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URBAN DEVELOPMENT AND HOUSING SECTOR FRAMEWORK DOCUMENT

HOUSING AND URBAN DEVELOPMENT DIVISION

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ABBREVIATIONS

ATES	Aquifer Thermal Energy Storage
COP 21	21 st Conference of the Parties to the United Nations Framework Convention on Climate Change
CRF	Corporate Results Framework
CSD	Climate Change and Sustainable Development Sector
CTF	Clean Technology Fund
ECLAC	Economic Commission for Latin America and the Caribbean
ESCI	Emerging and Sustainable Cities Initiative
FMK	Financial Markets Division
GDI	Gender and Diversity Division
GDP	Gross domestic product
GHG	Greenhouse gases
GIS	Georeferenced information systems
HDI	Human development index
HUD	Urban Development and Housing Division
INFONAVIT	Instituto del Fondo Nacional de la Vivienda para los Trabajadores de México [National Housing Fund for Mexican Workers]
IRR	Iniciativa Regional para el Reciclaje Inclusivo [Regional Initiative for Inclusive Recycling]
ISO	International Organization for Standardization
KNL	Knowledge and Learning Sector
LAC	Latin America and the Caribbean
LAIF	European Commission's Latin America Investment Facility
LCCF	Low Carbon Cities Framework
LEED	Leadership in Energy and Environmental Design
MDG	Millennium Development Objectives
NGO	Nongovernmental organization
NSG	Non-sovereign guaranteed
OECD	Organization for Economic Co-operation and Development
OMJ	Opportunities for the Majority Sector
OPC	Operations Policy Committee
OVE	Office of Evaluation and Oversight
PCR	Project Completion Report
PMR	Progress Monitoring Report
PPP	Public-private partnership
SDG	Sustainable Development Goals
SFD	Sector Framework Document
SG	Sovereign-guaranteed
SHF	Sociedad Hipotecaria Federal, S.N.C.
TIF	Tax Increment Finance
UN	United Nations
UN DESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme

UNESCO	United Nations Educational, Scientific, and Cultural Organization
UN-Habitat	United Nations Human Settlements Programme
UNISDR	United Nations Office for Disaster Risk Reduction
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization
ZEIS	Zonas Especiais de Interesse Social [Special zones of social interest]

I. THE SECTOR FRAMEWORK DOCUMENT IN THE CONTEXT OF CURRENT REGULATIONS AND THE INSTITUTIONAL STRATEGY 2010-2020

A. The Urban Development and Housing Sector Framework Document as part of the existing regulations

1.1 This document replaces the Urban Development and Housing Sector Framework Document (document GN-2732-2) approved by the Operations Policy Committee (OPC) on 3 October 2013, in accordance with paragraph 1.20 of the document “Strategies, Policies, Sector Frameworks, and Guidelines at the IDB” (document GN-2670-1), which provides that Sector Framework Documents (SFDs) are updated every three years on a continuous basis. This SFD keeps the emphasis on addressing the deficits in urban governance, urban infrastructure and public services, housing, and the urban habitat. In addition, in response to the urgent need to improve environmental sustainability and reduce the urban population’s vulnerability to climate change and to anthropogenic or geophysical hazards, this SFD focuses on improving the institutions that regulate urbanization and promoting sustainable and multisector interventions.

1.2 The Urban Development and Housing SFD is one of 20 SFDs prepared in the framework of document GN-2670-1, which together offer a comprehensive vision for addressing the development challenges faced by the region. This SFD complements: the Climate Change SFD by including measures to mitigate and adapt to climate change in all urban development and housing sector (hereinafter, “Sector”) activities; the Water and Sanitation SFD by promoting access to quality urban infrastructure and public services; the Fiscal Policy and Management SFD by supporting efficiency in housing program and municipal government expenditures; the Decentralization and Subnational Governments SFD by seeking to improve intergovernmental arrangements in metropolitan areas; the Transportation SFD by supporting sustainable urban mobility systems planned in conjunction with land-use planning; the Social Protection and Poverty SFD by addressing the needs of the most vulnerable households; the Citizen Security and Justice SFD by promoting crime reduction in upgraded neighborhoods and urban centers; the Support to SMEs and Financial Access/ Supervision SFD by supporting expanded access to the housing market; the Tourism SFD by promoting the revitalization of urban areas of heritage value; and the Gender and Diversity SFD by including the gender and diversity perspective in all Sector activities. Furthermore, this SFD is framed in the Bank’s five sector strategies, particularly the Integrated Strategy for Climate Change Mitigation and Adaptation, and Sustainable and Renewable Energy (document GN-2609-1) and the Sector Strategy on Institutions for Growth and Social Welfare (document GN-2587-2).

A. The Urban Development and Housing Sector Framework Document and the IDB Institutional Strategy

1.3 This document is consistent with the Update to the Institutional Strategy 2010-2020 (AB-3008), contributing to the crosscutting theme of mitigating climate change and improving environmental sustainability, and helping to address two

of the three structural challenges faced by the region: (i) reducing social exclusion and inequality; and (ii) boosting productivity and innovation (IDB, 2015). In addition, the Bank's work focuses on developing sustainable, productive, and inclusive cities and settlements where all residents have access to adequate housing and to the full benefits of urbanization. This objective is aligned with the United Nations Sustainable Development Goals (SDG) approved in 2015 by 193 world leaders. For 2030, there are 17 SDGs focusing on: "eradicating extreme poverty, reducing inequality and injustice, and combatting climate change" (United Nations (UN), 2015). Comprehensive work in cities is vital for achieving these SDGs in Latin America and the Caribbean (LAC), since unplanned urban growth increases inequality in access to services and infrastructure in urban areas and deepens the social and economic impact of both natural and anthropogenic disasters. To achieve these objectives, this SFD underscores the importance of multisector work and comprehensive planning of urban programs and policies, conceiving of cities as the basis for sustainable and productive development of the region.

II. INTERNATIONAL EVIDENCE ON THE EFFECTIVENESS OF POLICIES AND PROGRAMS IN THE SECTOR

A. The State of cities

- 2.1 Cities continue to be the main engine of economic and social development both in LAC and worldwide. One hundred cities currently account for 40% of the world's total gross domestic product (GDP), and the trend is for this share to continue to rapidly increase, primarily due to improved performance by medium-sized cities in China, India, and Latin America (McKinsey, 2016). This trend reinforces the role of cities as centers of consumption and production (Glaeser, 2014) where a variety of inputs, skilled labor, and knowledge is concentrated, generating economies of agglomeration that are essential for economic productivity (Combes & Gobillon, 2014).
- 2.2 The average annual rate of change in the world's urban population between 2010 and 2015 was 2.05%; in LAC, it was 1.45%. Projections to 2020 indicate a decline in the growth rate: 1.84% worldwide and 1.28% in LAC (United Nations Department of Economic and Social Affairs (UN DESA), 2016). Even with these relatively low rates, more than 320 million inhabitants were added to the global urban population between 2010 and 2015. This growth was concentrated mainly in developing regions, particularly in Sub-Saharan Africa and Asia-Pacific.¹ Over the same period, the urban population in LAC expanded by 30 million inhabitants (World Bank, 2016).²
- 2.3 An increase in the urbanization rate is associated with a decrease in poverty and indigence; more than three quarters of the extremely poor population of developing countries live in rural areas, and poverty rates in rural areas continue to be substantially higher than in urban areas (World Bank, 2016). Urbanization has also led to improvements in access to public health and education services for

¹ In terms of countries, the first three are Oman, Rwanda, and Burkina Faso.

² The population growth was concentrated in Brazil, Mexico, and Colombia.

residents by providing better urban infrastructure and public services (Eckert and Kohler, 2014). This differential in favor of urban residents is present even in developed countries (World Health Organization (WHO), 2016). For example, a recent study showed that life expectancy for the rural population in the United States is two years lower than for the urban population (Singh, 2014). In addition, social interaction in cities is driving innovation and creativity (Jacobs, 1969; Kratke, 2011), giving rise to cutting-edge technological and cultural production systems; social movements to extend full rights to women, indigenous and Afro-descendant peoples, and other minorities; and the promotion of democratic forms of government (Castells, 2012).

- 2.4 Despite contributing to economic and social development, cities have high levels of inequality in terms of access to these benefits. The urban population still suffers deficits in urban governance capacity, access to urban infrastructure and public services, housing, and quality of the urban habitat. These deficits are particularly evident in developing countries, where the growth rate of the urban population exceeds the growth rate of the urban GDP, making it difficult to address the demand for adequate urban public services³ for all residents. As a result, in 2014 it was estimated that 45% of the urban population in developing countries live in informal settlements, under inadequate housing conditions, in homes that are overcrowded or makeshift, with insecure tenure, lacking in water and sanitation, or highly exposed to disasters (United Nations Human Settlements Programme (UN-Habitat), 2015).
- 2.5 Improving the quality and equity of urban development and expanding access to housing are key actions on the path to advancing SDGs in LAC. Cities affect all areas of human development, but they have a direct impact on several of the SDGs. Specifically, they affect SDG 7, which seeks to improve household access to water and sanitation; SDG 8, which promotes access to decent jobs and inclusive economic growth; SDG 9, which promotes industrialization, innovation, and resilient infrastructure; SDG 12, which promotes educating the citizenry with a view to creating responsible production and consumption patterns; and the crosscutting SDGs in support of gender equality (SDG5) and climate change prevention (SDG 13).
- 2.6 In addition, SDG 11 calls attention specifically to the challenge of urban inequality and unsustainability, promoting cities that are “inclusive, safe, resilient, and sustainable” (UN, 2016).⁴ The relationship between environmental sustainability and urbanization has become a prevalent theme for developed as well as developing countries. Cities account for 70% of greenhouse gas (GHG) emissions, 70% of solid waste generation, and 60% of energy consumption in the world (UN-Habitat, 2015). Moreover, this share rises in tandem with the urbanized surface area, since urban expansion leads to an increase in the consumption of natural resources and the use of motorized transportation. This

³ The term urban public services refers to the set of services provided to urban residents, including but not limited to basic infrastructure services (water, sanitation, electricity), municipal public space maintenance services (cleaning and lighting of public roadways and waste collection), basic social services (police and firefighters), and mobility services (transportation and traffic management).

