authors based on the concept in R. Naik Singru and M. Lindfield. 2016 (forthcoming). *Manual for National Urban Assessment*. Manila: Asian Development Bank.

presently being met through the budgets made available to (i) the local self-government through the MRDI of Georgia; (ii) the projects directly handled by the MRDI; and (iii) the national companies with specific mandates such as the United Water Supply Company of Georgia, Solid Waste Management Company of Georgia, and Municipal Development Fund (MDF), which are also entities under the MRDI. External funding assistance from multilateral and bilateral funding organizations, such as the Development Policy Operations of the World Bank, is being sought for budgetary support for specific projects directly implemented by the ministries and for projects implemented by the national companies with specific mandates.

Budgets of the local self-governments include own revenues and external revenues. Own revenues include local taxes and duties, transfers, and other revenues provided by the legislation of Georgia. External revenues include special and target transfers as well as other revenues as provided by the legislation of Georgia. Discussions revealed that the revenues of the local self-governments are enough to meet only the operation and maintenance costs. For capital investments to meet the urban needs, the local self-governments are dependent on other financial sources through the national ministries or the national companies established by these ministries (see Table 3 for the budgetary revenues of selected Georgian cities).

While it is generally recognized that there is a significant gap in the urban financing needs, no estimate of the extent of this gap is readily available. Financial budget information (past, ongoing, and future) of the MRDI as well as the various national companies needs to be analyzed to examine the extent of the urban financing gap that is not being met. A bottom-up analysis across the different subsectors in the urban sector needs to be done. Urban investment initiatives are implemented either through the national companies or through demand-driven projects that are implemented through the MDF. The MDF supports demand-driven projects that are presented for funding by the local self-governments. The initiatives of the national companies are identified through preparation studies, followed by the drawing of plans and designs, preparation of detailed project reports, and finally implementation.

Municipal Development Fund

The Government of Georgia has limited financial resources to be able to meet the various urban development needs and relies on the multilateral and bilateral donor agencies to support the urban development efforts either through grants or soft loans. Although there are particular development projects that have received direct funding from the donor agencies, the Government of Georgia has also established a fund for the municipalities to apply and raise the required financial resources for development projects that are identified as a local need.

Established in 1997, the MDF of Georgia is cooperating with all large investment banks and financial institutions operating in Georgia. The supervisory board approved by the Government of Georgia and the MRDI coordinates the MDF. The prime minister is the chairman of the supervisory board, with the ministers of the MRDI, Economy and Sustainable Development, Culture and Monument Protection, Agriculture, Energy, and representatives of other government agencies as members. Transparency International of Georgia is also represented in this board (Figure 11).

Table 3: Budgetary Revenues of Selected Cities in Georgia, 2013
(GEL '000)

City	Total Revenue	Taxes	Grants		Other Income
			Total	Grants from State Budget (including equalizer transfer)	
Tbilisi	684,331.5	122,546.2 17.9%	448,338.4 65.5%	447,616.0	113,446.9 16.6%
Kutaisi	56,764.6	4,200.0 7.4%	44,151.3 77.8	44,068.2	8,413.3 14.8%
Batumi	87,607.8	11,628.1 13.3%	54,416.5 62.1%	46,527.3	21,563.2 24.6%
Rustavi	43,574.9	10,938.5 25.1%	28,156.0 64.6%	28,140.0	4,530.2 10.3%
Poti	17,006.9	6,448.1 37.9%	7,193.9 42.3%	7,134.1	3,364.9 19.8%

Notes:

1. Taxes (local) mostly include property taxes—enterprise property tax, land (real property) tax, and physical persons' property tax.
Grants include those from the government (state and local), equalizer transfer, “on purpose” transfer, from the Presidential Fund, and from international organizations.
Other income includes state property rental fees, dividends, fees from usage of natural resources, administrative and permission fees, gambling service fees, penalties, and liens, etc.
2. At the end of 2014, the Parliament of Georgia submitted a draft code on Spatial Planning and Construction, prepared by Ministry of Economy and Sustainable Development, which was slated to be discussed in the parliamentary sessions in spring 2015.

Sources:

Batumi: http://webcache.googleusercontent.com/search?q=cache:LtInyk02KWJsJ:batumicc.ge/uploads/banerebi/konmkursis_brzanebebi/biujeti2015/biujetis_damtkicebis_shesaxeb/ganmartebiTi_2014_15.11.14.doc+&cd=1&hl=en&ct=clnk

Kutaisi: https://matsne.gov.ge/index.php?option=com_ldmssearch&view=docView&id=2159588&lang=ge

Rustavi: https://matsne.gov.ge/index.php?option=com_ldmssearch&view=docView&id=2658457&lang=ge

Poti: <http://www.poticity.ge/files/files/biuj-2014.pdf>

Tbilisi: Tbilisi in figures. 2011. Statistical yearbook. Tbilisi City Hall, Economic Affairs Office.

As a legal entity of public law, the objective is to strengthen the institutional and financial capacities of the local government units, by investing financial resources in local infrastructure and services, improving on a sustainable basis the primary economic and social services for the local population (communities), developing renewable energy (midget power plants and geothermal) sources, creating a sustainable economic basis for refugees, rehabilitating irrigation and drainage systems, and providing low-interest loans to legal entities and individuals in Georgia. The MDF's mission is to provide institutional support to self-government bodies, make investments in the development of municipal infrastructure and services, and implement other target programs toward a powerful and competitive Georgia.

Figure 11: Structure of the Municipal Development Fund, Georgia

The MDF has solid human resource capacity with expertise in project implementation, procurement, safeguards, and financial and disbursement management. Regarded as a nonbanking financial intermediary, it plays an important role in developing the country's municipal infrastructure. Its performance is reflected by the growing interest of the government and the donors toward channeling their grants and credits through the MDF to the municipalities. Table 4 lists the main development partners supporting the MDF operations.

Of the municipal infrastructure subprojects funded so far, ADB (31%) and the World Bank (37%) are the largest financiers. The Government of Georgia (14%) has also contributed to the MDF. The United States Agency for International Development (USAID), KfW, European Investment Bank, the EU, and the European Bank for Reconstruction and Development have funded the remaining subprojects. Since 1997 to date, the MDF has funded about 1,500 subprojects across the country in the various municipalities. A rapid analysis of the type of projects, number of each type, and the amount invested is included in Table 5.

To support the preparation, implementation, and supervision of these subprojects, the MDF has engaged contractors and consultants. All of these activities are done in line with an operational manual, which was developed based on the individual donor agency requirements. Overall, the institutional capacity of the MDF is regarded as strong and is expected to continue to have a significant role in shaping the municipal infrastructure in the country.

Table 4: Development Partners Supporting Municipal Development Fund Operations

Development Partner
Asian Development Bank
European Bank for Reconstruction and Development
European Investment Bank
European Union Representation Commission in Georgia
GIZ – Gesellschaft für Internationale Zusammenarbeit (German Society for International Cooperation)
Government of the Netherlands
Japan Bank for International Cooperation
KfW
Meehan Family Foundation
Millennium-Challenge-Georgia
Swedish International Development Cooperation Agency
United Nations Development Programme
United States Agency for International Development
World Bank

Source: Municipal Development Fund (MDF). 2014. *Project Records Shared with the Team*. Tbilisi.

Table 5: Analysis of Municipal Development Fund-Funded Subprojects

Type of Subprojects	Number of Subprojects	Amount Invested (GEL million)	Percentage
Roads	278	593.48	30
Water supply system	389	456.63	24
Micro dam	26	171.71	9
Housing	35	104.21	5
Education	377	81.71	4
Irrigation	34	75.16	4
Community center	73	75.08	4
Sanitation	28	61.27	3
Rehabilitation of housing	8	18.75	<1
Electro energy	10	7.49	<1
Bridges	21	6.23	<1
Health	49	5.14	<1
Gas supply system	30	4.54	<1
Electricity lines	6	1.16	<1
Communication	5	0.45	<1
Other	91	262.03	14
Total	1,460	1,925.04	100

Source: Municipal Development Fund (MDF). 2014. *Project Records Shared with the Team*. Tbilisi.

Enabling Environment

Creating an enabling environment is key to developing urban competitiveness in a global economy. The *Doing Business Report 2015* (World Bank, various years) ranked the economy of Georgia 15th in a worldwide list of 189 economies surveyed for the Ease of Doing Business. The World Bank Urbanization Review 2014 states that Georgia's land registration system is highly rated and its planning legislation is gradually progressing; intergovernmental fiscal transfers are regular and transparent, and the government is in the process of financing several highway infrastructure projects to improve intercity connectivity and to reduce regional disparities.

Business Environment

Georgia has successfully implemented reforms in each of the diagnostic pillars of urban development and has made significant progress in streamlining administrative procedures and urban planning processes. In the *Doing Business Report 2015* rankings, Georgia consistently ranks number 1 among all 189 economies surveyed in terms of registering property, and number 3 in terms of getting a construction permit. Georgia's ranking dropped to number 5 worldwide with regard to "starting a business" (Figure 12).

Georgia made dealing with construction permits easier by simplifying the process of obtaining confirmation from utilities, introducing a risk-based approval process for building permits, and setting new time limits for the issuance of the occupancy certificate. Georgia made getting electricity easier by simplifying the process of connecting new customers to the distribution network and reducing connection fees. Tbilisi has implemented a "single-

Figure 12: Georgia's Ranking on Doing Business Indices

Note: Rank 189 center, Rank 1 outer edge

Source: World Bank. 2005–2015. *Doing Business Report*. Washington, DC. <http://www.doingbusiness.org/>

window” mechanism for residents to submit planning applications, which allows applicants to submit applications to a specific authority, thereby avoiding potential delays or the hassle of having to interact with multiple agencies (World Bank 2012a).

Global Competitiveness

Georgia became more globally competitive by moving up from position 72 to 69 in the *Global Competitiveness Index Report 2014–2015* (World Economic Forum 2015). The Global Competitiveness Index is defined by the World Economic Forum as a set of institutions, policies, and factors that determine national competitiveness based on the level of productivity of a country, conditions of public institutions, and technical conditions. The level of productivity, in turn, sets the level of prosperity that can be reached by an economy. The productivity level also determines the rates of return obtained by investments in an economy, which in turn are the fundamental drivers of its growth rates. Thus, a more competitive economy is one that is likely to grow faster over time. The index ranks 144 economies for 150 indicators revolving around “12 pillars of competitiveness” under the three subindices: (i) basic requirements, (ii) efficiency enhancers, and (iii) innovation and sophistication. Each pillar is assigned a weighted average score from 1 to 7, with 7 being the highest.

Georgia ranked 48th for basic requirements constituting the pillars of institutions, infrastructure, macroeconomic environment, and health and primary education, with a score of 4.88 out of 7, improving by nine places (Figure 13). Also, Georgia ranked 79th

Figure 13: Georgia’s Global Competitiveness Index Rating for All Pillars

GCI = Global Competitiveness Index.

Sources: World Economic Forum. 2015. *Global Competitiveness Index 2014–2015*. Georgia Country Profile. Geneva; Ministry of Economy and Sustainable Development. 2015. Presentation. <http://www3.weforum.org/docs/GCR2014-15/Georgia.pdf>

for efficiency enhancers, with a score of 3.92, improving by seven places. For innovation and sophistication factors, it stood at 118 with a score of 3.49, improving by seven places. Georgia rose 27 places in the pillar for macroeconomic environment, 8 places in goods market efficiency, 15 places in financial market development, and 4 places in technological readiness. The country's macroeconomic environment, financial market development, market size, and business sophistication has improved the country's global competitiveness. On the downside, the challenge lies in meeting the physical infrastructure and the institutional needs while improving labor market efficiency (Figure 13) if it has to improve its competitiveness within the region (Figure 14). A survey conducted for the Global Competitiveness Index on the most problematic factors identified an inadequately trained workforce with poor work ethics, lack of access to financing, and inadequate infrastructure among the most problematic factors affecting competitiveness (Figure 15).

Figure 14: Comparison of Georgia's Global Competitiveness Report Rating with Other Countries

Source: Government of Georgia, Ministry of Economy and Sustainable Development. The Global Competitiveness Report 2014–2015. 2015. http://www.economy.ge/uploads/ek_ciprebshi/reitingebi/reitingebi_eng/GCI_2014-2015_eng.pdf

Competitiveness of Cities

The competitiveness of cities in Georgia is linked to their geographic proximity to the national markets in the five main cities, connectivity to transport networks, and proximity to international borders. The World Bank Urbanization Review (2014, pp. 13) stated that the “economic performance of cities in Georgia is closely linked to market access indicators thus allowing greater opportunities for producers, extending the market for their products and opens new job opportunities for workers.”

**Figure 15: Problematic Factors of Doing Business:
Global Competitiveness Report**
(percent of responses)

Source: Government of Georgia, Ministry of Economy and Sustainable Development. The Global Competitiveness Report 2014–2015. 2015. http://www.economy.ge/uploads/ek_ciprebshi/reitingebi/reitingebi_eng/GCI_2014-2015_eng.pdf

Competitive Base: Economic Profile

Overview of National Economic System

Georgia is classified as a lower-middle-income economy. The growth in Georgia's gross domestic product (GDP) recovered from 3.3% in 2013 to an estimated 4.6% in 2014, although the current account deficit widened to 9.5% of GDP (ADB 2015a). This recovery reflected mainly gains of 8.5% in industry, particularly in construction, and 5.4% in services, particularly in financial intermediation and tourism, until the end of the third quarter of 2014. In the same period, agriculture grew by 1.3%. On the demand side, growth came from a 5.5% expansion in consumption, particularly with a 21.2% rise in investments mainly from the private sector.

Because of economic and institutional reforms and sound macroeconomic policies, Georgia's economy expanded on average by 9.6% annually during 2003–2007 and withstood the effects of the 2008 armed conflict with the Russian Federation as well as the global economic crisis. The conflict displaced more than 200,000 people and demonstrated the fragility of the Caucasus region, adding to political risk perceptions, interrupting investment flows, and challenging the country's territorial integrity. Despite these challenges, Georgia's GDP per capita rose from \$916 in 2003 to \$3,597 in 2013, as GDP growth averaged nearly 6%. Georgia's estimated GDP per capita was one of the highest among all republics of the former Soviet Union, reaching almost \$6,000. In the

initial years of independence, Georgia's GDP fell to less than \$2,000. Georgia's GDP in current prices is GEL23,335.0 which translates to almost GEL5,000 per capita GDP (Table 6).

In 1996, 5 years after independence, the country's GDP at current prices amounted to GEL3,869 million, with agriculture contributing about 34%. In 2013, GDP rose to GEL23,335 million, of which agriculture accounted for only 9%. The industry sector represented 17.5% of GDP in 1996 and 21% in 2014. The closing of the border between the Russian Federation and Georgia signaled the beginning of the decline of the agriculture sector. On the contrary, between 2009–2011, there has been significant growth in the industry sector (14.1% in 2011 compared with 12.3% in 2009) as well as the trade sector (16.9% in 2011 compared with 15.1% in 2009). Tables 6 and 7 show GDP in constant prices across sectors and regions. The sector representation in Figure 15 groups together mining, manufacturing, and construction under the label “industry.” Under this distribution, the sector constituted 21% of GDP in 2014. The impact of trade stayed at the same level as “public administration,” while education and health remain the weakest production sources, representing 3% of GDP in 2014 (Figure 16). The fast development of trade and industry is directly linked to Georgia adopting the European Neighbourhood Policy by the end of 2006: foreign direct investment (FDI) from EU countries represented 50% of the total FDI in 2011, and they have increased by about 146% since 2009, compared to 30% for the rest of the world.

Table 6: Gross Domestic Product at Constant Prices by Sector, 2009 and 2013

Sector	2009 (GEL million)	2013 (GEL million)	2013–2009 (% change)	2013 Per Capita (GEL)	Total (%)
Agriculture, hunting, forestry, fishing	2,003.3	2,195.0	9.6	490	9.4
Industry	2,624.4	2,405.3	(8.3)	536	10.3
Electricity, gas, water supply	674.8	699.8	3.7	156	3.0
Construction	1,380.8	1,568.2	13.6	350	6.7
Trade, repairing, households services	3,222.6	4,026.8	25.0	898	17.3
Transport, communication	2,400.9	2,451.2	2.1	547	10.5
Public administration	3,378.7	2,365.4	(30.0)	528	10.1
Education	1,041.4	1,202.5	15.5	268	5.2
Health and social work	1,404.3	1,338.5	(4.7)	299	5.7
Other services	3,242.0	5,082.3	56.8	1,133	21.8
Total	21,373.1	23,335.0	9.2	5,204	100.0

() = negative.

Source: National Statistics Office of Georgia. Geostat 2012 and 2014 data. Tbilisi.

Table 7: Gross Domestic Product at Constant Prices by Region, 2009 and 2013

Region	2009 (GEL million)	2013 (GEL million)	2013–2009 (% change)	Population 2013 (‘000)	2013 Per Capita (GEL)	Total (%)
Adjara	1,185.3	2,063.1	74.1	394.2	5,233.6	8.8
Kakheti	833.8	1,331.5	59.7	405.1	3,286.8	5.7
Imereti and Racha Lechkumi	2,018.5	2,670.4	32.3	750.2	3,559.6	11.4
Samegrelo	1,216.3	1,574.0	29.4	476.9	3,300.5	6.7
Sida Kartli and Mskheta	906.8	1,426.4	57.3	422.4	3,376.9	6.1
Kvemo Kartli	1,325.3	1,798.1	35.7	511.1	3,518.1	7.7
Guria	308.6	476.9	54.5	139.2	3,426.0	2.1
Samtskhe–Javakheti	477.4	693.8	45.3	213.5	3,249.7	3.1
Tbilisi City	7,274.3	11,300.9	55.4	1,171.2	9,649.0	48.4
Total	15,546.3	23,335.0	50.1	4,483.8	5,204.3	100.0

Source: National Statistics Office of Georgia. Geostat 2012 and 2014 data. Tbilisi.

Figure 16: Composition of Gross Domestic Product, 2014
(%)

Source: National Statistics Office of Georgia. Geostat 2014 data. Tbilisi.

Regional Production Systems

The contribution to Georgia's GDP by different regions, as well as by urban and rural places, is very uneven. Tbilisi by itself contributes almost half of Georgia's total GDP, which is in line with its share in urban population (Figure 17). The regions containing a big city—Kutaisi in Imereti, Rustavi in Kvemo Kartli, Batumi in Adjara, as well as Poti and Zugdidi in

Figure 17: Share in Gross Domestic Product by Region, 2010
(constant 2006 prices)

AJ = Adjara, GU = Guria, IM = Imereti, KA = Kakheti, MM = Mtskheta-Mtianeti, RL = Racha-Lechkhumi and Kvemo Svaneti, SJ = Samtskhe-Javakheti, SK = Shida Kartli, SZ = Samegrelo-Zemo Svaneti, TB = Tbilisi.

Source: World Bank. 2012. *Public Expenditure Review for Georgia*. Washington, DC.

Samegrelo—show a significantly higher share in GDP than other more rural regions, such as Shida Kartli and Mtskheta-Mtianeti, in spite of their favorable location along the main transportation routes and proximity to the major cities of Tbilisi and Rustavi. By estimation, the urban areas contribute at least 70% of GDP, while the rural areas, although populous, play a very minimal role in the national economy.¹¹

The assessment of regional impacts in terms of GDP requires highlighting of (i) GDP per capita and by region and (ii) the weight of each region at the country level (Map 7 and Figure 18). One can note an even growth of GDP per capita and by region—maximum in Shida Kartli and Mtskheta-Mtianeti and minimum in Samegrelo and Zemo Svaneti. Table 7 shows the huge gap between GDP per capita in Tbilisi (GEL9,649.0) and in Samtskhe-Javakheti (GEL3,249.7), Kakheti (GEL3,286.8), two of the weakest regions. It is also interesting to note that Tbilisi ranked second in the region in terms of poverty indicators—behind the seventh ranked Guria in terms of GDP per capita—and ranked last in terms of unemployment. This is the consequence of a strong impulse of the urbanization rate in the city and an insufficient redistribution in high value-added sectors.

Besides Tbilisi, which is an economic growth pole of the country, the regions of Adjara (led by the city of Batumi) and Imereti (led by the city of Kutaisi) are showing a positive trend and a higher potential for urban-based economic sectors—industry, construction, and communications and services. Meanwhile, Racha-Lechkhumi, Mtskheta-Mtianeti, Kakheti, Guria, and Samtskhe-Javakheti represent an extremely underdeveloped

¹¹ Based on World Bank (2014) and UN-Habitat (2013).

Map 7: Gross Domestic Product per Capita and Weight by Region, 2013
(%)

Source: Authors analysis, based on Geostat 2014 data.

Figure 18: Regional Gross Domestic Product, 2009–2011
(%)

Source: National Statistics for Georgia. Geostat 2012 data. Tbilisi.

pattern of urbanization and an imbalanced production structure, with agriculture and household production, a significant part of which, presumably, is also agricultural produce, substantially prevailing over all other sectors of the economy.

Sector Performance

The Georgian economy has undergone spectacular changes since the collapse of the Soviet Union; in the late 1980s, it was classified as an “agrarian-industrial” country, according to Soviet economic terminology. Today, its economic structure shows diversification with the predominance of trade and services over agriculture and industry (Figure 19).

Figure 19: Gross Domestic Product Structure, 2013
(%)

Source: World Bank. 2014.

The country's economic structure in the 1990s showed urban-based industries and construction constituting over 30% of GDP, whereas the collapse of particular manufacturing branches and enterprises and/or reduction of industrial volumes of surviving plants catastrophically worsened the socioeconomic conditions in the industrial centers. As a result, some industrial cities and towns, especially monofunctional ones, such as Rustavi, Zestaponi, Tkibuli, and Chiatura, shrunk in size losing up to the one-third of their populations. A partial industrial rebound since 2005 reversed this process to a certain extent but did not fully compensate for previous population, employment, and income losses. For many years, agriculture has attracted fewer amounts of capital investment compared with industry and the service sector. This was largely due to the rapid recovery of industries and the growth of tertiary sectors, such as banking, telecommunication, energy, tourism, construction, and community services, as well as the relative growth of public services, such as education, health care, and public administration.

In 2013, only 9.4% of Georgia's GDP was generated by the agriculture sector, while tertiary and quaternary sectors accounted for almost 70%, and industry sector together with construction contributed 24% (Figure 19). Compared with the world average as of 2013, Georgia's GDP still has higher contribution from agriculture (9% compared with 3%) but a lower contribution from the industry sector (17.3% compared with 26%). The share of value-added endeavors from the service sector is similar to that of the world average of 71%.

Regional Capital Markets

In the aftermath of the global crisis, regions in Georgia received between 12% and 23% of their GDP in total investments. Except for Tbilisi, public investments account for half of total investments in all other regions (and much more in smaller places, such as Guria and Kvemo Kartli). Total investments in 2010 were lower than those observed before the crisis. In addition, postcrisis public investments were high, because of a stimulus package, and can be expected to fall over time as a share of GDP. Georgia has chosen a model of growth, which prioritized sectors with obvious comparative advantages, such as transport services and tourism. Hence, private investments tend to flow to Tbilisi, and the Black Sea region of Adjara, resulting in very high leverage ratios in Tbilisi relative to other regions. FDI is predominant in Tbilisi and Adjara.

Second-generation business environment reforms favoring regional investments in agriculture and other natural resource sectors are yet to be rolled out in full force. As some of these public choices change, private investments could be expected to flow to other regions in greater proportions than ever before (World Bank 2012c). As the focus of public policy shifts from nontradables toward traditional tradable sectors, such as manufacturing, Georgia can be expected to attract greater amounts of investment and FDI into these regions. The beverages, textiles, and pharmaceutical industries are now key priority sectors to be promoted by the National Investment Agency. The focus on the development of key natural resources, primarily hydropower generation, followed by forestry and possibly mining, will further contribute to significant amounts of investment flows to the regions.

Industry

The added value of the industry sector amounted to GEL2.5 billion in 2013, which is 17.3% of GDP, reaching 25% of the value added to the global entrepreneurship and employing about 1,128,000 people, which accounts for about 6.6% of the total employment. It represents 14% of FDI, ranked after finance, energy, and transport (Table 8).

Tbilisi represents almost half the total added value entrepreneurship in the country with 47% share in 2013 (Table 8). With the exception of Guria, which is a nonindustrial area, the capital remains behind the other regions in terms of change in industry value added between 2009 and 2013, representing 64.9%, while the national average was 74.6% (Table 8 and Figure 20). The region with the maximum added value per capita is Kvemo Kartli (Rustavi city).

