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CREATING LIVABLE CITIES

REGIONAL PERSPECTIVES

AFRICAN DEVELOPMENT BANK GROUP

ADB

European Bank
for Reconstruction and Development

IDB
Inter-American
Development Bank

Summer at Songdo Central Park. This 41-hectare park is a highlight of the Songdo International Business District, a smart city being developed on 600 hectares of reclaimed land in Incheon, Republic of Korea (photo by PKphotograph/Shutterstock.com).

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CONTENTS

FOREWORD

We want cities to be economically competitive, environmentally sustainable, resilient, and socially inclusive. Cities have the great potential to be all that—vibrant centers where people can exchange ideas, take entrepreneurial initiative, and leverage the benefits of urban agglomeration and economies of scale.

However, cities are facing various challenges—rapid population change, poor planning, infrastructure deficits, pollution, overstretched urban services, and skills shortages in the labor market. Increased vulnerabilities to disasters and climate change are also adding to cities' environmental stress. Social and spatial inequality; the lack of economic opportunities for the poor and disadvantaged, including women, minorities, and people with disabilities; and continued crime and violence put social cohesion in cities at risk.

Notwithstanding these challenges, cities are also the seedbeds of innovative solutions for a better livable future for all. Our generation has both the responsibility and the opportunity to spearhead a shift toward a green economy and improve climate change resilience. And the time to act collectively is now. Cities have the potential to become digitized hubs utilizing data-based solutions for informed planning, financing, investing, and operations to improve urban governance and service delivery. Most of all, cities can transform themselves into knowledge economies supporting innovation, entrepreneurship, community engagement, and human capital development.

This publication, *Creating Livable Cities: Regional Perspectives*, looks at urbanization trends and urban development across emerging and developing economies in Africa; Asia and the Pacific; Emerging Europe, Central Asia, and the Southern and Eastern Mediterranean; and Latin America and the Caribbean. It is a joint effort of four regional development banks operating in these regions: the African Development Bank (AfDB), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), and the Inter-American Development Bank (IDB).

These four regional development banks address urbanization challenges and approach urban development through their specific plans and projects. They support national and subnational governments, the private sector, and civil society in identifying transformative investments, strengthening planning and regulatory systems, advising on policies and strategies, and developing the capacities of people and institutions to better plan and manage highly dynamic urbanization forces.

This report suggests that governments take a proactive, integrated, long-term, and agile planning approach to urban development. While the solutions presented in this report showcase lessons and good practices, we recognize that each city is unique and requires its own set of initiatives and investments to adapt to its socioeconomic, geographic, and ecological realities.

We are pleased to present this report to governments, the private sector, development partners, and civil society, both in the region where we operate and beyond. We hope that the knowledge, lessons, experience, and ideas presented will inspire stakeholders to work together in creating more livable cities.

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Cities provide significant opportunities to improve human well-being, catalyze economic development, and serve as incubators for new ideas and innovation. With support from the regional development banks, cities are preparing and implementing plans for more sustainable, resilient, and inclusive urban development.

EXECUTIVE SUMMARY

Cities are engines of economic growth and prosperity, offering prospects for productive investments, well-paying jobs, and access to key institutions and services. Rapid urbanization since the 1950s has provided most cities in the world with opportunities for growth and innovation through urban agglomerations and economies of scale. However, many cities also face various challenges that constrain their capacities to deliver services to residents and limit the realization of a more sustainable urban future for all.

The four regional development banks (RDBs)—African Development Bank (AfDB), Asian Development Bank (ADB), European Bank for Reconstruction and Development (EBRD), and Inter-American Development Bank (IDB)—are working with emerging and developing countries in their regions to address the challenges and capitalize on the opportunities for making cities more livable.

São Paulo, Brazil (photo by wsfurlan/iStock.com).

REGIONAL URBANIZATION PATTERNS

The world's urban population has grown significantly from 751 million in 1950 (30% of the total population) to 4.2 billion in 2018 (55% of the total population). This is estimated to increase to 5.2 billion in 2030 (60% of the total population) and 6.7 billion by 2050 (68% of the total population). The number of "megacities" in the world (those with more than 10 million inhabitants) is projected to increase from 33 in 2018 to 43 by 2030. Of these additional 10 megacities, nine will be located in developing countries. Megacities and primate cities (the largest ones in a country) remain dominant, but are not the fastest-growing cities. Instead, urban areas with fewer than 1 million inhabitants—dubbed as "small and medium cities"—are experiencing faster growth rates. These small and medium cities account for 59% of the world's urban population.

While most leading economic hubs are currently located in advanced economies, the center of economic activity of the urban world is moving to emerging and developing countries, with 90% of urban growth until 2050 expected to occur in Asia and Africa. These economic hubs have diverse demographic profiles with varying proportions of young and old populations. Most developing countries are facing the dual challenges of providing for aging societies while creating good quality and well-paying jobs for their young and working-age populations.

The world's urban population is growing tremendously.

1950: **751 million**
(30% of the total population)

2018: **4.2 billion**
(55% of the total population)

2030: **5.2 billion**
(60% of the total population)

2050: **6.7 billion**
(68% of the total population)

Cities face common urban development issues.

- Infrastructure deficits and overstretched public services
- Environmental stress and degradation
- Increased vulnerabilities to disasters and climate change
- Unequal access and affordability issues
- Labor market disparities
- Social cohesion at risk

Cities around the world can capitalize on significant opportunities through various initiatives.

- Integrated and flexible urban planning
- Data and technology for better-informed decision-making
- Green economies and green finance
- Low-carbon and resilient urban infrastructure and services
- Synergistic investments in city-regions
- Localizing global agendas

COMMON URBAN DEVELOPMENT CHALLENGES

Each city is unique. Nonetheless, there are common urban development challenges that cities face across the RDB regions (referring to the regions where the four regional development banks operate).

While substantial progress has been made in improving urban infrastructure and services, many cities have not been able to keep up with rapid population growth. They face underinvestment in infrastructure, poor spatial and economic planning, suboptimal land use, and increased vulnerabilities to climate change impacts and disaster risks.

The annual investments required by cities to bridge the infrastructure gap are substantial and these range from 2% to 8% of the gross domestic product (GDP) in developing countries. The investment gap is particularly pronounced in small and medium cities, which often face added challenges of inadequate capacity and poor governance.

Furthermore, cities face risks with respect to social cohesion due to labor market disparities and limited economic opportunities, particularly for poor and disadvantaged minorities, women, and people with disabilities. Access and affordability of urban services remain unequal in most cities and crime and violence aggravate social and spatial inequality across the RDB regions.

Aerial view of a highway junction (photo by Nanostock/iStock.com).

OPPORTUNITIES FOR LIVABLE CITIES

Notwithstanding these challenges, cities provide significant opportunities to improve human well-being, catalyze economic development, and serve as incubators for new ideas and innovation. International agendas like the Sustainable Development Goals and the New Urban Agenda promote engaging with city governments in the global development effort. With support from the RDBs, cities are preparing and implementing plans for more sustainable, resilient, and inclusive urban development.

Across the RDB regions, city authorities are realizing the potential of holistic, flexible, and participatory urban planning to integrate infrastructure investments and policy reforms, build strong urban institutions, generate knowledge, and promote regional cooperation. Digital technologies and improved use of data are emerging as positive change agents to inform better decision-making for more transparent, people-centered, and accountable governance.

The areas of green economy and green finance create additional opportunities for cities. Diverting from traditional urbanization models that result in extensive resource extraction, waste, and pollution, cities increasingly see the potential of green economy models, which promote efficient uses of materials, protection and rehabilitation of ecosystems, and appropriate regulations for industries and markets. Green economies have the potential to create a net 18 million jobs globally by 2030 as cities across the world invest in low-carbon and resilient urban infrastructure and services.

Recognizing the potential of city-regions and city clusters to realize economies of scale and increase competitiveness, efficiencies, and innovation, national and subnational governments are making efforts toward more coordinated regional governance, land use, and infrastructure planning. Moreover, cities across the RDB regions can leapfrog traditional development milestones through building on newly emerging industries, service sectors, and sustainable tourism. Cities are increasingly supporting local entrepreneurship and innovation through proactive local economic development initiatives.

The four RDBs contribute to livable cities through a variety of financial, policy, and capacity development instruments in their respective regions. While urban challenges and opportunities are usually rooted in local context, learning across regions sparks innovation and ideas that could be replicable at a larger scale. RDBs play an important role in identifying, distilling, and diffusing knowledge and actions that can accelerate progress toward creating more livable cities.

Nairobi, Kenya (photo by Eunika Sopotnicka/iStock.com).

AFRICA

The shift toward cities on the African continent has seen an impressive increase in urban population share from 19% to 39% between 1960 and 2011. By 2040, half of Africa's population is expected to live in cities. However, there is much diversity among the economies across the 54 countries—from some of the world's poorest countries to middle-income countries with thriving economies.

Besides globally common urban development challenges, African cities struggle with macroeconomic instability, a poor investment climate, and significantly less adequate infrastructure than most cities in other regions. Natural resource exports still dominate in many African countries, resulting in consumption-oriented, economically less competitive cities embedded in a context of poor intra- and interregional connectivity.

The opportunities for AfDB are summarized in its High 5s Strategy to: Light Up and Power Africa, Feed Africa, Integrate Africa, Industrialize Africa, and Improve the Quality of Life for the People of Africa. AfDB is guided by its new Sustainable Urban Development Action Plan that focuses on improved planning, governance, and management; enhanced financing mechanisms at the national and subnational levels; as well as knowledge sharing and dialogue on topics such as political and fiscal decentralization and depoliticizing planning, strengthening participation of local communities, and human-centric design of cities. AfDB also launched its first Urban and Municipal Development Fund in April 2019 to support its Cities Program, which helps municipalities improve urban sustainability, management, and growth.

AfDB defines a sustainable city as one that offers a good quality of life to its citizens, minimizes its impact on the environment, preserves its environmental and physical assets for future generations, and promotes sustainable competitiveness.

Rapid urbanization has become a pan-African phenomenon.

284%
Growth of the share of Africa's urban population from 1990 to 2019

1.2 billion
Expected urban population by 2050

3 megacities with over **10 million inhabitants each** are located in Africa

African cities struggle with significantly less adequate infrastructure than most cities in other regions.

More than 50%
of urban residents live informally, increasing by 4.5 million each year

Less than 0.1% of GDP
is invested in sanitation in most countries

79 of Africa's 100 fastest-growing cities
are classified as "extreme risk" by the Climate Change Vulnerability Index

African cities in 2025: the AfDB High 5s Strategic Priorities

- Light Up and Power Africa
- Feed Africa
- Integrate Africa
- Industrialize Africa
- Improve the Quality of Life for the People of Africa

ASIA AND THE PACIFIC

The Asia and Pacific region is home to more than 53% of the world's total population and 44% of the world's urban population, as well as 17 of the world's 33 megacities, featuring very large city-regions with more than 10 million people in Beijing, Delhi, Dhaka, Mumbai, and Shanghai. While the current urbanization level in the region is still low, it has been experiencing a high growth rate of urban population at 3.4% per annum since 1970. A prominent feature of this urbanization is spatial growth of cities beyond their administrative boundaries, resulting in urban mega-regions and city clusters.

The region's cities face challenges of substantive infrastructure deficits, congestion and traffic, as well as significant air and water pollution. Many cities are vulnerable to climate change impacts and disaster risks. They also face rising inequality, lack of affordable housing, and poor capacities of urban institutions.

Addressing these shortfalls, ADB's Livable Cities approach puts people and community well-being at the center of urban development for making cities economically competitive, environmentally sustainable, low-carbon and resilient, as well as inclusive. The approach aims to provide integrated solutions through holistic participatory planning and generating and sharing knowledge with cities in the region.

ADB combines investments for infrastructure and services with capacity building and strengthening of urban institutions, particularly through long-term partnerships with its developing member countries.

ADB's 5Es of Livable Cities focus on the pillars of Economy, Environment, Equity, Enablers, and Engagement. These relate to efforts to strengthen urban institutions and governance; promote holistic planning and integrated solutions; support coordination within and between city-regions; leverage financing mechanisms such as land-based financing, public–private partnerships, and green finance; and advance the use of data and digital technologies in all aspects of urban governance.

Cities are the center of economic growth and innovation.

80% of economic growth in developing Asia comes from its urban areas

17 out of 33 megacities with a population of 10 million or more are located in the region

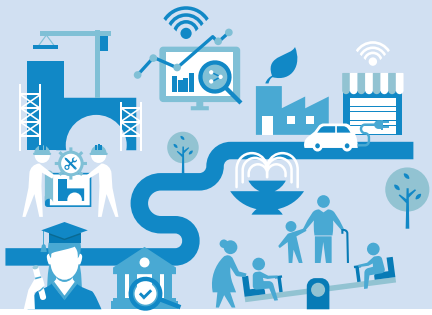
The region's urban trajectory has created major challenges, such as congestion, pollution, and increased disaster risk.

Up to 3% of the region's annual GDP is lost due to traffic congestion and long commuting hours

Over 90% of the population is exposed to air pollution beyond World Health Organization levels

84% of all people affected by natural disasters worldwide live in Asia and the Pacific

ADB's 5Es of Livable Cities



- Economy
- Environment
- Equity
- Enablers
- Engagement

EMERGING EUROPE, CENTRAL ASIA, AND THE SOUTHERN AND EASTERN MEDITERRANEAN

EBRD regions have experienced a steady process of urbanization, with urbanization patterns reflecting broader demographic trends—large and growing young populations in Central Asia, the Southern and Eastern Mediterranean and Turkey, and aging populations in Emerging Europe.

Despite these differences, populations are becoming more concentrated in large urban agglomerations across most of the region. Technological change benefits capital cities and large urban centers, where growing populations increase demand for infrastructure investments. In contrast, secondary cities—particularly in Emerging Europe—are often shrinking. This creates fiscal challenges, increases the costs of delivering public services, results in housing imbalances, outmigration of the more skilled, and increasingly poor outcomes for those who stay.

Since 1994, EBRD has supported projects to improve infrastructure for water, wastewater, urban transport, district energy, solid waste, facilities management, and energy efficiency. Beyond financing, EBRD offers policy dialogue and tailored technical assistance aimed at strengthening the capacity of municipalities and municipal companies to select, design, and implement projects to improve the provision of municipal services and leverage latest technologies. EBRD supports the development of livable cities, whether growing or shrinking. For instance, EBRD's Green Cities Framework assists city authorities in identifying, prioritizing, and connecting their environmental challenges with sustainable infrastructure investments and policy measures. Smart City Action Plans aim to improve competitiveness, planning capabilities, and quality of life through the use of real-time data analytics. EBRD's City Regeneration and Environment Fund is dedicated to integrated urban investments, upgrading transport hubs, rehabilitating disinvested assets in urban centers, and releasing value from disused industrial sites.

EBRD engages in urban regeneration initiatives, investing in projects aimed at improving existing urban public spaces in a manner that creates value and opens up new opportunities for complementary private sector investment.

Diverging patterns in urbanization

27% vs. over 90%
Urban population growth: Tajikistan vs. Jordan, at the extreme ends of EBRD regions

Slow or negative urban population growth in Central Europe, Baltic States, Southeastern and Eastern Europe, and the Caucasus

2% or more urban population growth in Central Asia, Southern and Eastern Mediterranean, and Turkey

Cities are drivers of growth

Over 70% of output and growth come from cities in EBRD regions

Over 60% of the population in EBRD regions live in cities

Large cities are growing more in population and have higher GDP

EBRD offers a range of support for developing livable cities

- $8.8 billion financed in infrastructure investments in 220 cities in 25 years
- 31 cities and counting have Green Cities Action Plans
- Smart City Action Plans use new technologies like internet of things and artificial intelligence
- The City Regeneration and Environment (CREATE) Fund supports integrated urban investments

LATIN AMERICA AND THE CARIBBEAN

Latin America and the Caribbean (LAC) has urbanized more rapidly than any other region in the world and earlier than other developing regions. It also has the world's largest percentage of population in megacities. The region is characterized by increasing migration between cities, while shrinking and aging households lead to internal transformations in the makeup of urban areas.

Notwithstanding improvements in reducing urban poverty and housing deficits, the region is looking for better ways to expand housing finance and availability. Most cities do not provide the recommended standard of the World Health Organization on green space per person. Stark inequalities persist as a challenge in terms of infrastructure provision quality and spatial segregation. Violence remains endemic in many LAC cities, highly concentrated in specific neighborhoods. Access to public spaces and urban opportunities is particularly challenging for low-income households and those led by women, minorities, and people with disabilities.

Equally important to IDB's work is mainstreaming the crosscutting issues of climate change and environmental sustainability, and gender and diversity.

Targeting related deficits in urban governance, urban infrastructure and public services, housing, and urban habitat, the four core areas of IDB's Urban Sector Framework aim to promote livable cities in the region. Solutions are jointly designed with local communities to include holistic territorial concepts for urban–rural linkages, promoting land-based municipal financing instruments, increasing private sector participation in infrastructure provision, strengthening local economies, and promoting metropolitan governance across sectors and jurisdictions. Projects converting traditionally "gray" into "blue-green" infrastructure is showcasing the transformative impact of inclusivity-oriented, targeted, place-based investments.

Latin America and the Caribbean is the most urbanized developing region in the world.

Over 8 out of 10 people live in cities in the region

27% of GDP growth is contributed by its 10 largest cities

3 million people join the urban workforce annually

Cities are the region's engines of growth, but they face many challenges: inequalities, inefficiencies, and the impacts of climate change.

About 20% of the region's population live in informal neighborhoods

Almost 5% of GDP in the region will be impacted by climate change by 2050

Less than 45% of urban households have the benefit of daily waste collection

IDB's Urban Sector Framework covers four core areas.

- Urban governance
- Urban infrastructure and public services
- Housing
- Urban habitats

DEVELOPING AND EMERGING ECONOMIES SUPPORTED BY THE REGIONAL DEVELOPMENT BANKS

African Development Bank (AfDB)

Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Côte d'Ivoire, Democratic Republic of Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Ghana, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Republic of Congo, Republic of Guinea (Conakry), Rwanda, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, eSwatini, Tanzania, The Gambia, Togo, Tunisia, Uganda, Zambia, Zimbabwe

Asian Development Bank (ADB)

Afghanistan; Armenia; Azerbaijan; Bangladesh; Bhutan; Brunei Darussalam; Cambodia; Cook Islands; Federated States of Micronesia; Fiji; Georgia; Hong Kong, China; India; Indonesia; Kazakhstan; Kiribati; Kyrgyz Republic; Lao People's Democratic Republic; Malaysia; Maldives; Marshall Islands; Mongolia; Myanmar; Nauru; Nepal; Niue; Pakistan; Palau; Papua New Guinea; People's Republic of China; Philippines; Republic of Korea; Samoa; Singapore; Solomon Islands; Sri Lanka; Taipei,China; Tajikistan; Thailand; Timor-Leste; Tonga; Turkmenistan; Tuvalu; Uzbekistan; Vanuatu; Viet Nam

European Bank for Reconstruction and Development (EBRD)

Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Egypt, Estonia, Georgia, Greece, Hungary, Jordan, Kazakhstan, Kosovo, Kyrgyz Republic, Latvia, Lebanon, Lithuania, Moldova, Mongolia, Montenegro, Morocco, North Macedonia, Poland, Romania, Russia, Serbia, Slovak Republic, Slovenia, Tajikistan, Tunisia, Turkey, Turkmenistan, Ukraine, Uzbekistan, West Bank and Gaza

Inter-American Development Bank (IDB)

Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay, Venezuela

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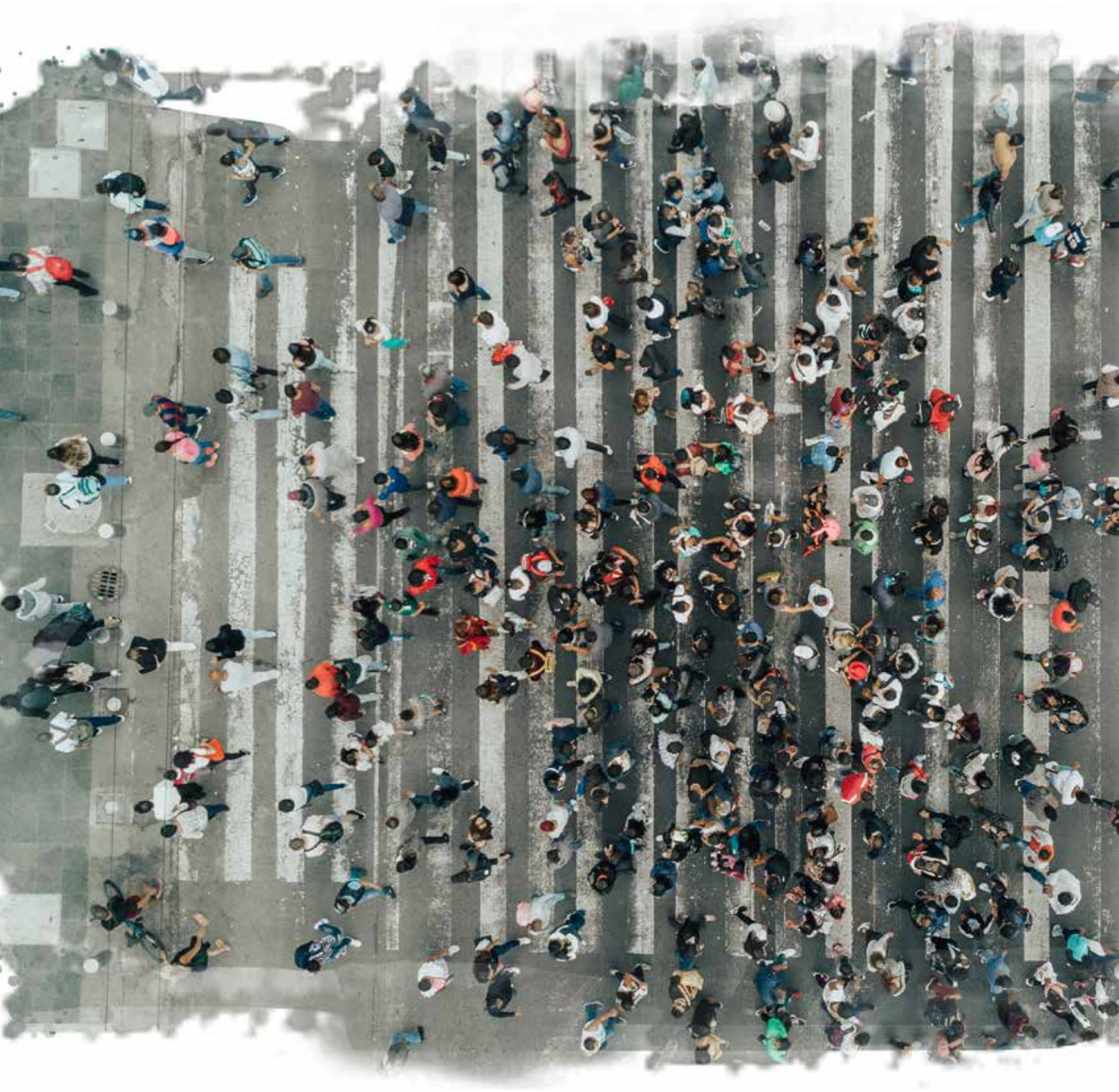


Aerial view of a crossing in Mexico City. The capital of Mexico regularly makes it to the top ranks in the world for worst traffic congestion, excessive commuting times, and bad air quality, but the city is taking bold climate actions to address its development challenges (photo by Orbon Alija/iStock.com).

CHAPTER 1

OVERVIEW

Cities are engines of economic growth and prosperity, offering opportunities for productive investments and innovations, well-paying jobs, and access to key institutions and services for a good quality of life. Cities facilitate more efficient production of goods and services due to concentration of capital and workers, entrepreneurial and managerial skills, and access to markets and consumers. Economies of scale also make infrastructure development and delivery of urban and social services more efficient and effective.

Rapid urbanization and demographic shifts provide exciting opportunities for cities to deliver a more sustainable and livable future. At the same time, many cities face challenges, such as inadequate investments in infrastructure, poor spatial and economic planning, and suboptimal land use. These challenges are further compounded by growing urban populations, rising youth unemployment, and aging societies.

This report examines urbanization trends, the challenges faced, and opportunities available to cities in the developing and emerging economies supported by the four regional development banks (RDBs)—African Development Bank (AfDB), Asian Development Bank (ADB), European Bank for Reconstruction and Development (EBRD), and Inter-American Development Bank (IDB).[1] This report contributes to the understanding of the different dynamics of urbanization within and across the RDB regions;[2] and outlines the approaches RDBs are taking to create more economically competitive, environmentally sustainable, resilient, and socially inclusive cities.

1 The member economies supported by the RDBs are listed on p. xv and at the start of each succeeding chapter.

2 In this publication, the term "RDB regions" refers to the cities and economies where the African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, and Inter-American Development Bank operate.

GROWING URBAN POPULATIONS AND URBANIZATION RATES

The world's urban population has grown considerably from 751 million in 1950 (30% of the total population) to 4.2 billion in 2018 (55% of the total population). This is estimated to increase to 5.2 billion in 2030 (60% of the total population) and 6.7 billion by 2050 (68% of the total population). By 2025, the 600 largest cities in the world—home to a quarter of the global population—is estimated to generate around 60% of global gross domestic product (GDP) (McKinsey Global Institute 2011). While the majority of leading economic hubs are currently still in advanced economies, the center of economic activity is moving toward the developing and emerging markets (Trujillo and Parilla 2016). Asia and Africa will account for 90% of the urban growth between 2018 and 2050, with more than a third of this growth to happen in just three countries: the People's Republic of China (PRC), India, and Nigeria (UN DESA 2018b). Thus, well-managed urbanization is critical to leveraging the productivity and innovation potential of cities.

Urbanization patterns within and across the RDB regions reveal varying patterns. Compared to the cities in the IDB and EBRD regions, cities in the ADB and AfDB regions have had lower urbanization levels, but higher rates of urban population growth over the past 5 decades. Projections for the next 3 decades show similar trends (Figure 1.1). Urbanization rates also varied widely within the regions in 2018: from 13% in Papua New Guinea to 76% in Malaysia (ADB), 13% in Burundi to 89% in Gabon (AfDB), 27% in Tajikistan to 91% in Jordan (EBRD), and 45% in Belize to 95% in Uruguay (IDB).

Massive megacities and fast-growing small and medium cities

The number of "megacities" in the world—those with more than 10 million people—is projected to increase from 33 in 2018 to 43 by 2030, with 9 of these 10 new megacities located in countries where the four RDBs operate (Figure 1.2). Although large and still dominant, megacities and primate cities (the largest ones in a country) are not the fastest-growing cities. Urban areas with fewer than 1 million inhabitants—the "small and medium cities"—account for 59% of the world's urban population and are experiencing a faster growth rate across the RDB regions. The growth rates of small and medium cities in ADB and AfDB regions are more than double the rate of IDB and EBRD regions. Conversely, urban populations in some cities in the EBRD regions are shrinking, particularly in Eastern Europe and in secondary and smaller cities that are not part of or close to an urban agglomeration—a trend that is nearly absent in the three other RDB regions (UN DESA 2018a).

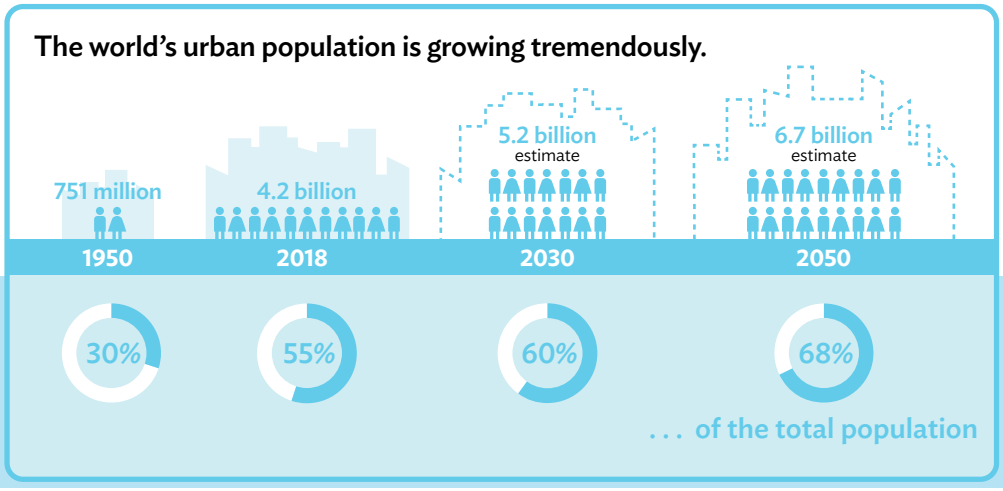
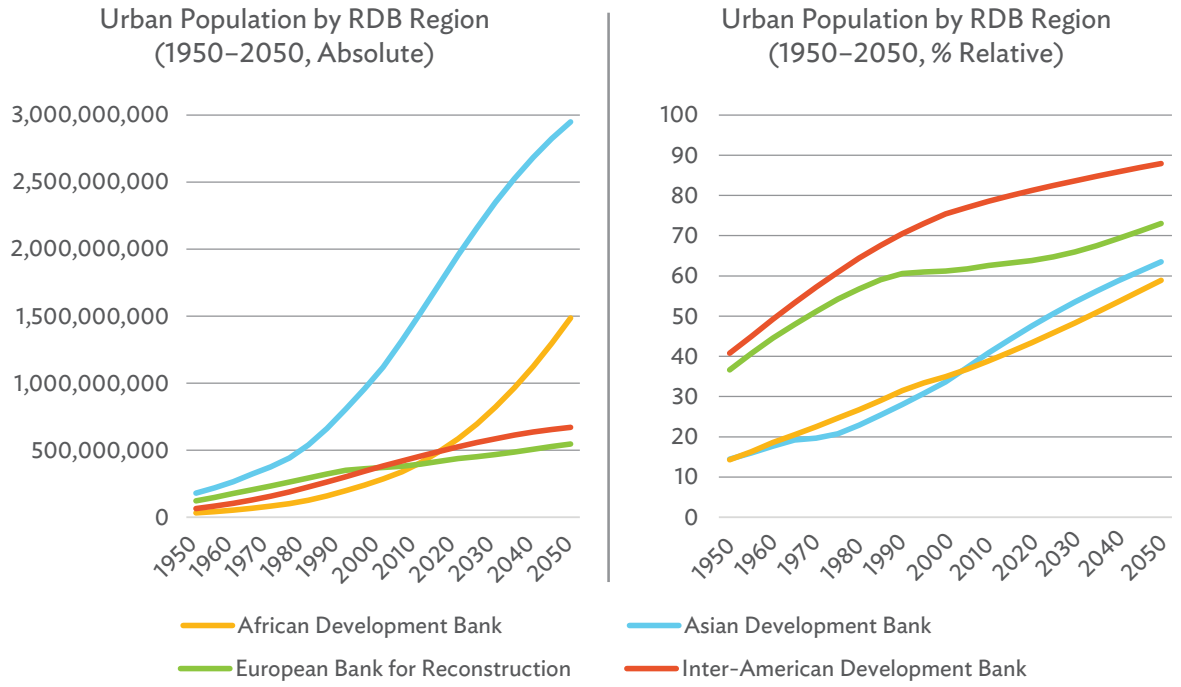


Figure 1.1: Urbanization Patterns of Regional Development Bank Regions, 1950–2050

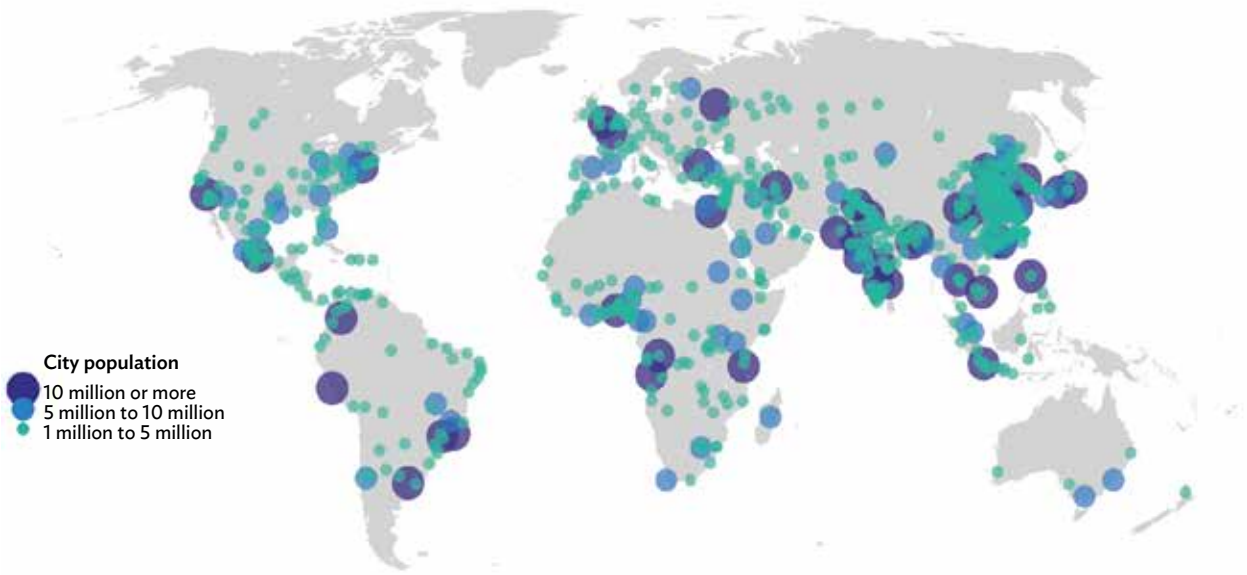


RDB = regional development bank.

Note: The member economies where the RDBs operate are listed on p. xv and at the start of each succeeding chapter.

Source: Authors' calculation based on United Nations, Department of Economic and Social Affairs, Population Division (UN DESA). 2018. *World Urbanization Prospects 2018*. https://population.un.org/wup/.