⁴ The City Prosperity Initiative index measures advances in more than 60 cities with regard to SDG 11. This indicator measures advances in six dimensions of development: infrastructure, productivity, quality of life, governance, and environmental sustainability (UN-Habitat, The City Prosperity Initiative, 2016).

trend toward expansive urbanization is present throughout the world, even in regions where the growth rate of the population is stable or negative (Angel, 2014), and is one of the reasons for the growing interest in territorial planning policies (Organization for Economic Co-operation and Development (OECD), 2014).

- 2.7 The need to foster a sustainable urbanization is reflected in the development of agreements to enhance environmental sustainability. At the international level, these notably include the Paris Agreement, negotiated at the most recent United Nations Climate Change Conference (COP21).⁵ This is the first global agreement aimed at holding the global average temperature rise to "well below 2°C" above pre-industrial levels and to "pursue efforts to limit the temperature increase to 1.5°C". To this end, the 175 countries that have adhered to COP21 undertook to carry out mitigation and adaptation measures, supporting and financing developing countries to help them contribute to the aforementioned goal (UNTC, 2015). Sustainable urbanization is an unprecedented challenge that simultaneously affects the comprehensive development of our societies and the sustainability of our planet (UN-Habitat, 2015). This issue plays a key role in the New Urban Agenda of Habitat III, the United Nations global conference that is scheduled to take place in October 2016 in Quito, Ecuador. This agenda advocates for environmental sustainability with social inclusion –which comprises both improving urban productivity as well as the quality of urban employment– and proposes an important role for national urban plans and comprehensive territorial planning. The contribution of LAC to the urban agenda is summarized in the 2016 Toluca Declaration (DT, 2016). This declaration identifies eight key issues for urban and territorial planning: urban governance, adequate housing, water and sanitation, sustainable mobility, land management, environment, climate change, and resilience.
- 2.8 A wide variety of policies and programs have addressed urban deficits at all levels of government, in developed and developing countries alike. This section identifies examples of sustainable good practices in addressing the four objectives that cities in LAC need to achieve in order to be inclusive, resilient, and sustainable: (i) capable urban governance; (ii) universal access to quality services and infrastructure; (iii) adequate affordable housing; and (iv) a quality urban habitat. The examples provided were selected on the basis of the impact they created and their broad bibliographical coverage. This international empirical evidence reflects the basic principles for the development of policies and programs in the Sector. These principles may be summarized as: (i) multisector interventions with territorial integrity, designed as a function of the specific characteristics of a territory; (ii) sustainable and effective interventions, considering their short- and long-term impact on the society, environment, public finances, and urban governance; and (iii) interventions focused on the citizenry, improving quality of life and inclusion in the productive activities of urban households, particularly the most vulnerable households.

⁵ COP21: 21st Conference of the Parties of the United Nations Framework Convention on Climate Change.

B. International policies and programs on issues of Bank interest in the Sector

1. Deficits in urban governance

- 2.9 The State plays an essential role in promoting private-sector activity without disregarding equitable access to urban public services (Davis, 2004). Paradoxically, although municipal governments⁶ are the ones that have the most direct contact with residents, they tend to be the least capable, technically and economically, to properly serve their population (UN-Habitat, 2013). This dependency on the central government erodes the management capacity of local governments. Thus, most urban master plans are not implemented due to a lack of proper tools, especially in the smaller municipalities in the region (Atkins, 2012). Successful policies and programs are those that generate a positive development dynamic for the society at large, improve the physical environment in which people live, and make appropriate use of fiscal resources. Considering that most of the cities in the region have limited capacity for governance, there is value in experiences that strengthen the institutions involved in urban governance, boost productivity, and innovate in the management of metropolitan areas.
- 2.10 **Strengthening of the institutions involved in urban governance.** Although 30% of the responsibility for public expenditure in LAC falls on subnational governments, the latter are only responsible for 10% of tax revenue (Corbacho et al., 2013). This asymmetry is an obstacle on the path to better urban governance. There are various strategies that urban municipalities can use to raise revenue, both by optimizing expenditures and by promoting progressive and efficient tax systems. Denser urban models make it possible to reduce municipal expenditures in the provision of water, sanitation, and residential waste collection services (Libertun de Duren and Guerrero Compeán, 2015). One way of encouraging greater population density in cities is to impose higher rates of property tax on vacant lots and underused properties, or to levy the property tax on the land itself rather than on what is built on it (Ladd, 1998). For example, the city of Tomar, in Portugal, changed the formula for calculating property tax in order to capture the cost of municipal investment in a property's infrastructure and maintenance, thus reducing the attractiveness of properties in the periphery in favor of centrally located properties (Almeida et al., 2013).
- 2.11 The fiscal sustainability of municipalities depends on their ability to increase their own sources of revenue. Cadastral updates are one of the most effective means of increasing tax revenue. For example, Bogota, Colombia, increased tax collection by US\$24 million per year after bringing more than 100,000 properties on their fiscal database at a cost of US\$4 million (UN-Habitat, 2013). The use of georeferenced information systems (GIS) makes it possible to perform cadastral updates effectively, lowering the rate of errors due to omission or duplication, which affect several of the databases of low-income municipalities (Ojiako et al., 2015). At the same time, the combination of GIS and digital systems improves the punctuality and tracking of collected payments (Bonet et al., 2014).

⁶ The term "municipal government" refers to the first tier of government with a specific territorial jurisdiction, and responsible for the smallest territorial unit within a country.

- 2.12 Another effective funding strategy is to capture appreciation in the value of urban land in advance by increasing the tax rates through the Tax Increment Finance (TIF) tool. TIFs are calculated on the basis of the expected future increases in property value as a result of new public infrastructure in order to underwrite the issuance of public bonds to fund this infrastructure (Carroll, 2008). Recently, Rio de Janeiro decided to sell future building permits to finance improvements in Porto Maravilha. In terms of tax revenue, the cases of the levy on increased property values in Bogota, Colombia, and the sale of building permits in São Paulo/Rio de Janeiro, Brazil, are emblematic. The first case brought in US\$1 billion in revenue, and the second, US\$1.5 billion for the sale of 2.25 million square meters of building space (UN-Habitat, 2013). In addition, PPPs incorporate the private sector into the financing of urban infrastructure (Harnick, 2011). For example, in Hong Kong, China, metro stations combine commercial and office developments on the same site, in both cases financed by PPPs (Jim, 2002). Recently, several cities have made use of PPPs to renew their infrastructure. For example, Barcelona, Spain, uses this model to manage its public bicycles program (O'Brien, 2014).
- 2.13 Another strategy available to municipalities for increasing tax revenue is to encourage voluntary taxpayer compliance. One way of achieving this is to improve communications between the municipalities and those who pay for municipal services. For example, the municipality of Junín, Argentina, sent messages to a group of taxpayers, describing the penalties for failure to make timely and proper payment of taxes. This action resulted in an increase of five percentage points in the rate of municipal tax payment by these taxpayers with respect to taxpayers who did not receive these messages (Castro and Scartascini, 2015). These results match the outcomes of similar experiences in Venezuelan municipalities (Ortega and Sanguinetti, 2013). Furthermore, personal communications are more effective than letters or e-mails. In Colombia, the Dirección de Impuestos y Aduanas Nacionales [National Tax and Customs Agency] found that 88% of tax delinquent households visited by a tax collector made some tax payment following the visit (Ortega and Scartascini, 2015). Lastly, it is worth noting the impact that rewards for compliant taxpayers can have in encouraging payment of taxes; this practice is widespread in the region, but is only now being studied (Dunning et al., 2015).
- 2.14 Municipal funding systems are part of the toolkit available to promote urban sustainability, making it possible to encourage the use of materials with low environmental impact and energy savings. The European Union uses the Energy Performance Contract, a contract that takes into account the energy performance of private-sector companies. This contract makes a portion of the service providers' revenue conditional on the achievement of energy savings (OECD, 2012). Service charges are another mechanism to encourage savings in water and energy use or foster the use of less polluting modes of transportation. For example, vehicle congestion charges are successfully levied in London on those using private automobiles in peak hours, contributing to an annual reduction of 20% in carbon dioxide emission levels in the city (Kennedy et al., 2010).
- 2.15 In addition to improving their finances, cities need to respond to the needs of residents. This requires reinforcing and expanding the availability of avenues for citizen participation (Jaramillo and Alcázar, 2013). The participatory budget,

- pioneered by Porto Alegre, Brazil, in the 1980s, was replicated in more than 200 municipalities in Brazil and other countries around the world. This instrument allows direct participation by citizens in the allocation of up to 15% of the budget, and in monitoring the results (UN-Habitat, 2013). Experiences with voluntary citizen participation, such as the Bogotá Cómo Vamos program in Colombia and the Observatorio do Recife in Brazil, have also improved urban management (Quiñones, 2011). These citizen initiatives thrive when they are consensus-based and supported by planned targets that are measurable and visible by the society (Fundación Avina, 2012).
- 2.16 An essential concern in urban governance is to ensure consistency across sector investments. To achieve this, one strategy is to regulate the environmental consequences of projects instead of their characteristics. For example, several cities in the United States have abandoned traditional zoning in favor of establishing limits on the impact of building construction (in the form of variables such as noise level and energy consumption) (Baker et al., 2006). Another alternative is to propose principles of urban design that must be met by land developers in the various urban areas (Duany et al., 2003). Yet another method is to establish density criteria to optimize infrastructure, water, sanitation, and electricity service costs. In Toronto, Canada, providing infrastructure for an urbanization of 150 inhabitants per hectare costs 40% less than providing it for an urban area of half that density (UN-Habitat, 2013).
- 2.17 Lastly, an area that is witnessing great innovation is the use of information and communication technologies to monitor and evaluate the impact of multisector urban projects (United Nations Development Programme (UNDP), 2013). Examples include: (i) access to big data,⁷ which makes it possible to identify and measure the impact of urban operations at the individual level, while georeferenced systems make it possible to better delineate the territorial impacts of these operations; (ii) participatory mapping platforms, which are one of the new ways of monitoring and evaluating urban issues; for example, the use of this mapping modality made it possible to monitor the transformation of New Orleans, United States, following hurricane Katrina (grassrootsmapping.org); and (iii) the use of satellite-based nocturnal lighting sensors in an area to measure the impact of urban projects on the economic productivity of a particular locality (Ebener et al., 2005). The most reliable results are obtained when these new sources of data are combined with other, more traditional sources, such as household surveys and official censuses. For example, in Rwanda, a domestic water-filter installation project was evaluated on the basis of combined data from remote sensors that detected the use of the filters and from surveys of the beneficiary households (Thomas et al., 2013).
- 2.18 **Promoting urban productivity.** One strategy to promote economic activity is to redevelop large urban areas, offering opportunities to new commercial enterprises. The 15-hectare redevelopment in the commercial port of Rheinauhafen, in Cologne, Germany, includes housing, offices, commercial

⁷ The term big-data refers to a database so large and complex that it exceeds the capabilities of the traditional data collection and management methods. In the last decade, the number of big-data sources has grown exponentially. These sources now include cellular telephones, satellite imagery, and platforms that use the Internet for bank transactions, trade, social interaction, and news searches, among others (UNDP 2013).

space, and public parking. Some original buildings were left standing in an effort to preserve the identity of the site. The project, completed at a cost close to €650 million, received public and private financing and is estimated to have helped create 2,500 new jobs (Maliene et al., 2011). Marseille-Euroméditerranée, the largest urban economic promotion project in southern Europe, spans 480 hectares in the city of Marseille, France. This project finances 8,000 housing units, 1 million square meters of office space, 200,000 square meters of commercial and public activities, and 60 hectares of public parks. The investment has a cost of €7 billion and is helping to create more than 35,000 new jobs (Martone et al., 2014).