Table 8: Industry Value Added per Region, 2009 and 2013

Regions	2009	2013	2009–2013 Change	2013 (% of total change)	2013 Population (‘000)	2013 Per Capita (GEL)	Value Added Entrepreneurship (GEL)	Entrepreneurship (%)
	Value Added (GEL million)	Value Added (GEL million)	(%)					
A – Adjara	39.8	94.6	137.7	3.7	394.2	240.0	514.2	18.4
B – Kakheti	52.1	146.1	180.4	5.8	405.1	360.7	135.2	108.1
C – Imereti	120.4	202.2	67.9	8.0	703.9	287.3	460.9	43.9
D – Samegrelo	22.4	70.4	214.3	2.8	476.9	147.6	366.3	19.2
E – Shida Kartli	33.9	78.1	130.4	3.1	313.5	249.1	210.6	37.1
F – Kvemo Kartli	341.6	459.9	34.6	18.1	511.1	899.8	652.7	70.5
G – Guria	24.5	34.0	38.8	1.3	139.2	244.3	43.7	77.8
H – Samtskhe–Javakheti	32.2	128.6	299.4	5.1	213.5	602.3	100.3	128.2
I – Mtskheta	25.9	86.7	234.7	3.4	108.9	796.1	59.4	146.0
J – Racha–Lechkhumi	1.9	2.5	31.6	0.1	46.3	54.0	11.2	22.3
T – Tbilisi	724.4	1,194.3	64.9	47.0	1,171.2	1,019.7	6,668.7	17.9
Total	1,454.2	2,538.5	74.6	100.0	4,483.8	566.1	9,253.7	27.4

Source: National Statistics Office of Georgia. Geostat 2012 and 2014 data. Tbilisi.

Figure 20: Regional Industry Value-Added, 2009–2013
(%)

Source: National Statistics Office of Georgia. Geostat 2012 and 2014 data. Tbilisi.

Construction

The interest of the construction sector relies on its recent aspect and on its extremely unequal sharing out linked to the direct profit stemming from the real estate investment. This sector accounts for 12.7% of the total entrepreneurship, and it accounts for 15% of the total employment. Table 9 and Figure 21 show the sensitivity of the sector to some projects such as the Parliament in Kutaisi and urban projects in Shida Kartli. To move beyond the speculation aspects of the real estate sector, which is currently the main driver of the construction sector, regulations are critical to ensure a balanced and sustainable expansion. This is highly reliant on the development and implementation of a rational and sound urban planning policy. Although the GDP assessment merges industry and construction, construction is a highly unequally distributed sector.

Agriculture

Revenue from agriculture was GEL3.18 billion in 2013, of which 40% was accounted for by plant growing, 56% by animal husbandry, and 4% by agricultural services. The main crops of the country—potato, vegetables, and maize—were major exports earlier. In 2011, although the agriculture sector accounted for 53% of employment in Georgia, its contribution to the country's GDP was 8.8%, which increased to 9.4% in 2013. The Russian embargo since 2006 has deeply impacted agricultural exports. The import of agricultural products is four times the volume of export. This contradiction, which highlights the prevalence of low-

Table 9: Construction Value Added by Region, 2009 and 2013

Regions	2009	2013	2009–2013 Change	2013 (% of total)	2013 Population (‘000)	2013 Per Capita (GEL)
	Value Added (GEL million)	Value Added (GEL million)	(%)			
A - Adjara	72.4	255.6	253.0	16.0	394.2	648.4
B - Kakheti	11.6	58.8	406.9	3.7	405.1	145.1
C - Imereti	17.7	44.8	153.1	2.8	703.9	63.6
D - Samegrelo	41.7	56.2	34.8	3.5	476.9	117.8
E - Shida Kartli	22.3	20.9	(6.3)	1.3	313.5	66.7
F - Kvemo Kartli	16.8	44.6	165.5	2.8	511.1	87.3
G - Guria	0.4	6.4	1,500.0	0.4	139.2	46.0
H - Samtskhe–Javakheti	3.8	57.2	1,405.3	3.6	213.5	267.9
I - Mtskheta	9.8	51.9	429.6	3.3	108.9	476.6
J - Racha–Lechkhumi	4.6	8.5	84.8	0.5	46.3	183.6
T - Tbilisi	404.1	989.8	144.9	62.1	1,171.2	845.1
Total	605.2	1,594.7	163.5	100.0	4,483.8	355.7

() = negative.

Source: National Statistics Office of Georgia. Geostat 2012 and 2014 data. Tbilisi.

Figure 21: Construction Value-Added, 2009–2013
(%)

Source: National Statistics Office of Georgia. Geostat 2012. Tbilisi.

productivity employment, needs to be addressed. High underemployment, which has been existent in Georgia since long has been declining in the past 3 years. In 2011, 53% of the labor force of the country was employed in the agriculture sector, of which 80% were involved in seasonal production, effectively being underemployed. Measures could support investments in export-oriented sectors to prompt higher employment demand in these sectors and, among others, vocational measures to address the current mismatch existing between the competencies required for available jobs and labor skills.

Summary:

- (i) Georgia's gross domestic product (GDP) reflects an uneven contribution by different regions and urban and rural areas.
- (ii) Urban areas account for more than 70% of GDP. This is proportionate to the population distribution.
- (iii) The agriculture sector accounted for 53% of employment and contributed 8.8% of GDP in 2011.
- (iv) The agriculture sector is declining because of underinvestment.
- (v) Renewable energy through hydropower generation is gaining prominence.
- (vi) Medium-sized cities in the rural hinterland are unable to capitalize on market opportunities because of lack of infrastructure and lack of industrial growth.

Recommendations:

- (i) Focus on differentiated and efficient ways and methods for further acceleration of economic growth and welfare of its population.
- (ii) Concentrate on the regions of Adjara and Imereti with the big cities of Batumi and Kutaisi which have a higher potential of urban-based economic sectors—industry, construction, and communications and services to develop as regional hubs.
- (iii) Focus economic policy on resources that enhance the potential of small investors who continue to be the backbone of regional development in the poorest regions.
- (iv) Consider access to credit, lower logistic costs, and expert promotion for small and medium-sized enterprises as an important area.
- (v) Promote agricultural production for high-demand exports, such as potatoes, for economic growth of the rural areas.
- (vi) Cluster economic hubs to optimize spatial and economic spillovers through improved connectivity of regional corridors in the country.
- (vii) Strengthen urban–rural linkages through improvement of transport connectivity of the rural areas and the medium-sized cities with larger markets within the country and across borders to balance regional disparities.

Inclusive Base: Equity Profile

Poverty

The human development index (HDI) 2014 places Georgia in the “high human development” group; Georgia is ranked 79th (HDI = 0.744) with respect to HDI globally. Georgia recorded a positive trend over the past decade and has moved up from the “medium human development” level because of its points in education and health care (UNDP 2014). Nevertheless, compared with the countries of Eastern Europe and the Russian Federation, Georgia’s HDI performance was still below the regional average.

The government statistical database Geostat 2014 shows an increase in the registered poverty level in Georgia over the past 8 years (Table 10). However, the World Bank survey indicates a much different and higher poverty rate based on a special survey for the years 2007–2010.¹² Relative poverty was 21.4% in 2014. The percentage of the population living on less than \$2.00 a day at purchasing power parity decreased only marginally from 36.7% in 2003 to 35.6% in 2010, while the poverty headcount ratio at \$1.25 a day at purchasing power parity slightly increased from 17.7% to 18.0% over the same period. The Gini

¹² In the absence of clear justifications from Geostat, the assessment was based on the World Bank data 2009–2010 and World Bank report 2014. The Geostat data do not match the results of the household budget surveys conducted by the World Bank for 2007–2010. Geostat mentions that 9.7% of the population lives under the poverty threshold according to the Social Service Agency rates. The World Bank data, based on a minimal revenue of GEL84.8 per month, estimated 21% of the population to be under the poverty line. Geostat does not give data regarding the rates applied by the Social Service Agency. Another important discrepancy stems from the change between 2009 and 2010, for which Geostat notices a decrease of about 2% while the World Bank underlines a growth of 20.7%.

Table 10: Poverty Indicators
(% share of population)

	2007	2008	2009	2010	2011	2012	2013	2014
Registered poverty: under poverty limit; beneficiaries of subsistence allowance	6.4	8.4	9.9	9.7	9.2	9.7	9.7	11.6
Relative poverty: under 60% of the median consumption	21.3	22.1	21.0	22.7	23.0	22.4	21.4	21.4

Note: Data of 2014 are calculated according to preliminary results of the Population Census of 5 November 2014. Recalculation of the population during 2007–2013 will start after the final results of the 2014 Population Census are published. Thereafter, the share of population under the poverty threshold will be recalculated.

Source: Geostat. 2014 and 2015. http://www.Geostat.ge/index.php?action=page&p_id=188&lang=eng

coefficient¹³ by total consumption expenditure in 2013 remains high at 0.42, reflecting quite large disparities among the population, given the concentration of income growth in urban areas and among the top 10% of income earners.¹⁴

Based on the World Bank database 2009, the average poverty rate of 17.4% matched a rural poverty of 20% and urban poverty of 14%, according to the Geostat data. These figures increased in 2010 in both datasets to almost 25% in rural areas and 17% in urban areas. It led to a global poverty rate of 20.5% all over the country. Table 11 details the data in 2009 and 2010 from the Geostat and World Bank datasets. This leads to the calculation of a significant indicator, which ranks the regions according to their level of poverty, with reference to the country marked “1.”

The charts of Figures 22 and 23 depict the following:

- (i) Figure 22 (left panel): Poverty at the regional level, which highlights a systematic increase of the percentage, except for the region of Samtskhe–Javakheti, was greatly impacted by the Municipal Services Development Project under ADB financing.
- (ii) Figure 22 (right panel): Poverty at the national level, with logically an important weight of Tbilisi and the other four cities in the context of their population. However, Kakheti region ranked second in 2009 just behind Tbilisi, and third in 2010 behind Imereti noting a 7% change in its poverty rate (Table 11).
- (iii) Figure 23 (left panel): Changes in poverty at both levels in 2009–2010. At the regional level, apart from the region of Samtskhe–Javakheti, the rates increased everywhere with a peak in some border regions of the occupied territories: Racha–Lechkumi, Imereti, Samegrelo, and Zemo Svaneti. Regarding their impact at the national level, the increase was significant for some regions, while it was reduced to some extent in the other regions.

¹³ The income Gini coefficient is the measure of the deviation of the distribution of income or consumption expenditure among individuals or households within an economy from a perfectly equal distribution. A value of 0 represents absolute equality, a value of 1 represents absolute inequality.

¹⁴ Total consumption expenditure comprises both cash and noncash consumption expenditures (Geostat 2014. National Statistics Office of Georgia. Tbilisi).

Table 11: Poverty Indicators, 2009–2010

Regions	2009					2010					Change, 2009–2010 (%)	
	Population, 2009 ('000)	Ranking by Population (%)	Poverty in the Region (%)	Share of Region in National Poverty (%)	Poverty Indicator	Population, 2010 ('000)	Ranking by Population (%)	Poverty in the Region (%)	Share of Region in National Poverty (%)	Poverty Indicator	Per Region	Country Level
A – Adjara Autonomous Republic	382.4	8.7	22.3	11.2	1.28	386.9	8.7	24.3	10.1	1.16	9	(10)
B – Kakheti	401.4	9.2	28.5	15.0	1.64	404.5	9.1	32.0	13.9	1.52	12	(7)
C – Imereti	693.5	15.8	11.9	10.8	0.68	700.4	15.8	19.0	14.3	0.91	60	32
D – Samegrelo & Zemo Svaneti	468.0	10.7	14.2	8.7	0.81	474.1	10.7	20.4	10.4	0.97	44	20
E – Shida Kartli	313.0	7.1	22.9	9.4	1.32	310.6	7.0	27.0	9.0	1.29	18	(4)
F – Kvemo Kartli	488.8	11.2	21.5	13.8	1.24	499.9	11.3	23.5	12.6	1.12	9	(9)
G – Guria	138.8	3.2	22.5	4.1	1.29	139.8	3.2	24.7	3.7	1.17	9	(10)
H – Samtskhe-Javakheti	208.1	4.7	19.8	5.4	1.14	211.3	4.8	13.2	3.0	0.63	(33)	(44)
I – Mtskheta-Mtianeti	105.2	2.4	23.2	3.2	1.33	108.8	2.5	26.5	3.1	1.26	14	(3)
J – Racha-Lechkhumi & Kvemo Svaneti	47.7	1.1	11.2	0.7	0.64	47.6	1.1	19.6	1.0	0.93	75	43
T – Tbilisi	1,136.6	25.9	11.9	17.8	0.69	1,152.5	26.0	15.2	18.8	0.72	27	6
Georgia	4,383.5	100.0	17.4	100.0	1.00	4,436.4	100.0	21.0	100.0	1.00	21	0

() = negative.

Sources: Geostat data; World Bank. 2012. Georgia Poverty Update. World Bank Indicators. Washington, DC.

Figure 22: Poverty Rates, 2009–2010
(%)

Source: World Bank. 2012. Georgia Poverty Update. *World Bank Indicators*. Washington, DC.

Figure 23: Changes in Poverty Rates and National Poverty Indicators, 2009–2010

Source: World Bank. 2012. Georgia Poverty Update. *World Bank Indicators*. Washington, DC.

- (iv) Figure 23 (right): The poverty indicator and the ranking of the regions. Six regions remain above the average country level: Imereti ranks first, Mtskheta ranks second, and Shida Kartli ranks third. The only region to fall below the average in 2009–2010 was Samtskhe–Javakheti. The other four regions remained below the average, but the gap shrunk with the global growth of the poverty rate in 2010.

Recent detailed data are missing, while Geostat provides only agglomerated indicators. “Over the last two decades, the profile of the poor has been evolving in Georgia, but the

poverty level has remained consistently high. If the official subsistence minimum is taken as the poverty line, slightly more than two-fifths of the population is poor according to the latest estimations. Arguably, persisting high poverty levels can be explained by jobless economic growth and low agricultural productivity. The institutionalization of a targeted social assistance scheme has yet to demonstrate its efficacy. The government should acknowledge deprivation as the major challenge for the country and must more eagerly attempt to cure its root causes: inappropriate human capital and narrow labor markets.”¹⁵

Therefore, the quantified conclusion of the analysis can be summarized under three different thresholds of poverty:

- (i) The relative poverty level, referring to people living under 60% of the median consumption level, was 21.4% at the country level in 2013.
- (ii) The official subsistence minimum, minimal food basket according to European norms, was 41.2% in 2010.
- (iii) The subsistence minimum based on the United Nations Children’s Fund and United Nations Development Programme rates was 41.5%. One can note that in 2003, according to the official food basket minimum defined by the Government of Georgia, 54.5% of the population was ranked as poor. A year later, based on the relative poverty level, the rate fell to 24.6%.

The poverty assessment is reinforced by three analyses: employment, enterprise, and industry.

Employment

Infrastructure gaps, agricultural stagnation, and an entrenched skills mismatch in the labor market have dampened the impact of growth on poverty reduction. The official unemployment rate rose from 11.5% in 2003 to 16.9% in 2009, before moderating at 14.6% in 2014 (ADB 2015b). The general trends in employment confirm a decrease in unemployment during the past 3 years. Even if some discrepancies remain in the data linked to some basic hypotheses, essentially linked to the rate of economic activity, it is evident that the relative results are reliable. In 2014, the unemployment rate fell from 15.1% (2011) to 12.4% (Table 12) at the national level, and Tbilisi ranked last with an unemployment rate of 22.5%, far more than the region of the Autonomous Republic of Adjara, which ranked last but one with an unemployment rate of 15.8%. Another significant point comes from the rate of decrease of unemployment between 2011 and 2014. Map 8 depicts the headcount of unemployment per region and also the weight of each region in percent compared with total unemployment in Georgia represented by various colors. Apart from the Samtskhe–Javakheti regions, a clear correlation appears between the amount of GDP per capita and the weight of unemployment: the higher the GDP per capita, the higher the level of unemployment, which is a specificity of countries with low redistribution rates.

¹⁵ The section has been complemented with information from Gugushvili (2011).

Table 12: Employment and Unemployment in Georgia, 2011–2014

Regions	2011			2014			Change, 2011–2014 (%)	Total (%)
	Active Population (‘000)	Unemployment (%)	Unemployment Rate (%)	Active Population (‘000)	Unemployment (%)	Unemployment Rate (%)		
Adjara	189.3	34.0	18.0	193.5	30.6	15.8	(11.80)	12.46
Kakheti	19.0	17.4	8.9	196.3	10.1	5.2	(42.10)	4.12
Imereti + Racha Lechkhumi	370.4	343.3	92.7	383.3	38.5	10.1	(89.15)	15.67
Samegrelo	211.0	343.8	162.9	218.8	29.4	13.4	(91.76)	11.94
Shida Kartli	144.1	12.8	8.9	147.1	12.0	8.2	(7.94)	4.89
Kvemo Kartli	195.5	18.3	9.4	205.1	19.5	9.5	1.55	7.93
Guria + Samtskhe- Javakheti + Mtskheta	216.6	15.4	7.1	227.7	11.6	5.1	(28.64)	4.70
Tbilisi	437.4	128.0	29.3	419.2	94.2	22.5	(23.24)	38.29
Georgia	1,959.3	295.1	15.1	1,991.1	246.0	12.4	(17.99)	100.00

() = negative.

Source: Geostat. 2014. http://www.geostat.ge/index.php?action=page&p_id=146&lang=eng

Map 8: Headcount of Unemployment and Weight per Region, 2014

Source: Authors analysis, based on Geostat 2014 data.

Labor shedding in the public sector exceeded job creation in the private sector. An estimated one-fifth of the labor force is underemployed.

However, the employment-to-unemployment rates could act as a disruptive indicator of the labor market. Officially, unemployment in 2013 was about four times lower in rural areas (6.5%) than in urban areas (25.6%).¹⁶ This appraisal does not take into account the huge underemployment in the countryside, which does not reflect the unemployment rate. Underemployment is linked to self-employment and employment in the agriculture sector, but no data are available. Underemployment is a matter of poverty in rural areas amounting to about 50% higher than in urban areas.¹⁷

Enterprises

The weight of industry, including construction and trade, represented about 43.1% of GDP in 2013. According to Geostat 2014, in 2009, there were 409,547 registered enterprises or units employing 387,463 people, while in 2013 there were 593,239 units employing 550,885 people. The turnover increased from GEL20,302.2 million in 2009 to GEL44,327.9 million in 2013, and consequently the value of produced goods rose from GEL11,003.1 million in 2009 to GEL23,553.6 million in 2013. The low rate of employment per enterprise suggests that self-employment, represented by the individual enterprises, is the most widespread kind of activity in Georgia. Logically, the number of enterprises across regions is in line with their respective population ratios. Regarding the ranking in GDP per capita, it is worth noting some changes linked to the role of the individual agricultural enterprises with a weak added value, particularly in the regions of Kakheti, Samtskhe–Javakheti, and Shida Kartli.

Education and Health

The meetings held with the Ministry of Education and Science as well as the Ministry of Labor, Health and Social Affairs have pointed out a common issue in modernizing and updating the public amenities built during the Soviet period. The programs implemented during this time were based on a global and exhaustive approach of the educational and health systems. Thus, an amenity had to include in the same area different levels of practice and use. Even if this concept was ambitious in terms of services, it proved to be (i) too rigid to match the real needs and size of the user groups, (ii) accordingly, too expensive to maintain and operate, and (iii) a tough challenge to mobilize staff in most of the remote areas.

¹⁶ Refer to Geostat (2014) and World Bank (2013).

¹⁷ Refer to Gugushvili (2011): “In the more liberalized environment, since 2004, labor market status and educational attainment started to become increasingly important for avoiding poverty. Households headed by wage earners experienced the lowest, while households headed by unemployed or inactive individuals the highest poverty rates. Among the employed, self-employment and agricultural employment was associated with the highest poverty risk. Anything less than technical and vocational education was associated with significantly higher chances of being poor. In addition, the levels of poverty started to vary considerably across different regions. Last but not least, the households with the greater number of children were particularly in danger of being worse off, while for the first time there was an indication that female-headed households did not face higher poverty risk.”

Currently, a campaign to privatize health amenities is under way, dealing with an upgrade to match national and European norms for infrastructure. Several incentives are part of the process with the support of USAID: land is offered in choice locations at cheaper credit rates. The objective is to ensure primary and secondary health centers in every district, accessible within 20 minutes for the users. However, statistical data do not confirm this. Besides, Geostat provides exhaustive information about the medical and paramedical staff in Georgia, which points to the fact that a major part of the paramedical staff has left the country, as the rates are quite imbalanced. In other countries, the headcount of paramedical staff is about 4 per physician, whereas in Georgia it has been steadily decreasing from 1995 to 2013, reaching a ratio of 0.7 paramedics per physician—a headcount of 15,500 paramedics against 22,400 physicians in 2013 in all specialized fields, while it was 17,900 paramedics against 21,800 physicians in 2011.

Regarding educational amenities, the ministry aims to bring in more flexibility to the existing infrastructure, each one currently sized to accommodate age groups from 5 to 16 years (grade I to XII). Regarding their implementation, the statistics enable assessment of the area of influence of each school in the urban areas. Table 13 shows the process:

- (i) Geostat indicates the number of schools and pupils by region and districts.
- (ii) On the basis of the urbanization rate, it is possible to assess the urbanized area in each district taking into account an average density of 60 pupils/ha in the cities and 40 pupils/ha in the other municipalities.¹⁸
- (iii) Another hypothesis concerns the number of pupils per school: the figures are accurate for the five cities and are appraised according to common rates in the other municipalities—400 pupils per school.
- (iv) Finally, the calculation of the number of schools in the urbanized area is possible and thereby their area of influence and the average radius of influence.

The maximum influence radius does not exceed 610 m, quite a good result in line with the most restrictive norms. This approach does fit the rural areas. Only the number of pupils per school can be estimated: the highest count is 340 pupils per school in Gardabani municipality, which could be because of its proximity to Rustavi city. In Table 13—an extract of the global calculation—the light colored columns on the left match the statistics enumerated in the Geostat documents, while the dark ones on the right give information about the radius of influence and the occupancy rate in the rural schools.

18 Low figures have been adopted to avoid an overly optimistic assessment.

Table 13: Influence Area of the Education Amenities in Urbanized Areas—Data 2011

	Number of Pupils 2011/2012	Number of Schools	Pupils/School	Area (km ²)	Urban Population ('000)	Urban/Rate (%)	Urban Area (km ²)	Number of Pupils/School in Urban Area	Number of Schools in Urban Area	Influence Area (IA) (km ²)	Radius IA in Urban Area (km)	Number of Pupils/School in Urban Area
Georgia—Total	568,486	2,317	245	53,881.5	2,373.1	53.1	395.5		1,222	0.324	0.32	
TBILISI	170,675	291	587	472	1,132.2	97.4	188.7					
City of Tbilisi	170,675	291	587	472	1,132.2	97.4	188.7	587	283	0.666	0.46	587
ABKHAZIA	2,372	15	158									
ADJARA	56,580	256	221	2,704	171.5	43.9	28.6					
City of Batumi	25,740	46	560	30	124.3	100.0	31.1	560	46	0.676	0.46	
Keda Municipality	2,730	29	94	415	1.6	7.8	0.4	400	1	0.751	0.49	88
Kobuleti Municipality	11,550	50	231	694	32.9	35.7	8.2	400	10	0.798	0.50	187
Shuakhevi Municipality	3,204	44	73	544	1.3	5.7	0.3	400	0	0.712	0.48	69
Khelvachauri Municipality	8,303	37	224	400	9.8	10.3	2.5	400	2	1.146	0.60	214
Khulo Municipality	5,053	50	101	650	1.4	2.9	0.4	400	0	0.710	0.48	98
GURIA	16,116	101	160	1,919	37.0	26.4	9.3					
Lanchkhuti Municipality	4,243	25	170	524	7.6	19.5	1.9	400	2	0.919	0.54	149
Ozurgeti Municipality	9,057	44	206	626	27.1	34.6	6.8	400	8	0.865	0.52	164
Chokhatauri Municipality	2,816	32	88	769	2.3	10.0	0.6	400	1	0.817	0.51	81
IMERETI	80,985	398	203	5,947	335.3	47.6	83.8					
City of Kutaisi	26,769	54	496	35	194.7	100.0	32.5	496	54	0.601	0.44	
Tkibuli Municipality	2,565	24	107	443	14.0	46.5	3.5	400	3	1.174	0.61	65
Tskaltubo Municipality	6,544	42	156	695	17.2	23.3	4.3	400	4	1.128	0.60	131
Chiatura Municipality	6,133	45	136	515	14.2	25.7	3.6	400	4	0.901	0.54	111
Bagdati Municipality	2,812	21	134	758	4.9	17.0	1.2	400	1	1.025	0.57	118
Vani Municipality	3,190	31	103	548	4.7	13.9	1.2	400	1	1.060	0.58	92
Zestaponi Municipality	9,456	34	278	407	26.5	35.0	6.6	400	8	0.801	0.50	239
Terjola Municipality	4,489	25	180	331	6.3	14.0	1.6	400	2	1.002	0.57	165
Samtredia Municipality	7,036	37	190	324	32.1	52.9	8.0	400	9	0.862	0.52	120
Sachkhere Municipality	5,902	33	179	697	7.2	15.1	1.8	400	2	0.808	0.51	163
Kharagauli Municipality	2,781	26	107	847	2.6	9.9	0.7	400	1	0.944	0.55	99
Khoni Municipality	3,308	26	127	384	11.3	35.9	2.8	400	3	0.952	0.55	92

Note: Light blue columns match the statistics pointed out in the Geostat documents, while the dark blue ones give information about the influence radius and occupancy rate of the rural schools.