Figure 1.2: Cities with 1 Million Inhabitants or More, 2030



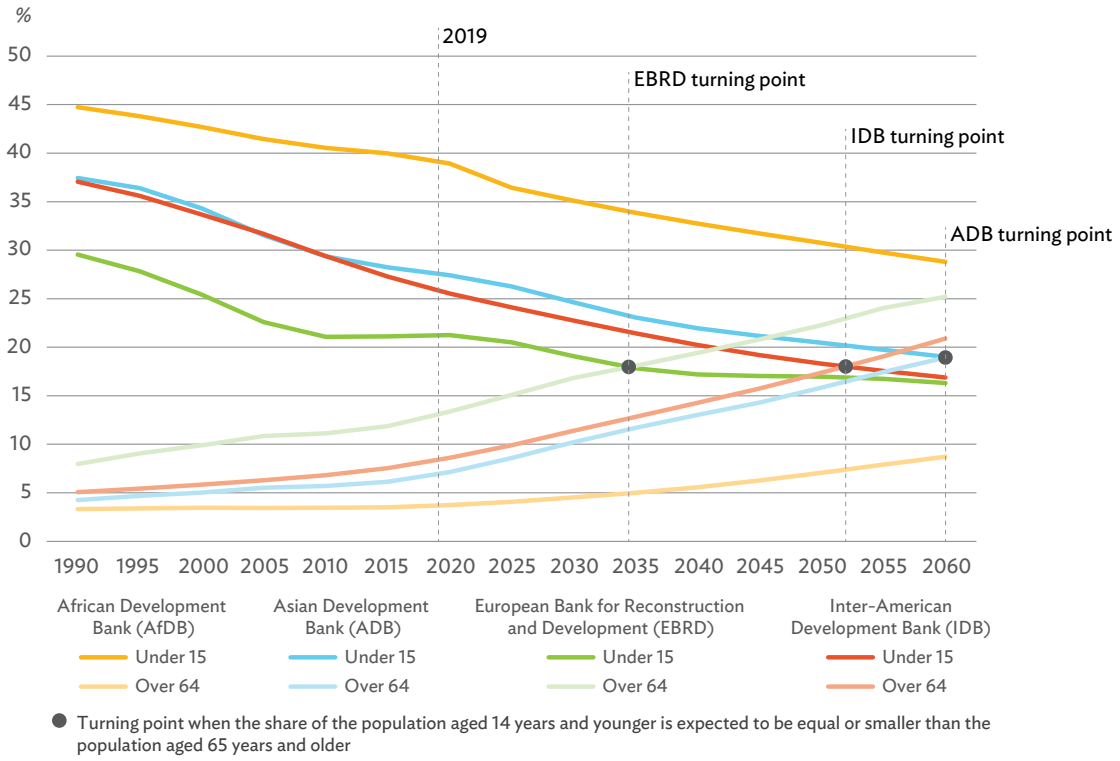
Source: United Nations, Department of Economic and Social Affairs, Population Division (UN DESA). 2018. *The World's Cities in 2018. Data Booklet*. New York. p. 2. © 2018 United Nations. Used with the permission of the United Nations.

Changing demographic profiles

Countries across the four regions have diverse demographic profiles in their proportions of young and old populations. For example, Niger is a very young country with 68% of its population younger than 25 years old while Greece and Bulgaria are relatively aging countries with 22% of their population projected to be more than 65 years in 2020. While most countries are currently still enjoying a beneficial age distribution profile, the trend is moving toward aging societies by 2050. The average share of the population aged 14 years and younger is projected to drop from more than a third of the total population in 1990 to less than a quarter by 2050. The average share of the population aged 65 years and older is expected to increase from 5% of the total population in 1990 to 17% in the RDB regions by 2050 (UN DESA 2019). Most regions are projected to experience the turning point after 2030 when the share of the population aged 14 years and younger is expected to be equal or even smaller than the population aged 65 years and older (Figure 1.3). The AfDB region, which is following a similar trend, is not expected to experience a turning point soon, although there are pockets of population aged 65 and older that are approaching 10% of the total population and are growing (Nabalamba and Chikoko 2011).

These trends are important to monitor as labor markets and social systems are sensitive to dependency ratios between nonworking (children and elderly) and working populations. In most AfDB countries (and some in the ADB and EBRD regions),

Figure 1.3: Average Population Share of Age Groups Under 15 and Over 64 Years by Regional Development Bank Region, 1990–2060



Note: Data based on medium fertility variant 2020–2100, for countries with available data.

Source: United Nations, Department of Economic and Social Affairs, Population Division (UN DESA). 2019. *World Population Prospects 2019*. https://population.un.org/wpp/Download/Standard/Population/.

the working populations are expected to continue to have a beneficial ratio to the dependent (nonworking) populations. Many countries in the IDB region, EBRD regions, and ADB's East Asia subregion, however, are already beyond this demographic curve.

Looking at the working population, some countries across the RDB regions are struggling with a youth bulge. Countries such as Haiti (IDB), Jordan (EBRD), Zimbabwe (AfDB), and Afghanistan (ADB) are estimated to have 20% of their populations in the age range of 15 to 24 years by 2030 (UN DESA 2019). An increasing number of young, working-age people are seeking job opportunities in cities, but are instead facing unemployment or underemployment. Their dissatisfaction could lead to accelerated internal and cross-border labor migration or even social unrest if economic growth cannot match the required job growth in some countries.

On the opposite end, economies facing a faster-aging population need to manage risks, such as underfunded health care programs, depleting pension funds, lack of age-appropriate housing and infrastructure, and shortfalls in the workforce with related reduced government revenue (McGraw Hill Financial Global Institute 2016). Countries with about 20% or more of their populations expected to be older than 64 after 2030 include, for instance, half of EBRD's countries of operations, particularly in Central and Eastern Europe, Chile and Uruguay (IDB), Mauritius (AfDB), and Thailand (ADB) (UN DESA 2019).

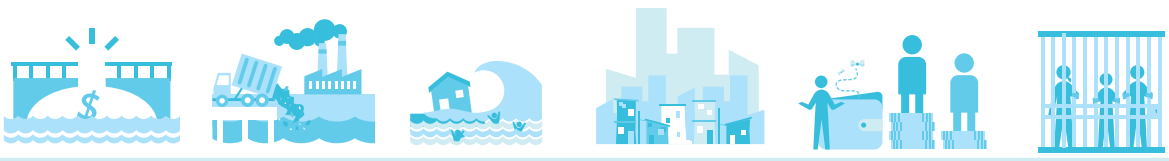
COMMON URBAN DEVELOPMENT CHALLENGES

Cities occupy about 2% of the earth's land, but they are responsible for approximately 70% of GDP, more than 60% of the global energy consumption, 70% of the greenhouse gas emissions, and 70% of global waste (World Bank 2019a). Urbanization is often associated with improved economic opportunities, better access to health and education services, better living conditions, and technological innovations, which can enhance overall quality of life. At the same time, cities face several challenges, including growing infrastructure deficits, overstretched public services, environmental stress, increasing risks of climate change impacts and disasters, growing inequality, violence and crime, and escalating threats from terrorism and cyberattacks (UN-Habitat 2016). Discussed below are some of the common challenges faced by cities across the RDB regions.

Infrastructure deficits and overstretched public services

Public services are improving, but are still not comprehensive. One of the essential public services is electricity, and cities in EBRD regions have the highest average access at nearly 100%, followed by those in IDB and ADB at 97%–98%, and AfDB at 73% (Figure 1.4). Another essential public service is water

CHALLENGES Cities across the RDB regions face common urban development issues.



Infrastructure deficits and overstretched public services

Environmental stress and degradation

Increased vulnerabilities to disasters and climate change

Unequal access and affordability issues

Labor market disparities

Social cohesion at risk

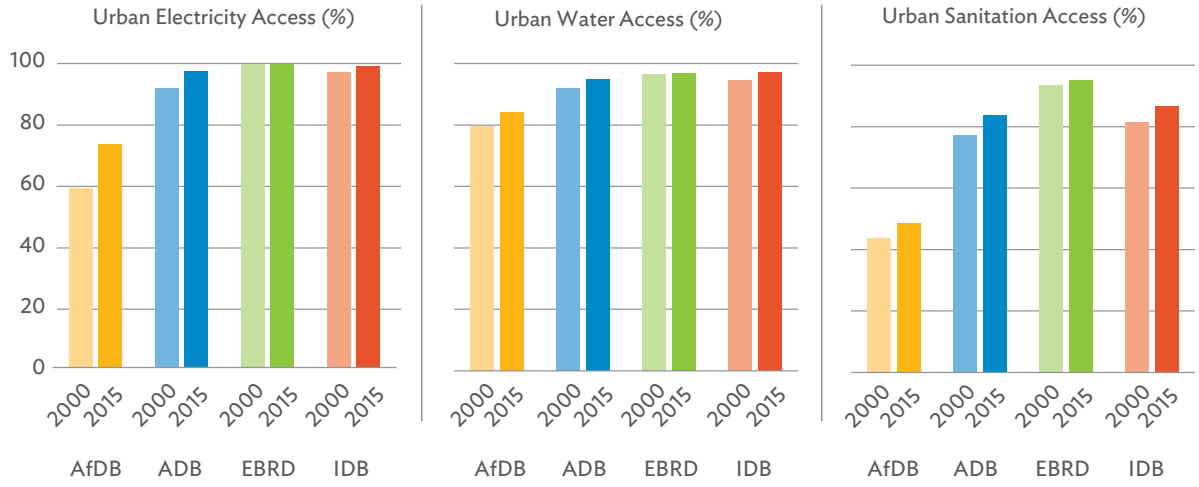
Dar es Salaam. Tanzania's largest city is an economic hub in East Africa and requires significant infrastructure investments to handle the continuous influx of new migrants to its expanding urban and peri-urban areas (photo by Moiz Husein/iStock.com).

supply, and cities in IDB and EBRD regions have the highest average access at 97%–98%, followed by those in the ADB region at 95%, and AfDB region at 84%. In contrast, sanitation remains less accessible across the RDB regions, with cities in the EBRD regions having the highest figure at 95%, followed by IDB at 87%, ADB at 84%, and AfDB at a low 49% (World Bank 2019b). Although lagging behind other regions, countries in the AfDB region have posted the greatest gains in improved urban access to electricity, water supply, and sanitation between 2000 and 2015.

Traffic congestion costs economies and the environment. Rapid urban population growth combined with sprawling, often unplanned, spatial expansion and insufficient road and rail infrastructure have led to massive traffic congestion in many cities. This congestion costs workers valuable time and the economy precious productivity. It also impacts negatively on the environment and human health in terms of physical health (e.g., road accidents and respiratory diseases) and mental health (stress and disorders). Traffic congestion has cost the economy an estimated 5% of GDP in cities such as Metro Manila (Philippines, ADB) and Dakar and Abidjan (Senegal and Côte d'Ivoire, AfDB) (Cervero 2013). Cities such as Istanbul (Turkey, EBRD) and Mexico City (Mexico, IDB) are regularly in the top ranks of the most congested cities (INRIX 2018).

The infrastructure investment gap is wide. Bridging the existing infrastructure gap that countries face requires substantial investments, particularly in cities and broader urban agglomerations. The scale of investment needs differs among the regions. The required average annual investments—expressed as a percentage of GDP— is estimated at 4.0% of GDP in East Asia and 4.8% of GDP in South Asia for capital investments; and an additional 2.5% of GDP in East Asia and 2.7% of GDP in South Asia for maintenance costs.

Figure 1.4: Regional Average of Service Access for Urban Populations, 2000 vs. 2015



AfDB=African Development Bank, ADB=Asian Development Bank, EBRD=European Bank for Reconstruction and Development, IDB=Inter-American Development Bank

Source: World Bank. 2019. World Development Indicators. http://datatopics.worldbank.org/world-development-indicators/.

Countries in Sub-Saharan Africa follow with 7.2% of GDP for capital investments and 2.0% for maintenance costs. Investment costs in countries covered by IDB and EBRD are significant, albeit lower, which reflects their comparatively better–developed infrastructure systems (Rozenberg and Fay 2019).

Difficulties in bridging the infrastructure gap are compounded by weak governance and limited local resources. Small and medium cities across the RDB regions frequently face governance challenges, including weak institutional structures, limited municipal authority, insufficient legal and regulatory frameworks, lack of coordination across agencies, overlapping administrative responsibilities, corruption, and a lack of own-source revenue. These deficiencies aggravate the infrastructure investment gap and delivery of urban services through the whole cycle of planning, financing, constructing, and managing infrastructure and services.

Environmental stress and degradation

Ecosystems are under pressure. Uncontrolled urbanization, inadequate planning, and over-exploitation of natural resources exacerbate existing levels of environmental degradation in cities across the four regions. These result in the loss of protective ecosystems (e.g., primary forests, water sources, riparian and coastal buffer zones) and higher environmental risks (e.g., land subsidence due to unregulated groundwater use). Inadequate management of solid waste, wastewater, and vehicular emissions pose environmental threats to air, soil, and water quality in many cities.

Most cities leave heavy carbon footprints. Over two-thirds of the 500 cities carrying the largest carbon footprint are in RDB regions, although cities in the IDB region are not listed in the worst 100 cities globally in terms of footprint per capita. RDBs operate in 11 of the 20 cities considered to have the worst total carbon footprint. Of the 20 cities considered to have the worst per capita carbon footprint, 13 cities are in the RDB regions. These include cities in the PRC, Singapore, the Republic of Korea, and Indonesia (ADB); Kazakhstan (ADB and EBRD); South Africa (AfDB); and Egypt (AfDB and EBRD) (WRI 2018).

Poor air quality remains. About 95% of the population in the RDB regions experiences air pollution levels that exceed the guidelines of the World Health

Organization (World Bank 2019b). An estimated 3 million people in developing Asia die each year from causes related to poor urban air quality (IEA 2016). The ambient air pollution is particularly serious in cities located in the ADB region, such as Afghanistan, Bangladesh, India, and the PRC; and in the AfDB region such as in Niger and Egypt (also EBRD).

Cities generate substantial solid waste. Solid waste generated globally was about 2 billion tons in 2018, and will increase to 3.4 billion tons before 2050 (Kaza et al. 2018). Waste generation per capita is highest in the EBRD and IDB regions, but is estimated to grow at a much faster rate in countries in Sub-Saharan Africa (AfDB) and South Asia (ADB). There are outliers with high per capita waste generation in each region, such as Singapore (ADB), Seychelles (AfDB), Moldova (EBRD), and Bahamas (IDB). With less than half of municipal waste collected in cities of low-income countries and at least one-third of municipal waste currently not managed sustainably, municipal waste and associated waste liquids (leachates) pose serious environmental and health risks. Plastic pollution is a critical emerging transboundary issue, with most plastic finding its way into drainage systems, waterways, and eventually into oceans.

Increased vulnerabilities to disasters and climate change

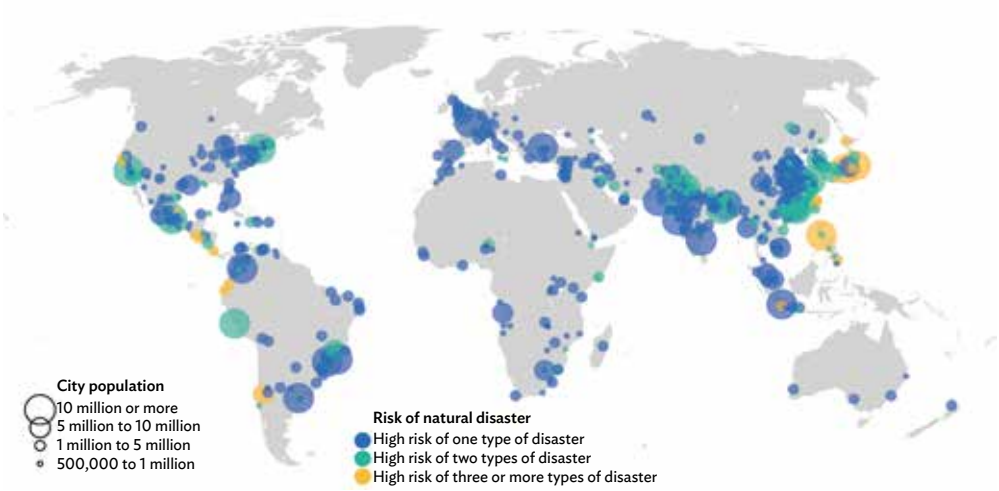
Cities are highly vulnerable to disasters. The regions where the RDBs operate are highly disaster-affected, experiencing an average of 376 disasters triggered by natural hazards per year. Mega-catastrophes, such as the 2008 cyclone Nargis in Myanmar (ADB) and the 2010 earthquake in Haiti (IDB), led to a high annual average of 69,827 deaths, 230 million affected people, and $138 billion in damage (Guha-Sapir et al. 2016). In 2016 alone, Africa recorded 58 natural disasters (including climatological, geophysical, hydrological, and meteorological); Latin America and the Caribbean had 55; Eastern and Southern Europe had 22; Asia had 159; and Oceania (excluding Australia and New Zealand) had 8.

Climate change aggravates disaster risks. Climate change is resulting in sea-level rise, erratic rainfall, and more extreme weather events. Metropolitan regions such as Manila (Philippines), the Pearl River Delta (the PRC), Jakarta (Indonesia), and those in low-lying areas along the coastlines, are increasingly vulnerable to the combined risks from climate change and disasters (Figure 1.5). Dramatic climate scenarios are likely to happen if the world moves beyond the 1.5 degrees Celsius temperature increase. Crossing that temperature threshold would, among other things, lead to the extinction of nearly all coral reefs and massive decreases in marine fish catch, which in turn would put at risk urban food security and the livelihoods of many of the 800 million people that depend on fish for catching, production, and nutrition (IPCC 2018).

Unequal access and affordability issues

Urban inequality is widespread. Poor and disadvantaged communities often face challenges in having their voices heard in policy and decision-making. Inequality is evident, for instance, in access to housing, with significant supply and demand imbalances. A deficit in the supply of affordable and durable housing in developing countries leaves people without adequate shelter—800 million people in 2018 and an estimated 2 billion by 2030 (Habitat III 2017b). Due to its durable and long-term nature, housing stock does not grow as rapidly while urban populations keep increasing. Although the proportion of urban slum populations, compared to total urban populations, has come down globally by 17% between 1990 and 2014, the absolute number of people living in slums increased by 200 million globally during the same time. Only Northern Africa saw a significant decrease in urban slum populations in both relative terms (–23%) and absolute terms (–48%). Similar positive developments were achieved in Latin America and the Caribbean (–13% in relative terms and –1% in absolute terms). In all other regions, however, relative improvements between 1990 and 2014 were far outpaced by the absolute increase in urban slum

Figure 1.5: Cities Exposed to Risks of Natural Disasters, Including due to Climate Change



Source: United Nations, Department of Economic and Social Affairs, Population Division (UN DESA). 2018. *The World's Cities in 2018. Data Booklet*. New York. p 9. © 2018 United Nations. Used with the permission of the United Nations.

populations. In Southeast Asia, a 21% decrease in slum population relative share contrasts with a 20% increase in the absolute number of people living in slums. In Sub-Saharan Africa, a 14% decrease in slum population relative share is a 118% increase in absolute numbers (UN-Habitat 2016).

Availability of housing and transport options are barriers for the urban poor. In many cities, the availability of affordable and adequate housing and transport modes creates spatial inequality, or unequal access to urban services and opportunities. For example, lower-income populations either reside in inner-city slums with precarious conditions or in informal peri-urban areas far away from public transport. Investments in urban transport that focus on roads for private cars contributes to increased traffic, spatial splintering, excessive commute times, lost productivity, and increased mobility costs. This especially disadvantages the poor residents in far-flung or poorly connected parts of a city, increasing their physical and financial burdens to access jobs, schools, hospitals, and common amenities, such as parks and playgrounds.

Labor market disparities

Urban labor markets reveal a combination of informal jobs, underemployment, and in-work poverty. Of the employment in low-income and lower-middle-income countries, 84%–90% is informal, and about 127 million people are underemployed. In Africa, informal employment accounts for 86% of the employed population—the highest of all regions— followed by Asia and the Pacific with 70%, Latin America and the Caribbean with 53%, and Eastern Europe and Western Asia with 43%. In addition, low-income and middle-income countries struggle with almost 700 million workers (25% of all adult workers) in extreme or moderate poverty in 2018 due to a mismatch of income and minimum living costs, particularly in urban areas (ILO 2019).

Youth unemployment, particularly among young women, is a concern. Younger people (15–24 years old) have a much higher unemployment rate than adults, particularly in lower-middle–income countries. An additional 1 billion young people are entering the labor market between 2015 and 2025,

with nearly 9 out of 10 of these young people in developing countries. The youth bulge creates the challenge of generating enough jobs, especially in urban areas that function as magnets of rural migrants in search of income opportunities outside of subsistence farming (ILO 2015). While gender disparities in terms of income have not been fully addressed, there are examples in Latin America and the Caribbean where income disparities are lower in urban areas. Notwithstanding relatively better employment opportunities in cities than in rural areas, young women experience gender disadvantages with a staggering 30% of young women versus 13% of young men globally who are not in education, employment, or training. In 2018, the unemployment rate for women in Northern Africa, a region with the highest unemployment rates, was 21%, which is more than double that of men (ILO 2019).

Not enough jobs, while new jobs require different skill sets and training. Despite large working-age populations, many cities experience a skills mismatch and labor market polarization as part of increasing standardization and digitalization of industries (Das and Hilgenstock 2018). Cities are at the epicenter of the structural transformation occurring around the fourth industrial revolution where access to information and communication technology (ICT) plays an important role. In 2016, mobile cellular subscriptions are showing signs of a mature technology with all regions at or above 100 subscriptions per 100 people—except for Africa with 80. Broadband subscriptions show opportunities for growth, and rates remain uneven with large differences among the regions. The EBRD regions, with 20 broadband subscriptions per 100 people, has twice as many subscriptions per 100 people than in the IDB and ADB regions, whereas AfDB countries on average barely reach 1 subscription per 100 people (AfDB, ADB, EBRD, and IDB 2018). The situation is typically better in cities than in rural areas, but caution is needed not to extrapolate the situation in the largest primate cities onto small and medium cities, which still often lag behind in ICT access.

Social cohesion at risk

Higher levels of crime and violence disproportionately affect the poor. Based on a comparison of more than 2,100 cities according to their population growth, unemployment, inequality, pollution, climate risks, homicide, and exposure to terrorism, 95% of African cities and 85% of Asian cities have high or medium levels of fragility (Igarape Institute 2019). "Zones of exclusion" have emerged in cities with prosperous, well-serviced, private residential and commercial areas in proximity of lower-income, poorly serviced, informal neighborhoods and markets. Residents in such slums disproportionately experience inadequate state power, gang violence, and drug wars that are increasingly violent, with particular examples in Latin America and the Caribbean (Vilalta, Castillo, and Torres 2016). Some countries have experienced episodic or prolonged urban ethnic and religious conflicts that have transformed urban landscapes into battlefields, targets of terrorism, and destinations of forced migration.

Despite large working-age populations, many cities experience a skills mismatch and labor market polarization as part of increasing standardization and digitalization of industries.

OPPORTUNITIES FOR LIVABLE CITIES

Despite the challenges brought about by urban development if not well-managed, the potential benefits of cities are unparalleled. Leveraging their opportunities requires forward-thinking and flexible planning, capacity at the municipal level, and good governance. Strong collaboration across different levels of government, and among public, private, and civil society sectors are key to the ideas, policies, and finance needed for a more sustainable urban development.

Cities have a fundamental role in their countries' development, especially where cities are part of larger agglomerations with their production and job growth often outpacing their national economies. Firms and people in cities benefit from agglomeration effects. More densely populated areas tend to be more productive. Firms that operate close to one another in large markets can more easily source inputs, access greater numbers of customers, and recruit employees from a much larger pool of workers. Ideas disseminate faster in more densely populated areas, fostering innovations that offer consumer competition and a variety of services and products. Infrastructure and other public goods in urban agglomerations also tend to be cheaper per capita due to economies of scale.

Several international agendas are calling for new ways of thinking and developing more livable cities. The New Urban Agenda provides a more comprehensive guiding framework with principles, standards, and policies for transforming the planning and governance of urban areas toward more sustainable pathways (UN 2016). The Sustainable Development Goals (SDGs), especially SDG 11, set the goal of making cities inclusive, safe, resilient, and sustainable. Many SDGs have targets for cities to be achieved by 2030. The following chapters in this report elaborate how cities in the RDB regions can and in many cases do already take advantage of the opportunities to address the challenges enumerated earlier.

Istanbul, Turkey. A transcontinental megacity of 15 million people that lies in both Asia and Europe faces extreme earthquake risks as it sits on the North Anatolian Fault, which is one of the most active seismic zones globally (photo by Damir Cudic/iStock.com).

This report illustrates how RDBs support cities through their urban operational plans and strategies, funds and instruments, projects and technical assistance, knowledge work and capacity building activities, and various pilots and initiatives—such as through AfDB's Sustainable Urban Development Action Plan, ADB's Livable Cities Operational Plan, IDB's Urban Sector Framework, and EBRD's Municipal and Environmental Infrastructure Sector Strategy and Green Cities Framework.[3]

Integrated and flexible urban planning

The key is long-term, holistic, participatory, and flexible urban planning. Urban authorities have realized that rigid master planning approaches are inadequate for addressing the challenges of a fast-changing urban environment. Based on well-informed urban diagnostics, holistic planning approaches are a way for governments to assess synergies, integrate sectors, engage with the private sector and civil society, and promote actions for linkages and cooperation within, between, and among urban regions.

The interrelationship among transport planning, land use, and labor markets has to be recognized. Given the generally persistent nature of interrelations among land use, transport plans, and labor markets, cities should use the right diagnostic and planning methodologies to look ahead to the future and to get infrastructure planning and investment decisions right the first time. They should also count on the tools and processes to adjust development directions and priorities in the future as needs and technologies change.

Data and technology for better-informed decision-making

Technology can be a positive change agent. "Smart cities" are harnessing the power of smartphones, cameras, and sensors by adding "a layer of digital intelligence over a cityscape" to capture streams of real-time data and opening up opportunities for more transparent, people-centered, and accountable governance (McKinsey Global Institute 2018). Digital technologies are changing

OPPORTUNITIES

Despite their urban development challenges, cities around the world can capitalize on significant opportunities through various initiatives.

Integrated and flexible urban planning

Data and technology for better-informed decision-making

Green economies and green finance

Low-carbon and resilient urban infrastructure and services

Synergistic investments in city-regions

Localizing global agendas

[3] For further reading on RDBs' approaches to urban development, see: AfDB. The Bank Group's Urban Development Strategy: Transforming Africa's Cities and Towns into Engines of Economic Growth and Social Development. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/Urban-Development%20Strategy-Rev%201.pdf; ADB. 2019. Operational Priority 4: Making Cities More Livable. https://www.adb.org/documents/strategy-2030-op4-livable-cities; EBRD. 2019. Video: Preparing Cities for the Future. https://www.ebrd.com/news/video/preparing-cities-for-the-future-.html and EBRD Green Cities. https://www.ebrdgreencities.com/; IDB. Housing and Urban Development Division. https://www.iadb.org/en/urban-development-and-housing/housing-and-urban-development.

An increasing number of cities are deploying digital technologies to inform their decision-making and creating more user-friendly and resource-efficient urban areas.

how governments plan and manage cities to utilize spatial data in urban diagnostics and project design, operate utilities and infrastructure systems, organize transport, ensure public safety design climate-efficient buildings and spaces, plan and budget projects, and monitor urban operations and investment impacts (Habitat III 2017c). Digital technologies can help optimize services for citizens in the most efficient and cost-effective way for public budgets.

Avoiding a digital divide requires proactive measures. Digital technologies in the urban space have much advanced in recent years. For example, the potential of artificial intelligence is being actively pursued and tested against a range of technical and governance issues in smart processes. Yet, policy makers should watch closely the potential risks of a widening gap between high-skilled and low-skilled work, since this has an impact on inclusiveness. (AfDB, ADB, EBRD and IDB 2018; World Bank 2016). Visionary leadership, promoting local innovation, embedding smart regulation into existing frameworks, enabling public–private partnerships, and adopting global standards of governance can ensure technological advancement to the benefit of all people (WEF, no date).

Acting boldly and collaboratively can yield enhanced development. Crowdsourcing and innovator hubs can convene and support entrepreneurs and civil society actors working on ideas and solutions for using technology to improve life in cities. Realizing this potential of the fourth industrial revolution, an increasing number of cities are deploying digital technologies to inform their decision-making and creating more user-friendly and resource-efficient urban areas, with examples worth exploring from Montevideo (Uruguay) and Vilnius (Lithuania) to Bandung (Indonesia) and Banjul (The Gambia).

Green economies and green finance

Greener economies are the indisputable winners. Reducing environmental risk and resource depletion while promoting sustainable development, a green economy can match the investment costs and economic benefits of carbon-intensive traditional models, while achieving far greater long-term social and environmental benefits (Rozenberg and Fay 2019). Increasingly, cities and countries divert from traditional urbanization models that rely on extensive resource extraction, waste, and pollution. Leaders are also realizing the potential of a greener economy and people-centered development models, which promote efficient material uses, undertake the protection and rehabilitation of ecosystems, implement mitigation and adaptation strategies to climate change, and utilize inclusive approaches to structural change in industries and markets (UNEP 2011). A green economy has the potential to create about 18 million jobs by 2030, particularly in the Americas, Asia and the Pacific, and Europe (ILO 2018).

Many types of infrastructure are ideal for green investments. Opportunities for low-carbon urban infrastructure and services are evident across

urban infrastructure. These include energy; transport; wastewater treatment; waste management (including waste prevention, recycling, waste-to-energy, and resource recovery); affordable and green housing; and efficiency improvements for the private sector, including manufacturing, services, and commercial establishments.

Sustainable urban projects benefit from additional finance. Countries are taking advantage of the green growth opportunity by leveraging private sector participation, and additional financing and technical assistance from multilateral and bilateral development organizations to advance low-carbon infrastructure development. RDBs are helping cities mobilize innovative external funding by accessing the global green finance and/or providing climate finance directly. Between 2011 and 2018, multilateral development banks committed $237 billion in climate finance, of which AfDB, ADB, EBRD, and IDB accounted for 37% of the amount (EBRD 2018). The four RDBs also guide in mainstreaming such instruments into urban finance and project development through policy development, capacity building, and knowledge sharing.

Sustainable investing and green finance are gaining momentum and scale.[4] Until 2018, green bond issuances amounted to $521 billion and emerging markets accounted for 42% of first-time issuers in 2018, with the PRC and India (ADB), Chile (IDB), South Africa (AfDB), and Poland (EBRD) as prominent examples in the RDB regions (CBI 2019). Other green finance instruments are also gaining momentum, such as specialized blended green finance facilities to leverage different finance sources and to indicate to investors that governments are committed to a low-carbon future.

Low-carbon and resilient urban infrastructure and services

There is much untapped potential in circular processes and economies.[5] With support from RDBs, cities are adopting more energy- and resource-efficient solutions to protect, sustainably manage, and restore ecosystems. These solutions help cities cope with issues, such as climate change, water security, food security, and natural disasters. For example, a wastewater treatment plant can become a resource generator providing electricity and manure from digested sludge and treated effluent for irrigation and industry. Cities are beginning to introduce or restore green spaces and green buildings as an alternative to conventional urban infrastructure, which is often intrusive and reliant on heavy construction interventions.

Green designs can link natural and built environments. Pocket parks, community gardens, and urban forests provide a bridge between natural and built environments in a city, as exemplified by projects in Curitiba and Brasilia in Latin America and the Caribbean (IDB), and the "sponge cities" approach in Pingxiang (Jiangxi province, PRC, ADB) (Oppla 2019). EBRD calls for a return of green spaces that were "lost in transition" over recent decades of socioeconomic and political change in Eastern Europe and Central Asia (Hirt 2013). RDBs are supporting cities that are greening designs—from smaller site-specific features, such as green roofs and rainwater harvesting, to larger-scale interventions, such as through riparian corridors and street tree canopies.

Integrated green projects offer cross-benefits. Infrastructure projects can promote multiple development objectives when they emerge from holistic, cross-sector approaches. One example

[4] Sustainable investing is aligned with environmental, social, and governance principles and avoids negative impact-generating assets. Green finance, as part of sustainable investing, aims to achieve positive environmental externalities through the protection and rehabilitation of ecosystems, efficient natural resource use, improved environmental resilience, and climate change adaptation and mitigation actions (which are both subsumed under climate finance).

[5] A circular economy is an economic system based on business models that replace the end-of-life concept with reducing, alternatively reusing, recycling, and recovering materials during the production or distribution and consumption processes across the micro, meso, and macro level with the aim of ensuring a sustainable development (Kirchherr, Reike, and Hekkert 2017, pp. 221–232).

is AfDB's Abidjan Urban Transport Project, which focuses on improving road conditions, traffic flows, and road safety. AfDB also supports better urban waste management, the protection of natural ecosystems in Banco National Park, strengthening planning capacities, and supporting better local revenue collection. Other countries have supported similar low-carbon, cross-benefit transport initiatives in cities, such as Peshawar's Sustainable Bus Rapid Transit Corridor Project in Pakistan, and Medellín's metro cable gondola lift system in Colombia. To scale up these efforts, national and subnational governments, with the support of international organizations, are working to mainstream aspects of sustainability and resilience through cross-cutting and sector-specific standards and guidelines for project design, implementation, infrastructure delivery, and operation and management of assets and services.

Synergistic investments in city-regions

The agglomeration of city-regions and city clusters are a development force. Many urban regions can realize economies of scale through coordinated governance, land use, and infrastructure planning. For example, the PRC has included in its 13th Five-Year Plan a total of 19 city clusters, with ADB supporting the Beijing–Tianjin–Hebei cluster, the Yangtze River Economic Belt Program, and the Chengdu–Chongqing Cluster. In Africa, the Dar es Salaam Bus Rapid Transit System Phase II (20 kilometers of exclusive lanes and nonmotorized transport) underscores the potential of affordable, efficient, and enhanced connectivity, with benefits to 1.2 million commuters from the formal and informal business sectors in and around Dar es Salaam.