- 2.19 Cities do not always have the resources needed to promote large-scale urban investments, turning to other strategies to encourage urban economic activity. Enterprise zones foster the creation of jobs in certain geographic areas through tax incentive programs (Kolko and Newman, 2010). The result of these initiatives is uneven, since they can lead to the relocation of employers rather than to a true creation of new jobs (Bondonio and Greenbaum, 2007). The United Kingdom has a similar economic promotion system. Known as regional selective assistance, it subsidizes the establishment of private-sector companies in depressed urban areas. While this system has increased the quantity and longevity of companies in these areas, it has failed to attract new companies (Criscuolo et al., 2008). An alternative strategy is the business improvement districts, which provide a mechanism for upgrading commercial urban neighborhoods. The owners of the businesses contribute funds to finance additional services, such as lighting, private surveillance, and advertising, designed to enhance the area's attractiveness. These districts have a governing council composed of representatives from the private sector and from the municipal government, and have proven extremely effective in upgrading neighborhoods in dense urban areas, although not in peripheral or marginal areas (OECD, 2012).
- 2.20 Over the last decade, various local efforts have promoted the "economy of culture." Governmental support for artistic and entertainment venues –whether permanent, such as museums and theaters, or temporary, such as craft fairs and exhibits– seeks to promote urban economic activity. Several cities have tried to attract residents belonging to the so-called "creative class," who engage in artistic or innovative activities (Florida, 2002). This idea, although an interesting one for local governments, has not led to effective policies (Peck, 2005). However, support for specialization in specific cultural activities has proven more successful. For example, the city of Los Angeles, United States, redeveloped an old textile production neighborhood as an international fashion design center, with good results (Scott, 2004).
- 2.21 **Innovations for urban and metropolitan governance.** Urban governance is evolving toward a smart city⁸ model (Bouskela, 2016). This model leverages technological infrastructures, human communication, and processes to make urban governance more transparent and efficient. This improves the quality of services and encourages more active and inclusive citizen participation

⁸ A smart city puts people at the center of the development objectives and incorporates information and communication technologies into urban management, thus encouraging efficient governance, with collaborative planning processes and citizen participation (Bouskela 2016).

- (Townsend, 2013). For example, the city of Melbourne, Australia, is including citizens in urban planning through “Future Melbourne,” an editable Internet platform in which more than 15,000 residents and institutions have already participated. Copenhagen, Denmark adopted the principle of “cities for people,” in which the urban plan reflects the city’s inhabitants’ mobility needs, leading to the creation of highways exclusively for bicycle use (Gehl, 2010). The Government of Singapore has an online platform known as “Virtual Singapore.” It is a three-dimensional virtual representation of the city that incorporates a multitude of data in real time, obtaining them by means of sensors distributed throughout the city. The system collects dynamic data on climate, demographics, energy consumption, traffic, and other factors which can be used to study and mitigate the impact of new projects (NRF, 2014).
- 2.22 Effective management of cities requires coordination beyond the municipal borders. Metropolitan areas are the economic drivers of the region; however, with few exceptions, governance is not strategically coordinated among different municipalities so as to maximize functionality, integration, and competitiveness (UN-Habitat, 2015). For the most part, the administrative limits between municipalities are not reflective of the growth patterns of human settlements or their economic activity. Therefore, the governance structures should stretch beyond the jurisdictional limits, particularly with regard to environmental issues, land-use, and transportation systems (OECD, 2015). This requires well-organized institutions that enable strategic territorial development at the national level, providing incentives that align regional competitiveness with balanced urban development. This helps to prevent excessive urban primacy. For example, there is a strong correlation between the extent of a country’s trade liberalization and the spatial decentralization of its economic activities (Krugman and Elizondo, 1996). From an urban point of view, comprehensive planning is one of the keys to improving the functionality of metropolitan areas and preventing a disorganized conurbation of municipalities.
- 2.23 To address the challenge of metropolitan coordination, various national and regional governments have created territorial development plans. Spain has a National Smart Cities Plan, which is a policy aimed at promoting and disseminating the growth of the technology sector in every city (Government of Spain, 2015). The Greater Stuttgart Region, in Germany, is a regional association comprising 179 local governments, including the city of Stuttgart, and is responsible for regional and public transportation planning, tourism promotion, and coordination of urban-rural issues (Andersson, 2015). The Lille metropolitan area, shared between France and Belgium, handles issues of common interest through the European Grouping of Territorial Cooperation, an organization with autonomous legal status created to address the challenges of transnational cooperation (Solitander et al., 2011). Worth noting in LAC is the participatory experience of Belo Horizonte, Brazil, which identifies “areas of metropolitan interest” for urban-regional transformation (RMBH, 2016).
- 2.24 A critical component of urban governance is the ability to coordinate and carry out multisector projects, particularly projects that are under the responsibility of several institutions and in the absence of a pre-established hierarchy among them. To address this challenge, various countries and metropolitan regions have resorted to creating ad hoc institutions known as collaborative intermediary

- organizations (CIOs). CIOs provide institutional and funding stability to projects that involve multiple actors and institutions, and enable a dialogue between sectors with diverse intervention logics (Sanyal, 2006). For example, the Development Bank of South Africa used a CIO arrangement to implement a sustainable development initiative in Grabouw, South Africa. This initiative was aimed at fostering better social interaction between communities of different races and cultures as well as promoting the economy of various localities. Having created a CIO, the initiative succeeded in establishing a channel for inclusive and effective dialogue for planning urban interventions. The CIO proved to be a determining factor in the selection of lots for the development of low-income housing, leading to a plan with better environmental performance and preventing arrangements that would have perpetuated the social fragmentation of the city (Hamann and Kurt, 2013).
- 2.25 The institutional design of CIOs should take into account cultural as well as situational characteristics. In this regard, the development of participatory and inclusive forms of leadership is critical (Crosby and Bryson, 2010). In addition, the work of CIOs is structured into a series of stages. First, a legal framework or memorandum is created, establishing an agreement between the parties involved. Second, a platform for dialogue is developed to arrive at relationship parameters between the parties and a common urban vision. Third, a technical document is prepared on the basis of this vision, focusing on a comprehensive land-use plan that incorporates the requirements and data of the various sectors (Hamann and Kurt, 2013). The reconfiguration of the regulatory institutions has also proven to be essential for implementing new technologies with a lower environmental impact (Schroeder et al., 2013). This is the case in the United Kingdom, where creating a platform to coordinate policy-making institutions, generate knowledge, and implement policy has made it possible to revitalize the construction industry and enhance the sustainability of the industry's practices (Killip, 2013).
- 2.26 The issues of sustainability, resilience, and mitigation in the face of geophysical and climate disasters have given rise to various cooperation networks among cities. In terms of environmental sustainability networks, there are several worth noting at the metropolitan level, including: 100 Resilient Cities, which supports cities worldwide in developing urban strategies that take climate change considerations into account; the RioResiliente strategy, which was developed in coordination with the municipality of Rio de Janeiro, Brazil; NAZCA (Non-State Actor Zone for Climate Action), which records commitments by 2,364 cities and more than 2,000 companies worldwide to enhance environmental sustainability and combat climate change (UNFCC, 2016); and lastly the Red de Áreas Metropolitanas de las Américas [Network of Metropolitan Areas in the Americas] (RAMA), which fosters cooperation among cities in the LAC region.
- 2.27 The majority of municipalities lack the resources needed to finance the cost of implementing adaptation and mitigation strategies. National and multilateral funds for combatting climate change do exist, but they tend to be inaccessible to the municipalities (ICLEI, 2015). One way of skirting this problem is by presenting comprehensive metropolitan projects that can qualify for this purpose, requiring municipalities to design comprehensive interventions at a regional scale. For example, the city of Amsterdam, Holland, together with ABN Amro Bank and the

Dutch National Government, launched the Green Finance Lab. This initiative promotes new financing arrangements for the city's transition to a sustainable metropolis, including ecosystem services, energy, water, raw materials, and transportation. The first lab focused on financing green areas, and it was followed by a second lab aimed at creating private sponsorship chambers and urban investment zones. Each chamber brings together private-sector, social-sector, and public-sector entrepreneurs to formulate acceptable financial risk parameters for promoting investments in urban sustainability (OECD, 2012).

- 2.28 One innovation in the financing of works for urban sustainability is the issuance of green municipal bonds (Della Croce et al., 2015). Green bonds still only account for a small fraction of the current municipal financing market of US\$17 billion, but the demand for these instruments is quickly rising. The World Bank has started to issue green bonds with an AAA rating. The United States federal government also offers this type of bond, supporting cities through tax incentives and subsidies to improve their risk rating (Canuto and Liu, 2010). The city of Chicago, which has a robust borrowing capacity, has developed its own system of green bonds. Lastly, there are bonds issued by private investors willing to finance climate change adaptation in urban areas, such as the Institutional Investors Group on Climate Change (IIGCC) (OECD, 2012). In all cases, the success of these financing models depends on solid coordination between national and urban policies and on comprehensive long-term development plans.