Sources: Data from Geostat 2012, National Statistics Office of Georgia; and data provided to the team by Government of Georgia, Ministry of Education and Science.

Summary:

- (i) Georgia is ranked 79th (HDI=0.744) globally in terms of human development.
- (ii) The relative poverty rate exceeded 21% in 2013.
- (iii) The Gini coefficient by total consumption expenditure equaled 0.40 in 2013.
- (iv) Unemployment in 2013 was about four times lower in rural areas (6.5%) than in urban areas (25.6%).
- (v) Rural areas are characterized by underemployment linked to self-employment and employment in the agriculture sector, which contributes to hidden poverty because of lack of reliable data.

Recommendations:

- (i) Make parallel improvements in the education system along with the creation of job opportunities.
- (ii) Introduce measures to address underemployment to support investments in export-oriented sectors to meet the demand for employment in these sectors.
- (iii) Undertake vocational measures to address the current mismatch between the competencies required for the available jobs and labor skill set.

Green Base: Environmental Profile

Climate Change

The current change in climate in Georgia has been assessed based on actual observation data. These include mean air temperature and temperature extremes, precipitation, relative humidity, wetting regimes, and wind, which were investigated, as well as trends of extreme weather events (high winds, drought, landslides, and floods), characteristic to each of the examined regions. The trends of change in the mean annual air temperature, the mean annual precipitation, and the moistening regime were estimated between the two time periods: 1955–1970 and 1990–2005. In West Georgia, the increment in temperature appeared to be in the range of 0.2°C–0.4°C and that of precipitation in the range of 8%–13%, while in East Georgia the relevant values were found to be 0.6°C and 6%. The changes in air temperature absolute minima and absolute maxima also demonstrated a tendency toward warming in both the warm and the cold periods of the year.

Two regional models have been used for the assessment of future climate scenarios: PRECIS and MAGICC/SCENGEN. The MAGICC/SCENGEN model was used for selecting the most suitable general circulation model (GCM) for East and West Georgia, for each season and for each climate parameter. Two runs of the PRECIS model were used for the forecast of future localized changes. The results of these models in West Georgia project an increase in mean annual temperature by 3.5°C by the end of this century, accompanied by a decrease in precipitation by about 6%, while in East Georgia, the air temperature is expected to rise by 4.1°C, with the sum of precipitation probably falling to 14%. This process of reverse changes in temperature and precipitation will be sharpened in summer when both tendencies are more distinct than in other seasons.

Vulnerability

In terms of climate change vulnerability, three priority areas—Black Sea coastal zone, Dedoplistskaro, and Kvemo Svaneti regions—have been identified and assessed. In all three of these priority regions, statistical analysis has revealed an increased tendency for both mean annual air temperature and annual precipitation from the first (1955–1970) to the second (1990–2005) period. The implications in the three priority areas are as follows:

Black Sea coastal zone: Georgia's coastal zone is affected by a variety of geophysical processes (tectonic movements, rising sea levels, tidal waves, floods, underwater currents, and river sedimentation), some of which are being intensified by the current climate change. This zone is considered the most vulnerable to climate change. In the past century, the mean rate of sea-level rise (eustasy) at the eastern coast of the Black Sea was 2.6 millimeters per year. During 1924–1996, the sea surface temperature decreased by 1.0°C. However, during 1990–2006, it increased by 1.3°C, resulting in the warming of the sea surface temperature by 0.2°C. Because of the increase in maximum wind velocities, the frequency of powerful storms (force 5–7) has increased by three times in Poti and Batumi during the past 4 decades. A number of indicators have been identified (eustasy, storms, sedimentation, and changes in sea surface water temperature) for assessing the vulnerability of various coastal zone areas to climate change (R. Rioni Delta, R. Chorokhi Delta, lower reaches of R. Rioni, and the Sokhumi coastal area). This assessment has indicated that the most vulnerable part of the coastal zone is the R. Rioni Delta surrounding Poti.

Dedoplistskaro region: This region is under threat of desertification. Extreme weather events, such as drought and high winds, are significantly affecting agriculture, the only developed sector in the region. Under the impact of climate change, the severity of these phenomena has increased markedly in the past 50 years: the annual duration of drought has increased from 54 to 72 days, and the frequency of occurrence has increased twofold. The frequency of high winds (greater than 30 m per second) has increased by five times since the beginning of the 1980s. Analysis of meteorological records has indicated that for the past half a century, the mean annual temperature has increased by 0.6°C and the mean annual precipitation by 6%. The projected decrease in precipitation by 14% by 2100 could increase the aridity of the local climate, transforming local semiarid landscapes into arid semidesert and desert landscapes. The shortage of water for winter wheat, sunflower, and pastures was revealed in the past (1960–2005) and assessed for the projected period 2021–2100. Because of the current minimum anthropogenic interference (arable land is not irrigated, wind belts are exterminated, or part of the land is abandoned), the situation in the region is apt to reflect the impact of present climate conditions on the crops and their yield.

Kvemo Svaneti: This mountainous region has been identified as an ecosystem vulnerable to various disastrous weather events, significantly enhanced by global warming. As a result of the increased frequency and intensity of these phenomena (floods, landslides, and mud torrents), land erosion has intensified and greatly damaged agriculture, forests, roads, and communication networks. As a result of the intensified landslides and floods, the population of the Lentekhi region has decreased by 40% since 1986, and it is believed

that this process will continue until decisive adaptation measures are employed to mitigate the adverse impact of climate change in the region. In the past 50 years, the mean annual air temperature in this region has increased by 0.4°C and the level of precipitation by 106 millimeters (8%). Analysis of observation data on floods during 1967–1989 has demonstrated that in the second half of said period, the recurrence of floods grew more than twofold, and the maximum discharge increased 9%. At the same time, the duration of floods has decreased 25%, which could explain the rise in the intensity and severity of floods. Since 1980, the number of landslides has increased 43%, reaching a total of 117 as of now. This exceptionally steep rise in the number of landslides was triggered by the abundant snowfall in the winter of 1986/87. The increase in heavy precipitation for the past 2 decades in Kvemo Svaneti has also caused an almost twofold growth in the frequency of mud streams. Despite sufficient provisions of precipitation in the Lentekhi region, its territory is affected by drought from time to time, the duration of which has increased 38% and its recurrence 17% since 1991, compared with 1956–1972. Forests represent one of the main natural riches of Kvemo Svaneti, covering about 60% of its territory. For the past 15–20 years, a growing spread of pests and diseases in the forests of the region has been observed. Assessments of Central Caucasus glaciers, including in the Svaneti region, have indicated that up to the present time the total area of glaciers in Kvemo Svaneti may have decreased 25%, and their total volume may have been reduced from 1.2 to 0.8 cubic kilometers. Projected rises in temperature by 2050 may result in the total disappearance of the Kvemo Svaneti glaciers.

Urban Environmental Challenges

Because of climate change, the main urban environmental challenges pertain to the coastal cities (particularly Poti and Batumi) and alongside the rivers. Climate-induced events result in flash floods that result in loss of life and damage to property in the cities. In particular, these climate-induced events affect mostly the vulnerable sections of the urban population.

Greenhouse Gas Emissions

The national greenhouse gas (GHG) inventory for 2000–2006 has shown that the energy sector, including transport, is the leading sector with regard to emissions in Georgia. The other sectors considered were the following: industrial processes, solves and other product uses, agriculture, and waste. Emissions data have been tracked for two periods: between 1987 and 1996 and between 1997 and 2006. More than 50% of the emissions are from the energy sector. According to the Second National Communication Report (2006), the total GHG emissions are 12,292 gigatons of carbon dioxide equivalent (Gt CO₂eq). This will be updated after the publication of the Third National Communication and the GHG National Inventory Report, which is presently being finalized.

Summary:

- The mountainous region of Kvemo Svaneti has been identified as an ecosystem vulnerable to various disastrous weather events, significantly enhanced by global warming.
- Extreme weather events, such as drought, high winds, and thunderstorms, are significantly affecting agriculture.
- The main urban environmental challenges pertain to the coastal cities (particularly Poti and Batumi) and to cities along the rivers, such as Tbilisi.
- The transport sector is the leading contributor of greenhouse gas (GHG) emissions.

Recommendations:

- Consider coastal cities, particularly Poti and Batumi, and riverside cities, such as Tbilisi, for investments resilient to urban climate change.
- Undertake GHG inventories at the city level and introduce GHG emission reduction priorities in the energy and transport sectors.

ADB and Development Partner Support in Urban Development

ADB Urban Operations

Eligible for financing from both the Asian Development Fund and ADB's ordinary capital resources, Georgia joined ADB in 2007. ADB's interventions are in line with the Georgian government's priorities and sector development strategies. ADB is among Georgia's largest development partners in the urban sector, focused on water supply and sanitation (WSS) and urban transport.

Lessons Learned from Urban Operations

Georgia's ongoing economic growth, rising urban population in the larger cities, and transition to a market economy has increased the demand for basic urban services. In spite of investments in selected cities, there is considerable demand to replace existing aging infrastructure to meet the requirements of urban redevelopment and expansion. In particular, this includes the need to provide quality service delivery, improve service coverage, and, consequently, improve urban environment and living conditions.¹⁹ ADB provided technical support to develop a geospatial water supply and sanitation (WSS) utility management system to facilitate infrastructure design and maintenance of assets to improve urban service delivery (Box 2).

¹⁹ Analysis based on consultations with relevant government agencies conducted by consultants during the first phase of NUA, World Bank (2013), and Government of Georgia (2013).

Box 2: Developing a Geospatial Urban Water Supply and Sanitation Utility Management System

The aim of the technical assistance (TA) project Developing a Geospatial Urban Water Supply and Sanitation Utility Management System was to produce a geospatial water supply and sanitation (WSS) utility management system to facilitate infrastructure design and maintenance of assets to improve urban service delivery. It provided a geographic information system (GIS) interface for decision makers, linking an asset and consumer database created through extensive ground surveys with digital maps generated from aerial photographs and satellite imagery. The GIS has an additional feature of being web-based for general users to access the data.

With the government's intention to improve and expand WSS services, the GIS aimed to help the United Water Supply Company of Georgia (UWSCG) on WSS capital improvement and rehabilitation planning, revenue management, and asset maintenance and management. Information generated from the TA was used to design the WSS system for six towns covered under the Urban Services Improvement Investment Program funded by the Asian Development Bank (ADB). Furthermore, the government expanded the scope of the GIS to cover urban transport infrastructure that was in line with ADB's support through the Municipal Services Development Projects and the Sustainable Urban Transport Investment Program.

The expected impact was capital and operational budget for WSS planning, maintenance, and management of assets linked to the geospatial WSS utility management system. The expected outcome was the Ministry of Regional Development and Infrastructure and UWSCG using the geospatial WSS utility management system for capital improvement and rehabilitation planning, and revenue management. The expected TA outputs combined with the inclusion of urban transport were (i) georeferenced cadastral maps with thematic layers on a GIS domain; (ii) integrated WSS asset and consumer database and database on urban transport assets, including condition and layout superimposed as a thematic layer; (iii) WSS utility management system and database on public transport routes and road traffic superimposed as a thematic layer; and (iv) staff trained on database management.

The major lesson was that basic infrastructure asset mapping is essential. This is to be considered an integral part of urban planning and while designing for any major urban infrastructure investments. It is better to adopt a holistic approach by advance identification of various utilities to be mapped and how the database can be used by various service providers. In terms of its achievement, the UWSCG has now taken the initiative to cover additional 49 towns under its jurisdiction for WSS utility mapping. The UWSCG will continue to update the GIS database through its own resources.

Source: ADB. 2014. *Technical Assistance Completion Report: Developing a Geospatial Urban Water Supply and Sanitation Utility Management System*. Manila (TA7551 GEO).

Utility Infrastructure and Services

Except for areas where infrastructure rehabilitation works in WSS and solid waste management (SWM) have been completed, urban infrastructure is outdated or nonexistent, and thus only partly functional. On the whole, quality, continuity, and coverage of services still remain suboptimal. Unless addressed in a coherent and systemic manner through a combination of rehabilitation and replacement of assets, these service delivery gaps will only increase with time.

Key reasons for poor service delivery include (i) insufficient investment, (ii) noticeable differences in the level of investment and quality of services management across the different regions, (iii) the low priority accorded to SWM and wastewater management versus water supply, (iv) overall weak operation and maintenance (O&M) capacity, (v) serious consequences of suboptimal O&M in terms of low financial and technical sustainability of services, (vi) lack of enabling legislative and regulatory framework for sector development, and (vii) low capacity of regulatory bodies. Ensuring that the institutional structure for water supply provides positive incentives for good service is critical.

The project completion report of the Municipal Service Development Projects 1 and 2 rated the project *successful* (ADB 2012, 2013b). However, the project completion report assigned a *less likely sustainable* rating to project 1, as there were concerns that neither the participating municipalities nor the water companies had sufficient capacity or incentives to ensure proper road maintenance, to rationalize tariffs to ensure cost recovery, or to deliver WSS in a commercially viable manner.

Urban Transport Systems

Mobility and connectivity within and between urban centers is hampered by dilapidated transport infrastructure, suboptimal urban transport planning and management, and gaps in the policy and regulatory setting. Motorization is increasing rapidly, causing congestion and air pollution in major urban centers. Recent initiatives in Tbilisi translated into noticeable but still insufficient transport investments. Better traffic planning and management, and more attractive public transportation alternatives are needed. In smaller cities, towns, and administrative centers, where there is strong potential for economic development (such as growing tourist destinations and local employment generation hubs), intercity connectivity is the main transport issue. Crosscutting concerns that affect urban transport in most cities include (i) institutional and regulatory constraints to a systemic approach to urban mobility, (ii) lack of integrated planning between urban and other transport modes, (iii) system redundancies, (iv) inefficient traffic management, (v) limited information on mobility needs, and (vi) constrained funding and financing sources.

Sustainability of Assets

The sustainability of urban assets is reduced by (i) limited financing of O&M expenditures, (ii) inappropriate institutional structures and insufficient managerial and technical capacity in O&M, (iii) lack of an enabling regulatory and legislative framework to operate urban assets efficiently, and (iv) suboptimal tariff-setting policies and processes. Problems of interagency coordination also stifle reforms toward managing urban assets. Better interagency coordination, adequate investment to meet capital and O&M costs, and enhanced capacity of sector agencies to maintain urban assets and to steadily increase cost recovery is essential. Encouraging public–private partnerships of various forms in utility operation and asset management could promote sustainability and financial viability of urban services.²⁰ This in turn requires improvements in the enabling legislative and regulatory setting.

²⁰ Tbilisi's WSS services were privatized in 2007.

Urban Planning

Over the past decade, real estate development rather than sustainable urban planning has driven urban expansion in Georgia. This has contributed to parking problems, traffic congestion, and alarming levels of air pollution in Tbilisi, and, in general, deterioration of sanitation services and insufficient adherence to preservation standards and to legal requirements for protecting cultural monuments. The cities need to update their spatial master plans, adopting a holistic and integrated approach, and to prepare investment plans to upgrade infrastructure.

Current Development Partner Focus

ADB works closely with the government and with international financing institutions to provide development support in Georgia. During the first phase of the study, the team interviewed various donors involved in the urban sector in Georgia. Table 14 outlines significant ongoing and planned investments. The main intervention areas in Georgia could be summarized as follows:

- (i) ADB: Transport and urban infrastructure, particularly WSS, energy, and resource mobilization for inclusive growth (see recent example in Box 3)
- (ii) EBRD: Energy and bank financing aiming to facilitate credit access to private investment
- (iii) EU: Policy reforms oriented to European regulation and/or poverty reduction through emergency housing for IDPs
- (iv) GIZ: Local governance and sustainable regional development focusing on agriculture and tourism
- (v) JICA: Transport and technical cooperation
- (vi) KfW: Integrated projects in energy and in urban infrastructure (water supply, wastewater, and solid waste)
- (vii) SIDA: Emergency housing for IDPs and environmental protection based on SWM
- (viii) USAID: Energy and economic growth
- (ix) World Bank: Transport and economic development of target regions

Capacity Development Needs Assessment

After independence, a big mismatch in professional skills and personnel know-how emerged and deepened progressively in the Georgian public and urban sectors, with the collapse of the previous standards of capacities and employment in the field of urban affairs and public administration that had regulated the education system. The main problems exist because of lack of clear formal specifications of the required skills for qualifications and knowledge of public officials on the government sector side and the absence of relevant training courses from higher education institutions for those who aim at employment in the public administration and urban governance sector. International finance institutions have provided capacity-building assistance along with project finance.

Table 14: Significant Ongoing and Planned Investments by Sector and Donor

Sector	Project or Program	Development Partner	Amount (\$ million)		Project or Program Description
			Grant	Loan	
Transport Infrastructure	Secondary and Local Roads Project II	WB		70	Rehabilitation and improvement of secondary and local roads
	Khakheti Regional Roads Improvement Project	WB		30	Improvement of roads in the Khakheti region
	East–West Highway I (Agaiani–Igoeti section, Rikoti Tunnel Rehabilitation)	WB		48	Upgrade of the Agaiani–Igoeti section of the East–West Highway and rehabilitation of the Rikoti Tunnel
	East–West Highway II (Igoeti–Sveneti section)	WB		55	Upgrade of the Igoeti–Sveneti section of the East–West Highway
	East–West Highway III (Sveneti–Ruisi section)	WB		147	Upgrade of the Sveneti–Ruisi section of the East–West Highway
	East–West Highway IV (Ruisi–Agara bypass)	WB		43	Upgrade of the Ruisi–Agara section of the East–West Highway
	East–West Highway Improvement Project (Zestaponi–Kutaisi road upgrade, Kutaisi–Samtredia bypass construction)	JICA		224	Upgrade of the Zestaponi–Samtredia section of the East–West Highway, including the construction of the Kutaisi bypass
	Modernization–construction of Samtredia–Grigoleti Section of the East–West Highway	EIB, EC (NIF)	25.89	220	Construction of the new 52 kilometers (km) highway from Samtredia to Grigoleti and upgrade of 16 km road from Grigoleti to Kobuleti (Choloki River)
	Kobuleti Bypass	ADB		260	Construction of a new two-lane road of approximately 28 km bypassing Kobuleti, and upgrade of approximately 6 km road section between Kobuleti and Batumi
Energy Infrastructure	Vardnili and Enguri Hydro Rehabilitation Project	EIB, EBRD, EC (NIF)	6.8	51	Rehabilitation of Enguri HPP and rehabilitation of the Vardnili water channel
	High-voltage power transmission line (500 kv)	KfW, EBRD, EIB, EC (NIF)	34.0	322	Constructing and rehabilitating a high-voltage transmission line between Zestaponi and Gardabani, with high voltage direct current station in Akhalsikhe
	Energy infrastructure expansion (electricity transmission upgrade, domestic gas supply line expansion, and engineering and oversight)	USAID	128.4		Electricity transmission upgrade: gas transit infrastructure construction and rehabilitation: hydro investment promotion
	Program for the Promotion of Renewable Energy	KfW	6.3		Financing of investments in renewable energies—SHPs through the partner banks

continued on next page

Table 14 continued

Sector	Project or Program	Development Partner	Amount (\$ million)		Project or Program Description
			Grant	Loan	
Urban	Sustainable Urban Transport Investment	ADB		80.0	Construction of Tbilisi–Rustavi urban road
	Sustainable Urban Transport Investment Program Tranche 1	ADB		85.0	Tbilisi metro extension: Vazha Pshavela avenue, road improvement: Zugdidi–Mestia, and coastal improvement: Anaklia
	Sustainable Urban Transport Investment Program Tranche 2	ADB		64.0	
	Sustainable Urban Transport Investment Program MFF Tranche 3	ADB		73.0	Construction of Tbilisi–Rustavi urban road (Phase 2) Anaklia coastal improvement (Phase 2)
	Sustainable Urban Transport Investment Program Tranche 4	ADB		80.0	Batumi coastal protection
	Regional Development Project (Kakheti) Part 1	WB		60.0	Improvement of infrastructure and institutional capacity to support the development of tourism-based economy
	Regional Development Project (Imereti) Part 2	WB		30.0	Improvement of infrastructure and institutional capacity to support the development of the tourism-based economy
	Adiara Solid Waste Project	EBRD		4.1	Construction of a new landfill in Adiara
	Kobuleti Water Waste Project	EBRD	2.3	2.4	Construction of and equipment of wastewater treatment plant
	Water Infrastructure Modernisation Project	EIB	52.0		Improvement of water supply and sanitation in different regions of Georgia (Samegrelo, Imereti, Racha–Lechkhumi, Guria, Shida Kartli, and Kakheti)
Water Supply and Sanitation Infrastructure	MultiTranche Financing Facility Urban Services Improvement Investment Program Tranche 1	ADB		80.0	Construction and rehabilitation of water facilities in Anaklia, Mestia, Kutasi, Poti, and Ureki
	Urban Services Improvement Investment Program Tranche 2	ADB		40.0	Rehabilitation, improvement, and expansion of WSS infrastructure in Anaklia and Mestia
	Urban Services Improvement Investment Program Tranche 3	ADB		98.0	Water supply in Kutaisi Water supply and sewage in Ureki
	Urban Services Improvement Investment Program Tranche 4	ADB		108.0	Water supply in Zugdidi Sewage in Poti

continued on next page

Table 14 continued

Sector	Project or Program	Development Partner	Amount (\$ million)		Project or Program Description
			Grant	Loan	
Water Supply and Sanitation Infrastructure	Urban Services Improvement Investment Program Tranche 5	ADB		75.0	Sewage in Zugdidi
	Urban Services Improvement Investment Program Tranche 6 (2016 approval)	ADB		99.0	Water supply and sewage in Marneuli
	Rehabilitation of Municipal Infrastructure Facilities in Batumi (Phase 1 and 2)	KfW, EU (NIF)	27.9	123.0	Improvement of water supply and wastewater treatment system in Batumi and surrounding villages; rehabilitation of storm water drainage system
Internally Displaced Persons	Improved Infrastructure, Economic Opportunities, and Support for Internally Displaced Persons	USAID	109.56		Improvement of municipal infrastructure in various municipalities; improved housing and living conditions for IDPs
	Emergency Rehabilitation of IDP Housing in Western Georgia	KfW	13.5		Rehabilitation of collective centers and construction of new houses for IDPs in Western Georgia
Other	Agriculture Support Project	IFAD	0.2	8.0	Introduction of leasing in agriculture sector investments and in irrigation systems in the different regions of Georgia
	Establishment of Javakheti National Park	KfW	2.7		Establishment of Javakheti National Park in Georgia
	Support Programme for Protected Areas in Caucasus-Georgia (Ecoregional Programme Georgia, Phase III)	KfW	5.6		Enhancement of the resources and protected area management in selected areas and socioeconomic development of adjacent communities
	Protected Areas Development Project	CNF	1.7		Rehabilitation of administrative buildings and visitor's center in Boriomi–Kharaquali National Park, Lagodekhi Protected Area
	Millennium Challenge Compact 2 Preparatory	MCC	2.7		Preparatory grant dedicated for the second Millennium Challenge Compact

ADB = Asian Development Bank, CNF = Caucasus Nature Fund, EBRD = European Bank for Reconstruction and Development, EC = European Commission, EIB = European Investment Bank, IDP = internally displaced person, IFAD = International Fund for Agricultural Development, JICA = Japan International Cooperation Agency, MCC = Millennium Challenge Corporation, NIF = Neighbourhood Investment Facility, SHP = small helium plants, USAID = United States Agency for International Development, WB = World Bank, WSS = water supply and sanitation.