Estero de Paco, Manila, Philippines. The Pasig River is the most important natural water system in Metro Manila, but urbanization and industrialization have turned it into a destination of waste. As part of multistakeholder efforts to rehabilitate the Pasig River, ADB assisted in a cleanup of the Estero de Paco, one of the estuaries that discharge into the river (photo by Eric Sales for ADB).

Integrated urban regions benefit from having dense, large markets. Integrated urban regions, or cluster cities, are at an economic advantage because of opportunities that come from pooled inputs, customers, and workers, which help drive up competition, efficiencies, and innovation. Proximate cities can share their otherwise limited financial resources and institutional capacities through collaboration, economies of scale, integrated labor markets, and better access to more evenly distributed services, such as with mass rapid transit systems. One example from AfDB is the Dakar–Diamniadio–Blaise Diagne Airport Regional Express Train in Senegal, a 55-kilometer-long railway that will connect the center of Dakar with the new international airport. This project will reduce travel time from 2 hours to just 45 minutes, and also includes the construction of a digital technology park in the bustling city of Diamniadio.

Strategic corridors and border crossings are ideal grounds for cities to collaborate. Governments in developing and emerging economies are investing in secondary cities as a strategy for more inclusive, regionally balanced urbanization. The infrastructure, services, and natural resource base of thriving secondary cities offer relief to primary cities. If well-governed, secondary cities also have the potential of being more resilient to economic and natural shocks.

Cities can leapfrog traditional development milestones by leveraging the benefits of sustainable urbanization and new industries. In India, major investments and policy reforms in industrial corridors have substantially improved ease of doing business and attracted investors; they have also supported the building of human capital through targeted skills development plans for workers, entrepreneurs, and students (ADB 2016). Some urban economies in Eastern Europe, such as Novi Sad in Serbia, are diversifying by shifting from industry to services and turning into important financial and ICT centers, with small and medium-sized enterprises dominating the city's economic development. Rising tech hubs in Medellín (Colombia) and Krakow (Poland) exemplify the advances that are possible within a short time.

Local urban governments are proactively supporting local entrepreneurship and higher-value industries. City governments are hosting business workshops, providing seed funds, reaching out proactively to private industries and investors, and devising policies that support small and medium-sized enterprise development for local economic growth and job creation. Monterrey (Mexico), San José (Costa Rica), São Paulo (Brazil), and Santiago de Chile (Chile), among others, have been proactive in developing an ecosystem to support entrepreneurship and innovation. Buenos Aires Expo 2023—the first international exhibition to take place in Latin America—is a clear example of the region's efforts to foster scientific–technical and creative initiatives at the local level. Another example is the emergence of successful tourism towns, such as Colonia (Uruguay) and Khiva (Uzbekistan), and sustainable and inclusive tourism strategies, such as in Viet Nam's secondary cities and in Aqaba (Jordan), which offer alternatives with higher-value economic development and the promise of local enterprise and job creation.

Governments in developing and emerging economies are investing in secondary cities as a strategy for more inclusive, regionally balanced urbanization.

Localizing global agendas

City governments are finding their voice on the global stage. Many countries have started including local and regional governments in the process of preparing their national development plans as cities contribute exponentially to local and national economic and social development progress. RDBs are supporting cities in implementing climate change commitments under the Paris Agreement by helping localize nationally determined contributions and preparing and implementing low-carbon, city-level transformation plans in line with national strategies and programs.

Global agendas require local implementation. Cities are taking the initiative to contribute to their countries' achievement of globally agreed targets and goals. On the Paris Agreement, the "Cities A List" recognizes cities that are leading the low-carbon transition, such as Buenos Aires (Argentina); Cape Town (South Africa); Athens (Greece); and Hong Kong, China. These cities are advancing actions to reduce their carbon emissions, adapt to climate change, and sustainably manage natural resources as part of their commitments to the global climate action agenda (CDP 2019).

An opportunity for global knowledge-sharing

While urban challenges are usually rooted in local context, interregional knowledge-sharing facilitates innovations and replication of good practices at a larger scale across regions. For this, RDBs can play an important role as catalysts. The following chapters, prepared by the RDBs, discuss region-specific trends, issues, challenges, and each RDB's approach to supporting cities in implementing their plans for enhancing urban livability. The commonality of challenges and opportunities and the diversity of approaches across the regions offer rich lessons for sharing and replication.

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CHAPTER 2

AFRICA

Rapid urbanization has become a Pan-African phenomenon, and African cities have been turning into vibrant centers of political, economic, and cultural life.

Urbanization can provide opportunities to accelerate social development and economic growth on the African continent in different ways. It can support inclusive growth and improve the quality of life of citizens through work opportunities, higher disposable income for food, shelter, and investment in human capital. Cities also enable economies of scale in delivering public infrastructure and services, such as transport, communication, power, water, and sanitation. Densification encourages community groups to connect and engage with local government on issues such as promoting entrepreneurship, poverty alleviation programs, or grassroots social development initiatives. Realizing these benefits requires coordinated and holistic policies, planning, and governance to make structural transformation more inclusive.

The historic Bo Kaap area in Cape Town, South Africa. While urban concentrations of the population can prove to be the foundation of rapid economic growth, urban areas can also provide serious challenges, especially in the supply of basic services (photo by wilpunt/iStock.com).

While urban concentrations of the population can prove to be the foundation of rapid economic growth, urban areas can also provide serious challenges, especially in the supply of food, jobs, housing, water, sanitation, public transport, education, health care, and other services, including controlling pollution and crime. Migration also means that more diversity among urban populations will need to be well-managed. Proper strategies will ensure that negative effects are minimized.

While urbanization does not, by itself, create structural transformation, it is a fundamental megatrend that will continue to profoundly transform African societies and economies in the coming decades. More will need to be done to advance the agenda of sustainable urban development in the continent. Although policy priorities and sequencing will depend on each country's specific context, new and ambitious national urban strategies will need to tackle the following four broad challenges:

(i) How to better manage the country's economic and social spaces in the context of rapid urbanization;
(ii) What governance structures should frame the design and implementation of those strategies;
(iii) How to finance the necessary investment; and
(iv) How to undertake environmental development and sustainably manage natural resources (AfDB 2013a).

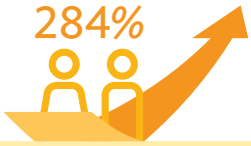
The African Development Bank (AfDB) responds to these challenges faced by its developing member countries (Table 2.1).

Table 2.1: African Development Bank Developing Member Countries

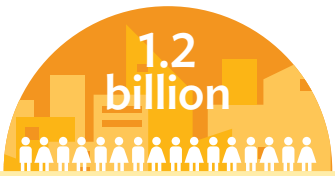
Subregion	Developing Member Countries
Central Africa	Cameroon, Chad, Central African Republic, Democratic Republic of Congo, Equatorial Guinea, Gabon, Republic of Congo
Eastern Africa	Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Tanzania, Uganda
Northern Africa	Algeria, Egypt, Libya, Mauritania, Morocco, Tunisia
Southern Africa	Angola, Botswana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, eSwatini, Zambia, Zimbabwe
Western Africa	Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Ghana, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Republic of Guinea (Conakry), São Tomé and Príncipe, Senegal, Sierra Leone, The Gambia, Togo

Source: African Development Bank.

TRENDS Rapid urbanization has become a pan-African phenomenon, but the region is urbanizing from a relatively low economic base.



Growth of the share of Africa's urban population from 1990 to 2019 (199 million to a projected 566 million)



Expected urban population by 2050

3 megacities with over 10 million inhabitants each are located in Africa

URBANIZATION IN THE REGION

Urban share of the population has nearly tripled. From 1990 to 2019, the urban share of Africa's population is estimated to expand by 284%—from 199 million to a projected 566 million. This trend is expected to continue with 1.2 billion people projected to live in urban areas by 2050 (UN DESA 2018). At present, three megacities with over 10 million inhabitants each are located in Africa.

Cities are benefiting from agglomeration. Agglomerations of people facilitate connections, knowledge transfer, and learning. They also support clusters of firms doing similar things. With competition and spillover effects, such clusters spur improvements in productivity, competence, and growth. The jobs that cities help create will also ensure greater financial returns from education and training. The expanding share of industry and services in the total gross domestic product (GDP) in Africa illustrates the importance of urban agglomerations (Figure 2.1).

Urban economies are growing from a low baseline. In Africa, countries range from the poorest in the world (those that are still moving out of an agrarian stage) to middle-income countries with relatively diversified economies. Urbanization in the continent is influenced by this diversity along the economic spectrum, as recognized by the African Development Bank (AfDB), Organisation for Economic Co-operation and Development (OECD), and United Nations Development Programme (UNDP) in their categorization, as shown in Table 2.2 (AfDB, OECD, and UNDP 2016).

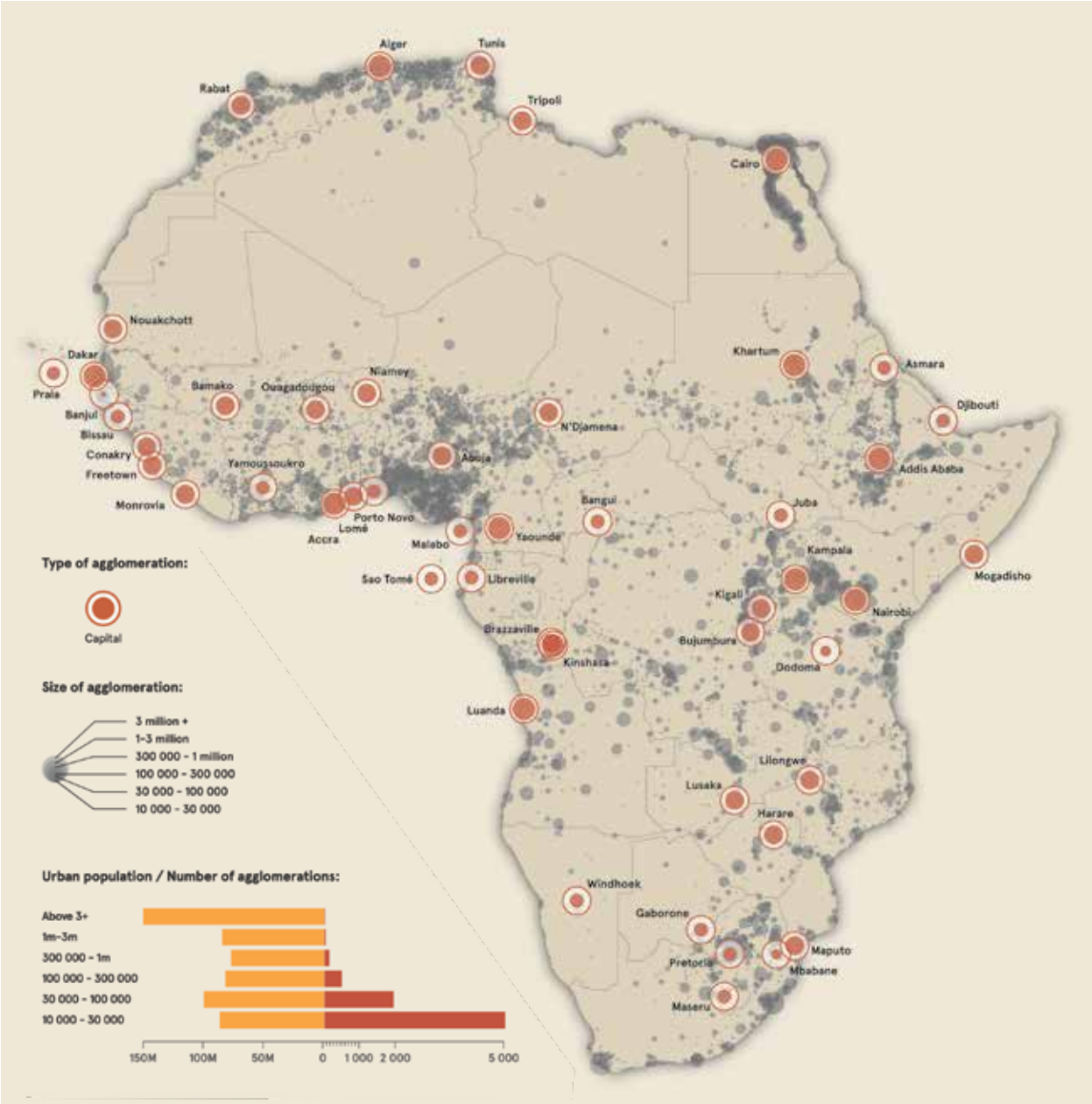
The high proportion of low-income countries in the continent results in relatively poor cities, although the relationship is not as absolute as in natural resource-based countries. A high GDP per capita is associated with the export of resources and this does not necessarily translate into prosperous cities. Africa is urbanizing with a relatively low economic base (Lall, Henderson, and Venables, 2017). When compared with other world regions, urban-based economic activities in Africa (i.e., industry and services) have performed poorly. GDP per capita for Sub-Saharan Africa is much lower at the same level of urbanization as other regions. This is largely due to the mismatch of skills and the labor market, weak business-enabling environment, and the dominance of the informal sector in employment.

Table 2.2: Diverse Economies in Africa

	Diversifiers	Early Urbanizers	Late Urbanizers	Agrarian-Based	Natural Resource-Based
Urbanization rate	40%–60%	35%–50%	18%–30%	<30%	30%–70%
Fertility	<3 children	5 children on average	>5 children	High	High
Gross national income per capita	<$10,000	$1–$4,000	$1–$2.20	<$1,600	$500–$20,000
Human development index	Above 0.60	0.40–0.57	0.38–0.51	0.34–0.48	Wide range
	5 countries	9 countries, mainly in Western Africa	11 countries, a number in Eastern Africa	11 countries, many landlocked	13 countries

Source: Adapted from African Development Bank. 2016. *African Economic Outlook 2016: Sustainable Cities and Structural Transformation.* Abidjan.

Figure 2.1: Urban Agglomeration in African Cities



Africapolis. Africapolis' definition of an urban agglomeration is based on a spatial approach and applies a physical criteria—a continuously built-up area—and a demographic criteria—more than 10,000 inhabitants. An urban unit is defined by combining satellite and aerial imagery, official demographic data such as censuses and other cartographic sources. The data is designed to enable comparative and long-term analyses of urbanization dynamics in Africa.

M = million.

Note: This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city, or area. © 2109. Sahel and West Africa Club (SWAC) Secretariat. SWAC Organisation of Economic Co-operation and Development.

Source: Africapolis. 2019. Visualise Urbanisation in Africa. http://africapolis.org/.

CHALLENGES AND OPPORTUNITIES

Despite the relatively weak urban economies, by international standards, the drive to urbanize remains strong because of two significant and well-researched reasons: (i) access to services is better in urban areas, and (ii) there are more employment opportunities in urban than in rural areas. Urban economies are in fact growing faster than urban populations (Figure 2.2).

Constraints to growth

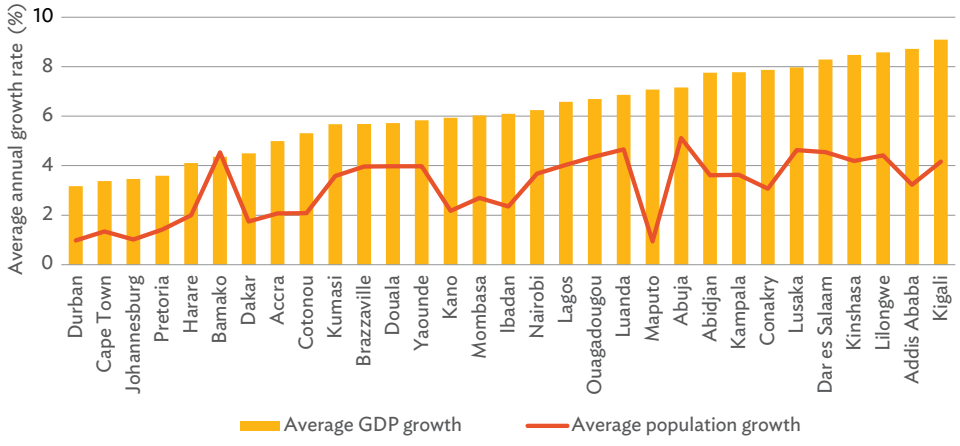
Three areas of economic policy stand out as constraints to the growth of urban economies.

Macroeconomic instability. The economy of cities and towns is strongly dependent on their national economies. As such, the relatively rapid growth of African economies over the past decade is driving urban growth. However, many countries remain economically unstable not only due to political instability, but also the lack of diversity, with their overdependence on their natural resources exports and the vagaries of commodity prices (AfDB 2018a). The more recent international trade wars are a further hindrance.

Poor investment climate. UN-Habitat and IHS University Rotterdam (2018), in assessing the state of African cities, reviewed the investment climate in Africa using foreign direct investment (FDI) as an indicator. The study showed that FDI growth in Africa is the second highest when compared to other regions of the world, but at a low base (Figure 2.3). The study concluded that, "Despite a growing FDI influx, Africa's share of total world FDI volume remains small, at roughly 5%. This compares poorly to the continent's 15% share of the global population and over 30% of world poverty. The current GDP per capita gap, relative to other world regions, is likely to widen if 'business as usual' is to continue" (UN-Habitat and IHS-Erasmus University Rotterdam 2018).

Inadequate infrastructure. The structure of African cities and the infrastructure deficit are key constraints to economic development. Lall et al. (2017) report in a new research that the higher cost of living in African cities is due in part to their lack of dense spatial form and infrastructure connections. The report also states: "Cities in Africa are costly for households, workers, and businesses. Because food and building costs are high, families can hardly remain healthy or afford decent housing. Because commuting by vehicle is not only slow, but expensive, workers find it hard to take and keep jobs

Figure 2.2: Average Annual GDP Growth vs. Population Growth in African Cities, 2014–2020



GDP = gross domestic product.

Source: Adapted from A. Cartwright et al. 2018. *Developing Prosperous and Inclusive Cities in Africa—National Urban Policies to the Rescue?* London and Washington, DC: Coalition for Urban Transitions. http://newclimateconomy.net/content/cities-working-papers.

Figure 2.3: Foreign Direct Investment in Africa

FDI = foreign direct investment.

Note: Europe is still the biggest investor in Africa, although Asia has higher growth rates. A shared history, culture, and language play an important role in this. Paris is the biggest investor in Africa and Cairo is the biggest African recipient.

Source: UN-Habitat and IHS-Erasmus University Rotterdam. 2018. *The State of African Cities, 2018: The Geography of African Investment.* Nairobi. https://unhabitat.org/books/the-state-of-african-cities-2018-the-geography-of-african-investment/.

that match their skills. And the need for higher wages to pay higher living costs makes firms less productive and competitive, keeping them out of tradable sectors. As a result, African cities are avoided by potential regional and global investors and trading partners."

Growing slums and inadequate urban services

The number of urban residents living in slums is increasing (UN-Habitat 2016). This is especially true in Sub-Saharan Africa (Figure 2.4). Currently, more than half of urban residents live informally, and this number is increasing each year (World Bank 2015).

Slum communities have become the new face of urban areas in many developing countries characterized by overcrowding; poor access to water supply and sanitation; lack of personal security; high social fragmentation; and lack of basic social, educational, and health facilities. This is driven primarily by the high cost of formal housing in low-income levels or urban households, but the lack of capability among local and central governments to manage the housing process,

CHALLENGES

Challenges include growing slums and deficits in urban services, unplanned urban growth, low infrastructure finance, and environmental challenges.

More than 50% of urban residents live informally, increasing by 4.5 million each year

Less than 0.1% of GDP is invested in sanitation in most countries

79 of Africa's 100 fastest-growing cities are classified as "extreme risk" by the Climate Change Vulnerability Index

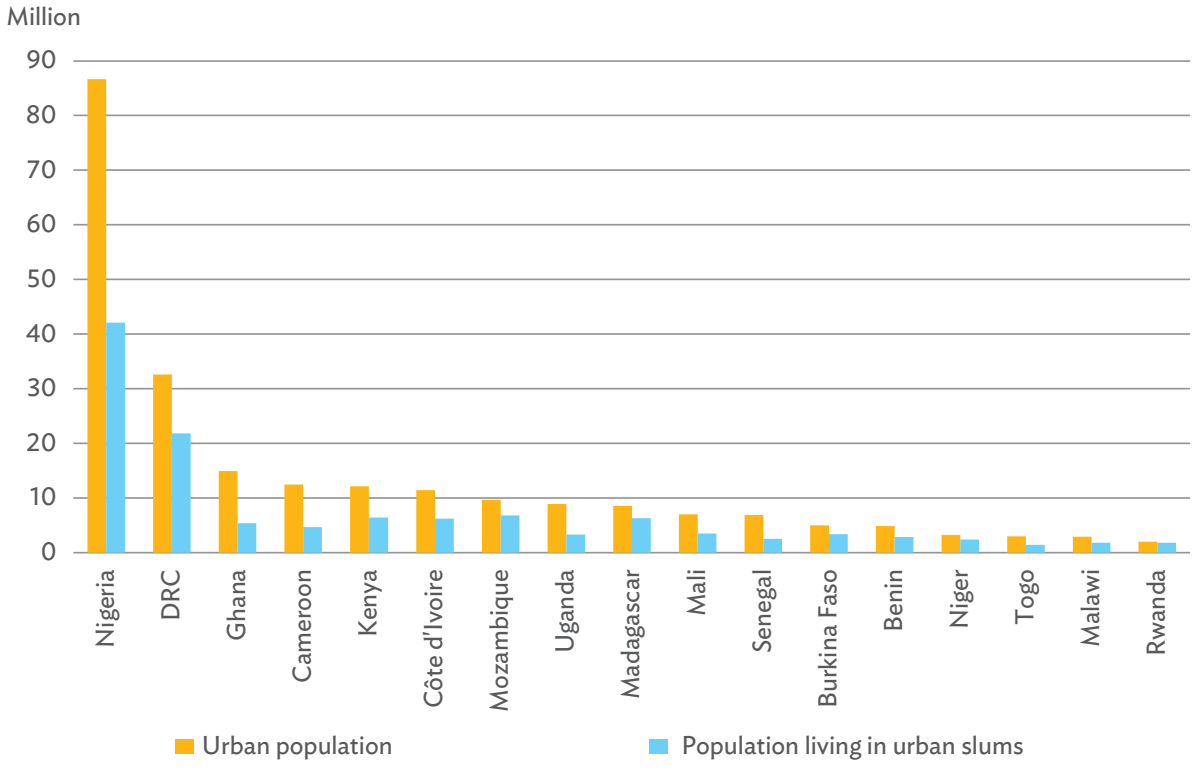
and provide associated services, also drives people into slum conditions.

Access to roads. This is also critical for the economic efficiency of cities and African cities do not fare well here. Of the largest African cities in Sub-Saharan Africa, 27 have only 3.4 kilometers (km) of paved roads per 1,000 people. This is low compared to Pretoria (22 km), Durban (18 km), and Cape Town (17 km). With a poor road system and limited transport options, cities become congested and expensive. As most citizens are dependent on public transport, the lack of road space for public transport operators is a major concern. To an extent, this is changing with new mass transit systems being provided in Addis Ababa, Dar es Salaam, Nairobi, Lagos, and Accra. However, the impact of these new systems will take time.

Access to clean water and improved sanitation. Such services significantly contribute to human development, poverty reduction, and the attainment of the United Nations Sustainable Development Goals (SDGs). The AfDB introduced the Africa Infrastructure Development Index (AIDI) to monitor the status and progress of infrastructure development across the continent, including water and sanitation.

However, the most recent AIDI results show disappointing progress for many African countries on water and sanitation (AfDB–Africa Infrastructure Development Index 2018). Many of them showed slower progress in water supply and sanitation compared to developing countries in other regions of the world. In half of the African countries, less than 35%

Figure 2.4: Estimated Urban Population Living in Slums in Selected African Countries, 2015–2016



DRC = Democratic Republic of Congo.
Source: UN-Habitat. 2016. *Slum Almanac, 2015–2016: Tracking Improvements in the Lives of Slum Dwellers.* Nairobi.

of the population had access to improved sanitation facilities, and less than 76% had access to potable water.

Progress made in sanitation is still well below the targets set by the SDGs. This needs to be addressed urgently, given the massive impact of this sector on the quality of life of the people of Africa and its linkages to other sectors such as health—particularly in this day of increased frequency of disease outbreaks related to poor hygiene.

Access to health. Africa has made considerable headway in improving the health outcomes of its population, and as a result, life expectancy at birth has steadily increased from 50 years in 2000 to 64 years in 2019, and is projected to reach 70 years by 2050 (Figure 2.5). However, there remains an evident need to establish robust health care systems and improve the accessibility and quality of health care services (AfDB 2014; AfDB 2013b).

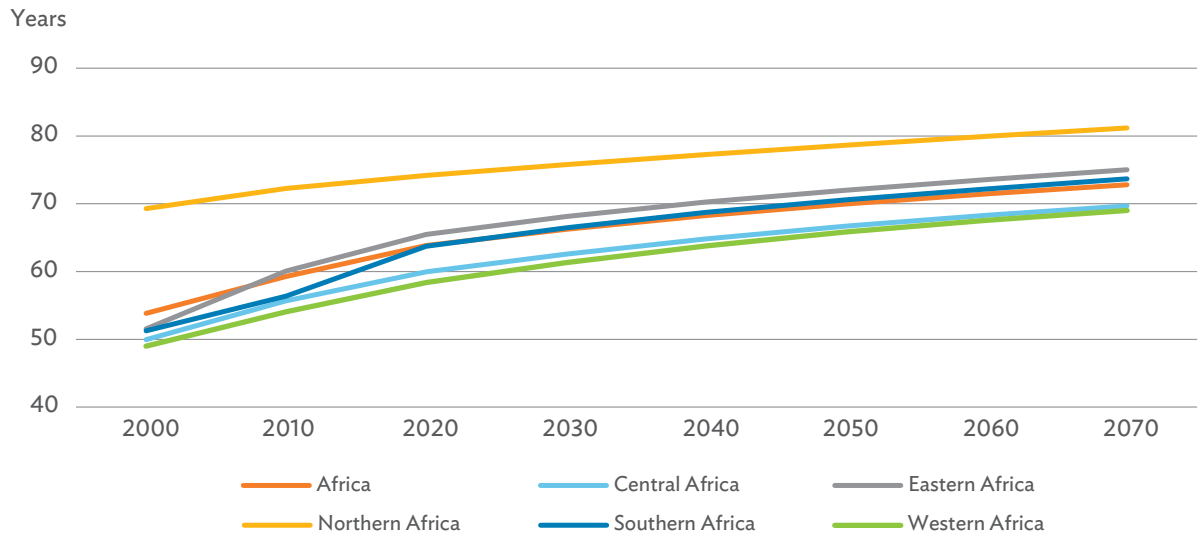
Poor air quality. Air pollution is estimated to claim over 712,000 lives in Africa every year, and is believed to cause more deaths than poor hygiene and malnutrition (Roy 2016). The number of deaths caused by air pollution has increased by over 36% in the last 3 decades. Large metropolitan areas rank among those with the poorest air quality in Africa. Poor air quality is an issue both for indoor pollution, such as cooking indoors and electricity generators, and outdoor pollution, such a burning rubbish and vehicle traffic. With reference to urban mobility, many African cities, such as Dar es Salaam, Casablanca, Tunis, Johannesburg, and Port Louis have adopted efficient public transport systems to help reduce per capita pollution substantially.

Evolving institutional and organizational arrangements

African cities lack the capacity to respond to the current unplanned urban growth (World Bank 2015). They suffer from regulatory bottlenecks and low skills capacity, which have created an unsustainable growth model and resulted in urban sprawl of fragmented and informal settlements.

Institutional arrangements typically disadvantage local government. The effectiveness of African cities depends on the extent to which powers and functions are devolved to them as a service provider and authority. The municipality must

Figure 2.5: Life Expectancy at Birth: Africa and Subregions, 2000–2070



Source: African Development Bank Statistics Department based on data from United Nations. *World Population Prospects 2019*. https://population.un.org/wpp/.

A downtown market street in Lagos, Nigeria. Lagos is one of the three megacities in Africa with over 10 million inhabitants (photo by peeterv/iStock.com).

(i) build a relationship with its citizens and businesses, (ii) be allowed to receive tariff revenue from services, and (iii) receive transfers from central government funding and technical assistance associated with the provision of infrastructure. In reality, however, municipalities are quite marginalized as service providers since a large proportion of services are provided by state-owned entities (SOEs).

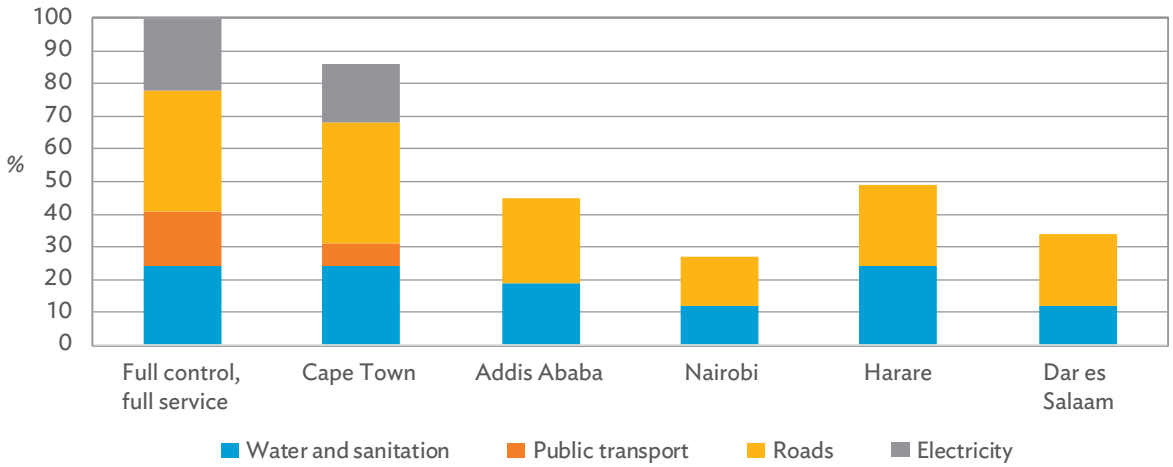
Only municipalities in South Africa and Namibia supply electricity and it is only in these countries along with a few others, such as Zimbabwe, where municipalities supply water and wastewater services. For water and sanitation, it is more typical for SOEs to operate locally rather than at national level; separating these services from the municipality isolates the municipality from revenue and responsibility. The extent to which municipalities have control over urban services is illustrated for five cities in Figure 2.6.

Weak capacities of municipalities. Most towns and cities in Africa have limited professional and institutional capacities for managing urban growth and development (Table 2.3). Municipalities lack legal and administrative frameworks for efficient service delivery, including managing urban planning, land rights and land tenure, informal settlements, and rural–urban migration; and they have low collection of municipal revenues (Cartwright et al. 2018).

Lack in infrastructure financing

Around $40 billion annually is needed for infrastructure, which African governments cannot provide. It is estimated that the demand for investment in basic urban infrastructure on the continent is in the range of $15 billion–$20 billion per year, while demand for urban housing investment is in the range of $20 billion–$25 billion.

Figure 2.6: African Cities: Limited Urban Services



Note: "Full control, full service" is when the municipality is the authority and the service provider and is providing a full level of service.

Sources: Authors' own calculations based on the data of individual cities, and from I. Palmer. 2019. *Institutional and Financial Precursors for Success: Assessment of Five African Cities*. Cape Town: African Center for Cities, University of Cape Town. .

Table 2.3: Municipal Government Staffing Deficit, by Function

Country	Finance	Planning	Public Works Department	Revenue	Solid Waste Management and Sanitation	Street Lighting	Total
Ethiopia	534	118	50	–139[a]	17	96	676
Mozambique	363	140	388	315	106	188	1,500
Uganda	210	128	115	199	131	88	871
Ghana	50	538	857	748	126	497	2,816

[a] A negative number implies a staffing excess.

Note: These figures represent data from 16 cities in Eastern, Southern, and Western Africa.

Source: Cities Alliance. 2017. *Human Resources Capacity Benchmarking: A Preliminary Toolkit for Planning and Management in Africa*. Brussels. http://www.citiesalliance.org.

Table 2.4: Trends in Infrastructure Finance in Africa, by Source ($ billion)

Source	2012	2013	2014	2015	2016	Average
African governments	26.3	30.5	43.6	24.0	26.3	30.1
Donors (ICA members)	18.7	25.3	18.8	19.8	18.6	20.2
MDBs and other bilaterals	1.7	2.0	3.5	2.4	3.1	2.5
People's Republic of China	13.7	13.4	3.1	20.9	6.4	11.5
Arab countries	5.2	3.3	3.4	4.4	5.5	4.4
Private sector	9.5	8.8	2.9	7.4	2.6	6.2
Total	**75.1**	**83.3**	**75.3**	**78.9**	**62.5**	**74.9**

ICA = Infrastructure Consortium for Africa, MDB = multilateral development bank.

Source: African Development Bank. 2018. The Infrastructure Consortium for Africa: Infrastructure Financing Trends in Africa–2017. https://www.icafrica.org/fileadmin/documents/Annual_Reports/IFT2017.pdf.

Cairo, Egypt cityscape. Cairo is the biggest African recipient of foreign direct investment (photo from Nirian/iStock.com).

There is no readily available information on the finance flows for urban infrastructure. As a start, the overall financial picture for infrastructure is used as reference (Table 2.4).

There is a concern that finance provided for infrastructure is not increasing. The pattern for urban infrastructure may be different, but is unlikely to be increasing fast. Looking at the blend of financing for urban infrastructure, there is a relatively complex set of financing mechanisms. These include:

Overseas development aid. This type of assistance is stagnating and cities will need to become less dependent on funds from this source.

Transfers from national to local government. The policy and practice of these transfers are highly variable—ranging from ad hoc payments to highly structured and transparent payments backed by legislation. Typically, in African cities, the transfers are predominantly to cover operating costs of municipalities, but there needs to be greater emphasis on infrastructure investment.