2. Deficits in urban public infrastructure and services

- 2.29 Access to public infrastructure and services is vital for the social and economic development of a city's population, whether at the individual household level or in the city as a whole. When households lack water, sanitation, and electricity services, health indices decline. Similarly, if these households are located in areas that lack adequate roads and transportation, their possibilities of having access to quality education and jobs are reduced. In addition, when an urban mobility system is dysfunctional, GHG emissions rise and productivity falls; and when there are no adequate systems to manage natural or anthropogenic disaster risks, the human and material losses due to disasters grow. In this context, housing (which is the second of the Sector's challenges) should be viewed as a platform for household access to a bundle of urban public services. In line with this perspective, below is a description of interventions that improve the provision of services both in informal neighborhoods and citywide and promote sustainable systems. It is worth noting that the success of these interventions depends on comprehensive urban planning in a well-regulated institutional context, including incentives to encourage proper use of the land at all scales: national, metropolitan, and municipal (Weingast, 2009; Bird, 2011).

- 2.30 **Improvement of informal neighborhoods.** A lack of comprehensive planning, coupled with insufficient investment in infrastructure, has helped fuel a proliferation of informal neighborhoods. Neighborhood improvement programs are remedial and cannot replace good planning, since their cost is three to seven times higher than the cost of formal urbanization (Bouillon, 2012). These programs combine investments in basic infrastructure with social services through comprehensive solutions that incorporate physical improvement components, landholding regularization programs, and social improvement

- components such as job training, care for vulnerable groups, and workshops to reduce levels of violence (Jaitman, 2014). Given the high cost of these programs, some national strategies seek to reduce their initial costs. For example, Brazil created Zonas Especiais de Interesse Social [special zones of social interest] (ZEIS) to facilitate the regularization of property titles. ZEIS protect residents from real estate speculation and allow public-private partnerships (PPPs) in housing financing (Lago, 2007).
- 2.31 The case studies and quasi-experimental evaluations of informal neighborhood improvement programs suggests that service delivery should be comprehensive and complementary (UN-Habitat, 2011). This is consistent with the experience of the Emerging and Sustainable Cities Initiative (ESCI), which indicates that these programs need to be designed comprehensively and on multiple scales ranging from the neighborhood to the region, and must take their formation process into account (Rojas, 2009). For example, the Integrated Urban Program in Medellín, Colombia, complements improvements to infrastructure and public spaces with cultural activities that preserve local traditions. This program has helped to significantly improve citizen security in the neighborhoods where it was implemented, tripled commercial activities in the area, and strengthened resident participation and community leadership (UN-Habitat, 2011). Other regions have achieved similar impacts. In Soweto, South Africa, comprehensive neighborhood improvements helped to lower local rates of violence and raise the value of housing per square meter (UN-Habitat, 2013). However, in the Caribbean, integrating informal neighborhoods into their respective formal cities has had uneven results. This is partly due to the fact that Caribbean cities that have arisen as extractive ports typically lack a cohesive urban structure (Donovan and Sanjak, 2015). Moreover, while a large proportion of the informal neighborhoods in the Southern Cone resulted from massive land invasions organized by community leaders, in the Caribbean most of these neighborhoods were formed gradually, without significant community organization (Rajack and Barhate, 2004).
- 2.32 Neighborhood improvement programs have been evaluated positively in terms of access to and coverage of basic services and health and education services, satisfaction with living standards and security, and rise in property values. However, a challenge to be addressed is the possibility that these programs will encourage informal urbanization, since they enhance the expected benefits of invading government-owned land (Abramo, 2003). For example, in Buenos Aires, Argentina, informally built-up areas increased by 12% after a change in national policies reduced the risk of eviction (Galiani and Schargrotsky, 2010). To mitigate this undesired effect of neighborhood improvement programs, these programs need to be complemented with policies aimed at expanding the supply of urbanized land and affordable housing. Lastly, the impact assessments do not show broader access to mortgage credit and are inconclusive regarding an increase in individual incomes and access to formal jobs (Perlman, 2010).
- 2.33 **Promoting access to urban public services.** Access to quality urban services and infrastructure stands in correlation with an improvement in indices of citizen health and satisfaction (UN-Habitat, 2013). An impact assessment of the improvement of the water supply in Argentina found an 8% reduction in infant mortality (Galiani et al., 2005). Urban public services also boost land values and promote private investment in housing. In Mexico City, paving local roads doubled

the number of internal home improvements and increased home sale values by 16% (González-Navarro and Quintana-Domeque, 2010). This outcome was also achieved in the case of the Acayucan municipality in Veracruz, Mexico, where a cost-benefit analysis showed that the costs of paving roads are equal to or lower than the direct benefits for neighboring households (Gonzalez-Navarro and Quintana-Domeque, 2016). In addition, urban lighting and public spaces with cultural and recreational activities increase residents' satisfaction with their quality of life. This association is robust in studies based on the willingness to pay for services and in studies that quantify the equivalent monetary value of urban services (Lora et al., 2008).

- 2.34 Burgeoning population growth and limited budgets challenge the response capacity of municipal governments. Recent technological advances can improve this situation by enabling the emergence of new models of urban public service provision, driving holistic transformations on issues of planning, governance, and regulation. For example, Auckland, New Zealand, has implemented a traffic monitoring system for real time decision-making, optimizing the system's efficiency based on big-data analysis. The city of Kalundborg, Denmark, is developing an innovative open platform to show how the city can optimize its energy consumption by coordinating the use of water, heating systems, transportation, and housing design. In addition, this platform allows participating companies to trade excess energy capacity (World Economic Forum, 2016).
- 2.35 An increasingly significant concern in the area of urban public services is ensuring that they are properly managed, since this directly affects the quality of the service delivered to the users. The concept of service quality is complex insofar as it depends on objective measures as well as on user expectations (Lovelock and Gummerson, 2004). Effective management of the entities that provide urban public services combines institutional management with an education of residents (Osborne et al., 2013). The former component notably includes long-term strategic plans that properly take into account the financial and fiscal implications of the service. The latter component includes campaigns designed to teach the population how to better use the services. For example, in the city of Gold Coast, Australia, the water utility installed a system in a group of homes that allowed households to monitor their own water consumption. Per-capita consumption in these households dropped from 157 to 148 liters of water per day, creating significant savings for users as well as for the providers (Jones et al., 2011).
- 2.36 **Improvement in urban sustainability.** Among the services aimed at improving sustainability, mobility plays an essential role. The transportation sector is the largest contributor to the carbon footprint in LAC, generating 42% of GHG emissions (Rodríguez Tejerina, 2015). For this reason, there is a need to foster the use of non-motorized transport and mass transit as well as to improve the functioning of multimodal transportation. Facilitating pedestrian and cyclist transportation reduces congestion and pollution and improves the health of the population. For example, during peak hours, traveling times within urban areas can be 40% shorter by bicycle than by automobile. Investments to foster bicycle use, such as bicycle paths and shared bicycle systems, are low-cost and high-yield (World Economic Forum, 2016).

- 2.37 The sustainability of cities also depends on their green infrastructure. Having an interconnected network of green spaces helps to cleanse the air and the water, replenish aquifers, reduce the risk of floods, and mitigate excessive temperatures. It also benefits public health by promoting exercise and social interaction. The city of Philadelphia, United States, has developed a green infrastructure plan to protect the watersheds by managing rainwater. This plan helps to reduce GHG emissions and provides green spaces in marginal neighborhoods. Over a period of 25 years, the cost of this green project is estimated to be US\$1.2 billion, as compared to the US\$6 billion that the project would have cost with a traditional infrastructure of concrete tunnels. Urban agriculture, such as green roofs and community gardens, also enhances sustainability. The Future City plan in Detroit, United States, supports these interventions to make use of vacant lots, improve food quality for the poorest population groups, and reduce GHG emissions from food transportation (American Society of Landscape Architects (ASLA), 2016).
- 2.38 The interest in urban sustainability also manifests itself in development models that consume less energy and produce less carbon. For example, the Low Carbon Cities Framework (LCCF) program in Malaysia promotes the development of low-emission cities at the national level. Worthy of note in LAC is the Low Carbon City program in Rio de Janeiro, the initial phase of which includes urban reforestation and upgrading of bicycle paths (World Bank, 2013). Cities can also use territorial planning to foster greener cities, as in Japan, where cities have five times the population density of Canadian cities but consume up to 60% less energy per household (OECD, 2010).

3. Housing deficits

- 2.39 Access to adequate housing is a universal human right (UN, 1948). Adequate housing involves access to urban public services and to labor markets. When this is fulfilled, it helps in improving the health of residents, children's school performance, and family life (Magalhães and Di Villarosa, 2012). However, regulatory flaws at the metropolitan level and cumbersome municipal land use regulations discourage land urbanization and contribute to the high cost of housing (Glaeser and Warn, 2008). Moreover, the lengthy and burdensome housing production process makes it difficult for supply to respond rapidly to changes in demand. This is further aggravated by the lack of an adequate financing system for housing suppliers and consumers (Cesa-Bianchi, 2012). In addition, housing is subject to location externalities, such as access to social services, labor markets, and quality public spaces, which generates differentiated demand and leads to segmented markets (O'Sullivan, 2009). The policies of greatest interest to LAC are those which improve the functioning of the institutions that regulate mortgage and housing markets and which expand affordable housing access and the production of housing with low environmental impact.
- 2.40 **Expanded access to housing.** The national and local authorities must reclaim a leadership role in formulating, regulating, implementing, and monitoring comprehensive and long-term public policies to address the housing deficits. These policies should promote a curative approach that fosters an improvement in existing property values, and a preventive approach that encourages the

provision of new housing in coordination with financial institutions, the private sector, and civil society (UN-Habitat, 2015). The most effective policies are those that take the diversity of the population into account. Demographic changes, such as the rise in female-headed, senior-headed, and unmarried-partner households, should be reflected in housing design solutions and credit systems (Joint Center for Housing Studies of Harvard University, 2014). For example, the city of Pasadena, United States, has a Master Plan for Seniors, which takes into account the housing needs (as well as mobility and health service needs) of households headed by seniors. This plan is the result of coordination work between the municipal government and the local communities and is updated on the basis of municipal demographic data (Kelly et al. 2013).