Source: Asian Development Bank.

Box 3: Shuakhevi Hydropower Plant: IFC, ADB, EBRD, Tata Power, and Clean Energy Help Georgia Achieve Self-Sufficiency in Energy

The International Finance Corporation (IFC), a member of the World Bank Group, together with the Asian Development Bank (ADB) and the European Bank for Reconstruction and Development (EBRD), is helping Georgia tap its hydropower potential and achieve energy self-sufficiency by investing in the construction and operation of the Shuakhevi hydropower plant. The \$250 million debt financing arranged by IFC represents the largest-ever private hydropower investment in Georgia, consisting of two \$90 million long-term senior loans, one each from ADB and EBRD, and a \$70 million loan from IFC. IFC's total investment in this project is \$104 million, which includes a \$34 million equity investment in the project company, Adjaristsqali Georgia, a joint venture between India's Tata Power and Norway's Clean Energy Invest (40% each), and IFC (20%). Some \$15 million of ADB's \$90 million in financing will be provided by the Canadian Climate Fund for the Private Sector in Asia, funded by the Canadian government and administered by ADB.

The project is the first hydropower project in Georgia certified by the United Nations Framework Convention on Climate Change for carbon emission reductions. It is expected to produce about 450 gigawatt-hours of power annually and reduce greenhouse gas emissions by more than 200,000 tons per year. The project will develop the 187-megawatt Shuakhevi hydropower scheme, consisting of the Shuakhevi and Skhalta hydropower plants located in the Adjara region, southwest Georgia.

The Shuakhevi plant will satisfy Georgia's electricity demand during winter, reducing dependence on imported fuel and increasing renewable energy output. It will also foster cross-border electricity trading at other times of the year by exporting electricity to Turkey through a transmission line financed by EBRD. The project will benefit local communities by helping create jobs, boosting municipal incomes, and upgrading area roads. The project will promote regional cooperation and generate additional revenues for Georgia through energy trade. This project facilitates private sector investment to support the transition to an open market economy and is expected to strengthen investor confidence in Georgia. This groundbreaking renewable energy investment highlights the important role ADB plays in leveraging support for energy security and environmentally sustainable growth in the region.

Source: ADB. 2015. Shuakhevi Hydropower Plant: IFC, ADB, EBRD, Tata Power, and Clean Energy Help Georgia Achieve Self-Sufficiency in Energy. News Release. 19 March 2015. Manila.

Georgia needs knowledge products and services to undertake structural reforms, promoting human capital development and developing people-centered inclusive infrastructure, including better project planning, implementation, and evaluation, as existing knowledge gaps reduce the effectiveness of development assistance. Knowledge products and services are also needed to increase the effectiveness of public service delivery, introduce appropriate public-private partnership schemes in project financing, further develop financial markets and institutions, strengthen the private sector's export capacity, and develop the country's regional trade and transit potential. Filling these knowledge gaps will help Georgia meet its overarching goal of strengthening inclusive economic growth and job creation. ADB is providing assistance through the Knowledge Management Plan, 2016–2018 to address the capacity building needs (ADB 2015c).

Human Resources: Institutions of Capacity Development

Traditionally, the main resources for the field of urban planning, architecture, construction, city design, and other city-related activities came from one of the largest universities of the country, Georgian Technical University (GTU). Two departments of GTU have been producing specialists in the fields of (i) civil engineering and (ii) architecture, planning, and design which should meet the requirements of the national and municipal and/or self-governing sector of Georgia. However, the employees in the executive tier of the state and self-governing sectors do not necessarily have the requisite education, nor the theoretical and technical skills, thereby impacting the efficiency of professional performance of the public sector. The main potential capacity for the local government sector comes from GTU, from which more than 50 architects and planners, and over 100 engineers graduate annually (having both bachelor's and master's degrees), although their match with the needs of the corresponding sectors is unclear. Besides GTU, there are few other higher education institutions that launch master's programs in public administration, focusing mostly on legal, policy, and institutional aspects of municipal and urban governance. Tbilisi State University, Georgian Institute of Public Affairs, and the Caucasus University are conducting several master's programs in different fields of public administration, including urban affairs, and at least 50 graduates from these programs are joining the prospective employee pool annually. In addition to systematic long-term education, there are sporadically organized training programs for public servants for upgrading their executive skills and performance capacities. Such training is mostly facilitated and financed by international organizations and foreign donors that are active in Georgia to promote the process of decentralization, transparent and efficient governance, and good service delivery.

Hence, Georgia has enough potential in human resources and professional capacity to meet the needs of public administration and urban planning and development sectors; however, the lack of clear specifications and requirements from the public sector seriously hinders the efficiency of the consequent segment of the labor market, making cooperation between government and academic institutions quite sporadic because of uncertainty of the employment for qualified specialists in the public sector.

Urban Infrastructure and Service Delivery (Management and Governance)

Since 2000, Tbilisi and other large city governments started to outsource some of the inefficiently planned and managed branches of urban services, such as electricity, water, gas provision, and urban transport, to the private sector. In some cases, foreign companies have taken over urban service delivery, such as Kaztransgas of Kazakhstan for gas distribution or RAO-Telasi of the Russian Federation for electricity provision, both in Tbilisi. Such measures in most cases not only resulted in significant improvement in service quality but also led to substantial increases in service charges.

The private companies in charge of urban service delivery identify capacity needs of their personnel and provide appropriate short- and long-term training. In general, the overall quality of urban services delivered by municipal bodies and enterprises has improved countrywide in the past few years. However, some areas, such as SWM or sewage

treatment, need serious systemic and management enhancements. For instance, in Tbilisi and some other cities, waste collection has substantially improved but disposal of collected waste is inappropriate given the lack of modern landfills. ADB has financed the services of an internationally reputed water operator as a management consultant to improve the technical management and financial performance of the United Water Supply Company of Georgia. These are basic for effective infrastructure and efficient service delivery of WSS. The management consultant was retained in October 2013 on a performance-based contract for 3 years.

Elaboration of relevant policies, implementation of modern approaches and technologies, and identification of capacity needs are important tasks for the future development of efficient urban services. Several knowledge solutions are needed for promoting infrastructure development (project planning, implementation, and evaluation), enhancing the country's institutional capacity, and strengthening national and regional connectivity. Areas for capacity building include knowledge and training on integrated urban and transport planning using "green city, inclusive city, and smart city" approaches. Georgia also needs capacity building to better assess the economic viability, management, and implementation of infrastructure projects.

Public Institutional Assessment (Organizational)

Urban development and planning in Georgia since its independence is lacking any formal policy as the legislative framework is declarative, while the institutional framework is weak and fragmented. Urban affairs have not found a place among national priorities, except for the Government of Georgia's 10-point plan for modernization and employment, issued in 2011, where urban and regional development was listed as point 10 among the top 10 priorities for national development (Government of Georgia 2011). However, after the change of government in 2012, the aforementioned document lost its importance and no serious measures for its implementation have been taken. Capacity at the national and especially local levels in various subsectors of urban development is largely inadequate. Programs and projects addressing urban issues at national, regional, and/or local levels, assisted by international agencies and foreign organizations, require good coordination with each other to enable substantive change.

Urban Finance Institutions (Private Sector Capacity)

The private sector is a key stakeholder in major projects in Georgia. In August 2011, the Government of Georgia constituted the Partnership Fund aimed at promoting cooperation between the public and the private sectors. ADB, which supports the private sector, will broaden its loan facilities to some Georgian banks for onlending to small and medium-sized firms, and explore potential for leveraging private sector investment in key sectors (transport, renewable energy, and education).

Urban Needs Assessment

Housing

The housing stock, utility systems, and services in Georgia, including water, sanitation, and waste management, were dilapidated and poorly managed at the time of independence. The years following independence have seen further deterioration of these systems, but Georgia has recently started overall redesign of the utility provision concepts and the reconstruction of utility systems (UN-Habitat 2013, Eiweida et al. 2013, World Bank 2015).

The major part of Georgia's housing stock (more than 80%) was constructed during the Soviet time. During independence, the volume of housing construction dramatically reduced, and significant legal and structural changes in apartment ownership occurred. Land reform and property privatization introduced in the 1990s have significantly changed the legal status of housing. Georgia carried out privatization of the housing stock free of charge, and 95% of residential spaces had already been privatized by 2000.

The pre-independence mass housing estates dominate Tbilisi and other bigger cities. Since the 1990s, high-rise buildings have become the emerging trend in Tbilisi and other cities. In smaller cities, estates of individual housing units constitute the largest share.

After independence, the existing norm of 9 square meters (m²) for individual living space was significantly increased, but it still lags behind those of European cities. In Georgia, according to an urban indicators' study (Ministry of Economy and Sustainable Development 2012), the estimated living area for urban places is about 20 m² for each dweller. In 2010, Georgia's total housing stock was estimated at 90 million–100 million m² (UN-Habitat 2013). Most units are multistory apartments with 67% of the urban households living in flats, whereas 94% of the rural dwellers have single-family detached houses. After the stagnant 1990s, the construction boom took place when investors and developers started new construction projects, and banks showed increasing willingness to finance housing developments. This boom triggered heavy competition for the best urban sites for multiapartment housing resulting in a significant increase in housing prices. During the construction boom in 2004–2008, central Tbilisi apartment prices tripled from \$400/m² to \$1,300/m² and from \$250/m² to \$850/m² in other parts of the city. Moderate bank credit availability in Georgia allowed regularly employed citizens to buy an apartment. Consequently, commercially produced housing fulfilled the demand of the relatively well-off urban population. However, many flats were purchased through remittances as speculative investments were made by expatriate absentee owners who mostly do not

rent out these flats. The result is high rates of vacancy, which might account for at least 15%–20% of new housing units.

The increased housing prices pushed housing beyond affordability for many citizens given the low average incomes, and according to local real estate experts interviewed in 2011, only 10%–15% of the population of Georgia can afford a flat in the new housing estates.

To expand the market, constructors in Georgia started to offer low-cost shell and core projects by providing unfurnished apartments to the new owners. Such spaces with different degrees of finishing of apartment interiors, though not entirely complete, comprise almost 90% of all new housing stock.²¹ Recently, the share of fully furnished apartments in the new housing stock has started to grow again, and a few gated communities have also appeared in Tbilisi, Batumi, and a few other cities.

Meanwhile, the rental market in Georgia is weak and mostly unregulated. There is almost no social housing stock for the poor and vulnerable population, other than few small-scale projects implemented by the development partners such as the Swiss Agency for Development and Cooperation.

Informal housing still exists in Georgia and hinders effective operation of property markets. Informal settlements in state and municipal-owned structures and absence of legal documentation (proof of ownership, building permission, and cadastral reference) are the most common causes of informality. In fewer cases, informality is a result of unsafe structures and locations or extension of existing buildings without permit or in violation of norms and standards.

In Georgia, internally displaced persons are the major occupants of low-quality and informal settlements in Tbilisi, Rustavi, Zugdidi, and other cities. Internally displaced persons occupy former public buildings or occupy land by building informal settlements. Other causes of illegality are questionable extensions or unsafe housing conditions. The major part of housing stock in Georgia, regardless of the tenure, will require rehabilitation if not reconstruction. In some districts of Tbilisi, entire housing estates have deteriorated into unstable informal settlements, while the 2002 earthquake resulted in more than 20,000 badly damaged houses.

The effective management of housing estates, especially multiapartment buildings with individual privatized flats, remains problematic in Georgia; however, it has substantially improved since the Law on Homeowners' Associations was adopted in 2007. The creation of homeowners' associations (HOAs) has significantly improved housing maintenance, especially in Tbilisi where there are more than 6,000 HOAs. There are HOAs in other cities of Georgia, but they do not operate as efficiently as those in Tbilisi. Buildings managed by HOAs are eligible to municipal cofinancing, which covers between 50% and 90% of the total cost, for renovation of common areas such as roofs, passageways, and staircases and public spaces such as courtyards.

²¹ Based on information gathered in the field by the ADB study team.

The banking sector in Georgia started to play a significant role only during the housing boom but immediately retracted at the start of the economic crisis. Recently, established mortgage markets became significant in Tbilisi and partially in Batumi, but not in other cities. Property markets remain underdeveloped because of low solvency levels.

Key Investment Needs in Housing

- (i) Rehabilitation and regeneration of the housing stock to meet demands and prevent hollowing out of inner city areas.
- (ii) Introduction of inclusive urban development policies to enable affordable housing and shelter for the urban poor.
- (iii) Urban renewal as a mechanism for rejuvenation of old and dilapidated building stock through a participatory planning process for mixed-use developments.
- (iv) Private sector participation to support in situ development rather than moving residents out of the city.

Water Resources

Georgia has sufficient water resources to ensure uninterrupted water supply to its urban population. However, despite its abundant water resources, water supply has always been complicated. In the mid-2000s, approximately 60% of existing water pipelines were defective and sanitation was unsatisfactory, resulting in frequent accidents, water contamination, and technical losses, which amounted to 40% (UNECE 2006).

As a result of international donor-supported projects, the situation has improved of recent in Tbilisi, Batumi, Rustavi, Kutaisi, and other urban and rural settlements. The largest urban population in Tbilisi is supplied with water from the Aragvi River, which is stored with underground, rain, and snow water as well as water received as a result of melting of glaciers. Outlets of the Aragvi River springs are in Zhinvali, Bulachauri, Choporti, Saguramo, and Natakhtari. Water conduits from these locations supply the various municipalities. Like the Aragvi River, other water sources provide supply across the country. Water supply and sewage still need more interventions. Currently, 92% of the urban and 51% of the rural population has piped water supply on their premises in the yard or household (Van Breusegem and Abramia 2011).

Water Supply

Despite the fact that Georgia is rich with water resources, providing all ultimate consumers with uninterrupted water service even in recent years is still a problem. The water supplied is either from rivers or underground sources, which are connected to pumping stations and treatment plants. There are water conduits in Bulachauri, Choporti–Misaktsieli zone, and Natakhtari to name a few. From underground sources, the water is generally supplied to cities and towns without treatment. From surface sources, it is taken to treatment plants

in Samgori and Grmaghele for filtration and chlorination, which are the only two basic methods. From the treatment plants, the water is pumped to cities and towns.

In Georgia, the main water utility companies are Georgian Water and Power, Rustavi Water, and Mtskheta Water which provide services to Tbilisi, Rustavi, Mtskheta, Gardabani (partly); Batumis Tskali, Kobuleti's Tskali, and four municipal enterprises that provide services to Batumi and towns and cities of the Autonomous Republic of Adjara; and United Water Supply Company of Georgia which provides services to 58 cities, towns, and tourist zones.

According to reports from the mid-2000s, water was only provided around the clock in parts of Batumi, Gori, Samtredia, and Tbilisi. In Rustavi, daily supply was only 8 hours, and only 6 hours in Kutaisi. The situation has recently somewhat improved, but the part-time water supply problems in most urban settlements, even in big cities, have not yet been resolved. There have been significant improvements in the water supply scenario over the last 5 years. Earlier, there were about 20 cities with 1-day-per-week water supply for only 3 hours per day. Currently, there are 18 cities with 24-hour water supply.

The betterment of urban water supply and sanitation (WSS) service is a key priority of the government, as it is essential in improving the quality of life, attracting investment, and raising productivity and competitiveness. Recognizing the need to overcome current problems and constraints, the government's urban WSS Sector Development Plan (SDP) for 2011–2020, approved on 31 January 2011, aims to ensure continuous and reliable water supply and safe sanitation services to all urban residents by 2020. The SDP's policy and institutional reform framework has a strong focus on technical sustainability of WSS services, environmental and natural resource protection, public–private partnerships, tariff rationalization, prudent financial management, and efficient sector regulation through an enabling legislative and regulatory framework for WSS services. The long-term investment plan (2011–2020) under the SDP is estimated at \$1.65 billion, comprising physical and nonphysical investments to address medium-term (2011–2015) and long-term (2016–2020) needs (ADB 2011).

Donor funding is also directed to strengthen water supply. Figure 24 shows the donor investments between 2010 to 2013. The Asian Development Bank (ADB) Multitranché Financing Facility for Urban Services Improvement Investment Program (USIIP) will improve WSS services in secondary towns of Georgia. It will (i) improve infrastructure by rehabilitating, reconstructing, and expanding WSS services; (ii) strengthen institutional effectiveness by (a) improving the technical and management capacities of the key WSS service provider, the United Water Supply Company of Georgia, (b) procuring the services of an internationally reputed water operator to act as a management contractor, enabling it to provide efficient WSS services, and (c) developing the capacity of sector regulators to regulate tariffs, services standards, environmental protection, and drinking water quality in the long term; and (iii) support the investment program implementation.

Significant work remains to be done to ensure that piped water supply is available for all. Though targeted for 2015, it will require another 5 years at least to achieve 24/7 piped water supply for all. Figure 25 shows striking differences in drinking water accessibility among the countries. Piped water into dwelling is accessible only for less than half of Georgian

Figure 24: Donor Investments in Georgia Water Supply, 2010–2013
(\$ million)

ADB = Asian Development Bank, EBRD = European Bank for Reconstruction and Development, EIB = European Investment Bank, EU = European Union, USAID = United States Agency for International Development, WB = World Bank.

Note: Presentation by the United Water Supply Company to the ADB study team on September 2014, Georgia.

Source: Asian Development Bank.

Figure 25: Distribution of Households by Type of the Main Source of Drinking Water, 2010
(%)

AJ = Autonomous region of Adjara, GU = Guria, IM = Imereti, KA = Kakheti, KK = Kvemo Kartli, MM = Mtskheta–Mtianeti, SK = Shida Kartli, SJ = Samtskhe–Javakheti, SZ = Samegrelo–Zemo Svaneti, TB = Tbilisi.

Source: National Statistics Office of Georgia. 2010. Nationwide Annual Household Survey. Unpublished.

households. Anaklia and Mestia have 24/7 water supply to over 90% of households as an outcome of the ADB-financed Multitranchise Financing Facility for USIIP tranches 1 and 2. Tbilisi provides piped water to almost all and Adjara to almost 75% of their population. Neither of the remaining regions has piped water provision to more than 30% of its households, predominantly urban ones. Hence, piped water provision is closely correlated to the urbanization level in regions. It is unequal compensation, but still a positive trait, that eastern and southern Georgian regions (Kakheti, Kvemo Kartli, and Samtskhe–Javakheti) are largely provided by piped water to the yard or plot, while western Georgian provinces (Samegrelo, Guria, and Imereti) mostly use dug wells in their land parcels for getting drinking water. Shida Kartli has somewhat equally balanced provision using all these types of water sources. Outside Tbilisi, the water supply systems require substantial investments toward rehabilitation of old assets, operation and maintenance, and extensions to new areas of the cities. United Water service is undertaking investment projects with support from the development partners including ADB. Strategic urban plans were developed for the first time in 2007–2008 supported by the United States Agency for International Development funding and were further updated and refined in 2013 for Rustavi, Batumi, and Poti.

Drinking water in Georgia is mainly drawn from the ground. All cities and districts in the country have central water systems, a total of 150 major water intakes, and a total capacity of 3.1 million cubic meters (m³) per day. Water is reported to be safe for drinking. At the same time, the majority of Georgian settlements receive water intermittently, while many water intakes remain unprotected. Water supplied often does not comply with standards or sanitary and epidemiological requirements.

Wastewater discharge systems operate only in 41 cities, 30 of which have wastewater treatment plants with a total design capacity of 1.6 million m³/day including regional treatment facilities in the Gardabani district which serve, with a daily capacity of 1 million m³. Nevertheless, only 74% of the total volume of Tbilisi and Rustavi wastewater is treated. In Kutaisi, there is no wastewater treatment. Khashuri is the only settlement in Georgia with 100% wastewater treatment but even then, almost all wastewater treatment facilities are in poor condition. The energy crisis after the dissolution of the Soviet Union, together with significant electricity tariff increases, has negatively influenced almost all wastewater treatment facilities in the country. Most wastewater treatment facilities have become dysfunctional, and wastewater is discharged untreated into water bodies. As a result, endemic intestinal and infectious diseases are common in Georgia (UNECE 2007).

Key Investment Needs in Water Resources and Water Supply

- Expansion of the water abstraction and treatment to address gaps in big cities (particularly outside Tbilisi) and towns.

Sewage

During the Soviet period, the provision of a sewage-collection network and sewage treatment was inextricably linked with water supply investments. Although there were issues associated with the operation and maintenance, such assets have been in place. In

all, 37 cities and towns have a sewage-collection network. Since 1991, there has been a lack of attention to the maintenance of these assets, which has resulted in deterioration leading to their poor condition. The respective municipalities should be held responsible. Over this period, sewage from all cities and towns has been discharged to surface water sources without any treatment, which has resulted in severe environmental issues.

The largest sewage treatment plant (STP) in Georgia is the Gardabani Treatment Plant (1.0 million m³/day), which receives sewage primarily from Tbilisi. The main trunk of sewer is 72 kilometers (km) in length, the street network is about 1,000 km, and the yard network is about 600 km. The sewage reaches the treatment plant and then is discharged to the Mtkvari River. However, this treatment plant is working only to a limited extent as only mechanical treatment is done with no biological treatment, and therefore, sewage is discharged virtually untreated. The city of Khashuri also has a sewage treatment facility, but most of its facilities are in poor condition or even dysfunctional. STPs for the cities of Batumi and Sachkhere are completed. Sewerage system for Kutaisi including sewage treatment plant is built under European Investment Bank (EIB) financing approved in 2015. This scenario prevails in other cities and towns as well. STPs are being financed under the ADB USIIP in Poti, Marneuli, Zugdidi, Anaklia, and Mestia. In order to address operational issues, the STPs are proposed to be bid out on design-build-operate format. Rehabilitation of the sewerage network, establishing treatment plants, and ensuring that all sewage is treated before being discharged into water bodies require to be urgently addressed throughout all cities and towns in Georgia.

Key Investment Needs in Sewage

- Rehabilitation and expansion of existing sewage treatment plants in Gardabani and Khashuri.
- Establishment of new sewage treatment plants in all cities and towns, where no such plants exist.

Sanitation

Discussions revealed that sanitation is a major gap across Georgia. While sewage pipe networks exist, treatment plants neither exist nor are functional. The lack of public toilets in the cities is regarded as a major deterrent for visitors and tourists who are made to rely on private toilets in restaurants and shopping malls. During the Soviet period, some public toilets were established and maintained in the city areas, for example, in Tbilisi. These have since been converted to alternative land use. Over these years, plans to strengthen the sanitation practices in the cities and towns have not been made, and a national-level policy, plan, and program for improving sanitation and financial resources for its implementation are required.

The type of water supply determines the availability of bathroom facilities in living houses and apartments. Although the proportion of households with bathroom facilities grew from 50.7% to 57.7% from 2003 to 2010 is a promising trend, the overall situation is unsatisfactory (Figure 26).

The regional differences are usual. Tbilisi's figures amount to more than 90% of provision, while in economically weak rural regions, only 3–4 households out of 10 have bathroom facilities (Figure 27). In almost all regions, trends of improvement are observed, with Adjara enhancing the situation between 2003 and 2010 by more than 20 percentage points,

Figure 26: Proportion of Households with Bathroom Facilities by Region, 2003 and 2010 (%)

AJ = Autonomous Region of Adjara, GU = Guria, IM = Imereti, KA = Kakheti, KK = Kvemo Kartli, MM = Mtskheta-Mtianeti, SK = Shida Kartli, SJ = Samtskhe-Javakheti, SZ = Samegrelo-Zemo Svaneti, TB = Tbilisi.

Source: National Statistics Office of Georgia. 2010. Nationwide Annual Household Survey. Unpublished.

Figure 27: Households Connected to Piped Sewer System, 2010 (%)

AJ = Autonomous Region of Adjara, GU = Guria, IM = Imereti, KA = Kakheti, KK = Kvemo Kartli, MM = Mtskheta-Mtianeti, SK = Shida Kartli, SJ = Samtskhe-Javakheti, SZ = Samegrelo-Zemo Svaneti, TB = Tbilisi.

Source: National Statistics Office of Georgia. 2010. Nationwide Annual Household Survey. Unpublished.

followed by Shida Kartli and Samegrelo with more than 10 points each; however, Guria's 12-point dramatic drop during the same period is difficult to explain.