Borrowing from development finance institutions. For SOEs active in providing urban services, borrowing from development finance institutions (DFIs), often with guarantees from the national government, is increasingly common. Few African countries have municipalities take up long-term debt, though this is also changing with DFIs' greater willingness to lend at a subnational level.

Self-funding through internal reserves. Where municipalities or SOEs are able to generate free cash flow, they may use internal reserves to fund infrastructure projects or take up debt finance and use the cash to service the debt.

Land-based financing. An assessment of options for land-based finance to fund urban infrastructure

covered the range of mechanisms to fund or provide bulk and connector infrastructure, including "in-kind" contributions from developers, development charges, and betterment levies.[1] This will enhance the fiscal sustainability of the municipality (ACC 2015).

Financing through public–private partnerships (PPPs), which include the provision of capital finance—such as concessions or build–operate–transfer contracts—are not common for urban infrastructure in Africa, but these have been applied and will need greater attention in the future.

Environmental conditions: the most immediate and pressing challenge

The urban poor live in life-threatening conditions. They have limited access to clean water, adequate drainage, and sanitation. Informal and unregulated urban settlements and the haphazard disposal of waste and industrial by-products contribute to the degradation of the environment. They are also affected by high levels of pollution due to toxic material, traffic and industrial emissions, residential congestion, and absence of green spaces. The results are environmental degradation, increased natural and man-made disasters, scarcity of drinking water, and increased risks to public health.

Yet, it is these settlements that are most affected by climate change, which can only accelerate rural–to–urban migration while at the same time putting urban settlements at greater risk due to extreme weather events. Research undertaken by Verisk Maplecroft using a Climate Change Vulnerability Index (CCVI) to assess the impact of climate change on the world's cities placed 79 of 100 fastest-growing cities at "extreme risk," including 15 capitals (Verisk Maplecroft 2018). The research also estimated the future exposure of urban GDP under the CCVI. In Africa, two cities were found to have the highest economic exposure to climate change by 2023: Lagos, Nigeria—$128.5 billion; and Addis Ababa, Ethiopia—$69 billion.

WAY FORWARD

African Cities in 2025: The African Development Bank High 5s Strategic Priorities

The response of AfDB to the challenges and opportunities posed by urbanization is to scale up investment and implement its 10-year strategy by zeroing in on the following five priority operational areas: (i) Light Up and Power Africa, (ii) Feed Africa, (iii) Integrate Africa, (iv) Industrialize Africa, and (v) Improve the Quality of Life for the People of Africa. Together, these priorities are known as the High 5s. The High 5s are mutually reinforcing and are central to the structural transformation of the continent—as envisioned in the AfDB's 10-year strategy (AfDB 2013c).

Despite its consistently strong growth over the past decade, Africa continues to be plagued by poverty, inequality, and the effects of climate change. Over 40% of the population still live below the $1.90 poverty line. Six of the 10 most unequal countries in the world are in Africa. The continent is also the most vulnerable to climate variability and change.

Each of the following strategic areas addresses a fundamental obstacle to Africa's development with a special focus on gender, food security, and fragility:

Light Up and Power Africa aspires to bring universal electricity access to Africa by 2025.

Feed Africa aims to transform the agriculture sector and make Africa a net food exporter by 2025.

Integrate Africa will make true regional integration a reality and, in so doing, boost infrastructure, trade, industrialization, and the free movement of people and goods and services, thus enhancing the cities' comparative advantages.

[1] Betterment taxes (or levies) are amounts charged to specific property owners who will benefit from an improvement in infrastructure or through an increase in property taxes.

Industrialize Africa will create jobs and promote inclusive economic transformation through domestic manufacturing and commodity-based industrialization, thereby making African cities more competitive and responsive to urban and demographic changes.

Improve the Quality of Life for the People of Africa touches on all dimensions of human need that, once met, can jumpstart prosperity and stability for Africans and Africa: sustainable urban development, health, education, employment, nutrition, access to technology, and innovation (AfDB 2013c).

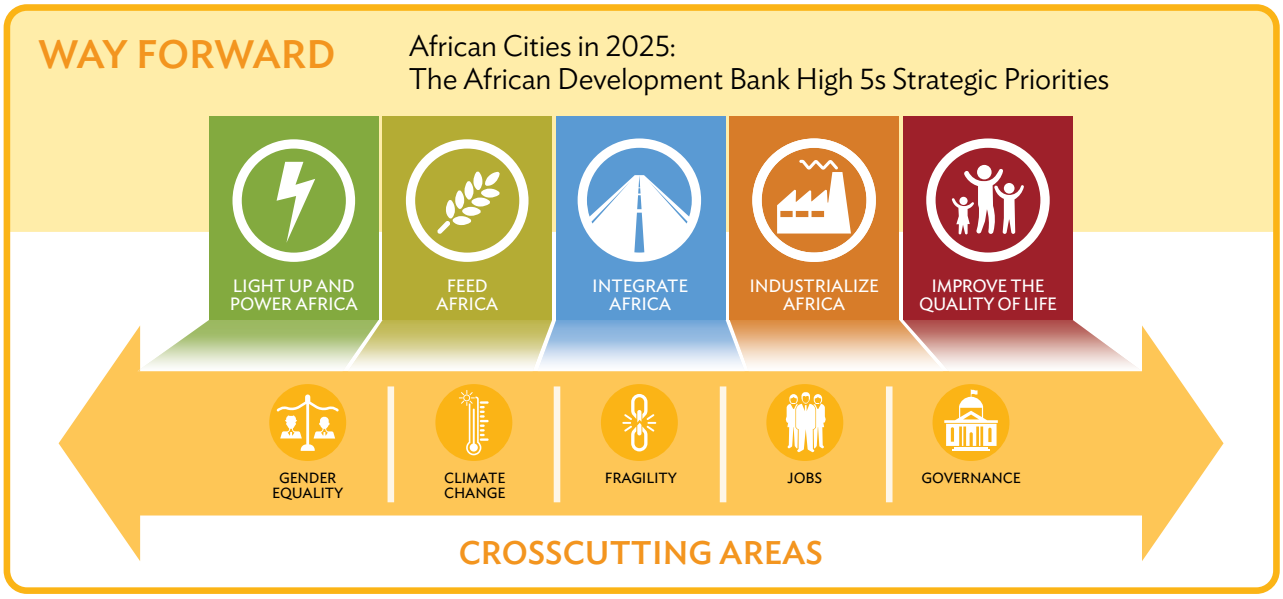
African Development Bank's Sustainable Urban Development Action Plan

Building on the vision and guiding principles outlined above, AfDB's proposed Sustainable Urban Development Action Plan will focus on four major strategic areas: infrastructure delivery and maintenance, urban governance, private sector development, and environmental challenges and adaptation to climate change.

Infrastructure delivery and maintenance. Basic infrastructure is an important enabling factor for the sustained growth of investment and business activities. It is crucial in improving the welfare and inclusion of vulnerable groups in African cities and municipalities and in strengthening the competitiveness of urban areas. Special emphasis will be placed on promoting professionalism in (i) the management of cities; (ii) building capacity for the maintenance of municipal physical infrastructure assets; (iii) fiscal management; (iv) creation of appropriate regulatory institutions at the national and municipal levels to assure private sector participation, and quality services; and (v) environmental and social protection.

Urban governance. Support to municipal and local authorities will cover fiscal decentralization, strengthening the capacity of municipalities to undertake their own urban planning and secure control and management of urban resources, and strengthening municipal creditworthiness.

Private sector development. In line with its overall strategy for the private sector, the AfDB will



Source: African Development Bank. 2016. *Scaling Up Implementation of the Ten-Year Strategy: The High 5s Agenda*. Abidjan.

support private enterprises across the full business spectrum—from small enterprises to mega enterprises. Private sector support will entail improving the business climate and targeting support for the development of small and medium-sized enterprises.

Environmental challenges and adaptation to climate change. AfDB's intervention will address (i) environmental threats emanating from unplanned urbanization growth and unregulated development, (ii) climate proofing of investments, (iii) appropriate reforms of the legal and regulatory frameworks particularly for the disposal of waste and industrial by-products, and (iv) knowledge generation and capacity building (Coalition for Urban Transitions 2018).

From urban problem to urban prosperity through improved planning, governance, and management

With a view of making cities and towns more livable, the starting point in the process of improving urban environments is to have a national urban policy (Cartwright et al. 2018). Such policies should include (i) increasing local governments' capacity and resources; (ii) establishing an urban rights framework; (iii) increasing citizens participation and local government engagement to identify home grown solutions; (iv) collecting data and assimilating evidence; (v) aligning spatial and tenure strategies; (vi) aligning infrastructure and services strategies; and, (vii) crafting fiscal, finance, and investment strategies.

An investment strategy, meanwhile, should be backed up with analysis in the form of a municipal infrastructure investment framework, which covers capital expenditure, capital finance options, and the operating finance arrangements, which ensure that the envisaged investment program is viable. It also needs to be backed up with infrastructure investment plans for individual local authorities.

New and improved financing mechanisms for infrastructure. In its 2018 report on "African Economic Outlook," AfDB offers a range of recommendations for improving finance for infrastructure. These are primarily on national scale infrastructure, with emphasis on improving the investment environment in African countries.

- Improve fund transfers to the local governments since funding from national governments remain the major source of funds for urban infrastructure.
- Enhance relationships with international development partners and build their interest in supporting local governments.
- Harness DFIs, including multilateral development banks (MDBs), to be more active in supporting and lending to municipalities.
- Develop the local governments' creditworthiness by improving their financial management and enhancing their opportunities to raise revenue.
- Reduce the risk to private lenders through, for example, guarantees or output-based aid.
- Understand and accept the fact that SOEs are the dominant providers of urban services in Africa and improve their profitability so they can become grant-independent and capable of financing infrastructure through use of internal reserves and debt finance.
- Improve policy and practice associated with land-based finance instruments, with developer charges as the most important.
- Improve the support and regulatory environment for PPPs in the urban services space (AfDB 2018b).

Enhanced coordination among governments and partners. The scope and implications of a 4.5% urban growth rate for the African continent are unprecedented and will require coordination among governments, donors, and financiers to maximize development outcomes. Local governments are critical to advancing the delivery of basic services and closing the infrastructure gap. While it is important that national governments set macro-level targets, oftentimes, local governments are tasked with the delivery of these targets. In many African cities, however, decentralization still remains a significant problem, thus, inhibiting efforts to scale up

Market day at Elmina, Ghana. Urban design considerations in the region should include access to green and public spaces, pedestrian and transport-oriented development, mixed-use and mixed-income housing, walkability, and access to basic services (photo by M. Torres/iStock.com).

contributions from subnational entities. An opportune time for such coordination is when developing and rolling out national development plans. During this time of research and planning, it will be important to undertake a consultative process with local governments and include multistakeholder platforms. Local governments should also receive proper support to ensure that business plans are aligned with national development plans, and formulate strong investment strategies that mayors and city councils can fully deliver.

Governments should have the opportunity to discuss coordination at the regional level to maximize benefits at a larger scale. For instance, regional integration projects must seek to connect urban hubs across a region. Governments should develop strategies that could harmonize initiatives to drive sustainable urban and economic growth while sharing best practices for successful outcomes.

Donors and financiers equally share this responsibility in coordination. Integrated planning and coordination will be critical over the next few decades. MDBs and/or regional development banks should work collectively and institutionally to enhance the achievement of impacts, avoid duplication of efforts, and encourage the sharing of innovative approaches. Often, duplication of efforts and ill-placed competition have impeded positive development impacts and resulted in low cost–benefit returns. Cofinancing, blended financing, and collaboration among donors and financiers will, thus, be instrumental in accelerating investment and the delivery of needed urban services in African cities.

Awareness, knowledge sharing, and changing the dialogue. To build livable cities, it will be critical for Africa to promote and adhere to a multidisciplinary and interdisciplinary approach to sustainable urban planning. At all levels of the vertical planning process, local and national governments will have to strengthen the participation of local communities to ensure inclusive planning that will consider the most vulnerable factions of the society.

Communities will also need sensitization to new technologies, policies, and best practices to enhance the quality lives of citizens and provide a more transparent forum to interact with the government. The immense growth in African cities will require leaders to depoliticize their planning efforts to formulate human-centric design ideas that will ensure the health and well-being of urban dwellers. Design considerations should include (i) access to green and public spaces per capita, (ii) pedestrian and transport-oriented development, (iii) mixed-use and mixed-income housing, (iv) walkability, and (v) access to basic services—which are all instrumental in securing a promising future for the region.

African Development Bank and the creation of livable cities

AfDB defines a sustainable city as one that offers a good quality of life to its citizens, minimizes its impact on the environment, preserves its environmental and physical assets for future generations, and promotes sustainable competitiveness. A sustainable city should also have a government with fiscal and administrative capacity to carry out its urban functions with the active participation of its citizens.

Urban and Municipal Development Fund.

In April 2019, the AfDB's first Urban and Municipal Development Fund (UMDF) was launched to support African cities and municipalities improve their resilience and better manage sustainable urban growth and development—by improving planning, governance, and quality of basic services. The UMDF seeks to enhance technical assistance and capacity building on urban planning, governance, and project preparation. This is to strengthen the viability and competitiveness of African cities and to transform them into epicenters of sustainable economic and social development. The UMDF is also designed to support ongoing AfDB operations to promote more integrated urban development projects across sectors (AfDB 2019b).

Figure 2.7: Abidjan Urban Transport Project

AfDB = African Development Bank.

Source: AfDB. 2019. *Infrastructure and Urban Development Annual Report* 2018. Abidjan.

Urban infrastructure projects. The AfDB has a strong track record in sustainable infrastructure projects across the continent. The organization finances over $3.5 billion of infrastructure projects each year and has steadily increased its funding in the urban sector—from an average of $150 million per year during 2005–2009 to over $490 million in 2018. These figures do not include AfDB's financing for subregional infrastructure projects.

Dar es Salaam Bus Rapid Transit System, Phase II (AfDB contribution: $141 million). Dar es Salaam is the largest city in Eastern Africa in terms of population. The 20 km of exclusive bus rapid transit (BRT) lanes and nonmotorized transport will benefit 1.2 million beneficiaries. The project will directly enhance and improve urban traffic circulation and eliminate bottlenecks to traffic flow in various economic activity centers.

Nairobi Rivers Rehabilitation Project (AfDB contribution: $60 million). The project aims to upgrade the quality, availability, capacity, and sustainability of wastewater services in Nairobi through the construction, rehabilitation, or extension of sewerage services and wastewater treatment plants. The project improved the quality of water and reduced the incidence of typical waterborne diseases by nearly 46% in 1 year. It also created 2,000 jobs at the implementation stage and is projected to generate an additional 200 jobs. The Kariobangi wastewater treatment facility will produce 0.5 megawatts of electricity, meeting more than 60% of the need, by digesting sludge, the by-product of which is usable as a soil conditioner.

Abidjan Urban Transport Project (AfDB contribution: $628 million). The city of Abidjan in Côte d'Ivoire is considered the economic pulse of the West African subregion. A port city and the sixth largest metropolis in the continent, Abidjan is home to an estimated population of 4.71 million. The Abidjan Urban Transport Project (PTUA) was initiated by the government and supported by AfDB to meet the dual challenges of population growth and a rapidly expanding car fleet in the city (Figure 2.7). Almost all intersections are experiencing severe congestion and the poor state of the roads results in increasing number of road accidents, impaired economic activity, and air pollution in the city.

The PTUA includes financing for the construction of the fourth bridge in Abidjan and the development of transformative roads in the city. This includes 87.9 km of rapid urban roads, six interchanges, rehabilitation of traffic lights at 89 intersections, assessment of air quality, urban waste management, and strengthening of existing capacities in traffic regulation, urban planning, local revenue improvement, and road safety. The project also integrates a holistic strategy for the adaptation and reduction of greenhouse gases in Abidjan, starting from an inventory of the impacts of climate change and a study for the protection of natural ecosystems. It includes a component for participatory management and conservation of the Banco National Park on the outskirts of the city.

Greater Banjul Area: Sustainable Urban Development Programme 2020–2040 (AfDB contribution: $3 million). The AfDB extended a $3 million grant from the Transition Support Facility to The Gambia for sustainable urban development of the greater Banjul Area. Activities will include capacity building and the formulation of a master plan for urban development using digital technologies, which are intended to greatly improve the operational efficiency of three municipalities (Banjul, Kanifing, and Brikama) and to provide support to the Banjul port expansion. The Greater Banjul Area: Sustainable Urban Development Program, 2020–2040 will serve as a pilot with implications for a countrywide rollout.

KEY MESSAGES

Optimize the sustainable models of urbanization, translate them into economic gains, and quantify these benefits—stressing them all at the national level.

Put back urban planning and the human dimension to planning at the core of discussions; make long-term strategies central to future livelihoods in cities.

Actively involve local governments in attaining the Sustainable Development Goals and in closing the enormous infrastructure gap in the continent.

Make capacity building and municipal strengthening the focus of decentralization and delivery of basic services.

Strengthen policy dialogue to incorporate all stakeholders. It is critical to have participatory planning and a human-centric approach to investments to ensure inclusive growth.

Elevate private sector involvement to support investments and innovation in the cities.

Consider urban development as territorial, not just sectoral.

Harness innovative financing and the emerging markets to support cities with regulatory and institutional reforms. This will create an enabling environment for raising municipal and other bonds, increasing domestic revenues, improving creditworthiness when accessing capital markets, and boosting access to climate finance to fund sustainable infrastructure.

Address the lack of land use reforms and regulation to ensure that sustainable models are used for urban growth.

Raise the level of people's awareness to ensure the development of healthy and climate-resilient cities.

Include secondary and tertiary cities and harness regional connectivity to promote regional urban growth, trade, and economic growth.

Pursue integrated planning and coordination and work collectively—as multilateral development banks and/or regional development banks—to enhance impacts, avoid duplication of efforts, and to share innovative approaches.

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CHAPTER 3

ASIA AND THE PACIFIC

The Asia and Pacific region is home to more than 53% of the world's total population and 44% of the world's urban population. The region has some of the most populated and densest cities in the world with 17 of the 33 global megacities (population of 10 million or more) in the region. Though the region's current urbanization is low, its urban population growth rate is the highest among the regions, with an average of 3.4% annually since 1970.

The majority of urban population growth and the share of urban population in Asia (the Pacific is an exception) is in the larger cities with more than 1 million inhabitants rather than the small and medium cities. The growth of urban population is outpacing total population growth, confirming an urban future for the region. A prominent feature of urbanization in Asia and the Pacific is its spatial growth—with cities expanding outside their legal jurisdictions and forming urban regions of city clusters.

Rush hour traffic in Jakarta, Indonesia. Rush hour traffic in Jakarta, Indonesia. Being the country's primate city, Jakarta houses more than 30 million people in its expanding metropolitan region and its traffic problem remains one of the worst in Asia (photo by Lester Ledesma for ADB).

The urbanization trajectory of Asia and the Pacific brings challenges and opportunities, especially for sustainable and inclusive development. Improvements in people's access to infrastructure and urban services have not kept pace with the absolute growth in urban populations. In addition, congestion, pollution, and vulnerabilities to sea-level rise and flood surges characterize many of the cities in the region. The share of the urban population living in slums has decreased, but the actual number of people has increased by almost 100 million over the past 2 decades. However, the concentration of people, resources, and markets presents an opportunity for more equitable development if governance and investments can address the cities' greatest needs. An integrated plan for transport and land use would be a major factor in enabling improved access and equity in cities.

Table 3.1: Asian Development Bank Developing Member Economies

Subregion	Developing Member Economies
Central and West Asia	Afghanistan, Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Pakistan, Tajikistan, Turkmenistan, Uzbekistan
East Asia	Hong Kong, China;[a] Mongolia; People's Republic of China; Republic of Korea;[a] Taipei,China[a]
Pacific	Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste,[b] Tonga, Tuvalu, Vanuatu
South Asia	Bangladesh, Bhutan, India, Maldives, Nepal, Sri Lanka
Southeast Asia	Brunei Darussalam,[a] Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore,[a] Thailand, Viet Nam

[a] Five members have graduated from regular ADB assistance: Brunei Darussalam; Hong Kong, China; the Republic of Korea; Singapore; and Taipei,China.

[b] Effective October 2019, Timor-Leste will be part of ADB's Southeast Asia operational subregion.

Source: Asian Development Bank (ADB).

The five operational subregions of the Asian Development Bank (ADB) form the basis of the analysis of urbanization in this chapter (Table 3.1).

URBANIZATION IN THE REGION

A little more than half of the world's total population and the world's urban population live in the Asia and Pacific region. The urbanization rate of developing member countries (DMCs) is lower than the 59% average of the other developing economies in the world and lags far behind the 81% of the developed economies (United Nations 2019). However, it has also experienced several decades of strong urbanization dynamics. Urban residents increased from 375 million in 1970 to 1.84 billion in 2017, resulting in an increase in the urbanization ratio from around 20% to 46% (Figure 3.1).

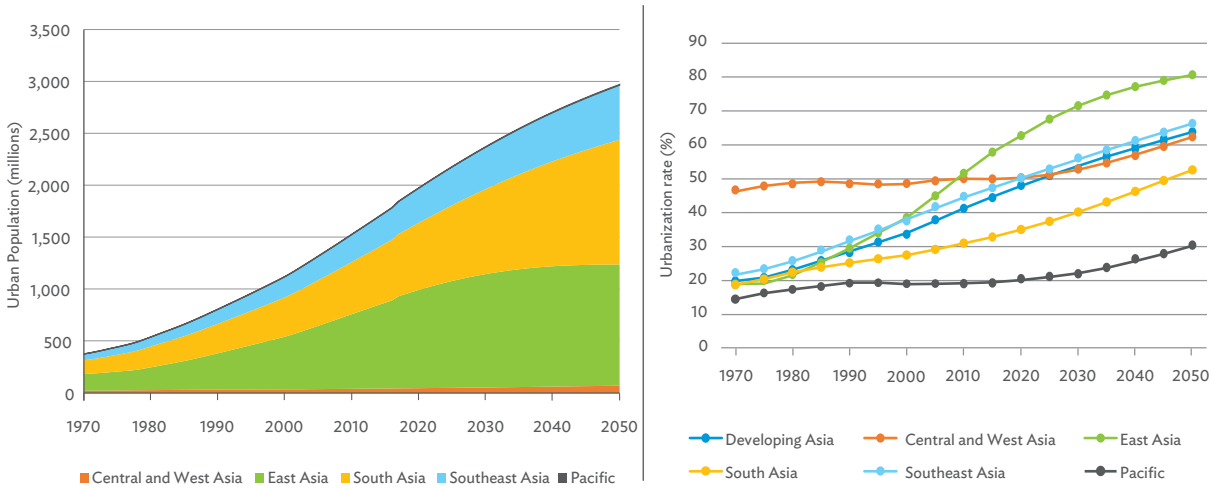
In all of the five subregions of ADB, urban population growth between 1970 and 2017 has far outpaced total population growth. East Asia more than tripled its urban population from 19% in 1970 to 59% in 2017. Southeast Asia's share has gone up from 22% to 48%. Due to the rapid increase in overall population, urban population increased moderately from 19% in 1970 to 34% in 2017 in South Asia.

Advances in urbanization were more limited in the Pacific, from 14% in 1970 to 20% in 2017; and Central and West Asia, from 46% to 50%, although this subregion was already significantly more urbanized than the rest of developing Asia.[1] The region's urban population is projected to reach close to 3 billion by 2050—at an urbanization rate of 64% (UN DESA 2018a).

Of the 36 cities that grew more than twice as fast as the global annual average rate of 2.4% between 2000 and 2018, 28 cities are located in Asia, with 17 in the People's Republic of China (PRC). Of the world's 33 megacities with populations of more than

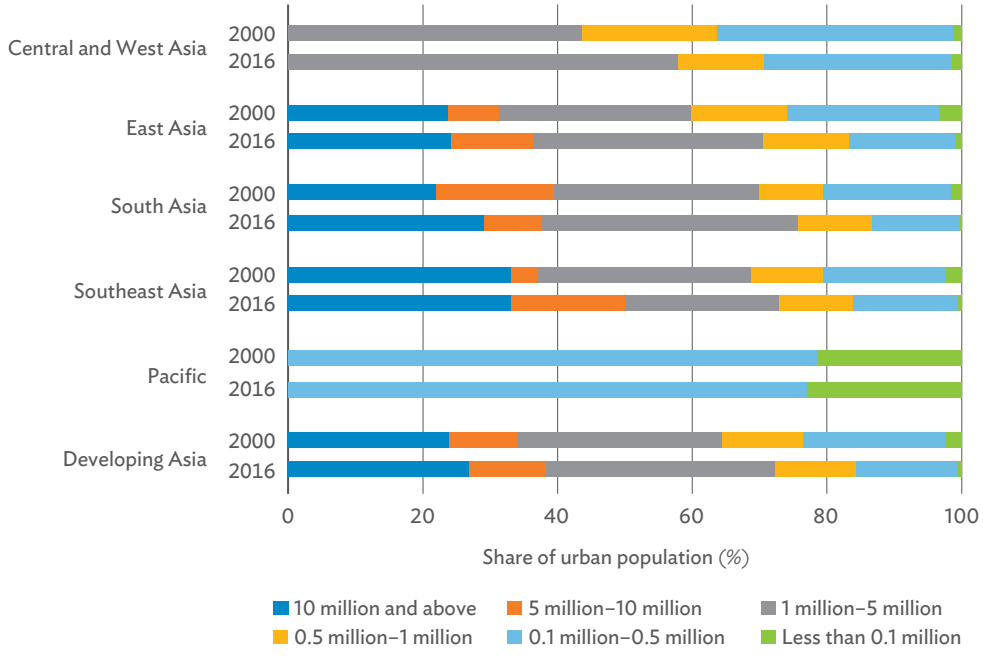
[1] Unless otherwise stated, the use of "Asia and the Pacific" in the text refers to ADB's developing member countries and is synonymous with other variants, such as "developing Asia" or "the region."

Figure 3.1: Urban Population and Urbanization Rates of Developing Asia and the Subregions, 1970–2050



Source: Asian Development Bank staff estimates using data in United Nations, Department of Economic and Social Affairs, Population Division (UN DESA). 2018. *2018 Revision of World Urbanization Prospects.* https://population.un.org/wup/.

Figure 3.2: Urban Population Share of Cities in Developing Asia: 2000 vs. 2016

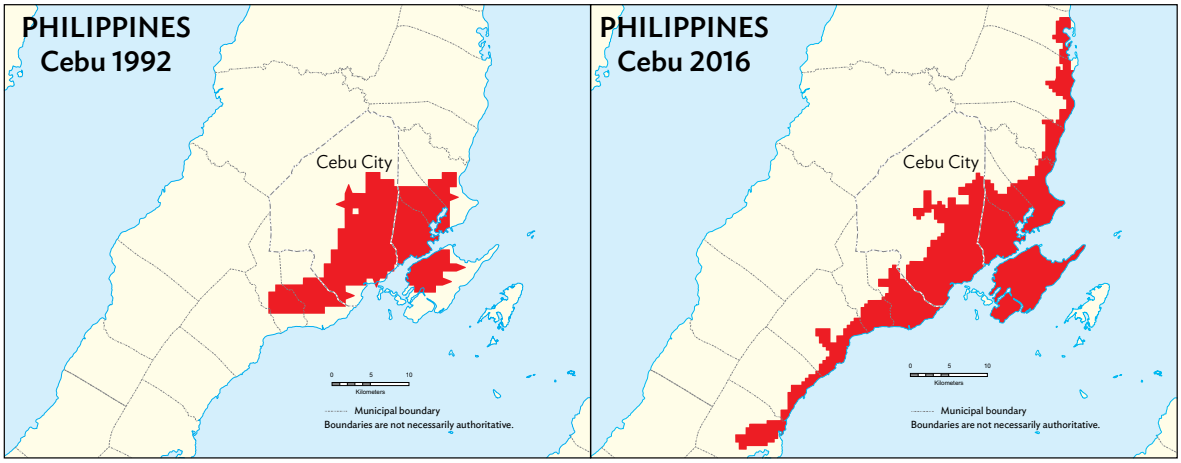


Source: Asian Development Bank. 2019. *Fostering Growth and Inclusion in Asia's Cities.* Asian Development Outlook 2019 Update. Manila.

10 million people, 20 cities are located in Asia—a figure that is estimated to jump to 27 cities by 2030, further increasing Asia's share among the world's megacities (UN DESA 2018b). Cities with a population above 1 million accounted for 64% of the total urban population in developing Asia in 2000. This share rose to 72% by 2016 (ADB 2019a). The significant increase is due both to the population growth in relatively bigger cities and because many cities are moving up the city-size ladder. The urban population share of cities with above 1 million has increased consistently across different subregions. However, Southeast Asia's share of those cities with 5 million–10 million population has increased substantially—from 4% in 2000 to 17% in 2016 (Figure 3.2).

In most countries in the region, the spatial nature of urbanization has undergone a major change with the urban footprint expanding massively (UN-Habitat, NYU, and Lincoln Institute of Land Policy 2019). Using satellite

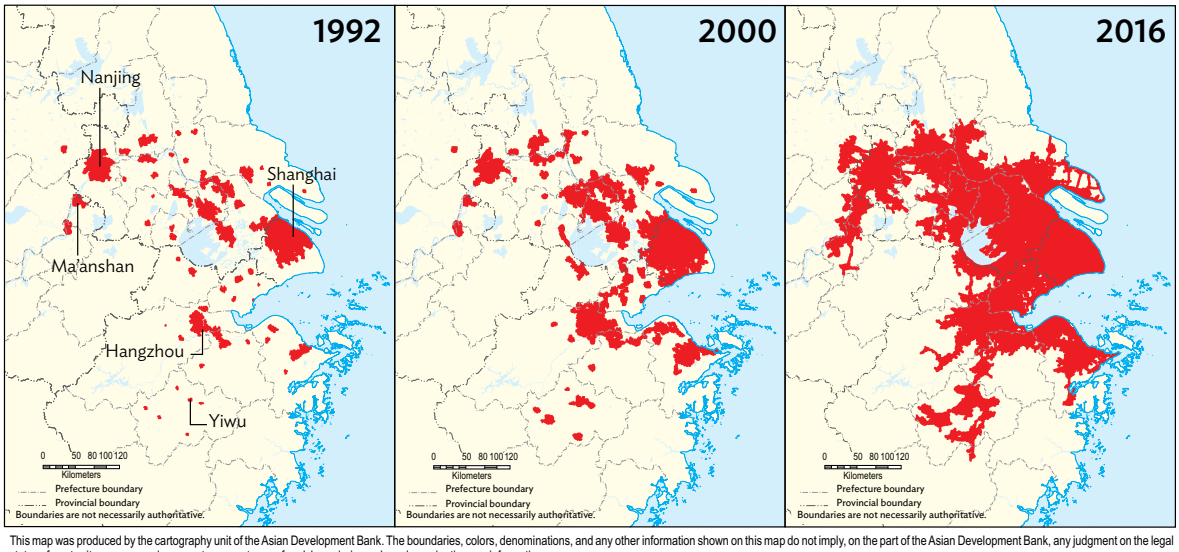
Figure 3.3: Growing Urban Footprint of Cities: Cebu City, Philippines, 1992–2016



This map was produced by the cartography unit of the Asian Development Bank. The boundaries, colors, denominations, and any 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 any endorsement or acceptance of such boundaries, colors, denominations, or information.

Source: Asian Development Bank. 2019. *Fostering Growth and Inclusion in Asia's Cities*. Asian Development Outlook 2019 Update. Manila.

Figure 3.4: Emergence of City Clusters: Spatial Transition in the Yangtze River Delta Area, People's Republic of China, 1992, 2000, and 2016



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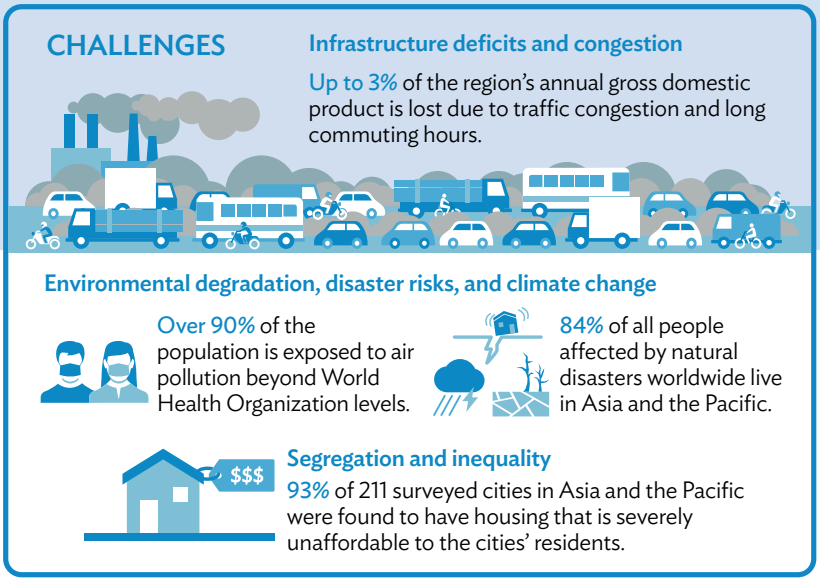


imagery data of night-time light to capture economically active areas, ADB has tracked the evolution of urban areas in Asian cities since the early 1990s (ADB 2019a). A fairly typical case is illustrated in Figure 3.3 with Cebu City in the Philippines as the example. The economically active parts of the city and its surrounding areas have grown by more than 50% in size between 1992 and 2016, with 73% of the natural urban area lying outside Cebu's administrative boundaries and spanning several city-level administrative units.

Similarly, many Asian cities have become well connected and have formed into city clusters. Figure 3.4 shows this phenomenon in terms of the spatial transition of the Shanghai-centered cluster of cities over the past 2.5 decades—which is now one of the largest city clusters in the world. It combines 53 natural cities of four administrative divisions and covers 45,000 square kilometers (km^2) with more than 91.5 million inhabitants. The growth of urban footprints—growth beyond an individual city's administrative boundary and the agglomeration of urban areas into metropolises or city clusters—calls for coordinated governance, land use, and infrastructure planning, which are generally lacking in the region (Groff and Rau 2019).