- 2.41 In view of the limitations in the size of and access to the mortgage market in developing countries, housing policies need to enhance housing programs by including financial solutions that serve the poorest households. Policies need to encourage private-sector participation in the financing and production of finished and incrementally built owner-occupied and rented housing (Chong et al., 2008). In addition, policies need to expand property tenure modalities, including support for rental housing, in order to reach all segments of the population (Blanco et al., 2013). The quality of rented housing is similar to that of owner-occupied homes, and better than that of informal housing (Moya, 2012). Moreover, rented housing tends to be better located and occupy more densely populated land, thus contributing to sustainability (Peppercorn and Taffin, 2013). Furthermore, rental housing is an efficient means of serving population sectors with high spatial mobility, such as students, short-term workers, informal workers, or workers in industries that require continuous relocation. In these cases, the potential capital gains of an owner-occupied home are not enough to offset the sale transaction costs (Belsky and Drew, 2008).
- 2.42 One of the barriers to the development of the rental market is excessive or inadequate regulation, which discourages private-sector participation in this market and leads to a decline in supply. In the United Kingdom, deregulation of rents and of the mechanisms to finance potential renters, as well as the streamlining of rent-related lawsuits, helped to reactivate the rental market (UK-DCLG, 2010). Following these institutional reforms, the number of renter households grew from 2.4 million in 2001 to 3.8 million in 2009, while the number of homeowner households remained constant. In Switzerland, where homeownership and ownership transfer are heavily taxed, only 34% of households own the homes in which they reside (Fretes et al., 2013). China has taken a different policy approach to support the rental market. The Chinese government sponsors a low-rent program, which subsidizes housing rentals by low-income households, and a public rental housing program, which finances the construction of affordable rental housing (Yonghui 2014). The plan is to gradually reduce the financing for affordable housing construction and increase the funding for direct household subsidies (Libertun de Duren, 2014).
- 2.43 Housing policies that support low-income households have not always proven beneficial. For example, in the United States, housing subsidies for single mothers have discouraged beneficiaries from marrying, in turn decreasing household income and the quality of children's education (McLanahan and Beck, 2010). An empirical study of this program's impact on household composition

shows that, after three years, one third of the female heads of household that received this subsidy were still living alone, while this was the case for only one fifth of female heads of household who were not receiving the subsidy (Curtis 2007). Another undesired potential effect of the housing subsidy is to discourage household members from obtaining employment (Collinson, Ellen, Ludwig, 2015). In this regard, the evidence is contradictory. In the United States, an income comparison of households with similar characteristics but different places of residence found that the income of households living in subsidized housing was 19% lower (Olsen et al., 2005). However, other studies show that if the subsidy allows the household to settle in a neighborhood that offers more employment opportunities, household income improves. This is the case for those who receive housing vouchers in California,⁹ since these vouchers give households the mobility needed to rent outside the most marginal neighborhoods (Patterson et al., 2004).

- 2.44 Another serious flaw in affordable housing policies is that they still fail to adequately address location, which significantly affects a household's chances of breaking out of poverty (Litman, 2015). Mass low-income housing construction in peripheral areas creates a vicious cycle of social and urban decline with environmental damage (Newmark & Hass, 2015). There are hidden costs for households and for the society in having neighborhoods that create excessive transportation spending for their residents (Mulliner et al., 2015). In addition, creating a concentration of peripheral areas of poverty increases social segregation, adversely affects municipal budgets, and intensifies vehicle congestion (Fisher et al., 2009). For example, in Mexico, 14.2% of the housing stock is vacant (OECD, 2015) likely because it is located in areas that have no services and are far from the workplace (Herbert et al., 2012). Several studies show the advantage of encouraging the growth of low-income housing in areas with high-density infrastructure. In South Africa, the need to provide infrastructure raises the unit cost of housing in the urban periphery by US\$1,300 with respect to the unit cost in central urban areas (Venter et al., 2014).
- 2.45 Most housing support programs have focused on urban demand. The reasons are that this demand encompasses a majority of residents and these programs anticipate an increase in urbanization rates in developing regions (UN-Habitat, 2011). However, the rural population also suffers from serious housing deficits and is often subject to more extreme deprivation than the population in urbanized areas (Ferre et al., 2012). The most recent experiences in rural areas have focused on applying new technologies to facilitate access to basic services and on rural housing reconstruction projects in areas affected by disasters. For example, in Malaysia, most rural households receive a subsidy to cover their costs of electricity, which is generated from the nation's oil. However, this technology is inefficient and highly polluting (Byrd, 2010). As a result, more than twenty years ago, the national government launched a series of initiatives aimed at promoting the use of photovoltaic cells in rural homes. These initiatives include subsidies for photovoltaic cell installation, tax benefits for producers, and educational programs for children in rural areas. This program has played a key role in expanding electricity service coverage for rural households in the Sabah region from 67% in 2000 to 81% in 2010 (Mekhilef et al., 2012).

⁹ These vouchers are known as Voucher 8.

- 2.46 Post-disaster reconstruction of rural homes requires a quick response, but with a long term view to the future development of the population. A prime example of this is the rural housing reconstruction program directed by the Government of Pakistan with US\$210 million in technical and financial support from the World Bank. This program was launched in November 2005, one month following the earthquake that caused 73,000 deaths and rendered more than 2.8 million people homeless. The program financed do-it-yourself construction of earthquake-resistant housing, providing households with funds through the existing bank network and with technical assistance through local organizations. As of June 2010, the program had supported the construction of 463,000 homes and served all eligible beneficiaries. The keys to this program's implementation were an institutional arrangement based on an ad-hoc unit specifically created to act as the sole window for program coordination; local capacity to quickly identify those affected by the disaster; a transparent banking system that was effective in connecting with households; and a network of local community organizations committed to the success of the program (Arshad and Athar, 2013).
- 2.47 **Affordable housing with low environmental impact.** The concept of housing quality has in recent years expanded to include environmental efficiency. In LAC, the residential sector is responsible for close to one quarter of GHG emissions in the region (Rodríguez Tejerina, 2015). To cover the housing deficit in cities until 2020 would mean doubling the current emissions level (UNEP, 2009). Sustainable architecture enhances energy efficiency and reduces the consumption of resources (UN-Habitat, 2015). This architecture includes smart designs (attention to the orientation of the home, sun exposure and solar protection, thermal insulation, and ventilation), low-impact materials (zero-kilometer, recyclable, and biodegradable materials), and technologies designed to optimize the use of natural resources (solar panels, low energy consumption appliances, and water recycling systems). For example, the municipality of Ljubljana, Slovenia, implemented a program to reduce energy consumption in low-income rental apartments by financing climate-adaptation interventions in existing housing and building passive homes. The interventions included insulating the exterior walls and roofs, installing energy-efficient windows and doors, and installing external shutters with thermal protection. These interventions led to a reduction of almost 40% in domestic energy consumption (UN-Habitat, 2015).
- 2.48 Tax incentives can encourage the use of green technology in homes and foster the construction of low-consumption buildings. For example, in the United States, incentives for green buildings include a "zero-cost option"¹⁰ as well as options that require investments by the public sector. The federal and local governments offer tax incentives, density bonuses, expedited issuance of construction permits, subsidies, loans, technical assistance, tax abatement, and discounts on products, the first three of these being the most attractive to the private sector. For example, Arlington County, Virginia, United States, provides extra density bonuses to private-sector projects with a Leadership in Energy and Environmental Design (LEED) certification (AIA, 2012). There are voluntary

¹⁰ The term "zero-cost option" is applied to those incentives that do not require upfront direct investment by the public sector. They include density bonuses, expedited issuance of construction permits, and reduced collection rates, among others.

assessment systems in addition to LEED, including the Building Research Establishment Environmental Assessment Method (BREEAM) in the United Kingdom and the Green Star method in Australia. At the municipal level, Canada's Vancouver has implemented a Greenest City Action Plan to reduce energy consumption and GHG emissions in existing buildings and in new construction. Thanks to this plan, CO₂ emissions from residential and commercial buildings decreased by 5% between 2007 and 2014 (Vancouver, 2015).

- 2.49 In the region, Argentina, Chile, Colombia, Ecuador, El Salvador, Honduras, Mexico, Peru, and Uruguay regulate the design of housing with a view to reducing energy consumption (Vergara et al., 2013). For example, the Instituto del Fondo Nacional de la Vivienda para los Trabajadores de México [National Housing Fund for Mexican Workers] (INFONAVIT) offers a “green mortgage” program to low-income households. The program finances 22 efficient electricity saving technologies (low-consumption light bulbs, thermal insulation, reflective coatings, voltage optimization, solar heaters) and water saving technologies (ecological toilets, flow-control valves) (UN-Habitat, 2015). The monthly cost of this mortgage is lower than the electricity savings enjoyed by households thanks to the use of these technologies. In 2010, the Green Mortgage program was a recipient of the IDB's Beyond Banking award; in 2011, it was recognized by the United Nations Development Programme (UNDP) as the best practice in solar water heater application in the housing category; and in 2012, it received the World Habitat Award from the Building & Social Housing Foundation.

4. Deficits in habitat quality

- 2.50 Improving the quality of the urban habitat is of great importance for the region. Well-designed and well-maintained public and green spaces bring about numerous environmental benefits (Ahem, 2013), improvements in the physical and mental health of the population (Lee and Maheswaran, 2011), reductions in the rates of violence (HCN 2004), and increases in municipal revenue (Mell et al., 2013). However, the quality of urban public spaces has been undermined by the absence of proper management and of institutional arrangements to ensure these spaces are well maintained, as well as by the trend toward suburbanization. The role of the urban habitat is becoming even more significant as average temperatures rise and rainfall increases in urban areas. It is extremely important for the region to learn from successful experiences in revitalizing degraded urban areas and in expanding the offering and enhancing the sustainability and quality of public spaces.
- 2.51 **Revitalization of degraded urban areas.** Reviving these areas contributes to urban sustainability, since it promotes better utilization of existing urban infrastructure systems (drainages, water, electricity) and introduces economies of scale in the use of transportation networks. At present, the notion of historical heritage applies not only to urban architecture but also to urban landscape (UNESCO, 2011). Furthermore, the current approach to preservation conceives of historical heritage as an ensemble of tangible and intangible values. This approach seeks a sustainable urban design that values the natural and the built environment as well as social diversity and the identity of the local community (Bandarin and van Oers, 2014). In addition, reviving historical city centers helps to revitalize the economy, particularly local commerce and tourism activities. An

economic appraisal of the historical heritage of Edinburgh, Scotland, shows that 36% of merchants are willing to pay up to £429 per year to preserve the urban heritage and that residents would pay up to £67 per year for the same purpose (Batas, 2016).