The most alarming problem exists in the collection and treatment of domestic sewage. In 2010, about 78% of the urban and only 4% of the rural populations were connected to a sewage network (Figure 28). This means that roughly 47% or less than half of the population across the country has access to improved sanitation (Ministry of Economy and Sustainable Development 2012; Van Breusegem and Abramia 2011, p. 16).

More than half of Adjara is connected to a piped sewage system, while Tbilisi is almost fully connected. In all other regions, 30% or fewer households are connected, with Guria and Kakheti accounting for less than 10% of such households, with more than 60% toilets in these regions being pit latrines, which are cleaned occasionally. There is no wastewater treatment except in Batumi.

Key Investment Needs in Sanitation

- Rehabilitation and reconstruction of water and sanitation systems
- Installation of public toilets in cities
- Development of a national policy and program for identification of detailed investments in each city and financial resources for their implementation

Solid Waste Management

Solid waste management (SWM) is a matter of national, regional, and local concern in Georgia. The Government of Georgia has identified SWM as an acute problem and recently started reforming the existing waste management system. As a whole, the country is estimated to generate about 2,100 tons per day of solid waste from its cities and towns. Of this, Tbilisi alone—population of about 1.5 million—generates 1,000 tons per day; the rest generated about 1,100 tons per day. The citywide storage, collection, and transportation of solid waste is the responsibility of the respective municipalities. In some cities, the respective municipalities themselves manage it, while in other cities the municipalities have engaged private contractors to manage it on their behalf. However, disposal has become the responsibility of the state-owned Solid Waste Management Company of Georgia, which was established on 24 April 2014 under the Ministry of Regional Development and Infrastructure (MRDI). This company implements SWM actions with respect to disposal in the landfills all over Georgia, excluding Tbilisi (one landfill) and Adjara (two landfills).

In early 2012, a national master plan for landfill management was prepared. A total of 54 legal landfills were identified. All 54 landfills are under the company already. Presently, the company is improving the management of these landfills by providing fencing, stopping scavengers, ensuring that no hazardous or medical wastes enter the landfills, installing weigh bridges, and streamlining the staff who are to operate and maintain the landfills. Management is gradually improving. By the end of 2014, 19 landfills will have to be completed. Using the funds allocated to the company (presently GEL12 million per year), more landfills will be established.

Apart from improving the management, the company is also establishing new state-of-the-art landfills that will service a region. The first has been planned in Imereti (300 tons per year) and is being executed with financial support from KfW. Another has been planned near Tbilisi and is being executed with financial support from the European Bank for Reconstruction and Development. Other such regional landfills are also in early stages of planning, and discussions are ongoing with donor agencies for support. Covering the cities and towns with proper SWM requires substantial financial and staffing resources and commitment. In terms of waste generators, there is no urban culture to segregate waste at source.

There is also no formal system to process the recyclables separately. Given that, there are informal ragpickers, particularly at the landfills, collecting the recyclables. While no recycling is being done in Georgia, these are collected, segregated, compacted, and sent to Turkey for recycling. The whole system of segregation at source needs to be established through active community campaigns and spreading awareness. Subsequently, the collection and transportation should be suitably modified so that the recyclables and the compostables are not mixed after source segregation.

Over the past few years, the policy framework is also being gradually formulated. A Framework Law on Waste Management was developed in March 2013 and established. Regulations, rules, and guidelines relevant to this law will have to be developed, accepted, and implemented. These legal instruments will streamline overall urban SWM in the country.

Key Investment Needs in Solid Waste Management

- Improvement of landfills by providing fencing, installing weigh bridges, and streamlining management systems
- Establishment of new state-of-the-art landfills to progressively close down the existing landfills
- Setting up of new recycling and recovery centers to promote recycling

Natural Hazards Including Flood Management

Due to the complicated mountainous terrain, specific atmospheric conditions and the negative impact of human activities, natural hazards in Georgia are extensive and frequent. Major natural hazards, such as floods, flash floods, landslides, mudflows, snow avalanches, earthquakes, hail, heavy rains, storm winds, and droughts, substantially affect the national economy, causing damage to infrastructure and human casualties. The development of an early warning system and proper analysis to forecast the natural hazards are of vital importance.

The second National Environmental Action Programme (NEAP), 2012–2016 of Georgia analyzed the following short-term goals: improvement and/or modernization of the early warning system, prevention and reduction of the negative impact of floods and flash floods from river basins, and resumption of artificial influence on certain types of natural phenomena (hail, drought, and snow avalanches) and reducing the risks of accidents on

industrial sites. Of the three short-term goals, early warning systems and the prevention and reduction of natural hazards are relevant to the urban sector. Technical studies—hazard vulnerability studies—and operational plans related to the floods in cities and towns are yet to be done, as analyzed in the NEAP. Flooding is a concern in coastal cities such as Batumi and Poti, as well as cities located alongside rivers such as the Tbilisi and Rustavi. Parts of these cities that are connecting the water bodies tend to get flooded during the monsoon season, causing property damage and significant inconvenience to the residents.

At the central level, it is the Ministry of Interior that coordinates relief and rehabilitation activities during the occurrence of floods. Furthermore, the Ministry of Environment and Natural Resources Protection is responsible for undertaking technical studies relevant to the formulation of policy. At the city level, it is the respective municipalities that are responsible for managing hazard events—with support from the central government. The management of these hazard events is not yet structured and made systematic.

Key Investment Needs in Natural Hazards Including Flood Management

- (i) Analytical studies that form a basis to developing a national strategy, and then policies, programs, and operational plans to tackle flooding events are urgently required
- (ii) Improvement and/or modernization of early warning system
- (iii) Investments to prevent and/or reduce the negative impact of floods and flash floods from river basins
- (iv) Investments to reducing risks of accidents on industrial sites

Air Pollution

Air pollution is a major concern in Tbilisi. This is due to the emissions from motorized vehicles. The number of vehicles in Tbilisi either equals or exceeds the vehicles compared to the whole country. Also, the second-hand cars tend to be largely reconditioned and have higher emission levels. There are also issues pertaining to fuel quality that adversely affect the air emission levels. In other cities, vehicular emissions are not high, though in some cities, for example, Rustavi and Kutaisi, the industrial emissions are the major contributor. However, in the prevailing scenario of industrial stagnation, this is currently not a major issue. The second NEAP, 2012–2016 analyzes the long-term target of having clean air throughout Georgia that is safe both for human health and the environment. To achieve this target, an urban air pollution management strategy is required. Being a multisector, and multidisciplinary issue, the commitment of political leadership and allocation of financial resources is essential to realize these targets and plan implementation.

As of 2009, four air pollution measurement stations were operational—one each in Tbilisi, Batumi, Kutaisi, and Zestaponi. Renovation of existing stations has to be done, and measurement methodologies and systems of data processing developed. According to the monitoring data, all observation points exceed the maximum allowed concentrations of some air pollutants. In order to assess the size and composition of the population exposed

to the polluted air and to plan necessary measures for reduction of human health-related risks, it is necessary to expand the monitoring network. Therefore, the renovation of air monitoring system through legislative, methodological, and technical mechanisms is crucial.

Key Investment Needs in Air Pollution

- (i) Air pollution problem is a concern only in Tbilisi, caused by its large vehicle population
- (ii) Investments associated with those relevant to sustainable urban transport needed
- (iii) Renovation and expansion of existing monitoring stations, measurement methodologies, and systems of data processing

Energy and Heating

Georgia has achieved significant success in terms of energy supply after independence. As a result of the public policies for hydropower development and combating corruption, Georgia has become an energy-independent country and an energy exporter before 2012. Currently, more than 92% of consumers are metered, and the Ministry of Energy plans to complete the individual meter installation program by 2015. Power is available in almost all parts of Georgia but significant quality improvement of energy supply and its compliance with commercial needs is necessary. This is more so in rural areas but also in urban areas.

Electricity Provision

The provision and consumption of energy in Georgia are characterized by seasonal imbalances. In the summer, energy generation in hydro-energy plants significantly exceeds internal demand, while during the winter, the energy deficit necessitates considerable fuel imports to operate heating stations. In Georgia, 80% of the consumed energy is based on hydro energy—a clean and renewable source—and the remaining 20% is produced in heat plants. Consequently, the primary problem of availability of electricity was successfully solved; nowadays and nearly all households in all parts of the country are provided with electricity. The national electricity supply increased from 99.1% in 2003 to 99.6% in 2010.

Gas and Heating

Gas has become the general source of domestic heating, when the wide usage of district heating systems collapsed. Tbilisi is the only region where the natural gas system is fully centralized. In other regions, this process is still under way or yet to be initiated. Kvemo Kartli and Kakheti have relatively high ratios of installation of central gas system (over 30%), while in Adjara, Samegrelo, and Guria, as well as in Samtskhe–Javakheti, such systems do not exist, and propane gas is widely used for heating purposes (Figure 28).

In Georgia, domestic hot water and heating systems are uncommon, except for Adjara and Tbilisi. Only slightly more than 20% of Georgian households have such systems operating. This implies a very low level of utility provision in the country.

Figure 28: Household Provision by Gas and Heating, 2010
(%)

AJ = Autonomous region of Adjara, GU = Guria, IM = Imereti, KA = Kakheti, KK = Kvemo Kartli, MM = Mtskheta–Mtianeti, SK = Shida Kartli, SJ = Samtskhe–Javakheti, SZ = Samegrelo–Zemo Svaneti, TB = Tbilisi.

Source: National Statistics Office of Georgia. 2010. Nationwide Annual Household Survey. Unpublished.

Key Investment Needs in Energy

- With Georgia already an energy-independent country, significant quality improvement of energy supply and its compliance with commercial needs
- District heating systems to be developed across different regions

Urban Transport

Over the past decade, Georgia's transport sector has been radically transformed both in terms of infrastructure (construction of roads, railways, port terminals, and new airports) and service delivery. Both domestic and international passenger transports are almost entirely road-based. The 22,000 km road, comprising international (860 km), secondary (6,140 km), and local (15,000 km) roads, is the most convenient network for the transport system. The 400 km East–West Highway is currently the main road link, providing the fastest surface access from the east to the west. It plays a strategic role for the country and is part of three international road networks of the Central Asia Regional Economic Cooperation Corridor between Europe and Asia, extending from the Red Bridge at the Republic of Azerbaijan border to Sarpi at the Turkish border.

The Ministry of Economy and Sustainable Development (MOESD) is charged with coordinating and regulating all modes of transport and formulating a national transport policy. The MRDI is responsible for developing and maintaining the road network,

except local roads that fall under the jurisdiction of local authorities. Each ministry has implementing units. At MOESD, the Transport Policy Department oversees road transport, maritime, railways, and aviation. The Land Transport Agency, Maritime Transport Agency, and the Georgia Civil Aviation Agency are the technical regulators, but there are no clear rules on financial regulation—pricing, taxation, and so on. At MRDI, the roads department implements and manages the infrastructure. Although managed by MOESD, Georgian Railways operates as a state-owned enterprise. All seaports and two major airports are either owned or operated by private companies. The international airport in Kutaisi and all smaller airports are operated by United Airports of Georgia, another state-owned enterprise.

Urban transport covers inter- and intracity transport. The ministerial transport department works on the policies matching the sector handled by each division operating as an independent body. As for land transport, the agency has to control and monitor the agreement of the private companies and enforce regulation. Regarding the agreement, it follows a bidding process with precise requirements concerning the quality of the fleet, the scope of the services, and a variable validity period of the contract between the ministry and the company. About 150 companies, including five big firms, manage 2,000 buses and 4,000 minibuses.

Urban public transport is a matter of municipal initiative. The following four types of local structures exist:

- (i) An institutional sharing arrangement between municipal and private transport under a clear, organized arrangement such as in Batumi, Rustavi, and Tbilisi. The agreement of the private company is through a competitive bidding process. Bidding for the service provision contracts is based on the following parameters: (a) the daily schedule, (b) the number of lines dedicated to each private company, and (c) the quality of the fleet.
- (ii) An informal combination of municipal and private-public transport without any agreement between private and municipal companies, such as in Poti. Private operators providing intercity services, regulated by the MOESD, informally provide an intracity service without any local agreement and accordingly without any fees paid to the municipality.
- (iii) An official private-public partnership based on local transport exclusively managed by private companies paying monthly fees to the municipality, as in Kutaisi. Bidding arrangements are similar to the ones stated in (i) with a validity period of 2 years.
- (iv) Wholly operated by private companies without any agreement or contract with the municipality, which is the situation in most of the municipalities.

The main concern, apart from the poor condition of the fleet, is the level of municipal revenue resulting from these arrangements. Cases (iii) and (iv) provide no fees to the municipality. For cases (i) and (ii), the municipalities expect an increase in the price of bus tickets to raise the monthly fees levied on the private companies. Even if the rise of the ticket prices is a key issue, regarding the balance between affordability and revenues, the private taxis that operate have an unchecked impact on the entire public transport system. This is an unregulated part of the public transport system and requires integration.

The ecologically cleaner trolley buses and trams from Rustavi and Tbilisi have been discontinued due to lack of maintenance of an aging fleet and facilities. Consequently, in the absence of good quality public transport, private transport, especially private cars, is the dominant urban and intercity transport mode. Tbilisi has a metro that serves 300,000 passengers daily, which is of great importance to urban mobility even though the networks and number of stations are relatively limited. Tbilisi Transport is responsible for the coordination and management of all public transportation in the city.

There is an increase in the modal share of cars with respect to public transport. About half of all Georgian passenger cars are registered in the capital. Car ownership in Tbilisi is about 300 vehicles per 1,000 inhabitants. The ongoing growth in vehicular ownership is expected to increase congestion. Traffic congestion, obsolete second-hand cars, and low-quality gasoline cause 80% of Tbilisi's air pollution, and the air quality is degrading day by day as polluted urban air remains trapped by the surrounding hills. Current motorization rates can only be mitigated by the establishment of an efficient public transport system, which offers an attractive alternative.

There are improvements in the nonmotorized transport infrastructure such as the creation of a pedestrian-friendly environment, cycling paths, and reallocation of road space. In other cities of Georgia, the main public transport modes are buses and *marshrutkas* (shared minibuses or taxis). In smaller settlements, the *marshrutka* is almost the sole transport facility, together with private cars.

The national greenhouse gas inventory for 2000–2006 has shown that the energy sector, including transport, is the leading sector responsible for emissions in Georgia. Increased motorization has degraded air quality, increased noise levels and congestion, and reduced green areas. The majority of secondary and smaller cities of Georgia have poor roads and inefficient urban transport systems, which are subject to rising traffic congestion and pollution.

The Sustainable Transport Initiative of ADB supports the development of accessible, safe, environment-friendly, and affordable transport systems in developing Asia and the Pacific. Through the initiative, ADB has identified opportunities for introducing new and enhanced lending operations to scale up its support for sustainable transport. The opportunities in urban transport are for

- (i) safe, secure, accessible, rapid, efficient, and user-friendly public transport systems;
- (ii) nonmotorized transport infrastructure;
- (iii) integrated urban transport and land-use planning;
- (iv) demand management; and
- (v) traffic engineering and management systems.

In view of the priority accorded internationally to the issue of climate change, there is an urgent need for ADB to assist in developing effective, efficient solutions that can work on a large scale in the transport sector in developing Asia. A useful conceptual tool to guide this work at the country and regional levels is the *avoid-shift-improve* approach:

- (i) **Avoid** means reducing the need to travel, for example, by integrating land-use and transport planning to create local clusters of economic activity that require less mobility; by changing how production is organized (e.g., doing more online); and by developing multimodal logistics chains to cut unnecessary trips.
- (ii) **Shift** means changing to more energy-efficient modes or routes, such as shifting from road to rail or waterways, or onto well-defined trucking routes, or shifting passengers from private vehicles to public transport and nonmotorized modes.
- (iii) **Improve** means using technologies that are more energy efficient, such as improving vehicle standards, inspection, and enforcement; developing improved vehicle technologies and fuels; and improving transport efficiency using information technology.

An integrated public transport system covering all public modes of transport including buses, taxis, and *marshrutkas* should be established. Bus routes should be restructured to introduce an urban hierarchy of main roads and feeder routes. The introduction of an efficient and green transit system, such as clean buses, dedicated bus lanes, and pedestrian crossings, will improve performance and quality of services such as improved time and comfort of travel, which can enable a modal shift. Innovative solutions such as the cable car can be assessed for application in Tbilisi to take advantage of its hilly topography.

Key Investment Needs in Urban Transport

- (i) Introduction of integrated transport and urban planning for sustainable urbanization adopting the *avoid-shift-improve* approach of the Sustainable Transport Initiative framework
- (ii) Development and adoption of traffic management systems in main cities and enhance integrated mobility systems including the transit system and nonmotorized transport
- (iii) Development of sustainable road transport networks, ensuring improved maintenance and safety
- (iv) Introduction of the *smart cities* approach and modern asset management systems
- (v) Introduction of the *green cities* approach for improving urban infrastructure climate-change-resilient standards
- (vi) Greenhouse gas inventories and introduction of greenhouse gas emission reduction priorities in the transport sector, such as introduction of low-emission technologies (clean buses and cable cars)
- (vii) Improvement of investment planning, funding, and financing mechanisms

Urban Vision and Strategic Prioritization

National Strategy

The Regional Development Program of Georgia, 2015–2017 is a medium-term government document specifying the main goals and objectives of Georgia’s Regional Development Policy and its priorities and measures. It also defines the necessary conditions for the balanced and sustainable socioeconomic development of the country’s regions.

In 2014, the Government of Georgia approved an important strategic document, the Socio-Economic Development Strategy of Georgia, referred to as Georgia 2020. The aim is for a significant part of the Georgian population to benefit from inclusive national economic growth. Georgia 2020 reflects the priorities and problems that need to be resolved in order to achieve long-term, sustainable and inclusive economic growth. The strategy defines the following main priority directions for achieving such inclusive economic growth: (1) improve investment and business environment, (2) support development of innovations and technologies, (3) facilitate growth of exports, (4) develop infrastructure and maximum utilization of country’s transit potential, (5) develop labor force according to the labor market requirements, (6) improve social security system, (7) ensure accessible and quality health care, and (8) mobilize investments and (9) develop financial intermediation” (Government of Georgia 2013, p. 11). Georgia 2020 describes each of these priorities, starting from the review of the historical path through the existing situation, main policy directions within a priority, and expected results and measures.

Georgia 2020 does not directly address the needs of urban development, additionally emphasizing that urban issues and development are not prioritized in the country. Although the prioritized issues of developing infrastructure, including roads, transport, and utilities; establishing logistic centers; improving the labor market; enhancing energy provision; caring for energy efficiency; and so on have an indirect connection with urban growth, they do not replace the necessity of more focused and comprehensive approaches by the government to the problems of cities and towns and the elaboration of an national urban strategy for the country.

Urban Vision

As a largely rural economy until recently and with only one large city (Tbilisi), the Government of Georgia is yet to identify the global trend of focusing on the economic development of cities and towns. The government does not yet have a clear, well-identified strategy for the development of the urban sector.

Urban development and planning in Georgia since its independence is lacking any formal policies; the legislative framework is incomplete and mostly declarative, while the institutional framework is weak and fragmented. Urban affairs have not found a place among national priorities, except for the Government of Georgia's 10-point plan for modernization and employment, issued in 2011, where "urban and regional development" was listed as point 10 among the top 10 priorities of national development (Government of Georgia 2011). However, after the change of government in 2012, the document lost its importance, and no effective measures for its implementation have been taken.

A number of government departments and agencies and/or companies are focusing on the urban sector in Georgia. At the ministry level, there are the Ministry of Regional Development and Infrastructure and the Ministry of Environmental Protection. At the agency and/or company level, there are the Solid Waste Management Company of Georgia, Municipal Development Fund (MDF), United Water Services Company of Georgia, Georgian Gas and Water Power Company, and the various municipalities. All of these organizations are directly or indirectly working toward establishing and maintaining urban assets in the country. As the Government of Georgia is focusing on regional development, there are strategies that were completed in 2013. From these strategies, it is necessary to ascertain programs and plans that are relevant to the urban sector. Tbilisi has recently developed a city development strategy that is yet to be adopted by the government.

There are some investments being made in the urban sectors through resources raised from the MDF or from multilateral or bilateral donors either directly or through the MDF. However, there is no clear mandate on how these investments are analyzed and being implemented. The MDF is focused on demand-driven urban subprojects. Around 1,800 subprojects have been implemented or are under implementation and building urban assets. As these are demand driven, the identification of these subprojects is not from an urban investment assessment. Determining the gaps from the database of subprojects across cities and towns in Georgia does not seem feasible, given the limitation of time and the extensive information gaps.

In July 2015, the government invited expressions of interest from consultants to prepare a national spatial development plan (NSDP), based on international best practice. The Ministry of Economy and Sustainable Development is taking steps to aid the process with the establishment of a responsible government commission, expected to be chaired by the prime minister, which will monitor the planning process throughout the period of planning until the submission of the NSDP to the government (Ministry of Economy and Sustainable Development 2015). The proposed NSDP should be prepared through extensive stakeholder consultations.

Developing an Urban Vision

The need to prepare such a national level strategy and plan was clearly identified in the stakeholder consultation and visioning workshop attended by stakeholders, agencies, development partners, and experts, held on 8 December 2014 at the ADB Georgia Resident Mission. The purpose of the workshop was to support the preparation of the Georgia National Urban Assessment through consultations of the key urban issues, challenges, and

opportunities in developing an urban vision for Georgia. Discussions with the stakeholders achieved concurrence on the integrated urban planning approach toward setting an urban vision and on alignment with national priorities on investment programs for increasing competitiveness, green, and inclusive development of cities.

The workshops achieved its objective to obtain consensus on the integrated urban planning approach and vision for sustainable urban development through the 3E strategies: economic competitiveness, environmental sustainability, and equitable society. Through this workshop, consultations were held with the participants on the key urban issues, challenges, and opportunities in developing an urban vision for Georgia.

An assessment of the urban challenges through strengths, weaknesses, threats, and opportunities (SWOT) analysis along the 3E strategies for economy, environment, and equity identified the following strategic areas for prioritization:

Economy

- (i) Enabling industry and business to generate employment
- (ii) Exploring public–private partnership options for financing infrastructure

Environment

- (i) Increasing the green areas—parks and trees—in cities
- (ii) Using modern environment-friendly technologies
- (iii) Compiling a CO₂ emissions inventory and reducing emissions
- (iv) Tightening the regulatory framework for environmental and construction standards

Equity

- (i) Universal access—disability
- (ii) Equal opportunities for all across the income strata
- (iii) Social safety nets
- (iv) Public transport—improving mobility, accessibility, and affordability
- (v) Housing for all incomes—rehabilitation of existing housing stock
- (vi) Improving infrastructure and services—expansion, coverage, and access
- (vii) Health protection
- (viii) Regulations and urban planning
- (ix) Public awareness (public transport and infrastructure)

The vision of Georgia is to leverage its strategic location and develop as a transport and logistics hub. The urban vision is to develop regionally competitive, connected, and livable cities through an inclusive and adaptive approach

- (i) to respond to the requirements of the cities by building on their individual assets, strengths, and opportunities through integrated urban planning;
- (ii) to support knowledge transfer through replication of transformational global good practice and experience;
- (iii) to strengthen resilience of the cities and meet international emission standards through technological innovation;
- (iv) to enable inclusive urban development for provision of affordable housing and shelter for the urban poor;

- (v) to strengthen institutions at all levels and build capacity of stakeholder groups including small and medium-sized enterprises (SMEs), and citizens through peer-to-peer learning and community awareness programs; and
- (vi) to build partnerships with other development partners to harmonize approaches.

Strategic Urban Priorities

The strategic urban priorities that emerged through the assessments, SWOT analysis, and the discussions with stakeholders are outlined in the following:

Enabling Environment: Improving Urban Governance and Management

- (i) Improving systems for urban planning and spatial planning. Developing a national urban strategy and spatial development plan based on a balanced regional urbanization approach to realize the potential of the medium-sized cities and rural economies for increased urban–rural integration and reduction of regional disparities.
- (ii) Developing integrated urban plans and programs for cities as well as smaller towns covering all sectors.
- (iii) Strengthening urban governance and management through establishment of an institutional mechanism for coordination across different sectors in major cities to deal with urban infrastructure and service delivery.
- (iv) Developing the capacity of local self-governments for technical and management skills through training courses and capacity building, especially for integrated urban planning, heritage conservation, building regulations, and other areas.
- (v) Developing an enabling framework for investments in the urban sector including legislative reforms, revision of planning and building codes, and environmental standards and regulations.
- (vi) Strengthening tax revenues to ensure adequate resources for social and physical infrastructure development for sustainable economic growth.