CHALLENGES AND OPPORTUNITIES

Urbanization has produced significant economic growth, benefiting from agglomeration economies, with cities accounting for about 80% of the region's combined economic output (ADB 2008). Urbanization and economic growth have reinforced each other, where one percentage point increase in developing Asia's urbanization rate has been associated with 3%–5% increase in gross domestic product (GDP) per capita (ADB 2019a).

On the downside, the underserved slum population has substantially outgrown formal urban areas, and income disparity is increasing, leaving more people than before lacking access to basic urban infrastructure and services. The relative share of urban dwellers living in slums has decreased in most countries in Asia and the Pacific over the past 2 decades, yet in absolute terms, about 96 million more people were living in slums in 2014 (564 million) than in 1990 (468 million) (UN-Habitat 2015). On access to electricity, both

the relative and absolute numbers of urban dwellers without access have decreased from 2000 to 2015. However, on access to water supply and sanitation infrastructure, improvements have not kept pace with the population growth. This resulted in 15 million more people with limited access to water supply, and 17.5 million more to sanitation facilities in 2015 (World Bank 2019a).

The region's urbanization trajectory has created major challenges

Infrastructure deficits and congestion.

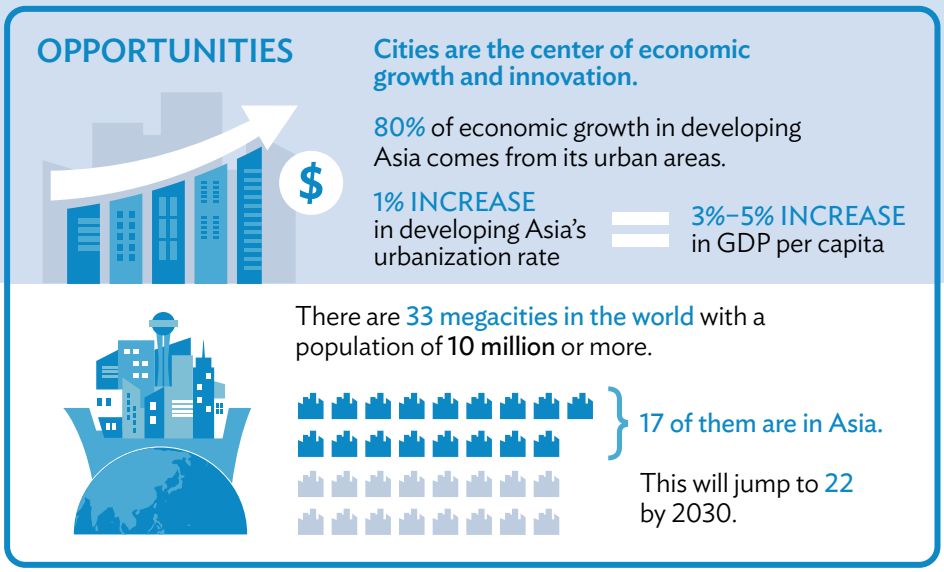
Rapid urbanization—accompanied by weak and uncoordinated land use and transport planning, inadequate regulations, and significant underinvestment in urban infrastructure—is constraining economic development and diminishing the livability of cities. Cities are expanding exponentially without integrated urban planning, leading to sprawl and low-density developments in peri-urban areas. Within the city core, building height regulations and permissible floor area ratios are often not coordinated with the transport network and related investments in public transport—resulting in traffic congestion and long commuting hours (e.g., 2 to 3 hours for peak-hour travel time), and a 2%–3% loss in GDPs annually (ADB 2019a).

In the Philippines, for instance, it is estimated that road congestion results in economic losses of some $54 million a day or $18 billion per year (2014 data) (McKinsey Global Institute 2018).

Environmental degradation, disaster risks, and climate change.

The unplanned and sprawling development of cities has caused massive environmental pollution and degradation, with pollution levels of air, water, and soil posing significant risks across the region (ADB 2016a; FAO 2018; WHO 2016). Cities are energy-intensive and consume unsustainably high levels of land, water, energy, and other resources. Such a situation increases vulnerability to climate change impacts, serious health problems, food insecurity, and waterborne and airborne diseases. To date, 9 of 10 people in the region are exposed to air pollution levels beyond those considered safe by the World Health Organization. In 2013, air pollution cost the region's countries about 7.5% of their GDPs (UNEP 2019).

Disaster risks and climate change are aggravating existing environmental stresses. Asia and the Pacific is the most disaster-affected region in the world. The region absorbs over 40% of all disasters and 84% of the total number of people affected



(ADB 2015a). The region's urban population exposed to sea-level rise and storm surges more than doubled in just 2 decades from 1990 to 2010 (World Bank 2019a). Between 1970 and 2010, 1.7 million lives were lost in the region due to extreme, weather-induced disasters (ADB 2013).

Segregation and inequality. Asia and the Pacific has achieved significant progress in reducing poverty with 786 million people being lifted out of poverty and the poverty headcount falling from 55% to 21% between 1990 and 2010 (ADB 2014). However, the numbers in both relative and absolute urban poor increased in the region, and inequality—as measured through the Gini coefficient—is particularly pronounced in cities. Poverty, disparities in well-being, conflict in urban areas, and access to urban services remain key issues (ADB 2017). This situation is even more pronounced in the housing sector—where 93% of 211 surveyed cities in Asia and the Pacific were found to have housing that is severely unaffordable to cities' residents (ADB 2019a). Sociospatial segregation in "globalizing" cities in the DMCs has exacerbated such inequality. While the affluent residents occupy large areas with low densities and enjoy exclusive access to services, the urban poor are crowded in some of the world's high-density areas and informal slums, or live in peri-urban settlements with limited urban infrastructure and services while employed in low-paying, faraway informal jobs (ADB 2014a).

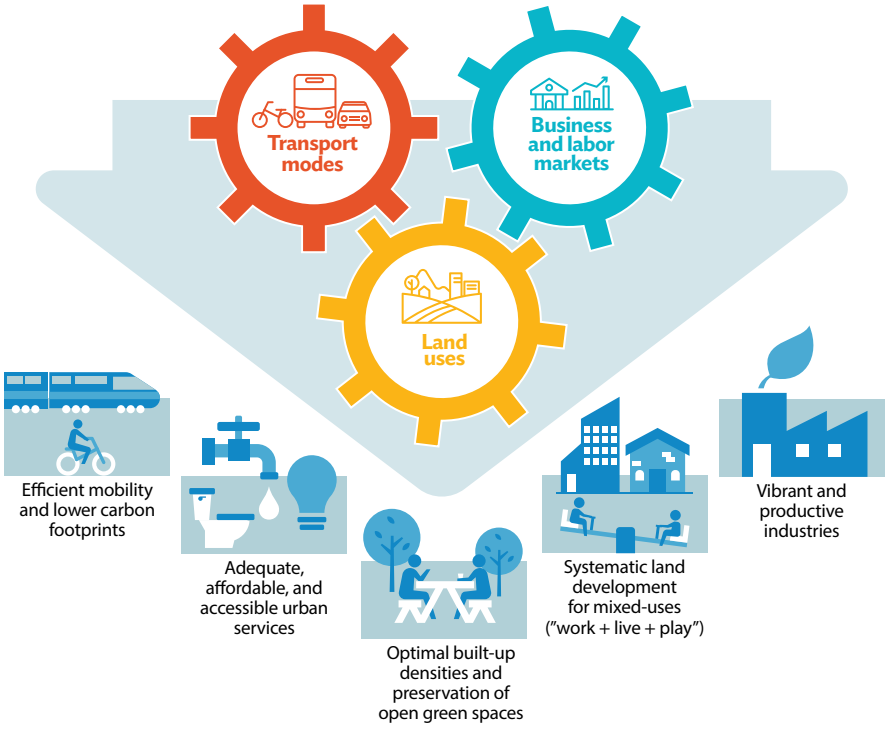
Dhaka, Bangladesh. Asia's rapid urbanization has been accompanied by weak and uncoordinated land use and transport planning, as well as inadequate regulations (photo by Tarzan9280/iStock.com).

Shortfalls in traditional sector-centric planning. Planning, implementing, and managing access to urban infrastructure and services require multisector and integrated approaches. The region's common focus on grand, master planning schemes did not prove flexible enough to capture urban interconnectivity nor was it able to capitalize on the nexus of transport modes, land uses, and business and labor markets. Hence, the resulting misallocation of labor and the spatial fragmentation of markets resulted in long commutes, high transport costs, unaffordable housing, and excessive natural resource use (ADB 2019a). Adaptive and cross-sector approaches to investment planning should replace single-sector ("siloed"), overly prescriptive, purely public sector-driven, and inflexible plans (ADB 2016b). This becomes even more relevant with the ever-expanding urban footprint of cities beyond administrative boundaries. Governance reform adding subnational city-cluster/agglomeration authorities can help break the political bias toward primate cities, build on the potential of secondary cities, and allow for subnational institutional coordination.

The nexus of transport modes, land uses, and business and labor markets

The urbanization in the region is highly influenced by the intricate interrelationship among land use planning, transport planning, and business and labor markets. Urban transport planning significantly influences land use and the emergence of expansive urban areas—as different transport modes have different spatial and functional implications on urban land use. Often, such impacts are hard to reverse given the transport infrastructure's dominant role in the urban space (ADB 2019b). Urban areas act as markets for business and labor, which attract people and firms that, in turn, synergize resources and innovation (Bertaud 2018). Therefore, the region's urbanization challenges can be

Figure 3.5: Path Dependency and Intricate Interrelationships among Key Areas



Sources: Authors.

The urbanization in the region is highly influenced by the intricate interrelationship among land use planning, transport planning, and business and labor markets.

understood through the nexus of transport modes, land uses, and business and labor markets. If planned effectively with foresight, this nexus can support the realization of the region's urbanization opportunities, such as in terms of supplying urban infrastructure and services at affordable rates, adequate quality, accessible, and inclusive to all citizens (Figure 3.5).

WAY FORWARD

As the urban footprint is ever expanding, cities present an opportunity for more people-centered, low-carbon, climate-resilient development. Progressive urban leaders and governments are abandoning traditional development models, characterized by extensive resource extraction, waste, and pollution (UNEP 2011). City governments are pursuing greener economies and people-centered development, which recognizes the economic, environmental, and social benefits from the efficient use of materials, protection and rehabilitation of ecosystems, mitigation and adaptation to climate change, and inclusive approaches to structural changes in industries and markets (New Climate Economy 2018). While the region's urban trajectory presents sizable challenges, new models and approaches can support a more sustainable way forward.

ADB's Strategy 2030 identifies "making cities more livable" as one of seven operational priorities (ADB 2018a). Its companion document, the Livable Cities Operational Priority Plan, 2019–2024, sets out the direction and approach for ADB to support its DMCs in building livable cities by (i) improving access, quality, and reliability of urban services; (ii) strengthening urban planning and financial sustainability; and (iii) improving urban environments, climate resilience, and disaster management. The plan also helps DMCs develop the right institutions, policies, and enabling environments (ADB 2019c).

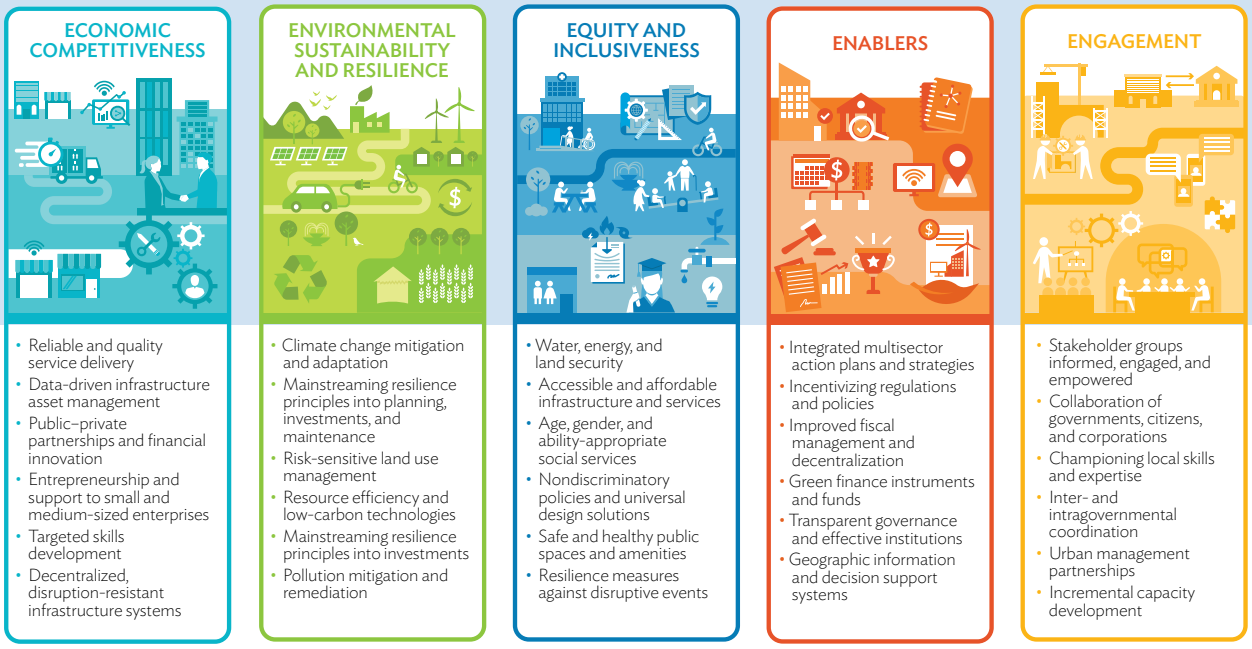
The 5Es of Livable Cities

"Livable Cities" put people and community well-being at the center of urban development and decision-making. Although definitions vary, at the heart of the envisioned transformation of a city is an integrated planning toward livability that is conceptualized through five crosscutting themes—the 5Es (Figure 3.6).

The livable cities approach has five dimensions called "5Es of Livable Cities." These are (i) economic competitiveness, (ii) environmental sustainability and resilience, (iii) equity and inclusiveness, (iv) enablers, and (vi) engagement.

Economic competitiveness: cities as vibrant markets. A competitive city creates vibrant markets; acts like a magnet to attract talent, skills, and investments; and generates new ideas, economic opportunities, well-paying jobs, and a productive economy and tax base (ADB 2019c). The region's urban economies have grown tremendously over the past decades, but their competitiveness is still lagging. Most DMCs aspire to be in the league of the front-runners in ease of doing business, such as Hong Kong, China; the Republic of Korea; or Singapore (World Bank 2019b). Having been in the top 10 global improvers during 2017–2018, Afghanistan, the PRC, and

Figure 3.6: The 5Es of Livable Cities



Source: Asian Development Bank.

India exemplify how DMCs are making great efforts to improve their regulatory efficiency and quality. On "competitiveness" in terms of effective institutions, policies, and productivity factors, Asia and the Pacific shows a similarly varied landscape, with Hong Kong, China; Japan; and Singapore in the global top 10, while most other DMCs aspire to achieve those levels (World Economic Forum 2018).

ADB is supporting cities in the region with economic planning tools and instruments, capacity development, and strategic investments to support local economic development—with particular focus on improving infrastructure, urban management, governance, and interregional connectivity. Such holistic and strategic approaches have shown cross-benefits of investments, as seen in the Greater Mekong Subregion's cross-border corridor towns, the Central Asia Regional Economic Cooperation Program, and India's East Coast Economic Corridor (Box 3.1).

Environmental sustainability and resilience: future-proofing cities. A resilient city helps individuals, communities, institutions, businesses, and industries to survive, adapt, and grow if shocks and stresses from natural disasters, infrastructure failures, and disruptive socioeconomic events occur (ADB 2015b). Cities, particularly those in low-lying areas along the coastlines, are increasingly vulnerable to climate change risks and disasters.

However, cities can significantly reduce losses and damage from disasters with effective forecasting and early warning systems, emergency response plans and communication channels, and higher rates of public awareness. For instance, ADB has mainstreamed urban climate change resilience principles in its normal operations and has provided technical assistance to cities through the Urban Climate Change Resilience Trust Fund.[2] Besides typical structural interventions,

[2] The Urban Climate Change Resilience Trust Fund is a $150 million multidonor trust fund with contributions from the governments of the United Kingdom and Switzerland, as well as the Rockefeller Foundation. The program's goals include the rollout of about 25 infrastructure projects and other resilience measures to protect 2 million poor and vulnerable people in the target cities by 2021, prioritizing investments in Bangladesh, India, Indonesia, Myanmar, Nepal, Pakistan, the Philippines, and Viet Nam.

Box 3.1: India's First Coastal Industrial Corridor: Paving the Way to Interlinked Prosperity

ADB has teamed up with national and subnational governments in India to build the country's first coastal industrial corridor. This is part of the 2,500-kilometer long East Coast Economic Corridor that will eventually link the eastern coast of India to the other South and Southeast Asian countries. The 800-kilometer Visakhapatnam–Chennai Industrial Corridor section connects four economic hubs and nine industrial clusters with strategic investments in transport, water, and energy. The program also (i) focuses on women's participation in the industrial workforce; (ii) provides skills development for 25,000 workers, entrepreneurs, and students; and (iii) features an investor promotion plan. Each of the four nodes has a different focus—ranging from pharmaceuticals, textiles, petrochemicals and/or chemicals, and steel to information and communication technology hardware, food processing and paper, electrical manufacturing, and tourism. The industrial output along the corridor is expected to quadruple to some $64 billion per year over the next 10 years if infrastructure construction, planning, capacity development activities, and related policy and management improvements are implemented to attract corresponding investments.

Source: ADB. India: Visakhapatnam–Chennai Industrial Corridor Development Program. https://www.adb.org/projects/48434-002/main.

Samarkand Railway Station, Uzbekistan. The north–south corridor linking Europe through Central Asia to the Middle East and South Asia passes through Samarkand City in Uzbekistan. ADB assisted in the electrification of 140 kilometers of this railway line, which annually carries about 10 million tons of freight (photo by Relisa Granovskaya for ADB).

nature-based solutions have been promoted in Asia and the Pacific to help protect, sustainably manage, and restore ecosystems (ADB 2016c). As an example of innovative environmental management approaches, the PRC piloted the "sponge cities" approach in Pingxiang, Jiangxi province and is a global leader in payments for ecosystem services, which has been a feature of ADB's knowledge-sharing work (ADB 2015d; Zhang et al. 2010).

Equity and inclusiveness: creating social benefits from economic growth. An inclusive city is built on a strategic vision shared by well-informed and engaged stakeholders through participatory planning and decision-making. An inclusive city aims to create a safe, livable environment with affordable and equitable access to infrastructure, services, technology, finance, and livelihood opportunities for all people, especially the most disadvantaged and vulnerable (ADB 2017a). Cities in DMCs often deal with the inequalities of age, gender, religion, physical abilities, and income. Unsafe living environments in vulnerable locations are overwhelmed by the environmental, physical, and social impacts of climate change; and by the waves of refugees, internally displaced persons, and rural migrants.

Cities in DMCs support inclusion and equity through laws, providing incentives through policies and regulations, and introducing inclusive governance processes. Co-design projects promote approaches that integrate meaningful consultations with key stakeholders to make cities more inclusive and to ensure available, adequate, and affordable housing, basic services, and other social services (ADB 2010, ADB 2011, ADB 2014c). Universal design concepts applied to project and planning approaches make services accessible to women, the elderly, children, and differently-abled people (ADB 2018b).

Enablers as building blocks. Making cities more livable is not possible without effective institutions, policies, and governance systems that create an enabling environment through integrated planning, sound financial management, and appropriate technologies. Cities can create the enabling environment—through leadership and partnerships that forge synergies among the different sectors and across various stakeholders. Essentially, it is not about doing different things, but doing things differently. The aim is to enable transformative change in urban development and to maximize the impact and sustainability of infrastructure investments. Four enablers were identified, as follows: (i) institutions, policies, and governance; (ii) integrated planning; (iii) financial sustainability; and (iv) data and digital technologies.

Institutions, policies, and governance. While ongoing decentralization and delegation have strengthened many local governments in the region, many cities are still negotiating for the power and resources to govern in the way prescribed in decentralization mandates. At the same time, rapidly evolving city clusters need a regional governance structure that promotes integrated development that leads to a synergistic landscape of vibrant cities. National urban policies and regional governance can guide cities to become an integral part of a wider interconnected system.

With many urban investments targeting basic infrastructure services in energy, water, sanitation, and waste, ADB has sharpened its focus on improving the performance of utilities in its DMCs (ADB 2017d). Through peer-to-peer learning mechanisms, local experts from different countries exchange experiences and solutions to tackle issues around tariff structures and collections, asset management, and staff upskilling (ADB 2019d). Lessons are shared more widely through regional capacity development initiatives and open-data online resources (ADB 2019e and 2019f).

Integrated planning. The scale and speed of the region's urbanization require a "fast forward," low-carbon, and climate-resilient planning paradigm that allows different stakeholders to accommodate dynamic physical–environmental changes, infrastructure needs, competing land uses, and new lifestyle and service demands (Shi and Gossop 2012). A planning approach that seriously considers green and blue environments can protect valuable ecosystems and cultural heritage, and enhance them for public good (ADB 2015c).

Different urban growth models are being explored to reduce spatial disparities, optimize cross-sector synergies, and contribute to more regional balanced development (Box 3.2). A planning approach based on the urban clusters model considers the limited financial resources and institutional capacities of individual cities by (i) interregional and intraregional collaboration, (ii) increased economies of scale, (iii) agglomeration effects, (iv) integrated labor markets, and (v) better access to more evenly distributed services (ADB 2019g; CDIA 2019). Beyond major urban clusters, DMCs are focusing on the strategic development of economic corridor and cross-border towns by enhancing economic linkages and improving access to services in DMCs' hinterlands—where poverty is often more pronounced. Connecting secondary cities and smaller towns to strategic transport routes can open opportunities for local economies to supply chains, logistics services, and tourism.

Financial sustainability. Cities struggle with managing local finances and accessing different sources for infrastructure investments. The continuing need to improve project preparation for more bankable investments is addressed by targeted initiatives, such as the Cities Development Initiative for Asia (CDIA), supported by several donors, or the Asia Pacific Project Preparation Facility (ADB 2019g; CDIA 2019). These help to design revenue-generating projects, reform fiscal systems, increase collection effectiveness, and attract private sector and green finance.

Land-based financing is gaining attention in the region. Mass rapid transit has the potential to capture land value increases and other economic benefits through targeted taxation and public–private partnerships (PPPs). However, these instruments require strong legal and regulatory frameworks for land development and valuation to function effectively (ADB 2019b).

PPPs remain important to close the massive infrastructure investment gap in the region (ADB 2017c). Innovative contractual modalities—such as long-term operation and maintenance embedded in construction contracts, and design–finance–build–maintain contracts instead of the traditional build–operate–transfer contracts—will attract the private sector in the development and rehabilitation of public utilities and infrastructure. ADB, for instance, is providing technical support, specialized credit lines, and financial risk management instruments to the private sector to involve them in financing infrastructure investments (ADB 2017b).

Box 3.2: Piloting Mega-Urban Governance in City Clusters

The People's Republic of China (PRC) included in its 13th Five-Year Plan a total of 19 city clusters. Many of the cities are as large as European countries and are referred to as mega-agglomeration regions or mega-urban regions. In 2015, the PRC's 11 largest city clusters accounted for one-third of the country's population, and two-thirds of its economic output.

City clusters' main challenge is fragmentation—multiple administrative entities coexist within clusters, each with independent authority and budgets. The PRC is working toward city cluster-level governance and institutions with authority over tax and budget, land use planning, transport infrastructure, and other agencies. The Beijing–Tianjin–Hebei cluster has been formally cooperating since 2014 with a formal leading team. The Yangtze River Delta cluster around Shanghai has been formally coordinating since 1992 and established a regional collaboration office in 2018. However, it is yet to attain legal planning authority and budget. Plans for all 19 clusters in the PRC have been prepared, and coordination and connectivity have been achieved efficiently—through national infrastructure initiatives such as high-speed rail that connects the main centers within the clusters. ADB has been supporting several such programs in the PRC, including the Beijing–Tianjin–Hebei cluster and the Yangtze River Economic Belt.

Sources: ADB. People's Republic of China: Beijing–Tianjin–Hebei Air Quality Improvement—Hebei Policy Reforms Program. https://www.adb.org/projects/49232-001/main; and ADB. People's Republic of China: Preparing Yangtze River Economic Belt Projects. https://www.adb.org/projects/50343-001/main.

Yangtze River in Nanjing, People's Republic of China. ADB is supporting the government in building inclusive and sustainable growth along the Yangtze River Economic Belt, an area encompassing nine provinces and two municipalities that flank the country's longest river (photo by gyn9038/iStock).

Climate finance and green finance are increasingly taking the main stage that cities can leverage by investing in low-carbon and resilient infrastructure (ADB 2017b). DMCs are increasingly building their capacities to understand the global finance landscape, reform institutions and governance practices to meet eligibility criteria of climate and green funds, and leverage green infrastructure investments.

Data and digital technologies. These can help cities manage growth more effectively and climate-proof their infrastructure and services through more scientific and evidence-based decisions. However, the quality, availability, and accessibility of data in DMCs are often a challenge.

Also, the use of smart digital technologies requires building not only the cities' technical capacity, but also their human resources, governance, and organizational capacities. The smartest choices may not be the most technology-intensive ones, but the most inclusive, economical, and environmentally sustainable. Learning from digital technology front-runners and collaborating with public, private, and academic partners in the region, cities are pursuing different pathways to better-informed decision-making in urban planning.

One key area concerns geographic information systems, which are applied in natural resources management, climate-resilience planning, and infrastructure project assessments. ADB's Spatial Data

Analysis Explorer (SPADE) is an open-source web-based platform that combines climate information with land use, socioeconomic, and infrastructure data sets to inform project preparation, planning, implementation, and monitoring of investment projects (ADB 2019h). Cities are receiving support to develop gender-responsive and inclusive smart city plans and projects. This further builds their technical and organizational capacities so they could benefit from technologies and digital solutions—as piloted, for instance, in the modernization of the land management system in Fiji using a blockchain-based system.

Engagement: co-creation in a dynamic context. Long-term partnerships with national and subnational governments are important. Partnerships of 20 or more years with the same local agencies are increasingly common as urban development programs progress into their third and fourth investment phases. The long-term relationship allows for institutional changes and governance reforms to evolve.

Urban development can also leverage citizens, community groups, and corporations. For instance, integrated city plans should include mechanisms for engaging different stakeholder groups and coordinating partnerships to foster the exchange of knowledge and skills. The ADB Youth for Asia initiative, for example, has adopted a strategic approach to integrating youth insights into all phases of the ADB project cycle since 2015, with eight projects across eight DMCs being supported (ADB 2019i). The role of local champions as change agents is clear in the experience of piloting innovative approaches toward livable cities.

Capitalizing on the opportunities of urbanization and harnessing the cross-benefits of the 5Es of Livable Cities promise a more green, competitive, inclusive, and resilient urban future in Asia and the Pacific.

KEY MESSAGES

Act now and act collectively. As the region continues its high-speed urbanization, the window of opportunity for proactive and timely action is fast closing. The previous land- and resource-intensive and socially unequal development patterns need to be urgently transformed. Efforts should bring together governments, the private sector, citizens, and community groups. Cities in the region have great potential to leapfrog toward a green economy by promoting low-carbon lifestyles and people-centered development.

Get the nexus of transport modes, land uses, and business and labor markets right the first time. With current urbanization patterns already in progress, a holistic approach is needed to forge this nexus in cities and city regions that can support urban infrastructure and services at affordable rates, adequate quality, accessible, and inclusive to all.

Localize global agendas with city-level action plans. Global and national agendas and policies for sustainable development and climate change must be translated and implemented at the regional, city, and community levels.

Develop appropriate urban governance systems. National policies should recognize regional urbanization patterns (such as economic corridors and city clusters) and develop appropriate governance structures and systems for making them vibrant and livable.

Bridge the infrastructure investment gap with leveraged financing. Pursue policies, regulatory reforms, and partnerships that build private sector confidence and the capacity of governments to access green and climate funds, which will unlock more financing for the infrastructure gap.

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CHAPTER 4

EMERGING EUROPE, CENTRAL ASIA, AND THE SOUTHERN AND EASTERN MEDITERRANEAN

The cities and economies where the European Bank for Reconstruction and Development (EBRD) operates span Central, Eastern, and Southeastern Europe; Central Asia; Russia, the Southern and Eastern Mediterranean; and Turkey (Table 4.1). The demographics differ significantly across these regions. While countries in the Southern and Eastern Mediterranean, Central Asia, and Turkey have young and growing populations, those in Emerging Europe are aging and their numbers are declining.

Despite the demographic differences, one common thread stands out—that populations are becoming increasingly concentrated in larger cities across all EBRD regions. Digitization, along with major advancements in transport and telecommunications, has been reshaping the geography of production and the composition of skills demanded in labor markets. On the back of this rapid technological change, the economic importance of large cities is increasing even faster than their share of the regions' population. Conversely, smaller cities, particularly those far from other urban agglomerations, are often facing population decline.

Chisinau, Moldova. The cities of the former centrally planned economies still face the legacies of past urbanization policies, including the need to maintain and sustain the value of mass-produced housing stocks (photo courtesy of EBRD).

Policies, particularly on infrastructure and public services, must be adapted to the specific priorities of urban and rural areas, and aligned to the needs of cities of different sizes. In fast-growing cities, careful urban planning and investment in public transport, water, and waste treatment can help to relieve the pressures of rising population densities, promote access to essential services, and generate economic opportunities that benefit all urban residents and leverage the productivity benefits that agglomeration can provide.

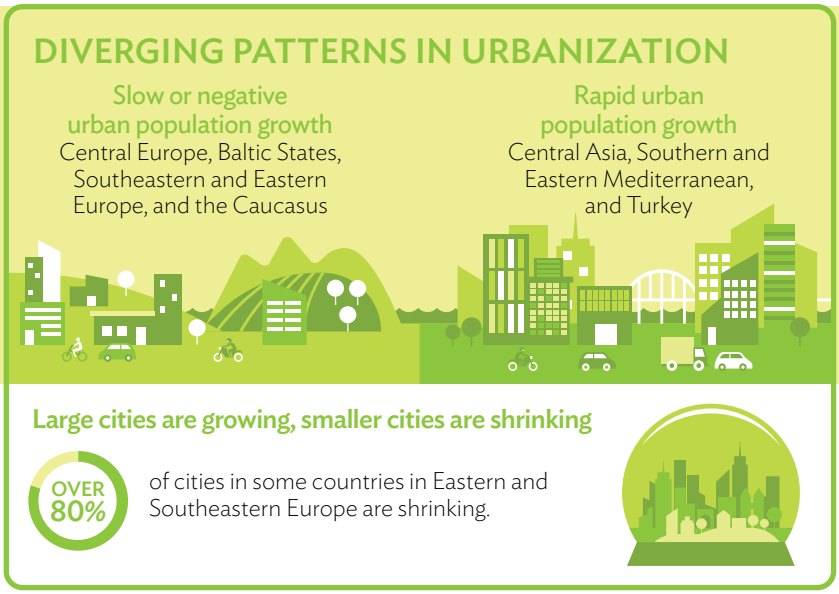
In shrinking cities, policies should focus on mitigating the negative effects of declining (localized) population densities and on helping coordinate investments across both public and private investors. Most important, urban development policies should have a long-term horizon as the policy and investment choices of today will shape the cities, their climate footprint, and the quality of life of their inhabitants for generations to come. Undoing poor urban planning is far more costly than getting it right from the start.

Development finance institutions, such as the EBRD, can support authorities and private sector actors in the EBRD regions by complementing investments with tailored technical assistance. These approaches can strengthen the capacity of municipalities and municipal companies to select, design, and implement projects that could leverage the latest technologies to improve the provision of municipal services.

Table 4.1: Economies in the European Bank for Reconstruction and Development Regions

Subregion	Economies in the EBRD Regions
Central Asia	Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan, Turkmenistan, Uzbekistan
Central Europe and Baltic States	Croatia, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic, Slovenia
Eastern Europe and the Caucasus	Armenia, Azerbaijan, Belarus, Georgia, Moldova, Ukraine
Southeastern Europe	Albania, Bosnia and Herzegovina, Bulgaria, Cyprus, Greece, Kosovo, Montenegro, North Macedonia, Romania, Serbia
Southern and Eastern Mediterranean	Egypt, Jordan, Lebanon, Morocco, Tunisia, West Bank and Gaza
Others	Russia, Turkey

Source: European Bank for Reconstruction and Development (EBRD).