- 2.52 A comprehensive and inclusive vision ensures that lower-income residents will not be driven out when heritage areas are renovated. The local population needs to actively participate in urban transformation processes so as to create an inclusive vision that encompasses all interested parties, spurring private-sector investments and generating sustainable economic uses of the rehabilitated structures (Martone et al., 2014). Urban revitalization policies, if well applied, can reverse the abandonment of city centers. For example, the center of Bordeaux, France's sixth-largest city, had lost 100,000 inhabitants between 1950 and 1955. As a result, more than 20% of the properties in the historical city center had become vacant and 12% were in unsanitary condition. The comprehensive revitalization program "Active, Attractive, and Inhabited Center" modernized the transportation system, reclaimed public spaces, and supported the renovation of public and private buildings and the development of cultural programs. This program succeeded in reducing the property vacancy rate to less than 5% (RI, 2015).
- 2.53 Policies to preserve areas of heritage value also promote the development of the cultural industry. This industry accounts for 6% of the GDP of the European Union and 8% of the GDP of the United States (Quartesan, 2007). When included as part of a comprehensive urban plan, these policies can create significant economic benefits. For example, the restoration of the historical center in Quito, Ecuador, helped to raise the square-meter price of the restored buildings nearly twelvefold over an eight-year period (Rojas and Lanzafame, 2012). Cultural tourism also benefits the local economy, since "culture tourists" tend to spend a third more than other travelers. Lima, Peru, obtained US\$1.8 million in revenue from the expenditures of the more than 5 million tourists who visited the city in 2014 (Hedrick et al., 2014).
- 2.54 One of the issues to be addressed in the design of projects aimed at revitalizing areas of heritage value is the impact of the increase in land value on the current residents. When these are legal owners, they tend to benefit by the appreciation in property values. However, when they are renters or illegal occupants, they tend to be displaced to other urban areas in worse condition. This process is known as gentrification and can exacerbate sociospatial fragmentation to the detriment of urban development (Smith, 1996). To prevent this from occurring requires integrating promotion and preservation plans with social programs. For example, in the neighborhood of Brockton in Toronto, Canada, the existence of strong community participation well-coordinated with the local government, coupled with neighborhood household access to mortgage loans, tempered the adverse effects of gentrification. In addition, the existence of various sources of employment in the area, including for low-income workers, helped neighborhood households to remain (Walks and August, 2008).
- 2.55 **Expanding the number and quality of urban public spaces.** Public spaces enhance the environmental, fiscal, and social soundness of a city. Green public spaces filter the air and mitigate environmental and acoustic pollution (Wolch

et al., 2014). These advantages are compounded by fiscal benefits, since these spaces raise the appraised value of real estate properties in their vicinity (Liu et al., 2015). In addition, public spaces increase citizen security if they are well designed and well-lit and offer activities (UN-Habitat, 2015).

- 2.56 Various cities have focused on public spaces in promoting urban development, this being one of the central themes of the UN New Urban Agenda.¹¹ In New York, United States, the High Line Park is based on repurposing a 2,500-meter section of an old railroad line. This park was developed at a cost of US\$260 million and it currently generates US\$900 million per year in tax revenue for the city, attributable to the increase in property values in the area and to tourism activities (NYCEDC, 2011). In the region, worth noting is the city of Medellín, Colombia, which went from being notorious for its violence levels to being an exemplar of urban innovation with social inclusion (Heinrichs & Bernet, 2014). Medellín has restructured its transportation system, public spaces, and cultural offerings, introducing high-quality design and services, especially in formerly marginalized neighborhoods (Navarrete, 2011). Another emblematic case is the revitalization of the urban waterfront in Rosario, Argentina. This project is a good example of the use of PPPs in promoting large investments in urban areas (ESCI, 2015) and the capture of increases in property values through levies, which in this case enabled an investment of US\$52 million in infrastructure and public spaces (Blanco et al., 2016).
- 2.57 Urban parks help to reduce the use of private vehicles as a part of strategies to combat climate change. In Seoul, Republic of Korea, the restoration of the Cheonggye River created a public recreational space of 16.3 hectares, resulting in a fivefold increase in the number of pedestrians in the area (Lim et al., 2013). In Edinburgh, Scotland, the plan to revitalize the public spaces in the historical center was aligned with the city's plan for adaptation to climate change to 2020 (Banadarin and von Oers, 2014). In Toronto, Canada, the Sherbourne Common Park has a system of ultraviolet light disinfection to treat the runoff water and then discharge it into Lake Ontario by cascading it through art sculptures in a water channel (WT, 2016).
- 2.58 In addition to enhancing the quality and increasing the number of urban parks, several cities are redeveloping industrial areas formerly abandoned due to pollution or obsolete infrastructure. These redevelopment processes are also an opportunity to rationalize the use of urban resources. The remodeling of an abandoned industrial zone in Eindhoven, Holland, created an opportunity to install heat pumps to save energy, using an underground hot water storage system known as Aquifer Thermal Energy Storage (ATES). The use of the ATES system lowered carbon dioxide emissions by almost half (3000 tons), also reducing natural gas consumption. While electricity use increased from 2.4 million kilowatts/hour to 4.7 million kilowatts/hour due to the heat pumps, overall heating and cooling costs decreased by 35% (Slenders et al., 2010).
- 2.59 **Initiatives to enhance the sustainability and resilience of cities.** The effects of climate are elevating the rate of occurrence of catastrophic events. To diminish

¹¹ One of the metrics of SDG 11 is "By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities."

the impact of natural or anthropogenic disasters, urban planning should respond to these events on the basis of probabilistic risk calculations. In addition, it should provide proper standards and techniques for construction and treatment of drainages, solid waste, and urban rivers (Simpson, 2012). Proper coordination between different levels of government and at the metropolitan scale is essential in preventing and addressing catastrophic events (Jabareen, 2013).

- 2.60 Probabilistic risk planning is highly profitable, as documented for cases in countries including Mexico, Colombia, Peru, and the United States (Multihazard Mitigation Council, 2005) (United Nations Office for Disaster Risk Reduction (UNISDR), 2013). In Sorsogon, Philippines, vulnerability maps have been used to plan the relocation of more than 22,000 families and reinforce 30,000 buildings, thus saving US\$3.3 million per year on reconstruction costs (UN-Habitat, 2013). In recent years, responses to catastrophic events have been made easier by the use of open mapping technologies such as Open Streets Maps. For example, in Katmandu, Nepal, the damage from the 2015 earthquake was quickly recorded thanks to information provided by the local community. Fast data collection facilitated rescue efforts and planning for reconstruction. After being hit with hurricane Sandy, the city of New York launched a plan known as A Stronger, More Resilient New York (NYC, 2013). This plan promotes more than 250 initiatives to reduce the city's vulnerability to coastal flooding and storms. London, United Kingdom, has implemented an initiative, known as Managing Risks and Increasing Resilience, to prevent floods, droughts, and heat waves. This initiative increases the number of parks and amount of vegetation and improves the energy efficiency of more than one million homes, among other actions (London, 2011).
- 2.61 Educating the population is critically important in order to enhance urban sustainability. Copenhagen, Denmark, has Europe's lowest level of emissions per capita, thanks in part to the fact that 40% of its population travels by bicycle on a daily basis. Appropriate coordination of land uses and transportation is framed within the city's climate adaptation plan, the objective of which is to achieve zero carbon emissions by 2025 (Copenhagen, 2011). In the region, Quito, Ecuador, approved Quito's Climate Change Strategy (Quito, 2009), which promotes integrating adaptation and mitigation policies with urban planning policy. More recently, Rio de Janeiro presented RioResiliente, a program designed to reinforce the city's climate change adaptation and mitigation actions. The program's main objectives include the dissemination of environmental stewardship practices and the promotion of quality public spaces (PRJ, 2016).

III. MAIN CHALLENGE FACING THE REGION IN THE SECTOR

- A. The current state of urbanization in Latin America and the Caribbean**
- 1. Urbanization in Latin America and the Caribbean is in the midst of a transformation**
- 3.1 The urban characteristics of a territory –the number, size, and order of magnitude of its cities– are in correlation with the technological changes in the means of production (Henderson and Wang, 2005), each city's geographical advantages

and access to international markets (Krugman and Elizondo, 1996), and the performance of the country's national and subnational institutions (North, 1990). Institutional arrangements become incentives that benefit one economic activity over another (for example, services over agriculture), eventually affecting the geographic distribution of the population (Glaeser, 2013). In the case of LAC, the persistence and depth of urban deficits in a context of high urban primacy¹² are evidence of serious institutional shortcomings. These shortcomings are reflected in a lack of national plans to regulate the network of cities (Clark and Clark, 2014), in the weaknesses in municipal governance (Fuchs 2012), and in the absence of effective agreements between the various levels of government acting in a single territory (Davis 2004) and between contiguous territorial entities within a single level of government (Bird and Slack 2007).

- 3.2 In turn, the characteristics of a city are derived from a society's interaction within a specific territory, constrained by both physical and institutional factors (Weber, 1968). Physical factors include the characteristics of the urban infrastructure, housing stock, and habitat¹³ (Kain and Quigley, 1970), while the institutional factors are the social standards and legal provisions that regulate urban governance (Ostrom, 2012). For this reason, it is important to understand the urban deficits in LAC as manifestations of a dysfunctional system that encompasses the national as well as subnational levels¹⁴ and which needs to be addressed comprehensively. Cities in LAC continue to grow in disorderly fashion, with deficits in the provision of urban public services and with weak and obsolete planning instruments (Beall et al., 2009). The two conditions are connected, since the lack of coordination in territorial interventions makes it impossible to efficiently address the existing deficits. This lack of coordination leads to cities with fragmented development, with high disparities in the quality of life of their residents, and with limited capacity to prevent and address environmental risks (Ravaillon et al., 2009). In addition, this lack of coordination is evident in the policies meant to address basic urban problems. This is the case with the housing deficit, which persists even as the production of new housing and the rate of vacant housing continue to increase (OECD 2015). It is also the case with disinvestment in basic infrastructure (Serebrisky, 2015), despite the fact that this adversely affects urban and national productivity levels.
- 3.3 After more than 50 years of urban growth, the region exhibits an unsustainable urbanization pattern, both because of its extensive use of land and because of its low level of productivity and high level of social exclusion. The urban form that

¹² Primacy is the demographic preponderance of a country's largest city with respect to that country's national urban network. This ratio (Pr) is calculated as $Pr=Pi/r$, where Pi is the number of inhabitants in the country's largest city and r is its size range. A country has high primacy if the population of its most populous city is double the population of its second-largest city (Jefferson, 1939).