Economy: Building Regional Competitiveness

- (i) Investing in transport and tourism infrastructure to improve access and economic prospects of rural communities and small towns dependent on agribusiness such as horticulture, nuts, fruits, cheese, and wine making.
- (ii) Developing an integrated transport system for major cities and improving regional connectivity.
- (iii) Consolidating and developing smaller towns and cities through clustered development to stimulate economic growth.
- (iv) Building on existing transport investments such as the East–West Highway to link tourism development through clustered development as a pilot initiative.
- (v) Advancing industrial development including SMEs and agroindustries (cheese and wine). Supporting the development of logistics for export-oriented horticulture and agribusiness. Providing incentives to investors to promote growth in regional centers as well as addressing regional disparities and urban imbalance.
- (vi) Enhancing credit finance to foster entrepreneurship for SME development and support social infrastructure.

- (vii) Improving the domestic investment climate and legislation to encourage the domestic banking sector and the private sector to invest in infrastructure to attain long-term development goals.
- (viii) Increasing the capacity of the MDF to support cities in developing bankable projects for public–private partnership.

Equity: Inclusive Growth

- (i) Promoting public and community awareness programs including mechanisms for community participation through schools.
- (ii) Developing a robust industry sector is necessary to create more productive job opportunities for unskilled labor.
- (iii) Linking education, vocational training, and skills development to employment creation with the provision of supporting infrastructure facilities.
- (iv) Supporting strategic investments in cross-sector initiatives such as agricultural and cultural tourism along with skills development.
- (v) Rehabilitating and regenerating the housing stock to meet demands.
- (vi) Introducing inclusive urban development policies to enable affordable housing and shelter for the urban poor, as well as ensuring the protection of rights and promoting compliance with regulations by all agencies, including the private sector, responsible for delivery of housing in an otherwise inefficient land and housing market.

Environment: Green Resilient Cities

- (i) Targeting investment in urban environmental infrastructure for climate change adaptation and mitigation: infrastructure with environmental considerations—with improvements in water supply and water quality; sanitation, solid waste management, education, and roads; sustainable public transport, mobility, and transport management; and public space management.
- (ii) Undertaking greenhouse gas inventories and introducing greenhouse gas emission reduction priorities in the power and transport sectors: expanding and renovating the existing monitoring stations for air quality, measurement methodologies, and systems of data processing.
- (iii) Reviewing land-use and land-conversion policies: establishing transparent and accountable systems that enable organizational reform to bring in good governance in the real estate and construction market.
- (iv) Consolidating data on urban land use: developing a centralized land-use database system with geographic information system mapping to aid government in tapping land value and increase efficiency in property tax collection.
- (v) Enhancing energy efficiency and technological support for renewable energy, considering waste-to-energy options, and others.
- (vi) Developing and expand district heating systems across different regions.
- (vii) Developing a national strategy, policies, programs, and operational plans to tackle flooding events: investing in the prevention and/or reduction of the negative impact of floods and flash floods from river basins and modernizing early warning systems.

Policy and Programming

ADB–Georgia Country Partnership Strategy

The country operations business plan (COBP), 2015–2017 of the Asian Development Bank (ADB) is consistent with the country partnership strategy (CPS) 2014–2018 for Georgia, according to the findings from ADB's recent Midterm Review of Strategy 2020 and the Socio-economic Development Strategy of Georgia (Georgia 2020) approved by the government in June 2014 (ADB 2014a, 2014b). Georgia 2020 has its vision for every member of society to enjoy the benefits of economic growth and for the potential of every citizen to fully contribute to the country's development (Government of Georgia 2014). The CPS, 2014–2018 and Georgia 2020 share a common goal of fostering inclusive economic growth through measures to (i) enhance private sector competitiveness; (ii) improve public sector management, including domestic resource mobilization for investment; and (iii) finance priority infrastructure that is essential for connectivity and broader access to economic activity. Both strategies also emphasize the need to ensure environmental sustainable growth, including the integration of climate risk management into infrastructure planning. The vision of Georgia to leverage its strategic location and develop as a transport corridor is consistent with ADB's Midterm Review of Strategy 2020 and its emphasis on regional cooperation and integration.

The strategic thrust of the COBP, 2015–2017 is consistent with the CPS priorities. The plan will support the government to (i) improve internal and regional market connectivity to enhance private sector competitiveness and to broaden community access to economic opportunities; (ii) make essential drinking water, sewerage, and sanitation services more accessible and reliable, particularly in smaller towns and secondary cities that are potential hubs for agribusiness and tourism; (iii) improve the security and stability of power systems, especially for communities in underdeveloped regions; (iv) strengthen public sector management for domestic resource mobilization and investment in business and infrastructure; and (v) increase access to finance and promote financial inclusion, particularly for micro, small, and medium-sized enterprises. Consultations between ADB and the government during April–August 2014 confirmed the overall validity of ADB's strategic approach and the indicative assistance pipeline.

The indicative resources available for 2015–2017 are \$482.0 million, including \$132.0 million from the Asian Development Fund (ADF) and \$350.0 million from ordinary capital resources.²² The total firm lending pipeline proposed for Georgia in 2015–2017

²² In August 2014, ADB approved the formal graduation of Georgia from access to ADF resources with effect from 1 January 2017.

amounts to \$516.0 million, comprising \$132.5 million from the ADF and \$383.5 million from ordinary capital resources.²³ In addition to \$100 million in financing for secondary roads in 2016 and \$50 million in financing for power transmission in 2017, public sector lending operations will finance subprograms of two multitranche financing facilities: the Urban Services Improvement Investment Program and the Sustainable Urban Transport Investment Program. A project development assistance for \$10 million in 2017 will finance the design of urban infrastructure and services in the context of sustainable cities. Policy-based lending operations of \$50 million in 2015 and \$75 million in 2016 will support public sector management and finance sector reforms. Nonsovereign lending will complement public sector borrowing. Nonsovereign operations will explore financing to commercial banks for micro, small, and medium-sized enterprises and to bankable projects in renewable energy, agroprocessing, transport logistics, and other priority areas.

An estimated \$9.2 million in technical assistance grants during 2015–2017 will support project preparation, capacity development, and policy advice. Nearly 50% of the technical assistance grant funding is allocated for project preparation, while the rest supports policy reform and capacity development in infrastructure planning, public–private partnerships, finance sector development, public sector management, and operationalizing knowledge management. Support for the key drivers of change is integrated into the proposed projects and programs.

Strategic Urban Infrastructure Investment Plan

Meeting the challenges and opportunities identified under the National Urban Assessment will require the government to adopt and support multiple strategies, new initiatives, and innovative funding mechanisms. The key challenge for the government is to strengthen institutional coordination among agencies. Building on the ongoing multitranche financing facility, ADB can help the government develop livable cities (competitive, socially inclusive, and environmentally attractive) through investments for infrastructure and improved policy and institutional arrangements for delivering urban services. This rapid assessment of the urban sector has identified some key investment areas that ADB could possibly target aligned with the CPS, 2014–2018 results framework, which identified ADB priority areas for intervention aligned with the government priorities. The additional priorities (in *italics*) are outlined in Table 15.

Integrated urban planning.

Developing competitive and livable cities in Georgia will require an urban development process that is based on integrated urban planning and policy formulation processes. These processes should (i) factor in the needs and opinions of immediate stakeholders; (ii) prioritize strategic investment in urban infrastructure with a holistic approach toward water management, especially water, wastewater (sanitation), solid waste management, and storm water management to reduce flood risks; (iii) address issues of utility service

²³ The final ADF allocation depends on the available commitment authority and outcome of country performance assessments.

provision; and (iv) implement integrated transport and land-use planning to ensure traffic optimization and intercity connectivity through proper linkages with the national road investment program. City development plans or integrated urban plans for towns should also focus on reducing environmental degradation; preserving cultural heritage; fostering financially sustainable development; and strengthening institutional, organizational, and technical capacities of the urban development agencies.

Sustainable urban transport.

To strengthen urban transport systems, Georgia needs to streamline policy and regulatory frameworks, rationalize and improve public transport, reinforce network structures, optimize technologies and services, and develop links with diversified supply elements (i.e., public and private service providers). The investments can focus on (i) rapid transit systems and public transport, (ii) coastal reinforcement works to protect urban infrastructure, and (iii) urban transport planning in Tbilisi and selected cities. In terms of organizational capacity building and institutional reforms, priorities are to (i) develop and adopt traffic management systems in the main cities; (ii) introduce modern asset management systems; (iii) enhance integrated mobility systems including nonmotorized transport; and (iv) improve investment planning, funding, and financing mechanisms.

Water supply and sanitation and solid waste management services.

These are to be provided in a professional, businesslike manner, with a focus on providing quality services to consumers. This includes (i) improving managerial, operational, and financial capacity of the utilities; (ii) strengthening water demand management (meters, system efficiency, and wastewater treatment); (iii) strengthening the institutional and regulatory environment to facilitate sustainable investments; (iv) upgrading service quality norms; and (v) providing services at affordable prices with explicit service obligations and cost-recovery tariffs where affordable. In addition to transforming sector institutions into professional service providers, there is a need to (i) develop a national policy and program to improve services by concentrating on comprehensive system improvements in urban growth centers as opposed to scattered investments; (ii) improve the planning process, management, and monitoring practices (management contracts); (iii) structure alternative modes of financing, including public–private partnerships; and (iv) apply updated technological solutions for upgrading water supply and sanitation and solid waste management systems.

Table 15: Suggested Areas for Interventions along the 3E Approach Aligned with the Country Partnership Strategy Results Framework

ADB Sector Focus (CPS): Government Objectives	ADB Areas of Intervention with Additional Priorities Identified along the 3E Approach			ADB Indicative Resource Allocation in the Next Pipeline and Thematic Priorities
	Competitive Cities Projects	Green Cities Projects	Inclusive Cities Projects	
1. Transport (Strategy 2020; Core Area 1: Infrastructure, Core Area 2: Environment, and Core Area 3: Regional integration): Improve transport and logistical infrastructure and services	Construction and rehabilitation of expressways, national, secondary, and urban roads <i>Integrated land use and transport</i>	Road and sectorwide transport policies and reform Public transport and urban transport planning and reforms <i>Clean and efficient modes of transport to address environmental concerns</i>	Road maintenance and road safety <i>Affordable and safe transport options; NMT options</i>	\$157 million or 22% of the total CPS envelope of which: ESG: 100% GEM: 0% PSD: 0% RCI: 64%
2. Water Supply and Other Municipal Infrastructure and Services (Strategy 2020; Core Area 1: Infrastructure and Core Area 2: Environment): Modern systems of water supply and waste management developed	Urban planning, tariff policies reform, and sector development <i>Integrated urban plans</i>	Drinking water and sanitation systems and wastewater management <i>Increasing efficiency of urban services</i>	Drinking water and sanitation systems and wastewater management <i>Improving access and affordability</i>	\$292 million or 42% of the total CPS envelope of which: ESG: 100% GEM: 97% PSD: 0% RCI: 0%
3. Energy (Strategy 2020; Core Area 1: Infrastructure and Core Area 2: Environment): Reduced energy consumption from environmentally unsustainable energy sources and improved energy efficiency	Energy sector development	Renewable energy; energy efficiency and conservation Develop and expand district heating systems across the different regions	Affordable energy; rural electrification	\$50 million or 7% of the total CPS envelope of which: ESG: 100% GEM: 0% PSD: 0% RCI: 0%
4. Public Sector Management (Strategy 2020; Core Area: Other areas of operations): Increased efficiency and effectiveness of public sector management	Improved management of debt, cash, and fiscal risk	<i>Improved public financial management; performance-based transfers; revenue mobilization; cost recovery tariffs</i>	Legal and regulatory framework for enhancing domestic savings and capital markets	\$100 million or 14% of the total CPS envelope of which: ESG: 0% GEM: 63% PSD: 100% RCI: 0%
5. Finance (Strategy 2020; Core Area 4: Finance sector development): Increased access to finance for private sector	Finance sector development, money and capital markets, insurance, and contractual savings		Small and medium-sized enterprise finance	\$100 million or 14% of the total CPS envelope of which: ESG: 0% GEM: 63% PSD: 100% RCI: 0%

3E = economy, environment, and equity; ADB = Asian Development Bank; CPS = country partnership strategy; ESG = environmentally sustainable growth; GEM = gender equity and mainstreaming; NMT = nonmotorized transport; PSD = private sector development and private sector operations; RCI = regional cooperation and integration.

Note: The additional areas for the suggested interventions are in italics. The analysis is based on the CPS for the Philippines.

Sources: ADB. 2015. *Country Partnership Strategy: Philippines, 2015–2018*. Manila.

The 3E Targeted Investment Program

Targeted investments require a geographical focus to identify urban strategic areas or locations for Asian Development Bank (ADB) interventions. These are based on the government policy documents, other donor agency reports, and ADB sources. The 3E (economy, environment, and equity) framework provides the platform for ADB to leverage the drivers for developing cities and to apply these to highlighted urban priorities. Cities must become more competitive, inclusive, and environmentally responsive, incorporating the current sectors of focus in the country partnership strategy—transport, energy, water supply and other municipal services, and public sector management—if they are to become more economically dynamic and livable places. The following table outlines recommendations for investments.

Table 16: Recommendations for 3E Investments

ADB Sector Focus	Green Cities	Competitive Cities	Inclusive Cities
Urban Development	<p>Policy: Target investment in urban environmental infrastructure for climate change adaptation and mitigation</p> <p>Prioritize strategic investment in urban infrastructure with holistic approach toward water management, especially water, wastewater (sanitation); solid waste management; and storm water management to reduce flood risks</p> <p>Address issues of utility service provision</p>	<p>Policy: Develop smaller towns and cities near major growth centers to stimulate economic growth to capture benefits of urbanization</p> <p>Institutions and regulatory systems</p> <p>Diversify export-oriented agribusiness and support development of robust industry sector to create more productive job opportunities for unskilled labor</p> <p>Establish vocational education</p> <p>Enhance local outlets for credit finance investment in SME promotion through industry associations and e-governance to reduce transaction costs and support SME development</p>	<p>Policy: Provide incentives to promote growth in medium-sized cities and towns to address urban imbalance</p> <p>Human resource development</p> <p>Link education, vocational training, and skills development to employment creation in small towns and medium-sized cities</p> <p>Provide vocational education and supply chain capacity development for agroindustries</p> <p>Introduce local revenue-generating activities</p>
Land Management	<p>Address urban renewal through targeted investments for rehabilitation of housing stock and provision for low-income communities</p> <p>Review land-use and land conversion policies</p>	<p>Consolidate data on urban land use</p> <p>Develop a centralized land-use database system with GIS mapping for transparent and efficient land-use and infrastructure planning</p>	<p>Empower communities to increase accountability and transparency in monitoring and implementation of housing rehabilitation and upgrading strategies for poor urban communities</p>

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Table 16 *continued*

ADB Sector Focus	Green Cities	Competitive Cities	Inclusive Cities
Land Management	Establish transparent and accountable systems that enable organizational reform to bring in good governance in the real estate and construction market	Ensure an integrated transport and land-use planning to facilitate land optimization	Ensure protection of rights and promote compliance of regulations by all agencies, including private sector, responsible for delivery of housing Address housing affordability
Solid Waste Management	Operationalize the existing landfills and the new state-of-the-art landfills so that there are no harmful impacts on the environment	Increase efficiency through involving the private sector in waste management Exploit cross-sector synergies, such as waste recycling (material reuse) and recovery (waste-to-energy options)	Improve access of urban population to adequate solid waste collection and disposal Encourage urban community initiatives to reduce and segregate waste-at-source
Water Supply and Municipal Services	Ensure water recycling and waste recovery Develop a watershed plan with a combination of restoration and protection measures, as a superset of the land-use plan	Improve planning process, management, and monitoring practices Strengthen institutional and regulatory environment to facilitate sustainable investments Structure alternative modes of financing, including PPPs Promote local revenue-generating activities Support infrastructure-led development Apply up-to-date technological solutions for upgrading WSS and SWM systems	Improve access of urban population to piped water on premises Provide services at affordable prices with explicit service obligations and cost-recovery tariffs, wherever applicable
Transport and Tourism	Establish public transport, land-use/transport synergies Incorporate greenhouse gas inventories and emission reduction priorities in transport sectors Measure and reduce infrastructure bottlenecks Increase densities and growth among corridors	Invest in transport and tourism infrastructure to improve access and economic prospects of geographically dispersed regions Establish intercity connectivity through proper linkages with the national road investment program Develop and adopt traffic management systems in the main cities Introduce modern asset management systems Enhance integrated mobility systems Improve investment planning, funding, and financing mechanisms	Promote strategic investments in cross-sector initiatives, such as agricultural tourism and cultural tourism, alongside alternative livelihood opportunities

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Table 16 continued

ADB Sector Focus	Green Cities	Competitive Cities	Inclusive Cities
Energy	Address climate change Mitigate greenhouse gas emissions Enhance energy efficiency in urban services Plan energy-efficient building construction Provide reliable and secure electricity services at competitive rates that are essential to improve the investment climate and distribution management Invest in clean production technology Increase technological support for renewable energy Consider waste-to-energy options, and others	Provide reliable and secure electricity services at competitive rates to improve the investment climate	Provide affordable electricity Provide rural electrification Provide renewable energy for community-led development
Urban Governance and Public Sector Management	Establish governance mechanisms for coordination of planning and implementation of projects Establish building codes and certification	Strengthen tax revenues to ensure adequate resources to develop social and physical infrastructure to facilitate sustainable economic growth Strengthen property rights Promote PPPs Improve the domestic investment climate to encourage the domestic banking sector and the private sector to invest in infrastructure to attain long-term development goals Ensure regional planning and coordination Provide innovative financing alternatives Facilitate capacity development of local self-governments to develop technical and management skills	Address project partnerships Reform local government institutions Encourage microfinance Address climate change and facilitate adaptation Ensure asset management and community-based budgeting

3E = economy, environment, and equity; ADB = Asian Development Bank; GHG = greenhouse gas; GIS = geographic information system; PPP = public-private partnership; SMEs = small and medium-sized enterprises; SWM = solid waste management; WSS = water supply and sanitation.

Source: Asian Development Bank.

APPENDIX 1

Population

Table A1: Population by Municipality at the Beginning of the Year, 2004–2014

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Georgia	4,315.2	4,321.5	4,401.3	4,394.7	4,382.1	4,385.4	4,436.4	4,469.2	4,497.6	4,483.8	4,490.5
Tbilisi	1,078.2	1,079.7	1,103.3	1,101.1	1,136.6	1,136.6	1,152.5	1,162.4	1,172.7	1,171.2	1,175.2
Autonomous Republic of Adjara	370.1	373.0	377.2	378.8	380.2	382.4	386.9	390.6	393.7	394.2	396.6
Batumi City	120.2	121.2	122.1	122.2	122.2	122.5	123.5	124.3	125.8	160.0*	161.2*
Keda Municipality	19.5	19.6	19.7	19.8	19.9	20.0	20.2	20.4	20.5	20.5	20.6
Kobuleti Municipality	86.6	87.2	88.9	89.2	89.4	89.8	91.1	92.1	93.0	92.9	93.3
Shuakhevi Municipality	21.2	21.3	21.6	21.8	22.0	22.3	22.6	22.8	22.9	22.8	22.9
Khelvachauri Municipality	89.6	90.5	91.3	91.8	92.2	92.8	94.0	95.2	95.6	62.1*	62.5*
Khulo Municipality	33.0	33.2	33.6	34.0	34.5	35.0	35.5	35.8	35.9	35.9	36.1
Guria	139.2	138.7	139.3	139.0	138.8	138.8	139.8	140.3	140.3	139.2	138.8
Lanchkhuti Municipality	39.2	39.0	39.0	38.8	38.7	38.7	38.9	38.9	39.0	38.7	38.6
Ozurgeti Municipality	77.1	76.9	77.5	77.4	77.3	77.2	77.9	78.4	78.5	77.9	77.7
Chokhatauri Municipality	22.9	22.8	22.8	22.8	22.8	22.9	23.0	23.0	22.8	22.6	22.5
Imereti	690.2	689.0	700.1	697.6	694.2	693.5	700.4	704.5	707.5	703.9	703.3
Kutaisi City	183.8	184.5	190.1	189.7	188.6	188.6	192.5	194.7	196.8	196.5	197.0
Baghdati Municipality	28.7	28.4	29.0	28.8	28.6	28.5	28.7	28.8	28.8	28.6	28.5
Vani Municipality	34.0	33.9	34.2	33.9	33.7	33.7	33.8	33.8	33.8	33.6	33.5
Zestaponi Municipality	75.2	75.0	75.6	75.4	75.2	75.1	75.4	75.7	75.7	75.3	75.2
Terjola Municipality	44.8	44.7	45.3	45.1	44.8	44.7	45.0	45.1	45.1	44.8	44.7
Samtredia Municipality	59.7	59.6	60.4	60.2	59.9	59.8	60.3	60.7	60.8	60.3	60.1
Sachkhere Municipality	46.2	46.2	46.4	46.5	46.6	46.9	47.3	47.7	48.1	48.0	48.1
Tkibuli Municipality	30.6	30.3	30.6	30.4	30.2	30.0	30.1	30.1	30.1	29.8	29.5
Tskaltubo Municipality	72.9	72.7	73.9	73.6	73.2	73.0	73.6	73.8	74.1	73.6	73.5
Chiatura Municipality	55.5	55.2	55.6	55.3	55.0	54.8	55.0	55.2	55.3	54.9	54.9
Kharagauli Municipality	27.5	27.3	27.6	27.5	27.4	27.4	27.5	27.5	27.4	27.2	27.1
Khoni Municipality	31.3	31.2	31.4	31.2	31.0	31.0	31.2	31.4	31.5	31.3	31.2
Kakheti	401.3	399.9	404.8	403.6	401.9	401.4	404.5	406.2	407.1	405.1	405.0
Akhmeta Municipality	40.9	40.8	41.7	41.6	41.5	41.5	42.0	42.2	42.4	42.3	42.3
Gurjaani Municipality	71.5	70.9	70.9	70.5	70.2	69.9	69.9	69.9	69.7	69.2	69.0
Dedoplistskaro Municipality	30.3	30.2	30.8	30.6	30.3	30.2	30.5	30.6	30.6	30.5	30.4