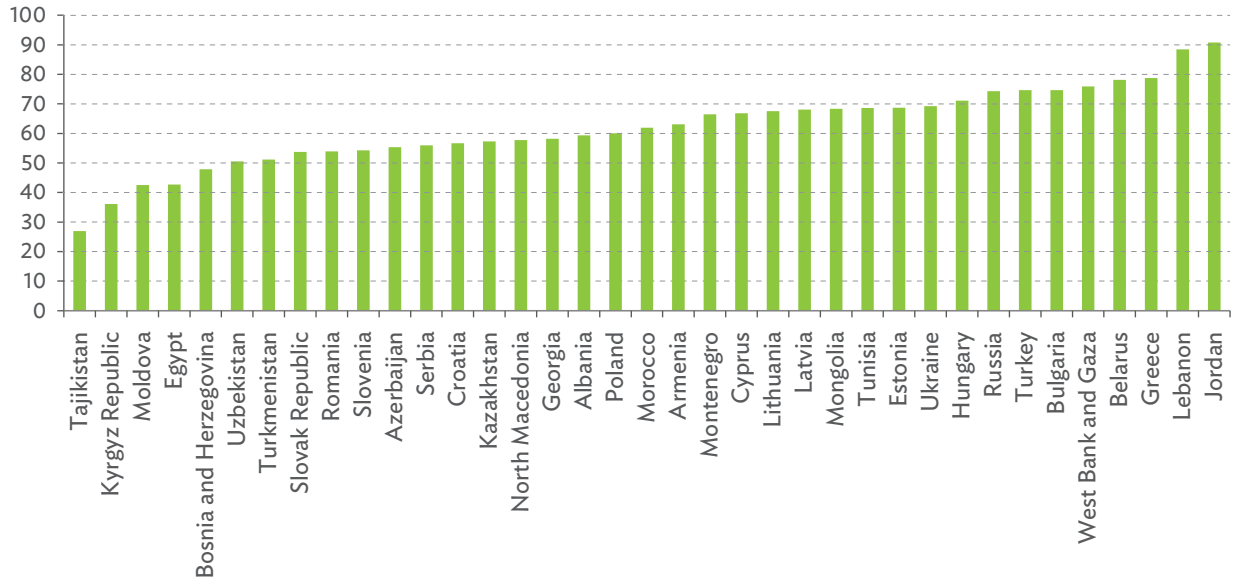
URBANIZATION IN THE REGION

Diverging patterns of urbanization

Urbanization is increasing overall, but rates vary across the EBRD regions. Over the past 25 years, the EBRD regions have experienced a steady process of urbanization. The number of people living in sparsely populated areas has declined, both in absolute terms and as a percentage of the total population. As elsewhere, urbanization in the EBRD regions generally increases along with the level of development. The percentage of urban population varies vastly across the EBRD regions, ranging from 27% of total population in Tajikistan—which is well below the average of 44% for Africa—to over 90% in Jordan—which is well above the average of 68% for Latin America and the Caribbean (Figure 4.1).[1]

Urbanization patterns reflect broader demographic trends. Demographic transformations are at different stages in the region—with Emerging Europe on the one hand, and Central Asia, the Southern and Eastern Mediterranean, and Turkey on the other. As documented in the 2018–2019 EBRD Transition Report, Central Asia, the Southern and Eastern Mediterranean, and Turkey are currently at an early stage of their demographic transition, with large and growing young populations (EBRD 2018). In contrast, populations in Emerging Europe are aging at about the same rate as the populations in advanced European economies—as a result of modest birth rates and continued improvements in life expectancy, often exacerbated by outward migration. The demographic transformation in Emerging Europe is much more advanced than in Emerging Asia, Latin America, the Middle East, or Africa.

Figure 4.1: Share of Urban Population to Total Population, 2017 *(%)*



Source: Authors' calculations based on World Bank. World Development Indicators : Urban Population as % of Total Population. http://datatopics.worldbank.org/world-development-indicators.

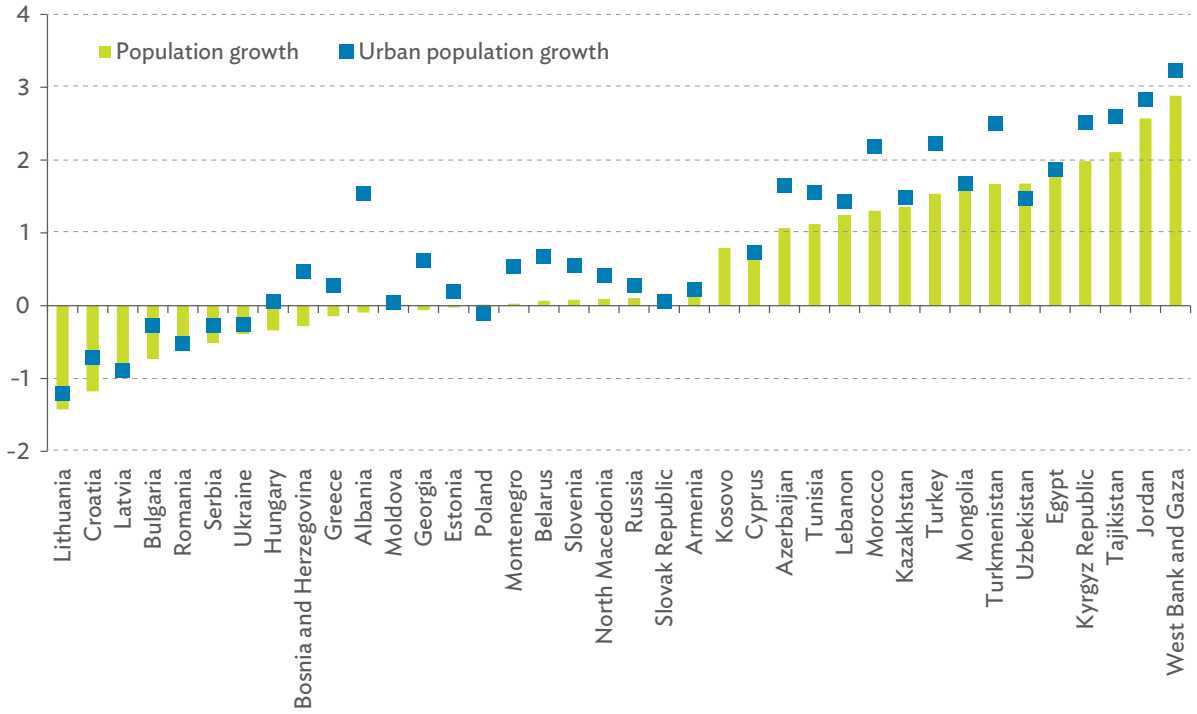
[1] Urban areas are often defined as settlements with populations over 5,000 inhabitants, although national statistical definitions vary. Other criteria may include population density, type of economic activity, physical characteristics, level of infrastructure, or a combination of these, and other criteria (Deuskar 2015). Figures were computed based on simple averages across African Development Bank and/or African Development Fund beneficiary countries in Africa, and Inter-American Development Bank borrowing members in Latin America and the Caribbean.

Thus, urban population growth is very slow or even negative in Central Europe, the Baltic States, Southeastern and Eastern Europe, and the Caucasus, in stark contrast with the patterns observed in most other emerging economies. In comparison, Central Asia, the Southern and Eastern Mediterranean, and Turkey have rapidly growing urban populations. High rates of population growth are observed for instance in Tunis, Cairo, parts of Morocco, the Nile valley and delta; and much of Jordan, Lebanon, and the West Bank and Gaza (Figure 4.2).

Some countries have shrinking populations yet increasing concentration. Demographic trends are also reflected in the changes in population density as experienced by a representative resident, the so-called average "localized population density." This indicator captures density in the immediate vicinity of a person, rather than the average density in the whole country. Localized population density looks at the number of people residing in a 5-kilometer (km) radius of a given point using information about populations on a 1 km by 1 km grid.[2]

Thus, the localized population density provides a better sense of change in a person's immediate environment than just an average density. For instance, if everyone in a 10 km by 10 km area was forced to move into a single 1 km by 1 km corner, people's lives would be significantly affected, despite the overall population density of the original 100 square kilometer (km^2) area remaining unchanged. This is likely to increase congestion and

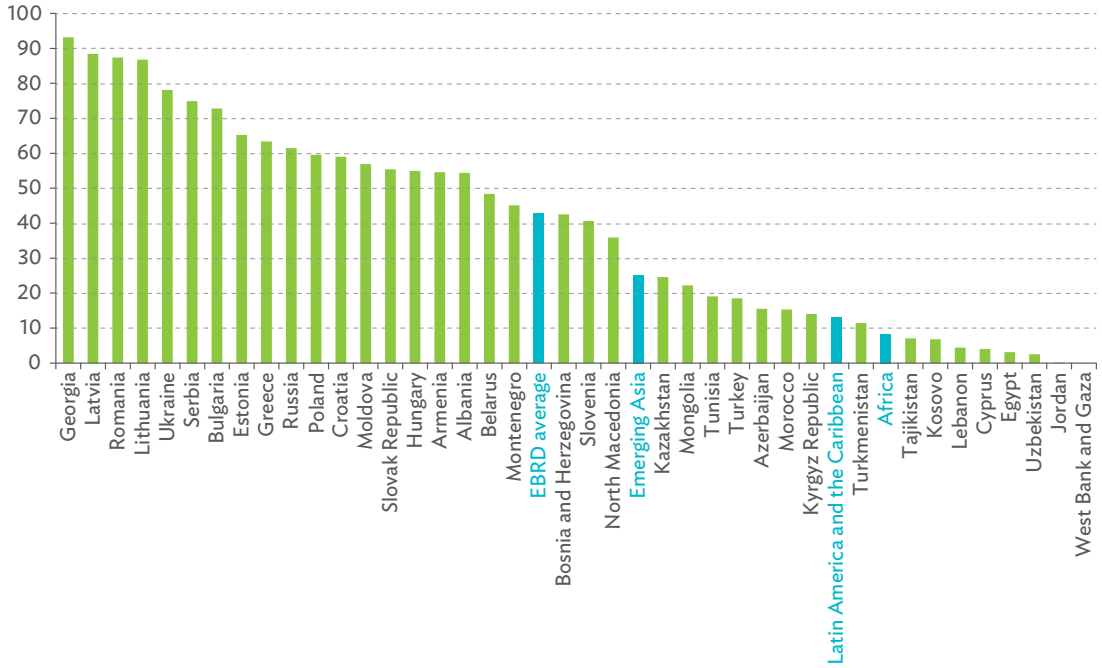
Figure 4.2: Population and Urban Population Growth, 2017 *(%)*



Source: Authors' calculations based on World Bank. World Development Indicators: Population Growth and Urban Population Growth. http://datatopics.worldbank.org/world-development-indicators.

[2] This measure assigns progressively smaller weights to people residing further away.

Figure 4.3: Share of Population Living in Areas with Declining Localized Density, 2000–2014 *(%)*



EBRD = European Bank for Reconstruction and Development.

Sources: European Commission (Joint Research Centre) and Columbia University (Center for International Earth Science Information Network). 2015. GHS population grid, derived from GPW4, multitemporal (1975, 1990, 2000, 2015); and EBRD. 2018. Work in Transition. *Transition Report 2018–2019*. London.

pollution, although it could also increase the benefits of agglomeration and facilitate access to potential employers and service providers.

Likewise, the economic impact of people moving away will vary depending on whether they are moving to a new neighborhood that is 1 km away or to an area that is 60 km away, even if both are in a different administrative region (EBRD 2018). Localized population densities can be averaged across a country—such averages are referred to as "average localized densities." Albania provides an example of a place where there was a substantial increase in average localized density, concentrated around the capital city of Tirana, while the country experienced a moderate decline in its overall population (EBRD 2018).

Most people in Emerging Europe live in areas with declining localized population density. The Baltic States experienced especially large declines in recent years. It is striking to note that in these countries, and in parts of Southeastern Europe, over three-quarters of the population live in areas with declining localized population densities (Figure 4.3). As a consequence, the individual residents have less access to potential employers and customers in their immediate vicinity. If productivity levels in those areas fall along with population density, depopulation risks become self-reinforcing. Over three-quarters of population in the EBRD regions still live within an hour away from a large city—which accounts for a higher share than in Africa, Emerging Asia, or Latin America and the Caribbean (Weiss et al. 2015)—however, their immediate surroundings are becoming more sparsely populated.

The picture is different in Central Asia, the Southern and Eastern Mediterranean, and Turkey where localized population density is increasing steadily. These economies have experienced consistent increases in localized population density across geographic areas, reflecting the rapid growth of their populations. However, even in these economies,

Ulaanbaatar, Mongolia. Large numbers of people have been moving to Mongolia's capital city, steadily increasing its population density (photo courtesy of EBRD).

some people live in areas with declining localized population density as people move to larger cities in search of economic opportunities (EBRD 2018). In Turkey, for instance, population growth has been concentrated in and around provincial capitals, with widespread declines noted in the number of people living in small towns in more remote areas. In Mongolia, large numbers of people moved to the capital city, Ulaanbaatar. Several economies in Emerging Asia and Africa exhibit similar patterns of population concentration, while in other emerging economies, notably in Latin America, populations have become less concentrated.

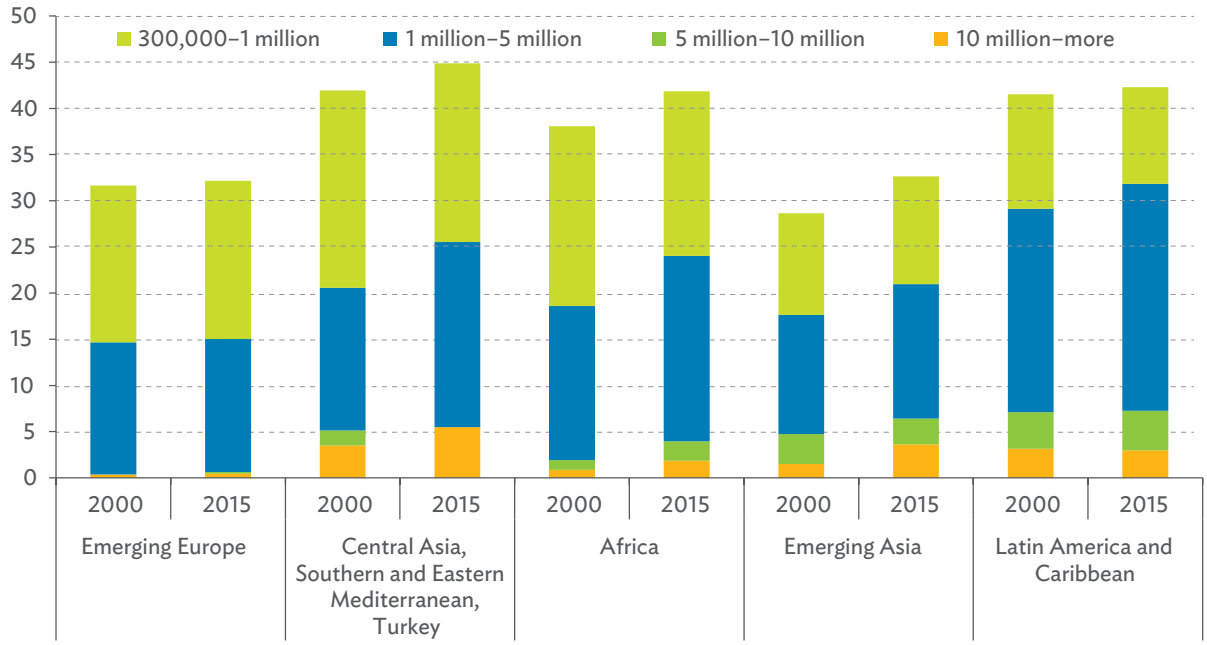
The fates of small and large cities

Historically, secondary cities in Emerging Europe had an important role. Populations in the EBRD regions so far, have been less concentrated in large urban agglomerations than in many other emerging economies. The largest cities of each country in the EBRD regions account for a much smaller share of the total urban population than the largest cities do in Latin America (at high levels of urbanization) or Africa (at low levels of urbanization). Secondary cities have historically played a relatively greater role in the EBRD regions, particularly among those countries with formerly centrally planned economies, which, under central planning, typically had high urbanization rates relative to their level of development, though with more dispersed settlement patterns (Figure 4.4).

The transition years of the 1990s were characterized by a rapid decline in the share of manufacturing in total value added, while the share of services increased. These structural shifts, alongside market-based restructuring, required changes in cities' economies as well.

Capital cities and large urban centers found themselves in a privileged position, attracting investment in

Figure 4.4: Share of Urban Population, by City Size (%)



Source: Authors' calculations based on United Nations, Department of Economic and Social Affairs, Population Division. 2018. Percentage of Urban Population in Cities Classified by Size, Class of Urban Settlement, Region, Subregion and Country, 1950–2035. https://population.un.org/wup/Download/.

banking, retail, and information-based technologies, thus, sustaining more stable labor markets. Some secondary cities also managed to shift away from traditional manufacturing industries to service-oriented urban economies and gained economic attractiveness. Novi Sad in Serbia, for instance, managed to diversify from industry to services, turning itself into an important financial and information technology center, with small and medium-sized enterprises dominating the city's economic development.

However, most secondary cities were left behind. Highly concentrated employment centers were hit hard by closures of state-owned or socially owned enterprises. Many smaller cities and those that relied on a single, dominant employer or industry turned into pockets of high unemployment and poverty. For instance, Tatabánya in Hungary experienced large drops in (industrial) employment, rapid outmigration, and falling real estate prices, despite its proximity to the capital and good transport connections. Cities such as Split along the Croatian coast were affected by the decline of shipbuilding, although tourism provided some economic offset. While foreign direct investment, such as car manufacturing, benefited secondary cities across Emerging Europe, these investments were often located in already growing cities or in areas that used to engage in car manufacturing (e. g., Győr and Kecskemét in Hungary, Kragujevac in Serbia, and Bratislava and Trnava in Slovakia).

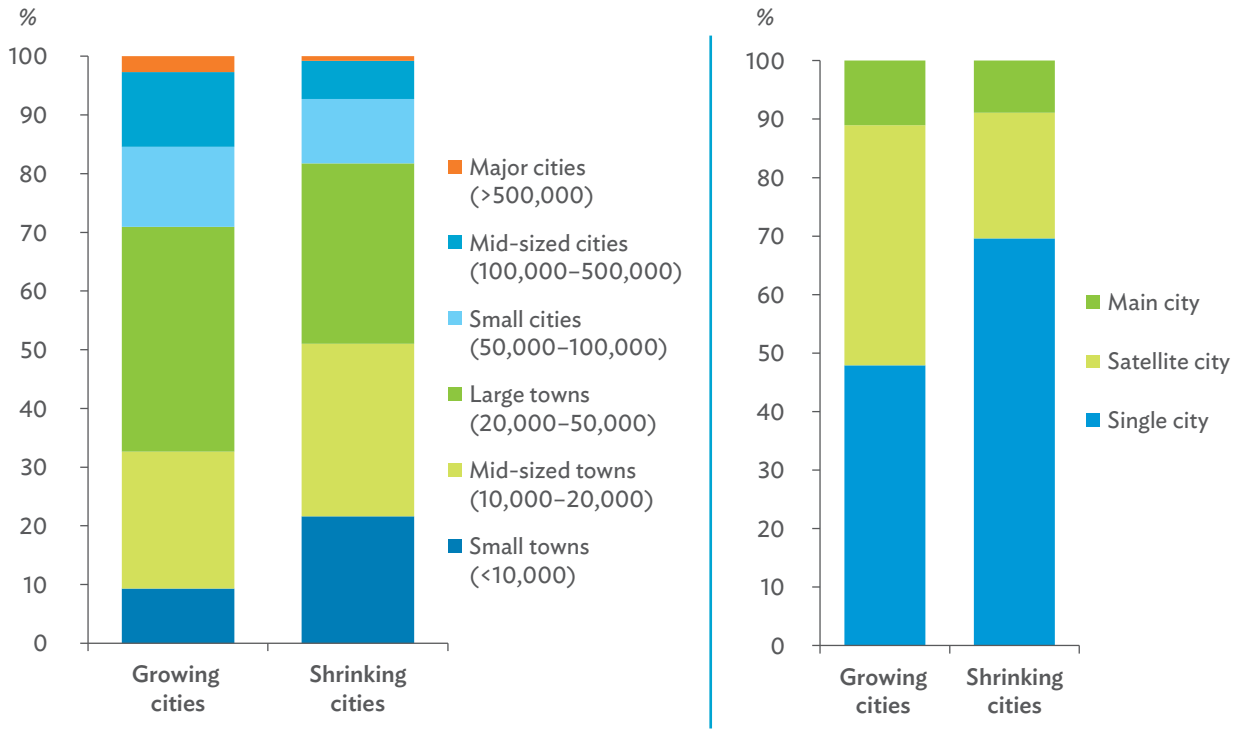
Today, populations across the EBRD regions are becoming increasingly concentrated in larger cities. The last 25 years have seen high population growth in major metropolitan areas, such as Istanbul and Moscow. Large cities—those with more than 500,000 inhabitants—also continue to grow. Around three-quarters of their inhabitants experienced significant increases in localized population density between 2000 and 2014 (EBRD 2018). In contrast, cities with fewer than 300,000 inhabitants (which are home to between one-third and three-quarters of

the countries' populations) account for a decreasing share of the EBRD regions' populations. Smaller cities, especially if they are not part of (or close to) a larger urban agglomeration, are likely to lose population (Figure 4.5).

Cities that are part of larger agglomerations have higher population growth than single cities. Cities with better access to other cities fare better (Restrepo Cadavid et al. 2017). In contrast, lagging areas are often left with concentrations of both lower-skilled workers and lower-productivity firms (Farole et al. 2018). Cities that are dominated by a single industry or enterprise also tend to grow more slowly (or experience a faster decline) than their peers (Commander 2018; Commander et al. 2011).

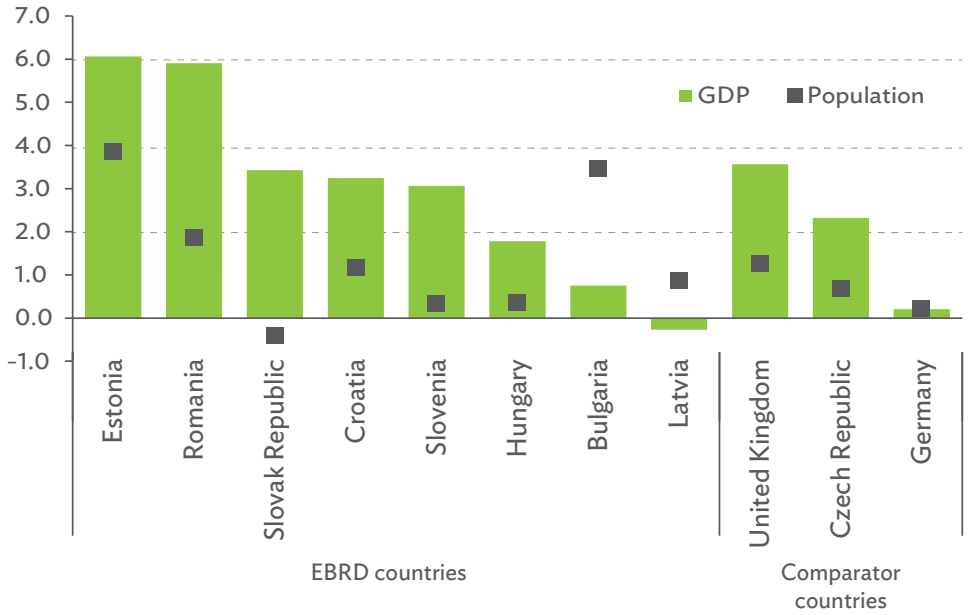
As a result, the share of output produced in large cities has been rising even faster than their share of their countries' populations. For instance, in the cities of Bucharest or Tallinn, the growth of gross domestic product (GDP) far exceeded population growth (Figure 4.6). The per capita GDP is also significantly higher in large cities than elsewhere in the country. In the EBRD regions, such differentials tend to be at par with or higher than those observed in advanced economies (Figure 4.7). Moreover, GDP growth is also typically higher in large cities (Figure 4.8). In other words, the gap between the economic fortunes of large cities and those of small ones and rural communities has been widening.

Figure 4.5: Characteristics of Cities with Growing and Shrinking Populations, 2000–2012 *(%)*



Source: Authors' calculations based on P. Restrepo Cadavid, G. Cineas, and S. Zhukova. Cities in Europe and Central Asia Database 1992–2012. World Bank. https://microdata.worldbank.org/index.php/catalog/2937.

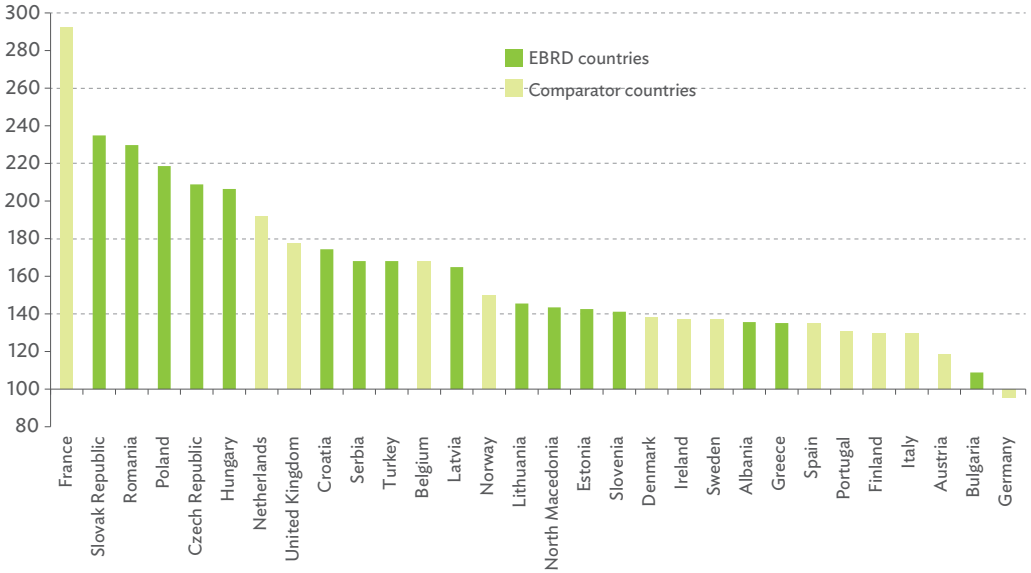
Figure 4.6: Change in Gross Domestic Product Share and Population Share of the Largest City's Metropolitan Area, 2000–2017 (Percentage points)



EBRD = European Bank for Reconstruction and Development, GDP = gross domestic product.

Source: Authors' calculations based on Eurostat database. See population and GDP of capital city metropolitan region in relation to national population and GDP.

Figure 4.7: Gross Domestic Product per Capita in the Largest City's Metropolitan Region, 2017 (National average = 100)

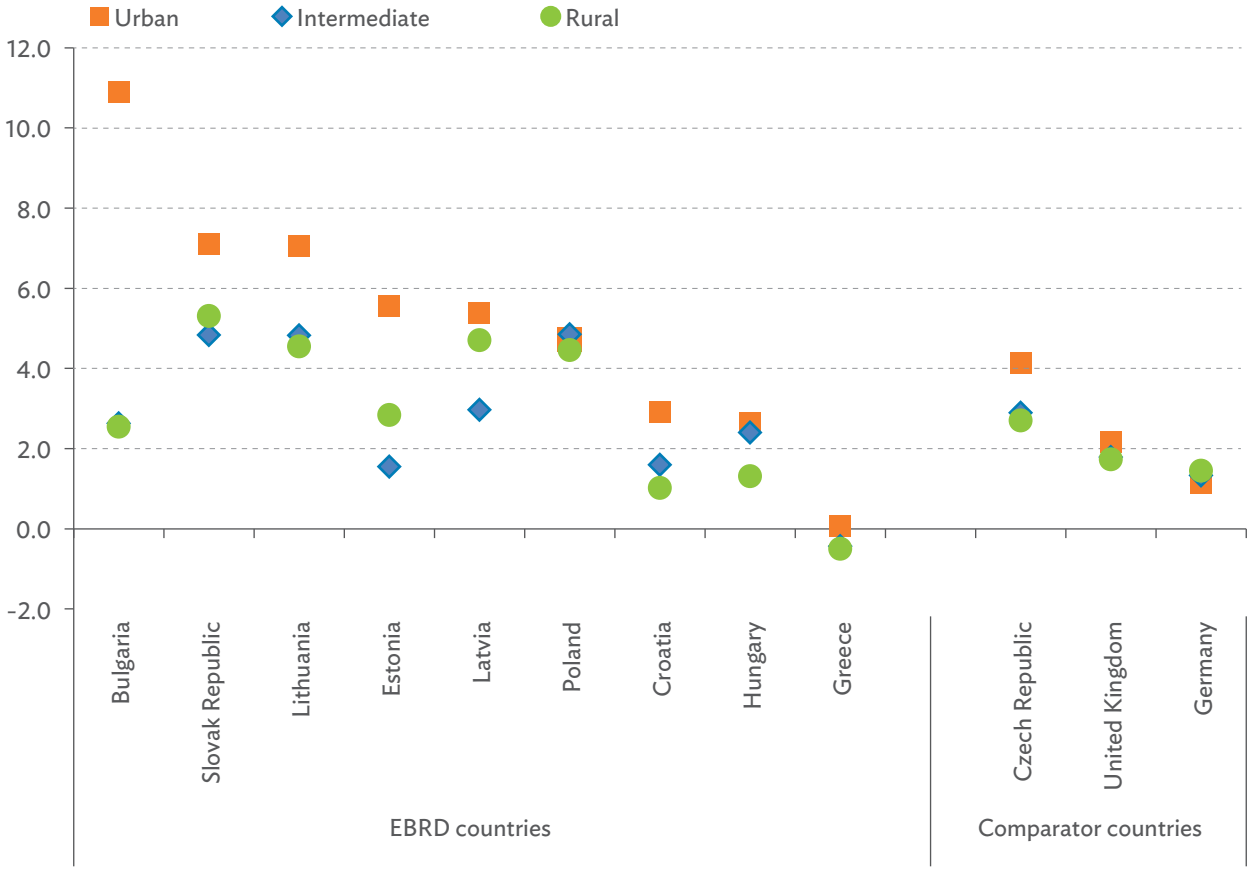


EBRD = European Bank for Reconstruction and Development.

Note: This figure uses the 2016 data for Albania, Croatia, France, Ireland, Italy, Latvia, Lithuania, North Macedonia, the Netherlands, and Norway.

Source: Authors' calculations based on Eurostat database. See the GDP per inhabitant for capital city metropolitan regions.

Figure 4.8: Average Annual Growth of Gross Domestic Product, 2000–2016 (%)

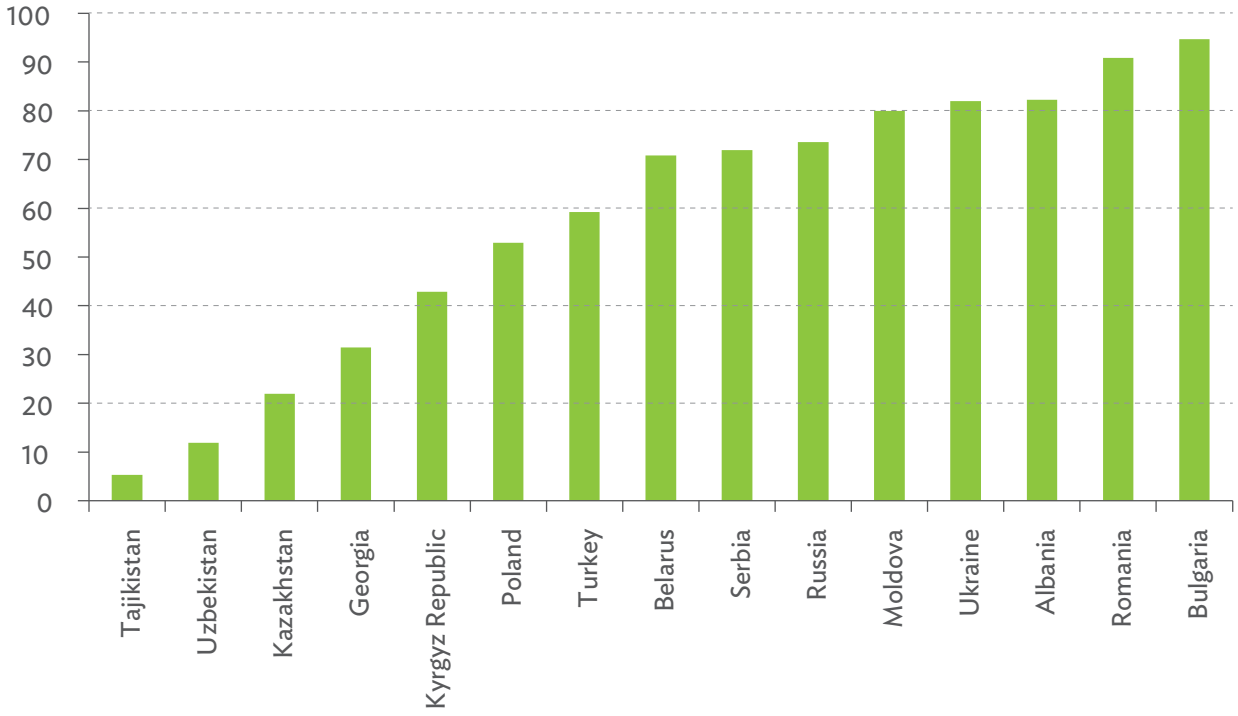


EBRD = European Bank for Reconstruction and Development.
Note: This figure uses 2000–2015 data for Croatia, Germany, Greece, Latvia, Lithuania, and Poland.
Source: Authors' calculations based on Organisation for Economic Co-operation and Development. 2016. *OECD Regions at a Glance 2016*. Paris.

Smaller cities and those not part of agglomerations are declining. Some countries in Eastern and Southeastern Europe are seeing most of their cities shrink. As a result of the increasing concentration of populations in a select few cities, over 80% of cities in some countries in Eastern and Southeastern Europe are shrinking (Figure 4.9).

In Armenia, for instance, the population of the capital Yerevan has been constant at around 1.1 million people, although the country's overall population is shrinking. So, while Yerevan's population share in the country's total is rising, the population of cities like Dilijan in the North is shrinking. Dilijan's population halved, from more than 30,000 in the early 1990s to around 15,000 today.

Figure 4.9: Share of Cities with Decreasing Populations, 2000–2012 *(%)*



Source: Authors' calculations based on P. Restrepo Cadavid, G. Cineas, and S. Zhukova. Cities in Europe and Central Asia Database 1992–2012. World Bank. https://microdata.worldbank.org/index.php/catalog/2937.

CHALLENGES AND OPPORTUNITIES

Urban policy and investment choices have long-term effects. Once a city is built, its physical form and land use patterns can be locked in for generations. Cities of former centrally planned economies, for instance, typically still face the legacies of relatively high shares of industrial land in urban areas and the need to maintain and sustain the value of mass-produced housing stocks, which often accommodate very large shares of the population (Hirt 2013). The urban design of cities can also exclude marginalized groups, perpetuating inequalities. Thus, cities should plan for long horizons. Urban policies and investment choices today—whether providing urban infrastructure, constructing new housing units, or finding an appropriate location of production—will shape people's lives, the economy's direction, and the environmental footprint for generations to come.