¹³ The term urban habitat brings together urban ecology and urban design concepts (Lynch, 1984), encompassing both the natural environment and the built environment, its most evident manifestation being the public space (Pickett et al., 2008).

¹⁴ Subnational refers to the levels of governments that govern territorial jurisdictions that are contained within a nation, these include provincial and state governments, and municipal and county governments, among others.

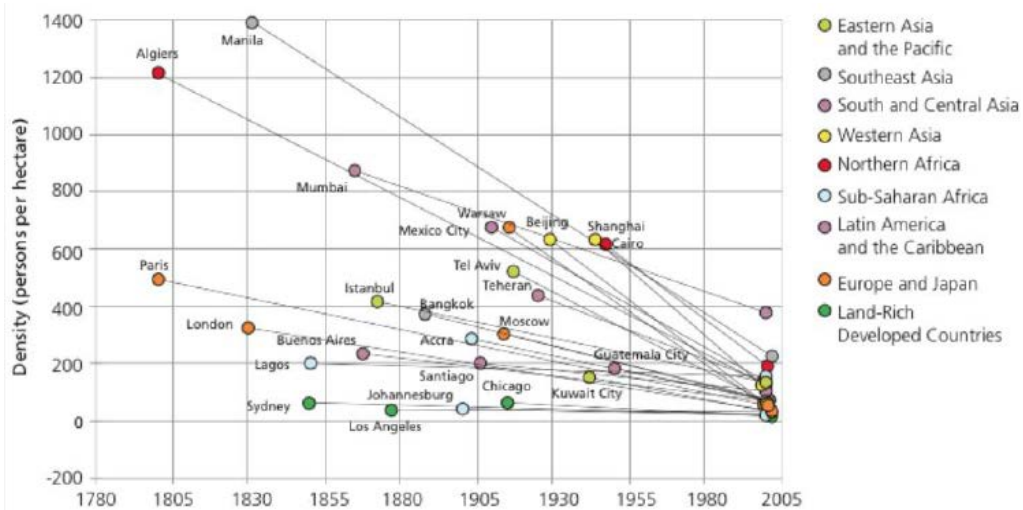
characterizes it is one of rapid expansion and low population density¹⁵ in a context of high environmental vulnerability (Romero Lankao et al., 2015). The average growth rate of the urban population in the region is relatively low, with very little growth in the Southern Cone and with gains in Central America, the Caribbean, and medium-sized cities (UN DESA 2015). Urban productivity is diminished by diseconomies of scale in the region's ten most populated cities, although it shows vitality in medium-sized cities (Brookings, 2015). In all cities and regions, social indices are improving but inequality levels are persistently high (Davis, 2015). The main characteristics of current urbanization in LAC are:

- a. **Expanded urban form.** The annual rate of territorial expansion (4%) is double the population growth rate (1.9%). This accelerates the consumption of natural resources and diminishes the sustainability of cities and their environment (Angel, 2014). The ESCI diagnostic assessment shows that the urban footprint of medium-sized cities in LAC expands very rapidly, with rates that can reach up to almost 9% per year (ESCI, 2016). This expansion tends to come at the expense of agricultural or forest areas and thus diminishes the region's capacity to absorb gas pollutants (Des Fries et al., 2010). Moreover, a more extensive urban area correlates with greater automobile use, bring about a concomitant increase in traffic congestion and pollution. Motorized transport is responsible for more than 42% of gas pollutant emissions, and LAC has the highest motorization rate of any developing region, with figures that are quickly rising. In 1990, 100 of every 1,000 vehicles were motorized, while at present the figure is in excess of 175 (Rodríguez Tejerina, 2015). In addition, density correlates with the level of municipal expenditure, describing a U-shaped function which reaches an optimum density value, following which the congestion costs begin to increase (Ladd 1992). The trend toward expanded urbanization is present worldwide, but given the serious shortcomings in the provision of urban public services in LAC, the externalities of this urbanization model are greater in the region. An empirical study of expenditures in the municipalities of Brazil, Mexico, Ecuador, and Chile finds that the costs of providing water, sanitation, and garbage collection decline up to an optimum value of 9,000 inhabitants per km,² which is a density level exceeding that of 85% of the municipalities in the region (Libertun de Duren and Guerrero Compeán, 2015). While it is true that high levels of population density can lead to a rise in crime rates (Glaeser and Sacerdote, 1999), land prices (Glaeser et al., 2001), and labor costs (Weathon and Lewis, 2001), most of the municipalities in LAC, with the exception of the central areas of the region's large metropolises, are still well below the density levels that would make these negative externalities evident. In addition, when an adequate fiscal policy is in place, governments can capitalize on the density to generate the funds needed to manage it, so that "density pays for itself" (Altshuler and Gómez-Ibáñez, 2000). Lastly, expansion of the urban footprint hinders the governance processes, since it requires greater metropolitan coordination and coordination among service providers, which is critically important for

¹⁵ Density is a typical indicator of the spatial distribution of the population (Forsyth, 2003). Its prominence in empirical studies suggests that, despite its limitations in representing the continuity, nuclearity, and centrality of urbanization, it is a useful indicator for identifying the urban form (Angel et al., 2005). Density indices make it possible to establish comparisons between cities and are less prone to errors of interpretation (Rapoport, 1977).

sustainable urbanization coupled with environmental risk management (Romero Lankao, 2015). (See Figure 1.)

Figure 1: Population density in selected cities, 1780-2005

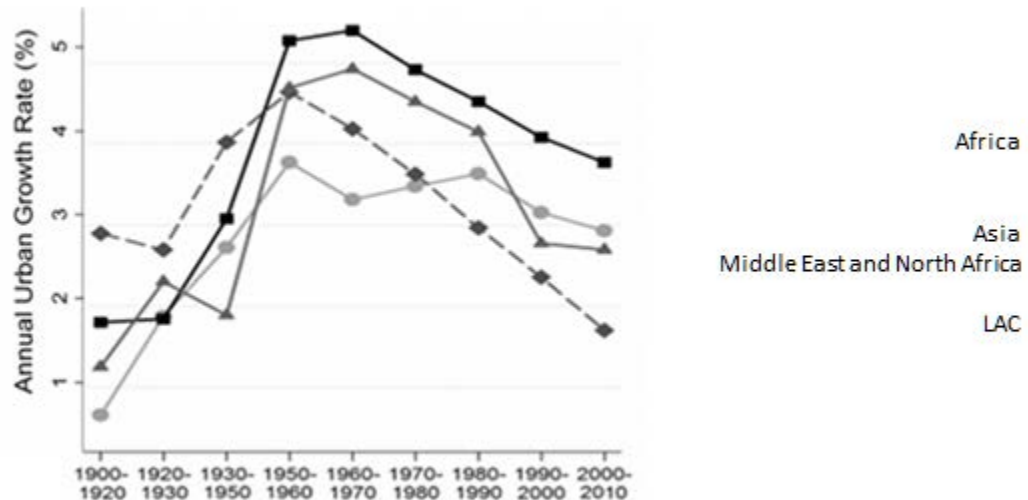


Source: Lincoln Institute of Land Policy, Making Room for a Planet of Cities (2011).

- b. Vegetative demographic growth.** While the urban area in LAC continues to grow, the growth rate of the population is stabilizing and is now less than half of the 4.5% yearly rate that characterized the demographic explosion in the decade of 1950 (UN DESA, 2015). The diversity of LAC is also evident in the region's urbanization process. The percentage of the population residing in urban centers is greater than 85% in the Southern Cone, greater than 70% in Mexico, 70% in the Andean region, 60% in the Caribbean, and 50% in Central America. As expected, the less urbanized a region, the higher its urban population growth rate. Thus, the growth rate of the urban population exceeds 4% in Central America and is less than 1% in the Southern Cone. In addition, in line with the high rates of national urbanization, the demographic share of interurban migrations is greater than that of migrations from rural areas to urban areas. In 1980, one of every three new urban inhabitants in LAC was of rural origin, while the proportion is now less than one of every six (ECLAC, 2012). This demographic growth is concentrated in medium-sized cities (from one million to five million inhabitants), although the weight of the population of the large metropolises continues to be very significant. With a few exceptions, which include Colombia, Brazil, Barbados, Costa Rica, and Chile, the countries in the region lack territorial planning for a network of cities that integrates medium-sized cities (World Bank, 2009; DNP-WB, 2012; OECD, 2013; CDB, 2014; MVA, 2012; MINVU, 2014). LAC continues to be the region with the world's largest percentage of its population in megacities (UN DESA, 2015). The eight most populated cities in the region –Mexico City, Sao 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 house 15% of the population of the Caribbean. At the same time, medium-sized cities house 20% of the region's

population and are growing at a rate of 3%, exceeding the growth rate of the larger cities, which is less than 1.9%. (See Figure 2.)

Figure 2: Annual urban growth rate (%)



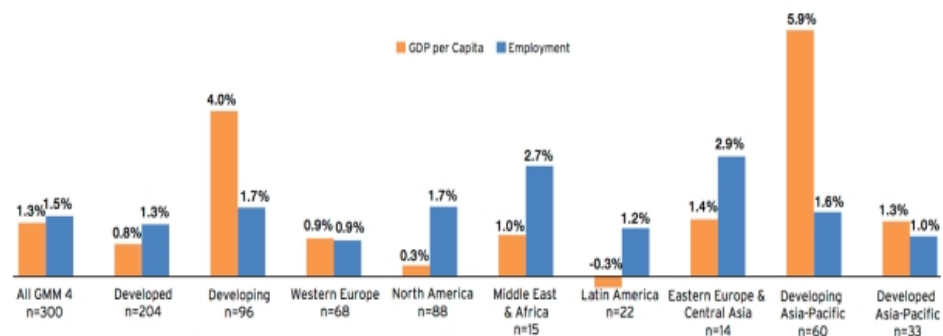
Source: Jedwab, R; Christiansen, L; Gindelsky (2015) Demography, Urbanization and Development: Rural Push, Urban Pull and...Urban Push? Journal of Urban Economics.