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Table A1 continued

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Telavi Municipality	69.7	69.5	70.6	70.4	70.0	69.8	70.5	71.0	71.2	70.9	70.9
Lagodekhi Municipality	50.4	50.4	50.9	51.0	51.1	51.3	51.8	51.9	52.1	51.9	52.0
Sagarejo Municipality	58.3	58.4	58.8	58.8	58.7	59.0	59.4	59.8	60.0	60.0	60.3
Sighnaghi Municipality	43.0	42.8	43.9	43.6	43.1	42.8	43.3	43.6	43.8	43.4	43.2
Kvareli Municipality	37.2	36.9	37.2	37.1	37.0	36.9	37.1	37.2	37.3	36.9	36.9
Mtskheta–Mtianeti	122.5	122.5	124.5	124.1	105.2	105.2	108.8	109.3	109.7	108.9	108.8
Akhalgori Municipality	7.4	7.4	7.6	7.6	7.6	7.6	...	...	...	...	...
Dusheti Municipality	33.0	32.8	33.4	33.3	33.1	33.1	33.8	34.0	34.1	33.8	33.6
Tianeti Municipality	13.3	13.2	13.4	13.3	13.1	13.1	13.2	13.1	13.1	12.9	12.9
Mtskheta Municipality	63.9	64.2	65.2	65.0	46.5	46.5	56.9	57.3	57.6	57.3	57.4
Kazbegi Municipality	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Racha–Lechkhumi, Kvemo Svaneti	49.7	49.1	49.1	48.6	48.2	47.7	47.6	47.3	47.0	46.3	45.9
Ambrolauri Municipality	15.7	15.4	15.3	15.1	14.9	14.7	14.5	14.3	14.1	13.8	13.6
Lentekhi Municipality	8.8	8.8	8.9	8.9	8.9	8.9	9.0	9.0	9.0	8.9	8.9
Oni Municipality	9.0	8.9	8.9	8.8	8.7	8.5	8.5	8.4	8.3	8.2	8.1
Tsageri Municipality	16.2	16.0	16.0	15.8	15.7	15.6	15.6	15.6	15.6	15.4	15.3
Samegrelo–Zemo Svaneti	459.5	460.4	471.0	469.8	467.7	468.0	474.1	477.1	479.5	476.9	476.3
Poti City	46.5	46.7	47.3	47.3	47.4	47.5	47.7	47.8	47.9	47.7	47.8
Abasha Municipality	28.1	28.1	28.2	28.1	27.9	27.8	27.8	27.8	27.7	27.6	27.5
Zugdidi Municipality	165.7	166.2	172.2	172.1	171.4	171.6	175.0	176.6	178.2	177.2	177.0
Martvili Municipality	44.0	44.2	44.8	44.6	44.4	44.4	44.7	44.9	45.0	44.7	44.5
Mestia Municipality	14.0	14.1	14.1	14.2	14.3	14.4	14.5	14.6	14.6	14.5	14.5
Senaki Municipality	51.5	51.4	52.2	52.0	51.7	51.7	52.3	52.5	52.6	52.3	52.2
Chkhorotsku Municipality	29.6	29.6	30.2	30.0	29.8	29.8	30.3	30.6	30.8	30.7	30.7
Tsalenjikha Municipality	39.5	39.5	40.5	40.3	40.0	40.0	40.5	40.7	40.9	40.7	40.6
Khobi Municipality	40.6	40.6	41.5	41.2	40.8	40.8	41.3	41.6	41.8	41.5	41.5
Samtskhe–Javakheti	202.6	203.5	208.5	208.3	207.7	208.1	211.3	212.8	214.2	213.5	213.7
Adigeni Municipality	20.1	20.1	20.5	20.4	20.3	20.4	20.7	20.7	20.9	20.8	20.8
Aspindza Municipality	12.3	12.3	12.7	12.7	12.6	12.7	12.9	13.0	13.1	13.2	13.2
Akhalqalaqi Municipality	59.9	60.4	62.5	62.5	62.3	62.3	63.7	64.4	65.0	64.8	64.9
Akhaltikhe Municipality	45.2	45.4	46.9	46.9	46.8	46.9	47.7	48.2	48.6	48.4	48.5
Borjomi Municipality	31.6	31.7	32.1	31.9	31.7	31.5	31.7	31.8	31.8	31.5	31.4
Ninotsminda Municipality	33.5	33.6	33.8	33.9	34.0	34.3	34.6	34.7	34.8	34.8	34.9
Kvemo Kartli	491.1	494.7	507.6	508.3	486.9	488.8	499.9	505.7	511.3	511.1	513.1
Rustavi City	115.0	115.5	118.2	117.9	117.3	117.4	119.5	120.8	122.5	122.5	122.9
Bolnisi Municipality	73.3	74.0	75.1	75.6	76.0	76.7	77.8	78.3	78.7	78.6	78.9
Gardabani Municipality	112.8	113.7	116.4	116.5	95.4	95.7	97.6	98.7	99.7	99.7	100.1
Dmanisi Municipality	27.6	27.8	28.4	28.3	28.2	28.2	28.5	28.8	28.9	28.8	28.8

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Table A1 *continued*

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TetriTskaro Municipality	25.0	25.0	26.4	26.2	25.8	25.6	27.7	28.0	28.4	28.3	28.3
Marneuli Municipality	116.7	117.9	121.0	121.8	122.5	123.5	126.3	128.1	129.6	129.8	130.6
Tsalka Municipality	20.7	20.8	22.1	22.0	21.7	21.7	22.5	23.0	23.5	23.4	23.5
Shida Kartli	308.9	309.1	314.0	313.6	312.8	313.0	310.6	313.0	314.6	313.5	313.8
Tskhinvali City	...	...	...	...	...	...	...	...	...	...	...
Gori Municipality	146.4	146.9	135.9	135.8	135.6	135.8	144.1	145.3	146.1	145.7	145.8
Eredvi Municipality	...	...	5.9	5.9	5.9	5.9	...	...	...	...	...
Tighvi Municipality	...	...	1.5	1.5	1.5	1.5	...	...	...	...	...
Kaspi Municipality	51.4	51.4	52.1	52.0	51.8	51.8	52.6	52.9	53.0	52.6	52.6
Kareli Municipality	49.5	49.4	49.7	49.7	49.5	49.5	51.6	52.3	52.9	52.8	52.9
Kurta Municipality	...	...	7.1	7.1	7.1	7.1	...	...	...	...	...
Khashuri Municipality	61.6	61.4	61.8	61.6	61.4	61.4	62.3	62.5	62.6	62.4	62.5
Java Municipality	...	...	...	...	...	...	...	...	...	...	...

... = not available.

Source: Geostat 2014. www.Geostat.ge

APPENDIX 2

Urban Profiles for Tbilisi and Other Cities

Tbilisi

Introduction

Location: Tbilisi is located about 120 kilometers (km) south of the Great Caucasus Mountains, on the banks of the Mtkvari (Kura) River, along the historical Silk Road. It still holds a strategic location at the crossroads of the Russian Federation, Turkey, Armenia, and the Republic of Azerbaijan; Europe and Asia; and the Islamic and Christian worlds. Its convenient location and the good accessibility enable the city to maintain a competitive position in the region.¹

Population, area, and geography: Tbilisi, the capital and the largest city of Georgia, has a population of 1.144 million people and covers an area of 504 square kilometers (km²).² It is a multifunctional settlement situated on the same latitude as Rome and Barcelona, ensuring climatic conditions and an environment favorable for human habitation, economic activities, and recreation.

Tbilisi is located in the Mtkvari (Kura) River Valley, on both banks of the river, surrounded by mountains on three sides. Originally, the old city of Tbilisi was located, for strategic reasons, at the narrowest point of the valley. Over time, as the city grew, the city progressively extended from the historical center and encompassed the adjacent villages. Further development resulted in a linear built-up area. The present urban area is approximately 35 km long and 5 km wide at the narrowest part of the valley.

Focus areas: Tbilisi is growing as a multifunctional city and a regional pole, in a wider international context. Strategic contact with global urban networks has become paramount to the city as well as to the country. During the last decade, the city succeeded to become a nodal point of the Transport Corridor Europe–Caucasus–Asia (TRACECA) and the East–West transportation and energy transfer routes (oil and gas pipelines, e.g., Baku–Tbilisi–Ceyhan), and it started to attract considerable foreign direct investments.³

To become a gateway or hub of the region, as well as the business, cultural, and educational center, the city requires strategic approaches to bring about further changes; improvements

¹ Tbilisi City Hall. 2012. *Tbilisi 2030: City Development Strategy (Draft)*. Tbilisi.

² Geostat 2014. www.geostat.ge

³ Tbilisi City Hall, Economic Affairs Office. 2011. *Tbilisi in Figures. Statistical Yearbook*. Tbilisi.

in governance; and the harmonization of its socioeconomic environment with advanced international, particularly European, standards and patterns.

Economic Competitiveness

General: Tbilisi is by far the largest settlement of the country. The city houses almost 25% of the total population and 43% of the urban population. Tbilisi alone comprises almost 50% of the total gross domestic product of Georgia in line with its share in urban population. The dominance of Tbilisi and lack of second-tier cities closer in scale to the primary city generates a disproportionate distribution in the national urban system.

Economic statistics: Tbilisi's economy is dominated by the services sector, contributing to 89% of the local gross domestic product. During the Soviet period, Tbilisi played an important role in the region as it was an industrialized and centralized economy. After a significant reduction of industrial production in the years of independence, Tbilisi now has a specific economic structure: based on the official figures of gross value added in 2009, reflecting a high share of tertiary and quaternary sectors, like construction, trade, transport, and communication, as well as all sorts of public and market services, and with a very moderate share of industrial activities (10%). Trade, transport and communications, and public administration are the top three branches, while industry and construction comprise an equal share of 10% in the capital's production system.

Transport and communication companies, industries, retail, and trade are the biggest employers. Branches of the machine industry such as the production of small aircrafts coexist with food and light industries. A few sectors successfully export their products. However, the volume of industrial production has been significantly reduced since independence.

Public transport: In Tbilisi, public transport is managed by Tbilisi Transport. In 2013, more than 203 million trips were carried out with vehicles of Tbilisi Transport: 96 million by metro coaches, 106 million by buses, and 1.15 million by ropeway. Interestingly, the metro was the leading mode of transport before 2013. Currently, Tbilisi is served by more than 150 metro coaches and almost 700 buses. Since 2011, Tbilisi Microbus has been operating microvans, which are also very much in demand and popular among the citizens. Besides public transport, a big number of private taxis also play a major role in the transportation.

Budgets: For 2013–2014, the budget of Tbilisi was more than GEL700 million, and about 90% of the budget was contributed by local income.⁴

Environmental Aspects

Electricity and heating: Telasi, a joint stock company, is responsible for power supply in Tbilisi. The company's duties include purchase and sale, production (services and maintenance of power grids), and transmission of power and demand management

⁴ Tbilisi City Hall. Budget of Tbilisi. 2013. <http://new.tbilisi.gov.ge/news/1500> (in Georgian).

(billing and collection services for external service organizations). The company operates 19 customer service centers and 11 operational districts located in all the administrative districts of Tbilisi.

At present, power is generated from the different types of power plants. Hydroelectric power plants provide 35% of the required electricity, while traditional power plants provide the remainder. However, the company is not successful in achieving its goal of 24/7 power supply. In a few districts of the city, power is erratic. The power consumption of the city of Tbilisi exceeds 2 billion kilowatts per year (footnote 3).

Natural gas is distributed by Kaztransgas, a Kazakh joint stock company. The length of gas line network is 2,000 km. The annual consumption of gas is almost 1 billion cubic meters (m³).

In Tbilisi, natural gas is supplied from gas stations in Gldani, Navtlughi, and Gachiani, located in three different directions. Additionally, there are nine supply stations and 657 outlets.

Water: More than 95% of the population of Tbilisi has access to improved sanitation and water sources. The daily water consumption in the city is 1.6 million m³.⁵

Georgian Water and Power (GWP), a private company, delivers drinking water to Tbilisi and its surroundings. The company treats 503 million m³ of water and provides 482 million m³ of drinking water per year. It provides services to the public and private sectors (constituting 5% of its customers) (Footnote 1). The GWP serves about 400,000 customers throughout the city, of which about 2,000 are public organizations; 15,000 are private organizations; and the remainder are residents.

In Tbilisi, the water supply system uses both groundwater and surface water. The groundwater is extracted at the Aragvi Gorge, and the surface water comes from the Tbilisi Sea through the Grmagele and Samgori treatment facilities (each with a capacity of 5.0 m³ per second). After treatment, the water is transported to supply tanks. The city's water reservoirs have a capacity of 320,000 m³, and 28 pumping stations ensure the water supply and water pressure for the entire city. After reaching the city, water is treated once again, and then distributed to the districts and supplied to high-rise buildings by means of over 1,000 pumps.

Three reservoirs (Zhinvali, Tbilisi Sea, and Bodona) as well as five conduits and water pipe systems provide water to Tbilisi. The total length of the water supply network is 3,600 km, which uses pipes with diameters varying between 13 and 1,400 millimeters. Branches mainly consist of steel pipes (65%), while 35% of the mains use basic iron pipes. A more recent development is the general use of polyethylene pipes.

In Tbilisi, the quality of drinking water is checked using an automated system and is monitored every hour by laboratory specialists. Tap water is safe in Tbilisi, and drinking water quality complies fully with World Health Organization (WHO) standards.

⁵ Tbilisi City Hall, Economic Affairs Office. 2010. *Tbilisi in Figures. Statistical Yearbook*. Tbilisi, p. 13.

Wastewater: Construction of the wastewater transport system of Tbilisi was started in 1835. Generally, the system comprised of brick sewers through which drinking water and wastewater flowed and joined the surface runoff into the Mtkvari River. Currently, the Tbilisi wastewater system uses pipes of diameters varying between 150 and 1,200 millimeters made of either of the following materials: brick, concrete, reinforced concrete, ceramics, cast iron, and asbestos cement and polyethylene. The system is gravity based and has a total length of 1,600 km. The length of the main trunk sewer is 72 km. The wastewater is transported to the Gardabani wastewater treatment plant (WWTP), which has 42 separating chambers in the main sewer.

The Gardabani WWTP was constructed as a standard mechanical–biological treatment plant with a total capacity of 1 million m³ per day. Nowadays, the Gardabani WWTP treats the wastewater transported from Tbilisi and Rustavi, the two largest cities in Georgia, using the sewer collector (42 km).

To date, only the mechanical treatment of wastewater is carried out, whereas biological treatment is not carried out. In 2005, the total volume of treated wastewater was 9 million m³. However, it was only 74% of the total volume of wastewater generated in Tbilisi and Rustavi. It is not customary to reuse treated wastewater in Georgia. The most alarming problems exist in the collection and treatment of domestic sewage and industrial wastewater as they are discharged untreated into the open water bodies. This contamination of water resources is the main reason for endemic intestinal and infectious disease in Georgia. The GWP provides wastewater treatment services to Tbilisi, which also delivers drinking water.

Solid waste: The Tbiliservice Group, a private company, has been responsible for solid waste collection and cleaning the city since 2008. The solid waste is collected blockwise (districtwise). The services include (i) solid waste collection and transport, (ii) cleaning of the capital city area, (iii) disinfection and cleaning of the garbage containers, and (iv) gritting of the streets during winter.

Urban solid waste is collected using around 25,000 containers of four different types and/or capacities, without any differentiation of the containers between individuals and businesses. Municipal collection trucks transport the collected waste to a transfer station at Tbilisi city, and after compacting to reduce the volume, the waste is transported to distant landfills using larger transfer vehicles. Waste sorting and recycling are hardly carried out at these transfer stations.

Regarding solid waste management, dumping in landfills is the only measure followed by the Tbilisi municipality. There are three authorized landfills receiving most types of nonindustrial urban waste, and all these sites are in a poor state. They have been in operation for more than 10 years and are functioning as uncontrolled open dumps with constant open fires and deep fires in the sites, posing risks to the health and safety of local residents.

The burning of solid waste leads to high concentrations of total suspended matter, PM₁₀ (particulate matter of less than 10 micrometers in diameter), sulfur dioxide, nitrogen dioxide, and formaldehyde in the air. Given the lack of hazardous waste treating facilities

in the country, waste dumped may be assumed to contain toxic pollutants. Of the people onsite, waste pickers and operators are being exposed to dioxins and furans and have a high risk of becoming ill because of inhalation of contaminated air.

The Municipal Sanitation Department is committed to change the situation by building a new sanitary landfill as well as closing old dumpsites. The new sanitary landfill will be situated in the Norio village (Gardabani district) and is designed in accordance with European Union environmental standards.

Flooding: Natural hazards such as earthquakes and continuing erosion along the mountain slopes threaten the city of Tbilisi. The erosion influences the absorption capacity of the soil, which may lead to increased flooding and mudslides. No data were found on the occurrence of substantial threatening situations and on the role city hall plays in preparing citizens on dealing with a disaster.

Some parts of the drainage system of Tbilisi date back to the 19th century and need substantial reconstruction and revamping.

Air quality: In the past 2 decades, industrial productivity has declined and many environmentally harmful enterprises were shut down. This has had a positive impact on the air quality in Tbilisi. However, a combination of the current industrial and construction activities, transportation systems, waste burning in the dumpsites, and other industrial waste treatment, as well as the meteorological and topographic conditions specific to the area leads to poor air quality in Tbilisi.

Green areas: The green spaces—recreational areas, forests, and natural landscapes—around the built-up area of Tbilisi amount to more than 30,000 hectares (ha). Comparatively, the urbanized sections of the city are poorly supplied with green areas and open public spaces (less than 5% of the built-up territory). Tbilisi has a complex natural landscape with varied topography, which creates an interesting cityscape. These features are a key asset and provide opportunities to create livable and attractive neighborhoods.

There are several relatively large public parks in Tbilisi, founded in different periods from the mid-1800s. However, according to Caucasus Environmental NGO Network data, Tbilisi currently has 5–6 square meters (m²) of green area per inhabitant, which is extremely low compared with the WHO standard of 50 m² per person. Furthermore, the (green) open spaces are not optimized in the city or used to increase the value for the city's real estate. The (green) open areas remain scattered throughout the city and are not part of an integral, well-designed network of the open space in the city.

Equity Aspects

Archeology and culture: Tbilisi is the main historical and cultural center of not only Georgia but also the entire Caucasus region. Founded in the 5th century AD in the vicinity of the ancient capital of Georgia Mtskheta, the city and surroundings abound in archeological and historical sites of different periods.

The city has well-developed cultural infrastructures for attracting locals and foreign visitors/tourists: There are 28 museums, 23 theatres, and 58 libraries in Tbilisi.⁶ The city hosts about seven musicals, plays, cinema, and other festivals annually.

Education: Tbilisi is the main educational center of the country. More than 30 public and private universities are located in the city, including the largest and oldest Ivane Javakhishvili Tbilisi State University. More than 30,000 students enter the higher educational institutions annually. There are 191 public and 146 private schools, of which many schools are well equipped. Approximately 180,000 pupils are studying in primary and secondary schools (Ministry for Education and Science, 2010).

Health care: Tbilisi has in total 240 hospitals, health care centers, and clinics. By the end of the 2010s, the city had almost 10,000 registered doctors, of whom more than 8,000 were practicing their profession, and the rest were assumed to play administrative or managerial roles in the health care sector.

In last 2 years, the government reformed the health care sector, providing the entire population of the country with affordable insurance, which dramatically improved the service provision in this sector.

Institutional and Governance Aspects

Planning: Tbilisi is a self-governing city. Since 2009, it has had a master plan for spatial development. However, the local government is already planning to revise the master plan.

Permitting process: Building permissions are issued by the Department of Architecture and Spatial Development at Tbilisi City Hall.

City hierarchy: The city comprises six territorial subdivisions and 33 second-tier territorial units (*ubani* or neighborhoods).

Batumi

Introduction

Location: Batumi is the capital city of the Autonomous Republic of Adjara, one of the two autonomous republics of Georgia and the only autonomous republic that is under the effective control of the Government of Georgia. Batumi has one of the two big Black Sea ports of Georgia just 20 km away from the state border with Turkey—the major economic partner of Georgia after the independence. This strategic location along with strong tourist and economic potential and remarkable human capital makes the city unique among others for urban development. Batumi, though it does not have a classical agglomeration or metropolitan region, has a large hinterland, embracing most of the territory of the autonomous republic and areas besides it, mainly along the seashore.

⁶ Tbilisi City Hall, Economic Affairs Office. 2010. *Tbilisi in Figures. Statistical Yearbook*. Tbilisi. p. 10.

Population, area, and geography: Batumi with a population of 160,000 and a geographical area of 65 km² at the Black Sea coast is the third largest city of Georgia. The recent territorial extension added some 20,000 population and 40 km² to the city.⁷ The city is well connected by road and rail networks to other settlements of Georgia and wider Caucasus–Near East regions, located right on the most important routs of the Trans-Eurasian transportation communication and, hence, dealing with most of the regional transit traffic. Besides the seaport, the city also has an international airport, which strengthens its international potential.

Focus areas: Batumi is a multifunctional city with public administration, services, and a tourism industry dominant above other economic sectors. After independence, oil refining, machine manufacturing, food industry, and light industry, which were the leading sectors during the Soviet period, were replaced by construction, energy, logistics, trade, and other tertiary sectors. Batumi and its surrounding regions are rich in cultural and natural monuments, which have considerable value for attracting local and foreign visitors.

Economic Competitiveness

General: Batumi is the political and economic center of the Autonomous Republic of Adjara. During the last decade, it became the second fastest growing city after Tbilisi (e.g., the population has grown almost 24% since 2002), focusing on the development of trade, tourism, services, and logistics. Batumi's role is crucial in transboundary cooperation with Turkey and also in communication and cooperation with cities of the Black Sea region.

Economic statistics: Services (19%), public administration (17%), trade (12%), health care and social protection (10%), construction (9%), and manufacturing (8%) comprised the major contributors of the total value added of the city in 2010.⁸ Sixty-three percent of the population is of working age, that is, between 15 and 60 years. Despite the increase of economic activities in recent years, progress in the creation of workplaces is still slow, and, consequently, the unemployment rate is high (about 30%). The largest employers as of 2011 are the manufacturing industry, construction, and commercial and services sectors (34.4%).

Industry: The main industry is ship repair and services in the Batumi port and oil terminal (capacity of 15 million tons per year). Batumi is a free customs clearance zone.

Tourism: The number of tourists in 2011 reached 1.15 million (including 410,519 foreign tourists), a 30-fold increase compared with 2004, making tourism the fastest growing economic sector. Because of the growth in tourism, in 2010 the turnover of tourism-driven hotel and restaurant businesses reached GEL32 million, and in 2011 the turnover of small and medium-sized enterprises and businesses reached GEL1,201.2 million.

Public transport: In Batumi, citizens and visitors use both municipal buses and private *marshrutkas* (minivans or microbuses) and taxis. The municipal transport, which is

⁷ USAID. 2013. *Batumi Strategic Plan*. Tbilisi.

⁸ USAID, Batumi Strategic Plan 2013: 52–53.

managed by Batumi Autotransport, operates 140 buses and covers 8 intracity and 19 suburban routes. In 2008, the municipality of Batumi provided GEL2 million in capital to Batumi Autotransport to purchase 25 buses; on top of this, the European Bank for Reconstruction and Development provided a loan of €2.5 million for purchasing 76 more buses. The number of *marshrutkas* amounts to 1,656 units. The city of Batumi also operates cable cars, which serve locals and visitors for commuting from the harbor near the city center to the housing and recreational areas on mountain slopes.

The road infrastructure is well maintained only in the center of the city, whereas in the suburbs roads are damaged and of low quality.

Budget: Revenue budget of the city of Batumi fluctuate from year to year: GEL202.5 million in 2011, dropping to GEL150.5 million in 2012. These figures largely depend on obtained grants, including transfers from the state budget, which comprise more than 80% of income in some years, while income from tax collection and other sources remain more or less stable (in range from GEL25 million to GEL35 million during the 2010s).⁹

Environmental Aspects

Electricity and heating: In Batumi, electricity is provided around 24 hours a day. The population depends mostly on electricity and wood for heating during winter, as well as for other domestic purposes (e.g., cooking). In order to improve this situation, during 2008–2011, a gas pipeline network of 136 km was installed, which cost GEL14.2 million, and 13,100 households have been connected to the network. Another gas pipeline network of 112 km costing GEL8.8 million is being implemented.

Water: In Batumi, 80% of the population is provided with 24-hour water service. The revamping of potable water and sewage systems was started in 2007 under cofinancing of Batumi City Hall and German development cooperation through KfW (loan of €115 million). In Batumi, the quality of potable water, obtained mainly from the Chorokhi and Mejinistskali rivers, is low.

Wastewater: The wastewater disposal system is linked to a recently revamped local treatment facility. However, the reconstruction of the sewage network is not yet completed. Therefore, the treatment facility serves only parts of the city so far, while in other neighborhoods (e.g., areas adjacent to the oil terminal), the sewerage networks are yet to be revamped. Hence, part of the wastewater currently runs directly into rivers and the sea.

Solid waste: Batumi does not have solid waste treatment facilities. Consequently, the cleaning and washing of the city's territory (streets) does not efficiently improve the sanitary-hygienic and ecological conditions. In some residential districts, the environment is unfavorable to the population because of poor waste management.

⁹ The Decision #1 of 17 January 2012 of the City Council of Self-Governing City of Batumi. <http://batumi.ge/ge/upload/batumisbiujeti2012.pdf>

Flooding: Batumi is exposed to floods because of its subtropical climate with high precipitation—heavy rains are frequent especially in spring and summer. Therefore, the city needs revamping of its drainage networks. The repair of drainage wells, covering of plates, and cleaning up of canals connecting to the Black Sea are already under way. In addition, the reconstruction of the Zhilini drainage canal is planned.

Coastal protection: The coastal zone of Batumi is composed of inert materials brought by the Chorokhi River, and the sea regulates its distribution keeping the stability of the coastal line. However, large-scale anthropological interventions such as construction of hydropower plant cascades in Turkey on the Chorokhi River in the early 2000s significantly changed the natural regime of coastline maintenance, putting Batumi under threat of losing coastal areas through the abrasion. Currently, there are risks in the areas of the Chorokhi and Mejinistskali rivers, where several treatment facilities and basins are allocated. The sustainability of the coastline can be assured only by artificial feeding of the seashore by inert materials. The area adjacent to the international airport alone requires 100,000 m³ of materials for coastline protection. The strengthening of the coastline enforcement infrastructure is absolutely crucial for Batumi's development.