Harnessing the advantage of growing cities

Cities account for over 60% of the population and over 70% of output and growth in the EBRD regions—demonstrating the benefits of agglomeration. Today, cities in Emerging Europe, Central Asia, and the Southern and Eastern Mediterranean, just like in other regions, have a fundamental role in their countries' economies. Firms and people in cities benefit from agglomeration effects as more densely populated areas tend to be more productive. When firms operate close to one another in large markets, it is easier for them to source inputs, access greater numbers of actual and potential customers, and recruit employees from a much larger potential pool of workers. Ideas tend to spread faster in more densely populated areas, fostering

Amman, Jordan. EBRD has supported Amman, with its large and rapidly growing population, through a combination of loans, grants, and technical assistance for municipal infrastructure and public services, and to develop its smart city capabilities (photo©EBRD/Dermot Doorly).

innovation, which ultimately results in consumers having access to a greater variety of products and services. Moreover, the provision of infrastructure and other public goods tends to be cheaper per capita because of the benefits of economies of scale.

Agglomeration, however, does not only bring benefits. Growing populations, if not managed well, eventually result in high levels of congestion and pollution. Long commutes, elevated noise levels, pollution, and scarcity of housing affect people's quality of life and may encourage movement away from city centers. Lack of urban economic opportunities for all, including for the most vulnerable and marginalized, can threaten social and political cohesion. Well-managed urbanization, therefore, is crucial in leveraging the productivity and innovation potential of cities, while planning for and minimizing the downsides.

Sustainable infrastructure for growing cities.

Investment in public transport, water, and waste treatment can relieve the pressures of rising population densities and leverage the economic benefits that agglomeration can provide. Municipal infrastructure investment in the EBRD regions has not kept pace with the growing demand for higher service levels. This problem is exacerbated by the fact that the asset base of municipal infrastructure was already depleted in the 1990s. Lack of financing has often been a major barrier to infrastructure investments.

Booming cities need infrastructure and services that will absorb the demands of a growing population, are able to manage peri-urban growth, and avoid uncontrolled sprawl. Providing infrastructure in densely populated environments tends to be cost-effective in per capita terms as new facilities serve large numbers

of people. Investments in health and education can also be cheaper on a per capita basis. The returns to such investments are likely to be high, for instance, in the Southern and Eastern Mediterranean and Turkey, where urbanization has been especially rapid. Investing in solid waste management and managing landfills should also be priorities. There is also evidence that growing cities are increasingly operating as multicity agglomerations, thus, it is crucial to coordinate public services to support economic performance (Restrepo Cadavid et al. 2017).

Focus on developing green cities. As the engine of global growth, cities consume close to two-thirds of the world's energy and account for more than 70% of global greenhouse gas emissions (C40 Cities website). Cities face environmental issues—including local air quality, traffic congestion, limited land resources, pressure on water resources, and managing municipal solid waste. As cities develop, their exposure to climate and disaster risks also increases. In many countries in the EBRD regions, there is a continued trend toward sprawl rather than compact cities. This increases the cost of delivering public services, has implications for access to employment, and locks in emissions associated with transport and other utilities, which are effectively oversized.

Smart, skilled, and economically competitive cities. Technological change has driven down the costs of transport and telecommunications. As transport becomes cheaper, the importance of cities could be expected to decline, and yet the opposite trend has been observed. Improved technologies—such as digitalization and major advancements in transport and telecommunications—favor large, urban agglomerations. Cities' importance has, thus, increased rather than fallen over time.

Structural transformation resulted in a shift from "local agricultural economies" via "national manufacturing or industrial economies" to "global knowledge economies." Across advanced economies—and increasingly also in Emerging Europe—the share of manual labor jobs has declined sharply, while the share of jobs requiring cognitive skills has increased. This is polarizing labor markets. While it increased the returns to workers with skills that complement new technologies, it also reduced the opportunities for the least skilled. For both workers and enterprises, these dynamics have spatial implications (Farole et al. 2018).

Opportunities abound for workers and employers in cities. Companies that rely on highly skilled workers and the workers themselves tend to concentrate in leading metropolitan areas, often, though not exclusively, in capital cities. When firms operate close to one another in large markets, it is easier for them to source inputs, they have more potential customers nearby, and they have a larger pool of potential workers from which to select. Meanwhile, workers can also access more employers and service providers. In fact, large urban agglomerations tend to actively compete to attract the highly skilled workers.

Competition across cities and regions could improve the business environment. Local policy makers could set up one-stop shops, facilitate online registrations, and reduce red tape in a bid to attract skilled labor and more investments. But coordination and cooperation is required, otherwise, subnational competition for resources can also become destructive. For instance, if regions or cities compete in offering subsidies and tax breaks to attract new investments in what is often called "a race to the bottom" (EBRD forthcoming).

Managing shrinking cities

Both growing and declining cities face uniquely challenging environments. Rapid urban growth can create difficult challenges; however, the challenges of rapid growth are fundamentally similar regardless of the level of development of an economy. Policy responses to population decline are much less well understood. In the past, the challenge of managing urban decline was largely confined to advanced economies, in cities such as Detroit in the United States and Glasgow in the United Kingdom. Today, this is becoming a common challenge in Emerging Europe and may become more common across emerging economies as labor markets change, and employment shares of industry and agriculture further decrease.

Fiscal imbalances and higher costs in delivering public services (Restrepo Cadavid et al. 2017). As populations decline, a city's taxable income dwindles. A drop in tax revenues may be compounded by reduced transfers from the central government as many transfer systems use per capita formulas. Declining population densities also increase the per unit cost of delivering public services. Schools may have smaller class sizes, while public transport systems, such as a subway, may become financially unsustainable. The marginal per capita cost of providing services, such as water supply, sanitation, and district heating also increases. Reversing this vicious cycle is extremely difficult once a negative trend has started.

Housing supply and demand imbalance. Due to the durable nature of housing, it can take decades for housing supply to adjust to a decline in demand. In the absence of rapid housing stock adjustment, a decrease in property values and an increase in housing vacancies erode municipal revenues in places where revenues are highly dependent on property taxes.

Increasingly poor outcomes for those who stay. Outmigration of the more mobile and those willing to move—typically the young and better educated—can further worsen the outcomes for those who are left behind. Those with tertiary education are most likely to move internationally, while those with upper secondary education are most likely to move domestically and are most likely to commute (Eurostat 2016). Among those who stay, demand is likely to increase for some social services, unemployment benefits, public health services, and long-term care. In Emerging Europe's towns with dwindling populations, declining productivity and further population losses can become self-reinforcing. As discussed in EBRD's Transition Report, in lagging areas, the low quality of governance, weak economic growth, and outmigration could result in vicious cycles that further worsen the plight of those who are left behind (EBRD forthcoming).

Opportunities do exist if supported with careful policy making. In shrinking cities, appropriate policies can mitigate self-fulfilling cycles of population and productivity declines. Targeted investments could boost productivity in certain localities. However, the expected returns to such investment depend on coordinated actions of other investors (Rosenstein-Rodan 1943). For instance, an investment in an automotive factory will be more profitable if suppliers and transport companies also decide to invest in the area, if universities in the area invest in training workers for the skills that are in high demand, or if a new motorway is built. Multilateral development banks (MDBs) could help cities overcome such policy coordination problems (Farole et al. 2018).

The negative fiscal impacts of population decline could be mitigated by diversifying revenues away from property taxes. More generally, while some residents may continue leaving secondary cities in search of

Over the last 25 years, EBRD has financed over $8.8 billion on infrastructure in 220 cities including in the water, wastewater, urban transport, district energy, solid waste, facilities management, and energy efficiency sectors. EBRD combines finance with policy dialogue, capacity building and stakeholder engagement for a holistic response.

Tbilisi, Georgia. As part of its Green City Action Plan, Tbilisi in Georgia acquired new compressed natural gas buses, which reduced car emissions that were causing 85% of air pollution (photo courtesy of EBRD).

better job prospects, social safety nets and place-based policies need to provide support for those who prefer (or have to) stay behind.

WAY FORWARD

Easing financing constraints and building capacity

Lack of financing has often been a major barrier to urban investments in the EBRD regions. Municipal infrastructure investment in the EBRD regions has not kept pace with the growing demand for higher service levels. Limited access to financing is an especially acute problem at the local utility level. Revenues are constrained due to a combination of weak regulation and affordability issues, making it difficult for utilities to make new investments or even to fund critical operations and maintenance.

Since 1994, EBRD has financed over $8.8 billion (€8 billion) on infrastructure in some 220 cities in water, wastewater, urban transport, district energy, solid waste, facilities management, and energy efficiency sectors.

EBRD's work combines the provision of finance to municipalities and municipal utility companies with policy dialogue and capacity building, and has supported the structuring of projects with cities as its clients. The bulk of its clients are in second-tier cities—some with declining populations and diminishing local tax bases.

In the early transition years from central planning toward a market economy, loans were backed by a sovereign guarantee and accompanied by a wide range of technical assistance and policy measures to improve

the creditworthiness of the borrower. From there, EBRD aimed to shift a city's borrowing from a sovereign to a subsovereign level, where lending is either to the public utility company, the city, or the private sector. EBRD's willingness to take such risk often sends a strong signal to the market, helping to crowd in private investment.

EBRD's municipal tool kit includes a range of financial products, recognizing different enabling environments (Figure 4.10).

The projects are designed to promote decentralization and commercialization, and encourage decision-making at the local level. This helps to deliver sustainable and demand-driven infrastructure that is responsive to local needs. Such projects often include outreach plans to engage a wide cross-section of stakeholders.

EBRD aims to strengthen project implementation capacity at the municipal level and disseminate best practices across cities. By structuring projects so that cities or municipal utility companies become direct counterparts, EBRD is able to build local technical capacity. In this way, municipalities learn to (i) assess the range of technical and financial options for their urban infrastructure needs, (ii) identify the most appropriate ways of funding new construction, and (iii) handle operations and maintenance. EBRD also provides support for public service contracts—formal contracts between the city and the utility—which define key performance indicators and compensating subsidies, particularly in the transport sector.

In addition to technical assistance, EBRD's municipal loans may use blended finance to ease funding gaps, particularly for green investments. It also provides support to help cities access capital markets through the capital market road maps.

Fostering greener cities

Investing in greener cities may be an effective way to scale up policies that address environmental challenges. Given the carbon footprint of cities, attempts to achieve global climate change targets have to focus on greener cities. MDBs can support cities to deliver more environmentally friendly growth by supporting projects that bring broader social benefits and encouraging medium- and long-term planning.

EBRD advocates environmental and social sustainability, and supports the commercialization

Figure 4.10: European Bank for Reconstruction and Development's Municipal Tool Kit

Source: European Bank for Reconstruction and Development.

of municipal services, with increased private sector participation. Operational responses vary—depending on the challenges and capacity of a city or economy in which EBRD works. EBRD takes a holistic approach, using policy dialogue, increasing public and private coordination, and technical assistance to deliver livable and sustainable cities.

EBRD Green Cities, launched in 2016 with support from donors, helps city authorities tackle their priority environmental challenges. The program strives to build a better and more sustainable future for cities and their residents. Central to achieving this is the development of Green City Action Plans—a tailored tool to identify, prioritize, and connect cities' environmental challenges with sustainable infrastructure investments and policy measures. To achieve these aims, EBRD, with support from the Organisation for Economic Co-operation and Development, developed a methodology to help cities develop Green City Action Plans, which help guide the strategic planning of green investments with medium- and long-term horizons across various areas and sectors. To date, the program has attracted over 30 cities and led to financing of $380 million (€350 million) of green investments. These investments deliver a range of benefits from improving air quality, easing congestion, strengthening the management of water resources, to better disposal of municipal solid waste (Box 4.1).

Urbanization policies should also focus on maintaining or restoring green areas and supporting green buildings. While the former centrally planned economies inherited generous public urban spaces, these green areas were often "lost in transition" (Hirt 2013). Where large, green development projects have taken place in recent years, these were typically concentrated in the largest and wealthiest cities. Green buildings should also be supported as countries in the regions where EBRD operates still significantly lag behind advanced economies in this respect. This is because zero-energy buildings (both new and refurbished) are still very costly.

Promoting cities as hubs of innovation

Policies should promote cities as hubs of innovation, and rely on improved technologies to support urban planning. New technologies can be used to forecast population

Box 4.1: Green City Action Plans

As part of its Green City Action Plan, Tbilisi in Georgia acquired new compressed-natural-gas buses, which reduced car emissions that were causing 85% of air pollution. The city also improved water and wastewater services, solid waste management, the climate resilience of buildings, and implemented other energy efficiency measures. These are expected to reduce annual carbon dioxide (CO_2) emissions by around 450,000 tons and save around 55 million cubic meters of water per year.

The European Bank for Reconstruction and Development (EBRD) is working with 30 other cities under EBRD Green Cities. It supported the cities of Banja Luka and Zenica in Bosnia and Herzegovina in moving toward less-polluting fuels. In the city of Banja Luka, EBRD's first subsovereign loan in Bosnia and Herzegovina helped finance the construction of a new biomass boiler plant, which converts heat generation capacity from heavy fuel oil (also known as mazut) to sustainably sourced woody biomass. Mazut-based heating has considerable negative environmental impacts—in terms of CO_2 and sulfurous emissions. The new biomass plant substantially reduces the use of this polluting fuel, reducing CO_2 emissions by over 90%. Locally sourced biomass will also reduce fuel costs. In Zenica, a new local heat and power plant helped the city move away from heavily polluting coal, resulting in major environmental improvements, and generating savings from reduced fuel costs.

Loans and technical assistance to Varna in Bulgaria supported investments in climate-resilient urban infrastructure upgrades, including electric vehicles and electric vehicle-charging stations. Paid parking zones in the city center were also developed.

Source: EBRD.

changes that affect demand for public services, commuting patterns, and land use. MDBs can support cities in reaping the benefits of new technologies by providing technical assistance—whether in developing digital cadastral maps or using high frequency data to track traffic flows or the demands on utilities. The resulting improvements—such as better traffic flow—help boost the cities' competitiveness and improve the residents' quality of life.

EBRD's Smart City Action Plans, for instance, aim to improve competitiveness and quality of life by applying real-time urban data analytics. The Smart City Action Plans help guide future investment by bringing together the public sector, the private sector, and citizens to develop ideas for smart city services that will benefit residents and local businesses. Examples of such smart investments include bus fleets and stops with real-time tracking, e-ticketing systems, and integrated transport apps (Box 4.2).

Supporting urban regeneration as a drawcard for further investment

EBRD engages in urban regeneration initiatives, investing in projects aimed at improving existing urban public spaces in a manner that creates value and opens up new opportunities for complementary private sector investment. These projects include redeveloping historic city center streets, repurposing disused industrial districts, and redeveloping public transport stations on a landlord lease model.

The EBRD's City Regeneration and Environment Fund (CREATE) is dedicated to supporting integrated urban investments.

Projects are focused on upgrading transport hubs, rehabilitating disinvested assets in urban centers, and releasing value from disused industrial or military sites (Box 4.3). The fund, which is supported by donors, also supports enhancing the technical capacity of municipal and national-level entities to enable them to implement by themselves regeneration activities in the future.

Advancing inclusive growth

EBRD recognizes the risks arising from economic disparities and inequality of opportunities that threaten social and political cohesion. Thus, it seeks to identify and support policies that maximize regional economic potential, measured not necessarily by output per

Box 4.2: Smart Cities in the European Bank for Reconstruction and Development Regions

The European Bank for Reconstruction and Development (EBRD) has been working closely with the Greater Amman Municipality (GAM) since 2015. The Bank's support has been steady throughout a very challenging period—an unprecedented pressure on GAM's infrastructure due to a growing population that is underpinned by the refugee crisis. EBRD's support to Amman included over $95.6 million in loans, $29.6 million in grants, and significant amounts of technical assistance focused on upgrading GAM's solid waste infrastructure.

EBRD and GAM signed a smart city memorandum of understanding in 2017. The objective was to develop a smart city road map to help Amman to respond to its changing needs by linking information and communication technology to the city's assets and applying the latest advances in information technology to better serve GAM's residents.

EBRD subsequently mobilized technical assistance, which is ongoing as of September 2019, to develop a smart city concept that will improve efficiency, reliability, and the quality of GAM's municipal infrastructure and associated public services. The assistance is focusing on (i) smart mobility investments (traffic management and parking); and (ii) environmental investments (smart lighting, waste management, and air quality), while utilizing technologies such as Internet of Things and Artificial Intelligence. The project will first develop a smart city concept in a pilot area, followed by a business case assessment.

Source: EBRD.

Box 4.3: Urban Regeneration in the European Bank for Reconstruction and Development Regions

In Bucharest, Romania, the European Bank for Reconstruction and Development (EBRD) provided early support to the regeneration of the city's historic zone, helping finance the rehabilitation of infrastructure and the creation of a pedestrian zone in the historic center. The upgrade included rehabilitating the utilities, adding stone pavements that are in line with the character of the area, installing street furniture, and transforming areas into multifunctional public spaces to accommodate the holding of cultural events. These investments and the pedestrianizing of the streets served as a catalyst in attracting new private investment and transform the area into one of the capital's liveliest districts. The project also helped improve traffic management, by installing monitoring equipment on public transport vehicles and introducing a fully integrated traffic management system with CCTV surveillance and traffic adaptive control at signalized junctions.

In Wroclaw, Poland, EBRD financed a parking garage through a public–private partnership near Nowy Targ Square. Thanks to the construction of this new parking garage with 331 parking spaces, the city was able to reduce street parking and redevelop the historic square as a high-quality urban space for pedestrians.

The EBRD's City Regeneration and Environment Fund (CREATE) is operational in the Baltic States, Central and Southeastern Europe, and the Southern and Eastern Mediterranean. Through technical assistance, EBRD is currently exploring a variety of projects with cities focusing on investments to configure rail and maritime transport, the strategic deployment of land assets, refurbishing streetscapes, and cofinancing regeneration investments.

Source: EBRD.

capita, but by equal opportunities for individuals to achieve their potential; acquire the requisite skills; and obtain a high-quality, productive job.

Residents of rural areas and less-developed regions tend to face higher barriers to finding a job than people living in more developed urban areas within the same country. They may also find it harder to access good quality education, health care, clean drinking water, and other publicly provided services. This further reduces their chances of competing successfully in the labor market. Indeed, an individual's place of birth is one of the most important drivers of wealth inequality and a key determinant of lifetime economic opportunities.

EBRD promotes regional inclusion by supporting a wide range of projects covering information technology connectivity, improving water supply in underserved regions, and providing credit lines that target small and medium-sized businesses in less economically developed areas. For example, rural farmers in remote areas often face hurdles when accessing finance, so credit lines targeting these groups—coupled with business and financial training—will allow them to invest and enable them to grow their businesses.

EBRD also promotes gender equality and economic inclusion in urban planning, with a view to reducing persistent gender and inclusion gaps in accessing essential services. The urban space can influence access to public services, such as child care facilities, and may disproportionally prevent women from accessing economic opportunities. For instance, when it comes to ensuring safety and accessibility in urban transport and public spaces, women may be at a disadvantage. Cities, thus, have a key role to play in ensuring that both women and men benefit from safe, affordable, accessible and gender-responsive infrastructures.

KEY MESSAGES

Urbanization in the European Bank for Reconstruction and Development regions varies significantly. Urban population growth is rapid across Central Asia, the Southern and Eastern Mediterranean, and Turkey, while Central, Southeastern, and Eastern Europe; the Baltic States; and the Caucasus have slow or even negative (urban) population growth.

Policies should recognize that country-level aggregates may mask very different local experiences—not just across urban and rural areas, but also across cities of different sizes. Decentralized decision-making can be more responsive to local experience. In growing cities, investments in public transport, water, and waste management can help relieve the pressures of rising population densities and leverage the economic benefits that agglomeration can provide. In shrinking cities, policies should try to mitigate self-fulfilling cycles of population and productivity declines, including through targeted investments.

Livable cities require us to work together to:

Build capacity and support access to finance at the local level to help make the most of private sector investment, deliver sustainable and demand-driven infrastructure, and make investments responsive to the vastly varied local needs.

Support cities in achieving environmentally friendly growth—improving air quality, easing congestion, strengthening the management of water resources or dealing better with municipal solid waste—will bring broader social benefits and help address environmental challenges at scale.

Foster innovation can help cities reap the benefits of agglomeration—as ideas spread faster in more densely populated areas—**and support urban planning,** for instance, by developing digital cadastral maps or using high frequency data to track traffic flows or demands on utilities.

Promote inclusive growth—across urban and rural regions, among cities within a country, and among different population groups within cities—can help support equal access to opportunities, such as high-quality productive jobs. Coordination and stakeholder engagement involving all groups can help design livable and sustainable cities.

Plan for long horizons. Policies should be cognizant of the long-term nature of urban planning as urban policies and investment choices today—whether related to the provision of urban infrastructure, the construction of new housing or location of production—will shape people's lives and economies' environmental footprints for generations to come.

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CHAPTER 5

LATIN AMERICA AND THE CARIBBEAN

Latin America and the Caribbean (LAC) is the most urbanized developing region in the world with 8 out of 10 people now living in cities. Urbanization has yielded many gains, including better economic opportunity and access to services. However, to reap the full benefits of urban agglomeration, there is a need to reexamine how urban leaders and institutions should nurture inclusive, sustainable, and prosperous cities for all.

A panoramic view of Octavio Frias de Oliveira Bridge, São Paulo, Brazil. São Paulo is one of the eight most populous cities in Latin America (photo © iStock).

URBANIZATION IN THE REGION

Urbanization rates are uneven. LAC has urbanized more rapidly than any other region in the world, and earlier than other developing regions. The share of the urban population nearly doubled from 49% in 1960 to 80% in 2015. These overall figures mask notable differences in the process and degree of urbanization. Urbanization is highest in the Southern Cone, where 85% of the population lives in urban areas, followed by Mexico and the Andean countries (60%), the Caribbean (60%), and Central America (50%). The average urban population growth rates in the region have dropped and now average 1.4% (World Bank 2019b), with lower values in the Southern Cone (<1%) and greater gains in Central America (>4%) and the Caribbean[1] (Figures 5.1 and 5.2).

High urban primacy. LAC has the world's largest percentage of its population in megacities (UN DESA 2015). The eight most populous cities—Mexico City, São Paulo, Buenos Aires, Rio de Janeiro, Lima, Bogotá, Santiago, and Belo Horizonte—account for close to 15% of all residents of Latin America, while Havana, Port-au-Prince, and Santo Domingo account for 15% of the population of the Caribbean. Meanwhile, medium-sized cities (1 million–5 million people)—such as Curitiba, Panama City, and Guadalajara—have 20% of the region's population and are growing 3% per year, much faster than larger cities (at less than 1.9%).

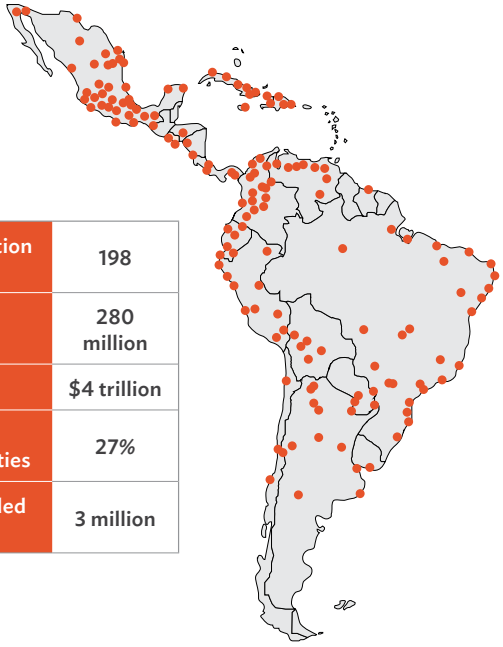
Table 5.1: IDB's Structural Organization within Vice Presidency of Countries

Subregion	Borrowing Member Countries
Southern Cone	Argentina, Brazil, Chile, Paraguay, Uruguay
Andean Group	Bolivia, Colombia, Ecuador, Peru, Venezuela
Caribbean	Bahamas, Barbados, Guyana, Jamaica, Suriname, Trinidad and Tobago
Central America, Haiti, Mexico, Panama, and the Dominican Republic	Belize, Costa Rica, Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Mexico, Panama

Source: Inter-American Development Bank (IDB).

[1] LAC's average annual rate of change in the share of urban population between 2010 and 2015 was 1.45%, considerably lower than the global average of 2.05%. Growth is projected to decline to 1.28% in the region by 2020, compared to 1.84% worldwide (UN DESA 2015).

Figure 5.1: Basic Statistics of Cities in Latin America and the Caribbean

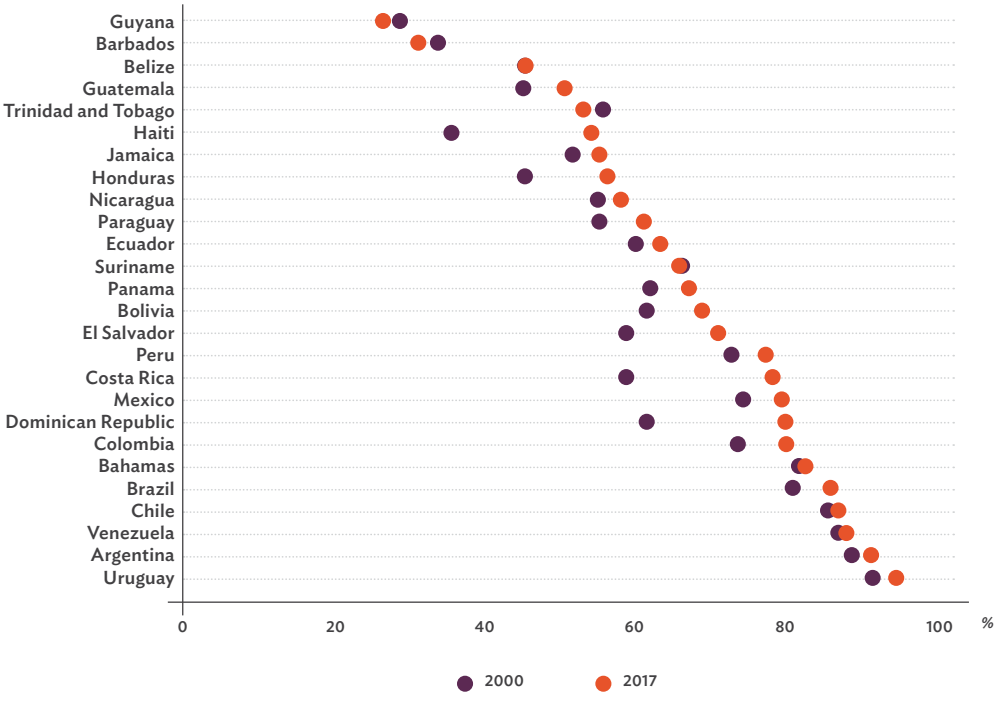


Number of cities with a population of >200,000 inhabitants	198
Total urban population	280 million
Collective cities' GDP	$4 trillion
GDP growth in the region contributed by the 10 largest cities	27%
Number of people annually added to the urban workforce	3 million

GDP = gross domestic product.

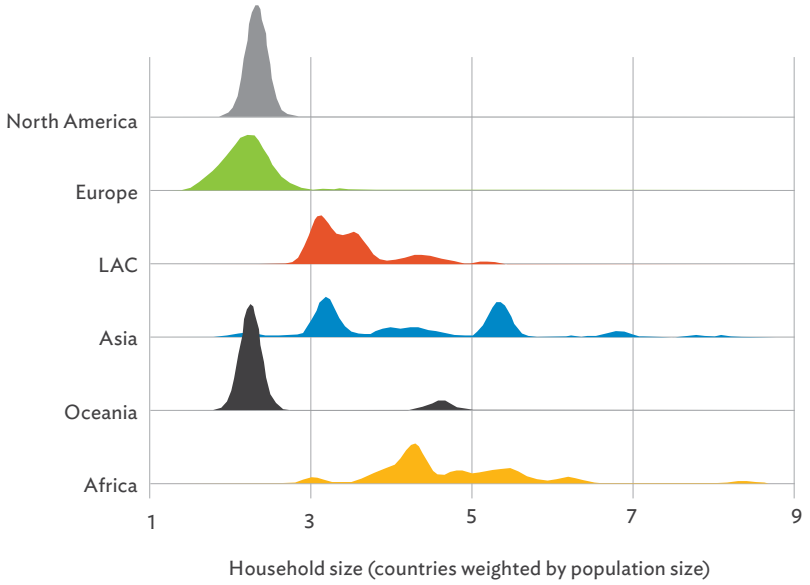
Source: G. Clark, 2015. *Review of the IDB Program for Cities and Urban Environments and the Future Role of the Emerging and Sustainable Cities (ESC) Initiative.* Washington, DC: Inter-American Development Bank.

Figure 5.2: Proportion of Urbanized Population in Latin America and the Caribbean, 2000 and 2017 (%)



Source: Authors' calculations based on United Nations, Department of Economic and Social Affairs, Population Division (UN DESA). 2015. *Database on Household Size and Composition.* New York.

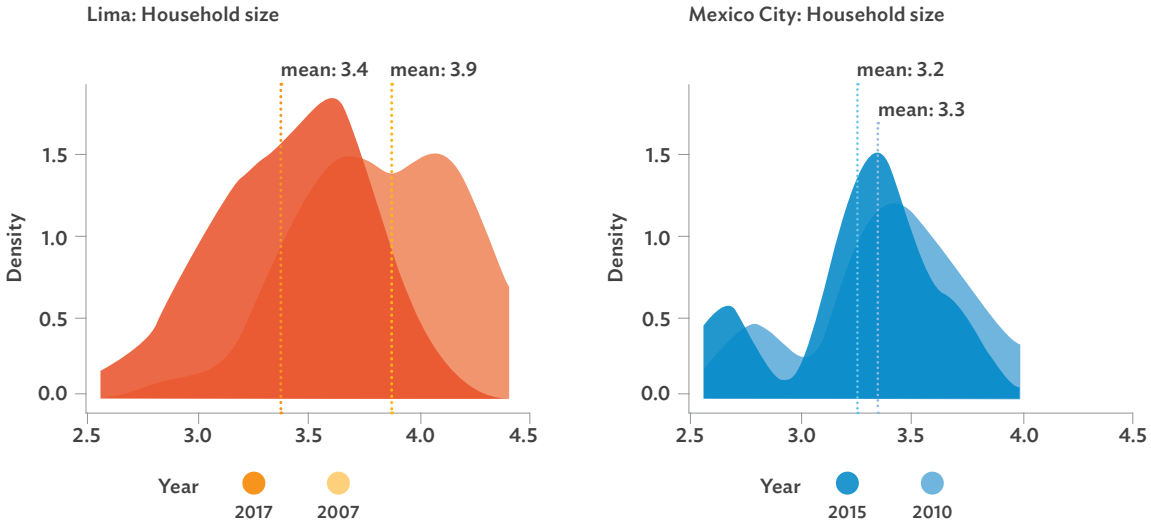
Figure 5.3: Household Size by World Region, 2018



LAC = Latin America and the Caribbean.

Source: Authors' calculations based on United Nations, Department of Economic and Social Affairs, Population Division (UN DESA). 2015. *Database on Household Size and Composition*. New York.

Figure 5.4: Shrinking Households



Sources: Authors' calculations based on Instituto Nacional de Estadística e Informática (2007, 2017) and Instituto Nacional de Estadística y Geografía (2010, 2015).

Migration between cities is increasing. While migration from rural to urban areas is decreasing,[2] migration between cities has increased, reflecting greater growth in medium-sized cities. Similarly, while inward and outward flows remain stable, cross-border migration among LAC cities is also growing (IOM 2017). Since 2015, 3.5 million migrants from Venezuela have crossed to other countries in the region, and the United Nations projects that by the end of 2019, 5.4 million Venezuelans will be living in another LAC country (IDB 2019).

Households are shrinking and aging. Household size is starting to resemble the smaller households of North America, Europe, Asia, and Oceania (Figure 5.3). For example, in Buenos Aires, Lima, and Mexico City, most households comprise only three members. In LAC as a whole, the number of children per family has decreased as the age of giving birth increased. The number of households headed by someone aged 65 or older increased in almost all districts of Buenos Aires, Lima, Mexico City, and Santiago de Chile between 2007 and 2017 (Figures 5.4).

Cities are sprawling. While still denser than North American cities, many LAC cities are rapidly expanding, consuming land and natural resources in the process. As cities have pushed out from the core, they have often expanded into fragile areas of high environmental vulnerability. Cities' expansion, in turn, have led to increased congestion and productivity drops. While the region is striving to contain urban sprawl, challenges persist.

CHALLENGES AND OPPORTUNITIES

Progress in social inclusion, but inequality persists

Urban poverty has been reduced. Two decades of concentrated efforts have brought down poverty levels in the region from 44% in 2002 to 30% in 2017. The "urban advantage" remains a strong contributor to this phenomenon, especially in higher-income countries, as larger cities are generally associated with better education, employment, and health than smaller settlements and rural areas (OECD 2019a). However, additional income has not benefited all urban dwellers equally. Localized economic inequality, and uneven income distribution is apparent in the Gini coefficients of Brazilian cities like Brasilia, Belo Horizonte, and Goiania, and in other parts of the region, such as Bogotá, Guatemala City, Mexico City, and Santiago de Chile where the indexes are often above their national equivalent. Socially excluded residents and communities include women, Afro-descents, indigenous peoples, and people with disabilities (Box 5.1). At the same time, spatial segregation in LAC cities remains entrenched along economic lines with an estimated 20% of the population (World Bank 2019c) or more than 125 million people, living in informal neighborhoods.

The housing deficit has shrunk, but the housing stock needs to be improved. Nearly one-quarter of LAC's urban residents live in an informal neighborhood where access to basic services is limited. Although access to housing improved during the past decade, 45% of the population (55 million households) are still affected by housing deficits, 70% of which are concentrated in urban areas. Of the households with deficits, 75% are subject to a qualitative deficit (e.g., overcrowding with three or more people per room; lack of water, sanitation, or electricity services; or insecure housing tenure) and the remainder suffer quantitative deficits (they live in makeshift housing or

[2] While in 1980, one in three new urban inhabitants in LAC came from a rural area, the proportion is now less than one in six.

Panoramic view of Natal, Brazil. The Inter-American Development Bank finances pre-investment studies to foster the proper development of fast-growing emerging cities in Latin America and the Caribbean (photo © 2017 IDB Image Bank).

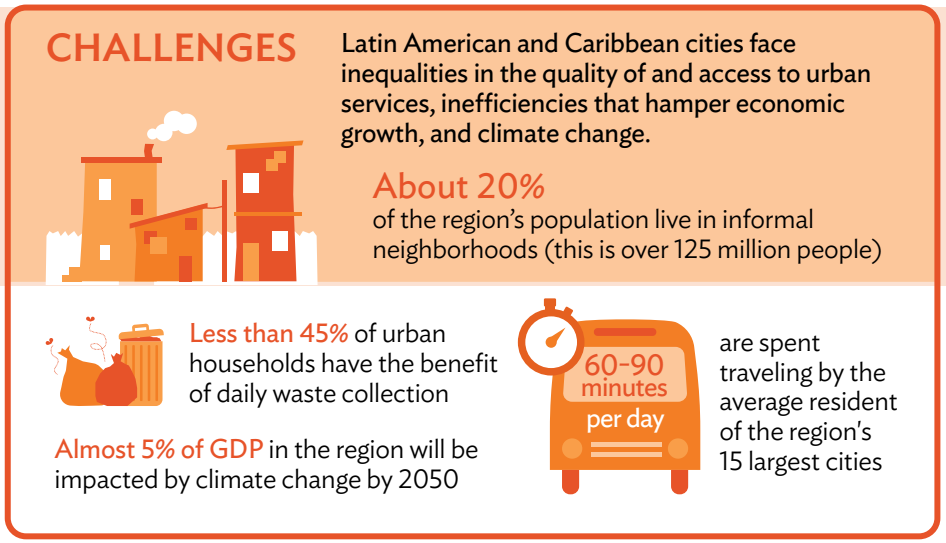
Latin American and Caribbean cities are rapidly expanding, consuming land and natural resources in the process. As cities have pushed out from the core, they have often expanded into fragile areas of high environmental vulnerability.

housing is shared with another household). Access to finance to upgrade housing is restricted. The mortgage market remains limited, accounting for 7% of the gross domestic product (GDP) and less than 20% of private sector bank portfolios while alternative instruments are not readily available. Serious barriers to expanding access to household credit remain, given high levels of job informality (42% for the richest quintile and 85% for the poorest) (OECD, CIAT, and IDB 2016). In addition, a lack of serviced urban lots drives up prices, making urban housing unaffordable for low-income households.

LAC has a long history of subsidizing home ownership in low-income housing. The average annual investment in such subsidies is 1.8% of GDP. These policies have succeeded in expanding the housing supply, but at the expense of urban sprawl and increasing sociospatial segregation. Current housing policies based on demand-side subsidies and regularization of informal neighborhoods are not fiscally sustainable. The region needs to improve mortgage markets and expand financing instruments. Recent years have shown a growing private sector interest in funding affordable housing with countries such as Mexico and Chile leading in terms of financial innovations (Box 5.2).

Housing ownership may not be the most appropriate solution for every household. Housing supply needs to be diversified to include alternative options (e.g., rental), and to simplify regulatory frameworks. The region also needs to promote the use of green and sustainable construction techniques, particularly in low-income housing. Despite efforts to update construction codes, environmental practices in the housing sector are still not properly implemented. This is highly relevant, given that the residential sector is responsible for nearly one-quarter of greenhouse gas (GHG) emissions, and that steps to close the urban housing deficit through 2020 would double the current emissions level (IDB 2016). Promising initiatives in countries, such as Argentina, Chile, Ecuador, and Mexico, aim to mainstream green technologies in affordable housing.

The quality and access to urban services and public spaces remain uneven. Despite 95% of urban households having access to a safe water, and 83% to improved sanitation, major challenges remain in the provision of infrastructure and quality and reliable service. Waste is collected on a daily basis in less than 45% of urban households. Around 70% of the region's families lack water service, and 85% of those without sanitation services are in the bottom 40% of the income distribution curve. Achieving



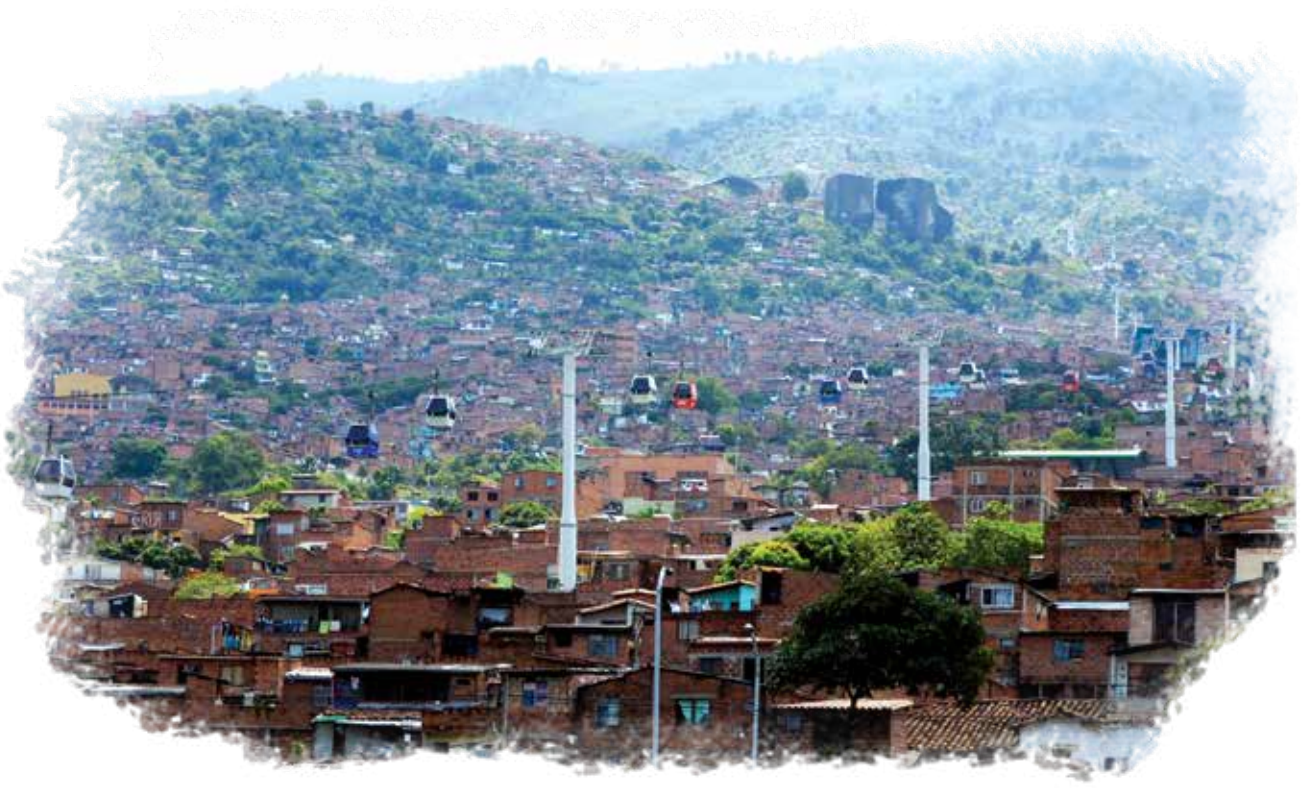
Box 5.1: Women in the City

Cities need to address the needs of women to improve urban life and urban productivity for all. In Latin America and the Caribbean, as in the rest of the world, the poor are disproportionately composed of females and the incidence of poverty among women is growing. This trend is linked to the growing number of households with female heads, representing almost 40% of the households in Brazil and Uruguay, for example.

Women still find it more difficult than men to obtain credit for housing because of discrimination and inequality in wage compensation, which can prevent them from accessing well-located housing and formal housing arrangements. Women are more exposed to violence and sexual harassment inside and outside the home, particularly when using public transport. At least 12 women in the region were killed every day in 2014 as victims of gender-based violence.

Cities' services and infrastructure need to take into account the specific needs of women if they aim to remain sustainable and productive. Decreasing informal employment for women is especially important. According to 2017 estimates, women could add 5%–25% of the gross domestic product per capita in Latin America and the Caribbean if they worked formally in the labor market.

Sources: Authors' elaboration based on W. Cheng and N. Novta. 2017. Women at Work in Latin America and the Caribbean. *IMF Working Paper WP/17/34*. Washington, DC: International Monetary Fund; and N. R. Libertun de Duren et al. 2018. *Ciudades Inclusivas: Productividad urbana a partir de la igualdad de género*. Washington, DC: Inter-American Development Bank.



Panoramic view of the Metrocable. This gondola lift system in Medellín, Colombia reaches some of the city's informal settlements (photo © 2009 IDB Image Bank).

universal coverage of safe water and improved sanitation by 2030 would require providing nearly 124 million people with water services and 196 million people with sanitation. In addition, the combination of urban sprawl and the rapid increase in the region's motorization rate have worsened urban mobility, which also increased congestion, pollution, and GHG emissions. A resident of any of the region's 15 largest cities spends on average 60–90 minutes per day on travel within the city, thus, reducing the resident's productivity and income. The region continues to face challenges of isolation, lengthy travel times, and restricted access to labor markets. Solutions include (i) furthering the use of public transport (now representing 43% of urban trips)—particularly bus rapid transport, now extending to metro and tram lines; (ii) increasing options for bicycling and other forms of nonmotorized transport; and (iii) progressively adopting planning models that promote urban development along transit corridors.

Urban parks are critical in improving the quality of life, in cooling cities, and serving as a sink for GHG emission. However, with few exceptions (e.g., Curitiba or Santiago de Chile), most cities in the region do not meet the World Health Organization's recommended standard of 9 square meters (m^2) green space per person. This is the case of Buenos Aires, Argentina or La Paz, Bolivia, which offer less than 2 m^2 and they are now actively engaged in recovering and developing green spaces through linear parks and urban reforestation initiatives. In addition to parks, cities like Panama City and Santo Domingo are engaged in revitalizing heritage markets and squares through collaborative design and place-making schemes. The region accounts for over 600 historical city centers (of which 42 were named World Heritage sites) whose preservation, and in some cases repopulation, has spurred local employment in the creative industries, and enhanced the city's cultural identity.

Urban institutions play a critical role in enabling development. The region has about 16,000 local governments responsible for land zoning and controlling densities, which could help reduce spatial segregation. New tools are also emerging in the form of strategic planning, participatory planning, and/or business-led exercises, such as in Colombia, where the private sector may lead the preparation and proposal of partial plans. Still, there is much to do. LAC needs new governance models that respond effectively to the fragmentation challenges in metropolitan areas and emerging urban corridors, and integrated territorial plans that reflect functional links across space and enable incentives for the exchange of services between urban and rural areas.

Box 5.2: Expanding the Housing Credit Market in Mexico and Chile

Mexico has used mortgage securitization to develop housing credit since 2003. The creation of the Sociedad Hipotecaria Federal (Federal Mortgage Society) allowed loans and guarantees to be extended to intermediary finance organizations.[a] As a result, the mortgage portfolio as a share of gross domestic product (GDP) increased from 7.4% in 2003 to 10% n 2015.[b]

Similarly, in Chile, the total amount of mortgage as a share of GDP more than doubled from 12% in 2001 to 26% in 2017,[c] significantly exceeding the regional average of 5.4%.[d] One reason for such jump is the development of the private saving system. Starting in 1981, the saving system was greatly expanded by the requirement that people invest part of their retirement savings in pension fund administrators.[e] One drawback of these systems is that those working in the informal labor market remain underserved.

[a] G. Babatz. 2004. The Role of the Sociedad Hipotecaria Federal in the Development of the Mexican Mortgage Market. *Housing Finance International*. March. pp. 42–51.

[b] HOFINET (Housing Finance Information Network). 2019. Mexico Country Profile. http://www.hofinet.org/countries/description.aspx?regionID=4&id=109.

[c] ———. 2019. Chile Country Profile. http://www.hofinet.org/countries/country.aspx?regionID=4&id=35.

[d] C. Bouillon. 2012. Room for Development: Housing Markets in Latin America and the Caribbean: Executive Summary. Inter-American Development Bank, Washington, DC.

[e] C. Cruz. 2004. Securitization of Mortgage Portfolios in Latin America: The Chilean Case. *Housing Finance International*. March pp. 15–20.

Note: Authors' elaboration based on Babatz 2004, Bouillon 2012, Cruz 2004, and HOFINET 2019.

Street vendors in Salina Cruz, Mexico. Six out of 10 people in Latin America and the Caribbean are in the "informal" sector with work conditions that do not offer a proper contract or access to social security benefits, health care, or pension savings. Such informality hampers the economic development of the cities in the region (photo © 2018 by IDB Image Bank).

High levels of crime and insecurity also require new comprehensive governance approaches. In numbers, the region registers 39% of the global annual homicidal violence (despite being home to less than 10% of the world's population), while almost 40% of the population report having been victims of a crime. It is estimated that crime absorbs 3% of the region's GDP. Violence is not only concentrated in cities, but in specific neighborhoods, as zones of exclusion segregate higher-income communities from lower-income ones and inhibit physical and social connectivity (Chincilla and Vorndran 2018). Projects increasingly include socioeconomic integration tools, such as sport and music programs for the youth-at-risk in Tegucigalpa (IDB 2018a), or citizen social cohesion programs in Montevideo (IDB 2018b).

Cities as the region's engines of growth, but facing many challenges

Cities continue to lead LAC's economic growth. The region's share of the global economy has not changed substantially in recent decades, yet cities have become major contributors to the GDP of LAC, valued at nearly $6 trillion (World Bank 2019d). Cities in the region are centers of consumption and production and where inputs, skilled labor, and knowledge concentrate, generating agglomeration economies essential for growth. In 2011, LAC's 198 largest cities—with more than 200,000 people and home to 41% of the region's population—were estimated to have a combined GDP of $3.6 trillion, which was 60% of the region's total (McKinsey Global Institute 2011). While the level of urban primacy in the region still correlates well with the concentration of economic activity, there is a distinct group of medium-sized cities that have dynamic economies and are growing at a faster pace. Collectively, they contribute 30% of the region's GDP—a value projected to reach 40% in 2025. The region's continued growth is subject to increasing productivity, and cities in the region, while performing above the global average, are below the global frontier (World Bank 2018a). Tackling high inequality and informality levels is central to achieving this goal.

Informality hampers the economic development of LAC's cities. The cities in the region provide appropriate grounds for achieving

economies of scale and for concentrating skilled labor. However, the benefits of agglomeration are compromised by limited access to markets and substandard infrastructure. Informality in LAC has been estimated to be highest among the regions, accounting for 40% of GDP (OECD 2019b) and 55% of all workers (140 million people) (Kaplan 2016). Informality hampers growth in several sectors, from urban labor markets to basic social services. In rapidly urbanizing cities, housing built on illegal land subdivisions drove up the costs and hampered the provision of infrastructure and public services, which can be two to three times more costly when organized as a piecemeal upgrade rather than through a process of planned urbanization (Abiko et al. 2007; IDB 2012).

Local economic development needs to internationalize. In a continent that traditionally has relied on commodity exports (South America)[3] and remittances (Central America and Mexico), cities are increasingly aware of the need to improve their competitive strengths and local production systems. São Paulo, Mexico City, Santiago de Chile, and Bucaramanga have achieved significant improvements in their competitiveness indices while Buenos Aires, Monterrey, and San José de Costa Rica have proactively developed ecosystems to support innovation. An increasing number of cities, however, need to establish institutions devoted to promoting competitiveness and local economic development, and to create innovation hubs and talent programs.

Better financing options are needed to fund infrastructure investment. Infrastructure investment has remained at 2%–3% of the regional GDP in recent years, lower than the estimated 5% needed to respond to LAC's competitiveness challenges. More than 70% is financed from public sources. Subnational expenditure has increased to about 30%, while the percentage of revenues collected remains unchanged at about 10%, making cities dependent on national transfers (Fretes 2018; Bonet et al. 2014). On average, property tax collection remains low at 0.28% of the GDP, compared to 1.15% in OECD countries.[4] While there are opportunities to substitute old taxes or create new ones that are more efficient and effective, more can also be done to advance the use of public–private partnerships (PPPs) or land-based financing instruments (Box 5.3).

Box 5.3: Generating Local Income through Land-Based Financing Instruments

Land value mechanisms are innovative options to generate local income. These involve mobilizing all or part of the increased value of the land, which were generated by public investments in infrastructure, or enacting administrative changes in the rules and regulations on land use to capture those gains.

For example, construction rights have been successfully used in São Paulo, where "usage" above a certain densification or utilization rate triggers compensation. The proceeds are reutilized or reinvested in infrastructure or housing projects.[a] In Colombia, improvement fees helped capitalize land value since the 1920s, leveraging billions in investment.

The main benefits of these mechanisms are that they provide local authorities with their own resources, which contributes to their financial autonomy. Municipal governments need technical, technological, and management capacity for the design, implementation, and administration of this type of financing tool. They also must account for the time lag between the time that surplus value is produced and the time that it can be monetized.

[a] A. Blanco B, V. Fretes, and A. Muñoz. 2016. Expandiendo el uso de la valorización del suelo: la captura de plusvalías en América Latina y el Caribe. Washington, DC: Inter-American Development Bank

Note: Authors' elaboration based on preceding reference.

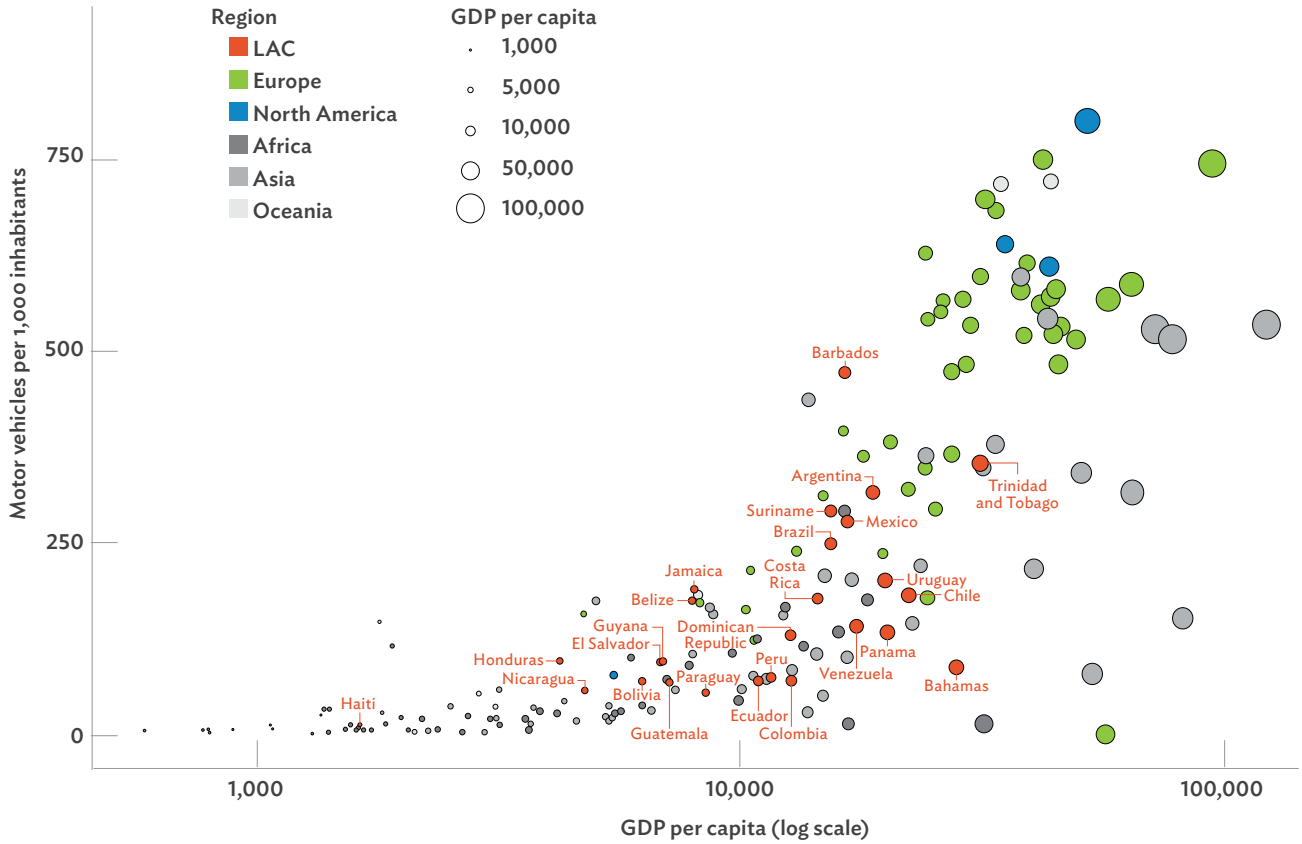
[3] This comprises the Andean and Southern Cone countries.

[4] Brazil and Colombia have levels similar to European comparators.

Climate change and environmental sustainability: the new challenges

Environmental stresses are increasing in urban areas. The relationship between environmental sustainability and urbanization has become a prevalent theme for both developing and developed countries. The carbon dioxide (CO_2) emissions of LAC are 6 tons per capita per year, lower than in Europe (12 tons) and North America (17 tons) (C40 Cities Climate Leadership Group 2018). However, the region's sprawling urbanization model is increasing the consumption of land and natural resources and the use of motorized transport (Figure 5.5). In Mexico, for example, while the country's urban population doubled during 1980–2010, the urbanized area increased by more than seven times. Moreover, doubling of the middle-income class over the last decade (to about 186 million people) (IDB 2018c), mainly in cities, also led to changing and intensifying consumption patterns, such as an increasing vehicular demand. LAC has the highest motorization rate of any developing region, and the rate is rising quickly—from 10.0% of all vehicles in 1990 to 17.5% in 2007 (EconStats). Transport is responsible for more than one-third of the region's urban carbon emissions and that percentage is likely to rise. Strengthening public systems, as in the case of transport, needs to be combined with formulating local policies that regulate consumption policies, as in the case of single-use plastics, which is a significant threat to the region's unique riverine and marine biodiversity.

Figure 5.5: Car Vehicles Per 1,000 Inhabitants and Gross Domestic Product Per Capita, 2014



GDP = gross domestic product, LAC = Latin America and the Caribbean.

Source: Authors' calculations based on World Bank. 2019. World Development Indicators. Accessed July 2019. https://datacatalog.worldbank.org/dataset/world-development-indicators.

Figure 5.6: Vulnerability Index to Climate Change in the Latin America and the Caribbean Region

km = kilometer.

Source: Maplecroft. 2014. *Vulnerability and Adaptation to Climate Change in Latin America and the Caribbean.* Corporación Andina de Fomento.

LAC is exposed to increasing impacts. The population and infrastructure of the cities in the region are vulnerable to floods, droughts, and extreme weather events, such as hurricanes, earthquakes, storms, and tsunamis. Flooding events resulting from sea rise and coastal erosion are projected to have greater impacts in the coastal cities of northern Argentina, Uruguay, and Brazil, and in large conurbations in the Caribbean where 70% of the population reside in flood-prone areas (ECLAC 2012). Raising average temperatures have been correlated to increased mortality in cities with poor air quality, such as Mexico City, Bogotá, and Santiago de Chile. Andean cities (e.g., Quito, Lima, and La Paz) also face an increasing risk from water shortages as glaciers shrink. Such is the case for glaciers in La Cordillera Real whose volume has declined by 50% since 1970. By 2050, the impact of climate change on LAC's economy could be equivalent to almost 5% of the region's GDP (Cline 2007) and 2.6% of LAC's population may need to migrate due to climate change.

High vulnerability to climate change. All over the world, cities are increasingly exposed to the risk

of serious disasters. LAC cities face an asymmetrical situation with respect to climate change. Although LAC cities' contribution to it is relatively low (10% of total global emission), their vulnerability to the negative effects can be extremely high in some cases (Figure 5.6). Households most vulnerable to climate change are those with lower incomes, headed by females or seniors, or homes that include people with disabilities. In most cities, these households are largely concentrated in informal housing zones located in areas at environmental risk. Poorer neighborhoods are impacted more severely in the absence of appropriate infrastructure, such as drainage or suitable emergency evacuation routes. In addition, informal households lack access to insurance systems and have fewer savings to offset material losses caused by disasters.

Cities are uniquely positioned to contribute to the fight against climate change. Mayors have confirmed their commitment to bold climate actions under the Paris Agreement (C40 Cities Climate Leadership Group 2018). While a few cities, such as Mexico City and Montevideo, have compiled and mapped GHG inventories, acting comprehensively requires a common methodology and framework in which to act.

WAY FORWARD

Inter-American Development Bank's Sector Strategy for Livable Cities: Four Core Areas

Thus far, the urbanization process in LAC has contributed to reducing poverty and promoting growth. Remaining challenges include (i) reducing inequalities in the quality of urban services and access to them, (ii) reducing inefficiencies that hamper economic growth, and (iii) increasing the capacity of cities to adapt and mitigate to climate change.

The Inter-American Development Bank (IDB) has partnered with governments and cities in the region for the past 60 years. This is consistent with the IDB Group's Institutional Strategy[5] and the four core areas of the Urban Sector Framework's aim to promote livable cities in the region through solutions that target deficits in urban governance, urban infrastructure and public services, housing, and urban habitats.

Urban governance. Successful decentralization and subnational fiscal reforms in LAC need to be complemented by (i) implementing planning

Central to the work of the IDB Group is taking advantage of new technologies to incentivize the creation of cutting-edge data analytic systems for inclusive, transparent, and participatory urban services.

[5] The IDB Group comprises two separate legal entities: the Inter-American Development Bank (IDB) and the Inter-American Investment Corporation, which was rebranded as IDB Invest in 2017. The IDB Group Institutional Strategy focuses on three key development challenges that need to be addressed to preserve and continue to advance development gains (social exclusion and inequality, low productivity and innovation, and limited economic integration), and the crosscutting issues that must be mainstreamed in the IDB Group's work to address the challenges of gender equality and diversity, climate change and environmental sustainability, and institutional capacity and the rule of law.

frameworks anchored in international commitments, holistic territorial concepts (including urban–rural linkages and environmental considerations) and broad participation; (ii) promoting land-based municipal financing instruments that complement progressive and efficient property tax systems to increase local revenues; (iii) increasing private sector participation in infrastructure investment and public service provision, including through PPPs, while ensuring equitable access to services; (iv) increasing urban competitiveness by creating institutions and strategies that focus on local economic development, innovation, and internationalization; and (v) putting in place structures that promote metropolitan governance across sectors and jurisdictions.

Urban infrastructure and public services. As a result of deficient planning and/or insufficient infrastructure investment, LAC needs to intensify efforts to (i) undertake comprehensive slum programs that combine landholding regularization and physical, social, and economic components such as job training or violence-reduction programs; (ii) promote access to quality urban public services, including expanded networks for wastewater and solid waste collection and treatment, which promote sustainable circular economy approaches; and (iii) facilitate sustainable urban transport by promoting efficient mass public transport systems (preferably through electrical motorization), the use of nonmotorized vehicles, and the application of transport-oriented development principles.

Housing. Adequate housing policies are central to weaving a city's fabric. Despite significant investment in this sector, the region still suffers from regulatory flaws, the absence of urbanized land, lengthy and burdensome housing production processes, and inadequate financing and mortgage markets.

IDB'S SECTOR STRATEGY

IDB's Urban Sector Framework covers four core areas:

Urban governance | Urban infrastructure and public services | Housing | Urban habitats

The IDB Group is also taking advantage of the benefits of the Fourth Industrial Revolution, as well as mainstreaming crosscutting issues.

New technologies | Climate change resilience and environmental sustainability | Gender equality and diversity

Expanding access to affordable housing requires (i) revisiting the role of national and local authorities in formulating, regulating, implementing, and monitoring comprehensive public policies; (ii) designing subsidy programs that rebalance the construction of new units with options for expansion, retrofitting, and/or new tenure modalities, including rental; (iii) exploring the use of alternative, more effective financing instruments that enable greater access to markets, such as guarantees; and (iv) promoting the systematic adoption of green principles in water and energy efficiency and low-impact construction in low-income housing.

Urban habitats. The quality of the urban habitat is of critical importance to the health and well-being of citizens, even more so as average temperatures increase. This is supported by (i) regenerating degraded urban areas, often depopulated and of historical significance, to preserve heritage, revitalize the economy, and redevelop the city while maintaining reasonable population densities; (ii) increasing public spaces and parks by repurposing existing vehicular corridors and revitalizing water fronts—also through temporary place-making initiatives that are reversible in nature; and (iii) converting traditionally "gray" infrastructure into "blue-green" infrastructure, such as linear submersible parks that meet standards for resiliency and carbon sink principles.

Technology and crosscutting issues

Also central to the work of the IDB Group is taking advantage of the benefits of the Fourth Industrial Revolution (adopting new technologies) to incentivize the creation of cutting-edge data analytic systems for inclusive, transparent, and participatory urban services. Equally important to the IDB Group's work is mainstreaming the crosscutting issues of climate change and environmental sustainability, and gender and diversity.

Innovation and adoption of new technologies. The use of cutting-edge technology and data solutions, such as cloud services, advanced analytics for big data, blockchain, 5G, and others are emerging fast, potentially boosting the quality and sustainability of cities. Yet, just as urbanization presents important challenges for the region, so does digitalization and technological change. The IDB supports efforts by cities in the region to deploy infrastructure (e.g., by de-risking private investments, or project aggregation) and design adequate governance structures and regulatory frameworks. The IDB also provides institutional guidance on cutting-edge data analytic systems for inclusive, transparent, and participatory urban services.

Climate change resilience and environmental sustainability. Natural hazards, often exacerbated by climate change, pose a major risk to cities in the region. By incorporating disaster risk management into urban planning, design, and execution, governments can promote equitable urbanization processes that reduce vulnerability and contribute to the Sustainable Development Goals. The IDB is helping cities across the region to (i) integrate disaster risk reduction and climate change adaptation into urban development policies (e.g., through risk and vulnerability mapping and planning); and (ii) integrate GHG mitigation and adaptation into urban planning and design, including through the localization of nationally determined contributions or city climate action plans. The IDB's support is also helping cities to connect with green financing.

Gender equality and diversity. Many social groups face steep barriers to accessing the services and opportunities offered by cities. Besides poor households, those households led by women and the elderly; those with many children or have people with disabilities; and households identified as Afro descendants, indigenous peoples, or migrants are often located in areas where the quality of services is low and the incidence of crime and environmental hazards is high. Reducing sociospatial inequalities calls for greater efforts. The IDB is supporting programs offered by cities to (i) increase the quality of infrastructure and access among the poor and informal neighborhoods; (ii) ease the access to public spaces and systems among people with disabilities, children, and the elderly and their caretakers; and (iii) foster participation by all residents in urban governance.

KEY MESSAGES

Catalyze the changes brought about by urbanization, spatial, and population patterns and channel them to work toward a sustainable environment. LAC cities are still expanding, often into areas that are highly vulnerable. Urban households are shrinking and aging rapidly. Medium-sized cities are growing much faster than megacities due to the increasing flows of internal migration between cities. Cross-border migration among LAC cities is also growing.

Reinforce the progress achieved in social inclusion to lessen if not eradicate inequality in providing quality and full access to urban services. In the last 20 years, urban poverty has been reduced and the housing deficit has shrunk. However, spatial segregation and inequality remain entrenched along economic lines, with almost 20% of the urban population living in informal neighborhoods. Cities need to become more inclusive, and to be designed and planned for gender equality and diversity.

Harness the potential of urban institutions to enable a comprehensive and integrated development. LAC requires new governance models based on innovative tools and data that respond effectively to the challenges of territorial fragmentation and insecurity in cities. It also demands integrated territorial plans for metropolitan areas and emerging urban corridors, which promote functional links across space and facilitate the exchange of services between urban and rural areas.

Shore up the cities—as they step up to become LAC's engines of growth—to face the many hurdles that drive that growth. Cities in the region provide appropriate grounds for achieving economies of scale and for concentrating skilled labor. However, the benefits of agglomeration are compromised by limited access to markets, substandard infrastructure, high levels of informality, and persistent low levels of productivity.

Put greater focus on addressing climate change and environmental sustainability challenges of cities. Although LAC cities contribute a relatively low share (10%) of the total global emission, their vulnerability to the negative effects is extremely high in some cases. Natural hazards, often exacerbated by climate change, pose a major risk to cities in the region and its most vulnerable population. By incorporating disaster risk management into urban planning, design, and execution, cities can promote equitable urbanization, reduce vulnerability, and contribute to the Sustainable Development Goals.

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Creating Livable Cities

Regional Perspectives

The shift of people from rural areas to cities and urban towns in developing and emerging economies is one of the most profound demographic changes happening globally. Cities all over the world offer significant opportunities to improve human well-being, catalyze economic development, and serve as incubators for new ideas. Rapid urbanization is often linked to improved economic opportunities, better access to health and education services, and improved living conditions. However, underinvestment in infrastructure and services, as well as weak urban governance and planning and financing frameworks can undermine urbanization's potential to serve as the engine of green and inclusive growth and development.

The publication *Creating Livable Cities: Regional Perspectives* takes stock of key patterns of urbanization and urban development across developing and emerging economies. It also examines the policy interventions and solutions to promote competitive, inclusive, equitable, and environmentally sustainable and climate-resilient cities—in short, "livable" cities.

Creating Livable Cities: Regional Perspectives is a joint effort of the African Development Bank (AfDB), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), and the Inter-American Development Bank (IDB).

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