Air quality: In Batumi, 95% of air pollution is caused by vehicle traffic. In recent years, population growth with increased vehicle traffic and reduction of green spaces inside the built-up area have caused an increase in carbon dioxide emissions. Although the natural conditions (humid soils, abundance of green spaces around the city, frequent rains, etc.) minimize air pollution, recent measurements show higher air pollution: nitrogen dioxide 3.8 times (limit 0.04 milligrams[mg]/m³), sulfur dioxide 2 times (limit 0.5 mg/m³), and carbon dioxide 5.2 times (limit 3 mg/m³).

Green areas: As of 2013, the green planted area was about 65.3 ha inside the built-up area of Batumi, which amounted to only 4.08 m² per person, while the norm is defined as at least 12 m² per person. The surrounding areas of Batumi are abundant in different types of green spaces, including a botanical garden occupying 111 ha; however, they do not compensate for the dramatic shortage of green spaces inside the city.

Equity Aspects

Archeology and culture: In Batumi and the surrounding areas (e.g., Gonio), many archeological and architectural monuments were discovered. Some of them date back to the third and second millennia BC. These sites belonged to the Kolikhida culture that was highly developed for that time. Cultural layers of the Bronze and Iron Ages as well as the Antic and Medieval periods are also present. The monuments of historical-cultural heritage prove that Batumi and its surrounding areas were part of the Silk Road network. This unique historical-cultural heritage is a valuable asset for tourism development of the city.

Education: In Batumi, Shota Rustaveli Batumi State University, Batumi State Maritime Academy, and the Batumi University of Navigation create a coherent system of higher education, which is among the top three intellectual centers of the country. In 2011, there were 11 professional schools, 19 public and 20 private secondary schools, and 26 municipal and 13 private kindergartens in the city.

Institutional and Governance Aspects

Planning: Batumi is a self-governing city. In 2013, a socioeconomic development plan was prepared with the support of the United States Agency for International Development (USAID), which preceded the 2014 master plan.

Permitting process: Even in the absence of plans, construction permits are being given. Permissions are issued by the Architectural and Urban Planning Office at Batumi City Hall.

City hierarchy: The city comprises 13 territorial subdivisions.

Poti

Introduction

Location: Poti is a port city in Georgia, located on the eastern Black Sea coast in the west of the country. It is built near the site of the ancient Greek colony of Phasis and derives its name from the same. It is one of the two largest Black Sea ports of Georgia, mostly specialized in cargo turnover. The city is located on the main axis of the Transport Corridor Europe–Caucasus–Asia (TRASECA). It is well connected by road and rail networks with other settlements of Georgia, taking only 2 hours of road travel to reach Kutaisi and Batumi, two other big cities of the country. Furthermore, its perfect location for maritime communication and cooperation with other cities of the Black Sea region strengthen its international potential.

Population, area, and geography: Poti is a medium-sized city with a population of 47,800 and a geographical area of 39.7 km². Despite its modest size, it is one of the 10 biggest settlements of Georgia.¹⁰ Poti is surrounded by vast Kolkhida lowland, part of which is located in the Kolkheti National Park because of its unique wetlands and birdlife.

Focus areas: Poti has become a major port city and an industrial center since the early 20th century. It is also home to one of the main naval bases and the headquarters of the Georgian navy. Countrywide Poti serves as a transportation hub on the Black Sea and an important logistic center. These factors attract the majority of transport and communication enterprises, as well as other industries. Poti's former airport is no longer operational since the collapse of the Soviet Union in the 1990s. At present, the Government of Georgia is reconstructing the airport for public and private services.

Economic Competitiveness

General: Poti is a self-governing city. It is located in the Samegrelo–Zemo Svaneti region and is the second biggest settlement in the region after the city of Zugdidi.

¹⁰ USAID: Democratic Governance in Georgia. Strategic Plan of Urban Development of Poti. 2013. Tbilisi file: http://H:/2014-ADB-urbanization%20review/GEO%20USAID%20Studies/USAID_poti/Poti%20Strategic%20Plan%20of%20Urban%20Development_Geo.pdf

Economic statistics: Poti is “demographically active” and has a sufficient number of working-age population. The employment rate in the city was 41% in 2011. Transport and logistics are central to the city: 56% of all employees represented the transport and communication sector, 19% trade and services, 18% industry, 7% construction, and 13% of the population was unemployed.

Industry: Poti is considered one of the prospective cities for further industrial development. The industrial enterprises comprise mainly the shipyard, hydro-apparatus factory, metallurgical plant (established with the aid of an Indian investment), different food processing enterprises, and so on. Adjacent to the Poti port area is the Ras Al Khaimah Investment Authority (RAKIA)-owned Free Industrial Zone. Inaugurated in April 2008, it has registered a number of businesses, mostly funded by foreign capital.

Public transport: Regular inner city transport is performed by Potikalak Transport (Poti City Transport), which operates eight buses and serves about 4,500 passengers a month. The bus fleet needs renovation and upgrading. A big share of the population uses private taxis and microvans or *marshrutkas* for transportation within the city and across the cities, which normally require certificates for transport services from the municipality. Rail and sea transport is used for long-distance intercity communications.

Budget: The budget of Poti in 2014 comprised GEL20.2 million, of which grants and transfers amounted to more than GEL10 million, including GEL5.6 million of state transfers. The priorities in budget spending were infrastructure development (GEL3.5 million) and health care and social provision. In 2014, there was a slight increase in the budget in comparison with 2013 (GEL17.7 million), but a significant drop compared with 2012 (GEL30.3 million); the difference was due to reduction of the state transfers, while local tax collection and other sources were more or less stable and even slightly increased (about GEL8 million–GEL9 million in the last 3 years).¹¹

Environmental Aspects

Electricity and heating: The population of Poti is served with electricity and gas.

Water: Potable water to Poti is supplied from two sources located in other municipalities of the Samegrelo–Zemo Svaneti region: Grouli Springs (Martvili municipality) and Nosiri Well Fields (Senaki municipality). The current total production capacity is about 2,330 m³ per hour.¹² Water is delivered from headworks by pipes to the Nabada reservoir in Poti, and from supplied to the city’s water supply system via a pumping station located on the same site. There is no water treatment plant for the water supply system of Poti. For water disinfection, chlorine is added at the Nosiri well field collector reservoir and liquid chlorine is added at the Nabada reservoir. The total length of the Poti water pipeline system is 230.7 km, including 89 km of the water pipeline system outside the city. Although the water pipeline system covers almost the entire population, the potable water is provided once

¹¹ City Council of Poti. 2013. On Approval of the Budget of 2014 of the Self-Governing City Poti (self-governing entity). Resolution #24/36. 18 December 2013. <http://www.poticity.ge/files/files/biuj-2014.pdf> (in Georgian).

¹² ADB. 2013. Poti Feasibility Study. Manila.

in 2 days for 5–6 hours daily. The water pipeline system of Poti dates back to 1937–1939, and most of it has not undergone fundamental repair and revamping since. The pipes are metallic, obsolete, and often damaged, which causes leakages. Of the total distribution network of 140 km, only 38 km has been replaced in the recent past with polyethylene pipes, funded by the Municipality Development Fund. The construction of the water supply system to cover a population of 48,000 is almost complete under the ADB financed USIIP.

Wastewater: In Poti, the sewage system stretches to 36.1 km. Although it covers most of the municipality, only 25%–30% of population is connected to the system. Hence, the population not connected to the sewage network depends on cesspits for sewage disposal. The sewage system is usually separated from drainage canals. The wastewater treatment plant in Poti has been defunct for a long time. Therefore, wastewater that is pumped to the treatment plant enters the Rioni River and the sea untreated. The construction of the sewerage system has started under the USIIP. The construction of a new treatment station will soon be completed in the Maltakva district, which will serve about 40% of the city. Another treatment station is planned to be built in the Nabada district.

Solid waste: Poti does not have solid waste treatment facilities. A primitive landfill located by the Rioni River operates with scant respect for sanitary norms. The Rioni River releases residential waste from the landfill directly into the sea, thereby polluting the sea and coastline.

The construction of a modern landfill with waste treatment facilities is considered a priority for ensuring the health of the populace and safeguarding the ecosystems of protected territories.

Flooding: Poti is exposed to floods, but 80% of its streets lack a proper drainage system. Furthermore, the existing drainage system needs urgent revamping. Infrastructura 2008, a municipal enterprise, is responsible for the maintenance of drainage canals and repair works, as well as for solid waste management, street cleaning, and some other communal services.

Air quality: No literature data are available regarding air quality in Poti. However, one could conclude that the main pollution comes from car traffic, especially from the transit vehicles coming from Poti port and other destinations. Generally, the reports (USAID, ADB, and other documents) show that air pollution is a minor problem compared with water and coastline pollution.

Green areas: Among the green areas inside the city, the Park of Culture and Leisure is the largest with a total area of 12 ha. There are few other smaller public open spaces in the city proper. Meantime, eastward, in the immediate neighborhood of Poti, vast territories are occupied by Kolikhida National Park, established in 1999. The park occupies almost 300 km² of land and 160 km² of water area. The existence of this unique natural reservation represented by wetlands, relict forests, specific landscapes, and the lake of Paliastomi is crucial for regulation and preservation of the natural environment, as well as for the protection from sea abrasion of coastal areas inside and around Poti.

Equity Aspects

Archeology and culture: Kolikhida National Park is an important tourist attraction for natural landscape and wetland sightseeing, as well as for bird-watching. The surrounding areas of Poti are also rich in archeological sites dating back to the late Bronze and early Iron Ages. The city has a museum, dramatic theater, folklore center, and exhibition hall.

Education: Poti has 14 secondary schools (11 public and 3 private), 15 kindergartens, and several artistic centers and/or schools for children.

Health care: The city has three hospitals and seven polyclinics with 100 beds in total. The insurance services to the population are provided by two companies.

Institutional and Governance Aspects

Planning: Poti is a self-governing city. In 2013, a socioeconomic development plan was prepared with the support of USAID.

Permitting process: Building permissions are issued by the Department of Spatial Planning, Architectural and Construction at Poti City Hall.

City hierarchy: The city comprises four territorial subdivisions.

Kutaisi

Introduction

Location: Kutaisi is located in the central part of the Imereti region on both banks of the Rioni River. The city is located on the valleys and hills in the Kolikhida lowland. The distance to Tbilisi, the capital city, is about 220 km and to the Black Sea around 100 km.

Population, area, and geography: Kutaisi is the second largest city in the country and the biggest in western Georgia with a population of 197,000 Geostat.¹³ The area of Kutaisi in its administrative boundaries equals 70 km².¹⁴

Kutaisi is well connected with other big cities of Georgia by rail and road networks. It also has a recently rebuilt international airport, and is one of visitor' hubs of Georgia and the entire South Caucasus region.

Focus areas: Kutaisi for its traditional historical importance in Georgian statehood is often called "the second capital of Georgia." It was the main administrative, economic,

¹³ National Statistics Office of Georgia (Geostat). 2015. *Statistical Yearbook of Georgia 2015*. Tbilisi, p.37. http://www.geostat.ge/cms/site_images/_files/yearbook/Yearbook_2015.pdf

¹⁴ USAID. 2013. *Adaptation to Climate Change and Impact Mitigation at Local Level: Existing Situation in Kutaisi*. <http://nala.ge/uploads/kutaisi.pdf>

commercial, and cultural center of western Georgia. However, after a dramatic economic decline and population reduction in the post-Soviet period, it is endeavoring to regain the leading role in the area. Today, public administration and trade prevail upon industry and other production sectors.

The city replaces obsolete functions of the Soviet era to build a new economic basis for development. In 2011, the previous government decided to relocate the parliament to Kutaisi, which became the legislative capital of Georgia. A quest for decentralization and a desire for providing an economic bolster to Kutaisi were cited as the reasons for this change. However, the current government puts that decision under challenge.

Economic Competitiveness

General: Kutaisi is a self-governing city. It is the administrative center of the Imereti region, accommodating approximately 27% of the population of the region.

Economic statistics: Following the collapse of heavy industry in the early 1990s, the main economic activities in Kutaisi have been the services and trade sectors. Industry, once the largest sector, now accounts for only about 25% of the domestic product. Value added of the city is mostly formed by four economic sectors: heavy industry, light industry, food processing, and trade and services.

As the regional center, the city has well-developed commercial, retail, and banking sectors, an important source of employment.

The labor participation rate in Kutaisi in the early 2010s was 50% lower than that in the mid-2000s, which indicates a low employment rate and, consequently, low income levels of the population.

Industry: Most of the present industries can be characterized as light, and it is expected that heavy industries will recover as they are being privatized. Attempts are being made to revive the car industry, for which the city was well known during the Soviet period, by bringing in one of the international brands.

Public transport: Public transport is moderately developed and represented with buses, while the rest of inner city transfers are operated by private cars or taxis, minivans, or *marshrutkas*. Most intercity connections are by private transport—taxi, microvan, *marshrutka*, and railway.

Budget: The budget of Kutaisi was reduced to GEL57.2 million in 2014 from GEL67–68 million in 2013 and 2012 mainly because of the reduction of the state transfers, which comprised more than 40% in the previous years.¹⁵

¹⁵ USAID. 2013. The adaptation of climate change and impact mitigation on local level: The existing situation in the self-governing city of Kutaisi. [in Georgian]; see <http://nala.ge/uploads/kutaisi.pdf>; and the official website of the self-governing city of Kutaisi. <http://kutaisi.gov.ge/>

Environmental Aspects

Electricity and heating: The population of Kutaisi is provided by electricity and gas. According to the local government, electricity consumption decreases and gas consumption increases during the last years.¹⁶ Energy efficiency is neither measured nor monitored by the municipality.

Water: Kutaisi depends on two main water sources, the Partskhanakanebi and Mukhiani well fields, which are equipped with respective headworks. The Gumati well field provides a small amount of drinking water to Kutaisi. The current water transport system has a total length of about 37 km. Many illegal connections lead to water losses from the water transport system. The cost of energy is high for pumping the water from both well fields over a distance of up to 14 km to the Kvitiri and 15 km to the Mukhrani reservoirs. Most of the water from both well fields is pumped to the Kvitiri collector reservoir located at the west side of the city. Many other smaller reservoirs also supply water to Kutaisi, with a total storage volume of about 77,200 m³. Two main pumping stations, Kvitiri and Choma, directly serve the water supply distribution network of the city by gravity via six reservoirs. The total length of the distribution network is approximately 419 km. The age and condition of the pipes vary. The prevalent material used in these pipes is steel, whereas cast iron pipes make up 23.5% of the distribution network. The installation of high-density polyethylene pipes began in 2008 and amounts to 30.7% of the distribution network. Water quality is not systematically controlled by the municipality. Water to Kutaisi is provided by the United Water Supply Company of Georgia LLC. In 2011, Kutaisi consumed about 62 million m³ of water. According to the local government and experts, the water resources are sufficient for the city, but the system must be improved. ADB USIIP covers the construction of the water supply system and includes the construction of three reservoirs, two pumping stations and the corresponding transmission mains.

Wastewater: Access to safe sanitation will increase from 25% in 2011 to 88% in Kutaisi under the ADB financed USIIP.¹⁷ The existing sewer system is located primarily in residential areas, but the density varies. The industrial areas are covered by a rudimentary sewer system. A system of main collectors form the backbone of the sewer system, to which the secondary network is connected. The existing drainage area is divided into three parts: the left side of the Rioni River, the central Kutaisi, and the western part of the city. Many parts of the existing sewer system are in poor condition. Hence, a significant part of the system must be replaced. A wastewater treatment plant that is located in Patriketi village (Tskaltubo municipality) has been out of order for many years; therefore, a new one has to be constructed on the site of the existing treatment plant. A new sewerage system and STP will be financed through the European Infrastructure Bank (EIB) while ADB will construct the main pipeline in 2017.

Solid waste: A specialized municipal entity is responsible for city cleaning and for solid waste collection and disposal, which takes place at a primitive landfill located by the Kutaisi–Geguti road. The yearly collection of solid waste in Kutaisi amounts to 200,000 m³.

¹⁶ Footnote 15.

¹⁷ ADB. 2013. Multitranché Financing Facility Georgia: Urban Services Improvement Investment Program – Project 3. Project Administration Manual. <http://www.adb.org/sites/default/files/project-document/79816/43405-025-pam.pdf>

The collected solid waste is not separated and processed in the landfill, causing water and air pollution. Besides the official landfill, there are several other illegal landfills in the area, which pollute the smaller tributaries of the Rioni River. The local government has a plan for conserving the old landfill and building a new one according to standards.

Flooding: Although data about the drainage system of Kutaisi are not available, one could conclude that the system does not work well. The government intends to improve canalization and drainage systems.

Air quality: The main air pollutant in Kutaisi is auto transport, including transit traffic. Data on air quality are not available, but according to experts air quality needs to be improved.

Green areas: Four large parks and numerous small open public green spaces are spread over 56 ha in Kutaisi. This amounts to less than 3 m² per capita, which is a very low figure and stresses the necessity to increase green open spaces.

Equity Aspects

Archeology and culture: Kutaisi and its surroundings are rich in historical monuments of the Middle Ages—Bagrati Cathedral (XI century), Gelati Monastery complex (UNESCO World Heritage Site), and Geguti Palace, which was one of the residences of Georgian monarchs and several others. Besides the historical sites, there are several unique natural sights, of which Sataplia Cave is of special value, housing footprints of dinosaurs. Kutaisi counts on its tourist potential to improve its currently weak economic situation.

Education: Kutaisi hosts Akaki Tsereteli State University and a few other private universities. There are more than 30 public and private secondary schools in the city.

Institutional and Governance Aspects

Planning: Kutaisi is a self-governing city. An urban master plan for Kutaisi does not exist. A Regional Development Strategy (2010–2017) adopted through Ordinance No. 172 of 25 June 2010 set the basis for the development of the water and sanitation infrastructure.

Permitting process: Building permissions are issued by the Department of City Planning and Urban Development at Kutaisi City Hall.

City hierarchy: The city comprises 12 territorial subdivisions.

Rustavi

Introduction

Location: Rustavi, a big municipality and center of the Kvemo Kartli region, is a main part of the Mtskheta–Tbilisi–Rustavi–Gardabani agglomeration. Rustavi is part of the Tbilisi urban

area with functional links through mobility; economic cooperation; cultural exchange; and a commuting population for work, studies, and services. Located in the immediate vicinity of the capital, the industrial city of Rustavi has enormous development potential. Together with the historical town of Mtskheta and the capital city of Tbilisi, Rustavi combines the intellectual and business potential of the country. Also, being the border city to the neighboring countries of the Republic of Azerbaijan and Armenia, the city is ideally located to serve as an engine for economic development. At the time of original city planning, Rustavi was about 27 km from Tbilisi. At present, considering the growth of the city since then, the distance between the design borders of the two cities is about 5.5 km.

Population, area, and geography: The city of Rustavi has a population of less than 150,000 and a geographical area of 66 km². The Mtkvari River flows right through the center of the city, dividing the city into two parts. The city is demarcated into three parts: left embankment, right embankment, and areas adjacent to the railway station.

Focus areas: Rustavi developed as an industrial city, a major contributor to the country's economy. In addition, Rustavi also houses some monuments from the Middle Ages.

Economic Competitiveness

General: Rustavi is the political and economic center of the Kvemo Kartli region. To promote the economic development of the region, Rustavi should promote industry, trade, and commerce. Also, being the closest city to the neighboring countries, both Armenia and the Republic of Azerbaijan, the city is also well poised to be a conduit for international trade and commerce.

Economic statistics: The change in value added of the country as a whole was 55.7% between 2009 and 2011. Of this, almost half of the total value added was from Tbilisi, and the change in value added was 46.2%. Rustavi was recognized as having the maximum value added, which was 10% higher than Tbilisi. Like in most other self-governing cities, there was a sharp drop in income in Rustavi as well between 2012 and 2013.

Industry: Rustavi was intended to be an industrial city. In fact, the metallurgical plant of Transcaucasia was to be the main asset of the city. It was designed as the largest industrial center of Georgia with development in ferrous metallurgy, chemistry, and construction. However, with the ongoing industrial stagnation, the city is presently dependent on trade and commerce.

Public transport: For public transport, there is a mix of municipal and private transport. The Municipal Auto Transport company operates 20 buses within the city. In addition, there are about 300 private minibuses operated by four companies, which serve the intracity transport needs. The municipality and the private companies renew their contract every 5 years for the provision of these services.

Budget: In terms of budget, the city is similar to Batumi, but received just a quarter of its budget for its functions. There is a need to significantly increase the budgetary allocation and to align it with other self-governing cities.

Environmental Aspects

Water: Potable water is sourced from the Khrami River. At present, the city has sufficient water supply, and 100% households are connected to the water supply system. Operated by Georgian Water and Power, the water supply remains steady on all days, with rare exceptions, but this may not be sufficient as the city develops further. Special attention is required for the development of the water supply system, and it should be implemented simultaneously along with the development of new areas.

Wastewater: The wastewater disposal system is linked to the neighboring Gardabani treatment facility. In fact, the wastewater from Tbilisi also passes through Rustavi for final treatment and disposal at Gardabani. There is a network of wastewater pipes within the city that connect to the main pipeline leading to Gardabani. However, the treatment facility is only marginally functional, and therefore most of the wastewater is discharged to the river without treatment. Significant investments are required to revamp the Gardabani treatment facility.

Solid waste: In the old city, along the left embankment of the Mtkvari River, there is a waste dump, which poses a significant problem from an ecological point of view and requires investments to revamp. There is a new operational landfill, opened in 2011, with an area of 7 ha, about 10 km from Rustavi. A private company manages the collection and transportation of solid waste, covering the entire area. Additionally, the country's only garbage recycling plant is in Rustavi. This is a rather basic plant, which collects and compresses garbage for recycling, which is done outside the country. Given that Rustavi was developed as an industrial city, it had a landfill for hazardous wastes. This was the only one in the country. However, this is no longer in use and, therefore, there are no facilities to dispose hazardous waste. Although industrial stagnation pervades currently, there is a need to make significant investments to streamline hazardous waste management to prepare for a possible industrial revival.

Flooding: As the Mtkvari River flows right through the center of the city, there is a risk of flooding during the heavy precipitation that occurs in the early spring (May or June) and even in the fall (September). The city's location along the river and the absence of proper land-use plans make it vulnerable to the risk of flooding, information on which is not available.

Air quality: There is one air quality control station in Rustavi. The quality of the air is largely influenced by industrial emissions. Because of the prevailing industrial stagnation, the level of air pollution is not high. Although traffic contributes to the air pollution problem, the limited number of vehicles restrict it to permissible limits.

Green areas: As of 2013, there were about 614 ha of green plantations and about 720 ha of partially planted area. It was proposed to landscape and plant in another 1,915 ha. In addition, Rustavi has about 530 ha of protected areas. Significant budget is needed to maintain and expand the green areas within the city.

Equity Aspects

Archeology and culture: In Rustavi, archeological and architectural monuments were discovered. These related to the Middle Ages (IV–XIII), such as Rustavi fortress, burial sites in Nakalakari, cultural layers and settlements of Bronze and Hellenistic Ages, and so on. It is necessary to define the protective zone for Rustavi fortress and register Nakalakari as a monument of historical–cultural heritage. Besides being an industrial city, efforts need to be made to recognize it as a historical–cultural heritage, which should be gainfully used to realize its tourism potential.

Education: It is recognized that the municipality expects financial support to improve the very poor condition of the kindergarten under its responsibility.

Institutional and Governance Aspects

Planning: A socioeconomic development plan has been prepared with the support of USAID. It precedes a master plan that is not yet forecasted nor financed. There is an urgent need for such a master plan.

Permitting process: Even in the absence of plans, construction permits are being given.

City hierarchy: The city comprises 10 territorial subdivisions.

APPENDIX 3

National Urban Consultation Workshop

Photos: Carina Soliman, 2014

Photos: Carina Soliman, 2014

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Realizing the Urban Potential in Georgia

National Urban Assessment

This publication details the rapid assessment of the urban sector in Georgia to understand key urbanization trends and patterns of growth and to analyze challenges and opportunities. It gives a snapshot of the state of urban affairs at the national level with an urbanization profile, governance and urban management profile, capacity needs assessment, urban finance matrix, and a “3E” assessment covering economic, environmental, and social equity profiles. This document is not a strategy but the basis for developing a national urban strategy and road map for integrated investments to maximize development impact.

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