- c. **Stagnant productivity.** Sixty percent of the gross domestic product (GDP) of LAC is generated in the region's 198 cities with more than 200,000 inhabitants. This share of GDP is 1.5 times greater than the contribution of the European Community's cities to their region's GDP (Cadena et al., 2011). The heavy dependence of the LAC economy on the region's cities is worrisome in view of the management, service provision and metropolitan governance shortcomings that undermine urban productivity. Between 2013 and 2014, the GDP of the 22 largest cities in LAC contracted at an annual rate of 0.3%, making LAC the only region in the world with negative growth rates in its cities (Brookings, 2015). Under this scenario, the economic contribution of medium-sized cities has tended to rise as the contribution of large cities stagnates. Curitiba in Brazil, Mérida in Mexico, and Medellín in Colombia have exceeded the economic growth rate of their respective countries, while most of the larger cities have grown at a lower rate than their respective countries (Euromonitor, 2012). This dynamic demonstrates the high costs of urban congestion in the large metropolises, which now need to reinforce their fiscal and planning capacity in order to boost their competitiveness. This leads to a vicious cycle of loss of quality of life,¹⁶ starting with disinvestment in infrastructure and the resulting difficulty of urban areas in attracting investments and creating well-paid formal jobs. In turn, job informality harms productivity in urban areas even further while shrinking tax revenue, degrading the quality of the urban habitat, and deepening racial segregation (Satchi and Temple, 2009). Monterrey in

¹⁶ Urban quality of life based on: environmental and climate change sustainability, comprehensive and sustainable urban development, and fiscal sustainability and governance (ESCI 2012).

Mexico, San José in Costa Rica, Sao Paulo in Brazil, and Santiago de Chile in Chile have been proactive in developing an ecosystem of support for innovation (Scheel, 2014). However, the vast majority of cities in the region lack programs for job creation, local economic development, and innovation hubs¹⁷ (Engel and del Palacio, 2009). Lastly, urban governments need to expand their interaction with the private sector, improving the design, risk sharing, and management of PPPs (Guasch et al., 2014) and introducing a prospective vision of the potential impact of new and emerging technologies for the trading and financing of services –such as the *Internet of Things*, crowdfunding, and web-based transportation services– on the urbanization of the region. (See Figure 3.)

Figure 3: Metropolitan GDP per capita and employment growth rates by region and development status, 2013-2014



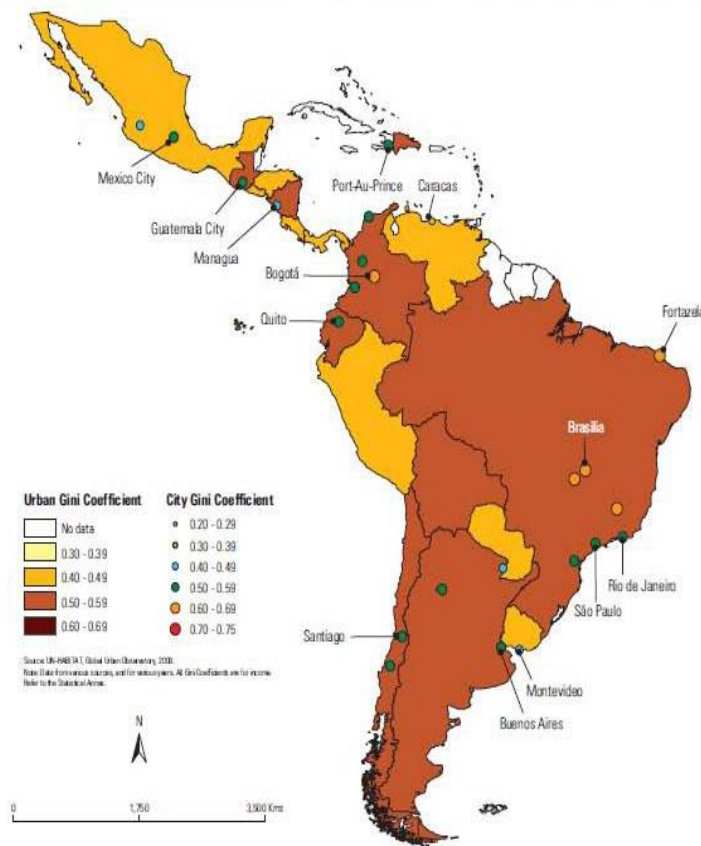
Source: Brookings Institute based on data published by Oxford Economics, Moody's Analytics, and US Census Bureau.

- d. **Societal inequality.** The past decades saw the proportion of poor households decline in LAC, from 48% of total households in 1990 to less than 30% at the present time, as more than 73 million of the region's inhabitants raised their income above US\$10 per day (Ferreira et al., 2013). However, social inequality continues to be high, with an average Gini coefficient of 0.49 that is even higher at the intra-urban level (OECD, 2011). For example, the Gini coefficient for Montevideo is almost ten points higher than for Uruguay. This phenomenon, in which a city's Gini exceeds the Gini of its respective country, also occurs in Mexico City, Guatemala City, Managua, Barranquilla, Quito, Santiago de Chile, Asunción, Buenos Aires, Rio de Janeiro, and other cities (UN-Habitat 2012). Urban income inequality persists even when there is a decline in the national Gini coefficient or an increase in average income (UN-Habitat, 2011). At the same time, spatial segregation in Latin American cities becomes more entrenched (Davis, 2015). Recent decades have also witnessed changes in the characteristics of households. A lower birth rate, a higher life expectancy, and new social patterns have transformed the profile of urban households. In 1980, there was an average of four children per household; since 2010, the average is less than two (CEDB, 2010). At the same time, the percentage of people older than 60 continues to grow in all countries. By 2014, for the first time,

¹⁷ Concentrations of interconnected organizations in which proximity leads to advantages for all participants through an aggregation of knowledge and resources (Porter 1990).

this segment of the population will be more numerous than the percentage of those under the age of 15, thus reversing the demographic growth pattern in the region (Economic Commission for Latin America and the Caribbean (ECLAC), 2011). In addition, the number of civil marriages has declined and the number of unmarried-partner households has increased significantly. According to the 2000 census, the region's cohabitation rate households with women 25 to 29 years of age was 35%, and more than 50% in Colombia, Cuba, Nicaragua, Panama, Peru, and Venezuela (Esteve, 2013). In the 2010 census, Argentina, Brazil, El Salvador, and Uruguay also show a cohabitation rate exceeding 50% in the case of the above-described household cohort (López-Gay et al., 2014). (See Map 1.)

Map 1: Urban Gini coefficient for Latin American and the Caribbean



Source: UN-Habitat (2012) State of the World's Cities 2010/2011 – Cities for All

2. Urban deficits persist in LAC

3.4 The valuable improvements in the region's social indicators are not enough to close the gaps in access to housing and urban public services or to significantly improve the urban habitat and urban governance (World Bank, 2013). Moreover, the increase in average income of the urban population boosts the demand for quality in services (IDB, 2015). This is particularly significant in areas such as

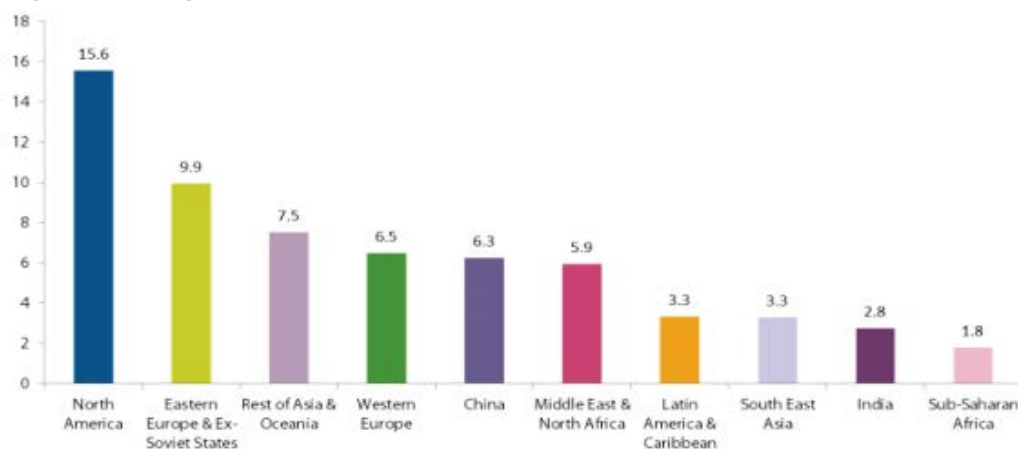
- housing and public spaces, where households understand that the value of these services declines if they are not supplemented by access to adequate transportation, investment in maintenance, and security.
- 3.5 Most cities face serious problems in managing their territory, protecting their historical heritage, and providing quality public spaces. Many of these problems are accentuated in the region's major cities, which have not yet succeeded in establishing appropriate metropolitan arrangements. One positive change is that these issues have started to appear on the agendas of both the national and subnational governments. In both cases, governments understand the need for territorial development plans at several scales in order to prevent the management problems of large cities from being replicated in medium-sized cities. However, major difficulties persist in institutionalizing territorial planning, coordinating the development plans of different jurisdictions, and creating long-term urban policies (ESCI, 2015). Municipal governments lack the resources and institutional capacity required to address these deficits; and to effectively coordinate the response to the new demands of this urbanization stage with other levels of government, civil society, and the private sector. The housing deficit shows some relative improvements in terms of expanded low-income housing programs and private sector participation, yet the demand for affordable housing is rising more rapidly than the supply. The percentage of households with a housing deficit declined between 1995 and 2009, and it is estimated that this trend is continuing (Bouillon 2012). However, in absolute numbers, the situation is different: it is estimated that in 1990, 51 million households had a housing deficit of some sort, while the current figure for households with a housing deficit is more than 55 million (UN-Habitat, 2015). Lastly, a high percentage of the urban population remains without access to basic services and, despite improvements, informal neighborhoods continue to be home to one third of the region's residents (UN-Habitat, 2016).
- 3.6 All countries in the region have deficits in terms of governance, access to housing and urban public services, and quality of the urban habitat. However, there are clear differences from country to country. While substandard housing affects less than 15% of Chilean households, it is estimated that more than 30% of Peruvian households are affected (UN-Habitat, 2015). The deficits in services are significant in large and medium-sized cities and are particularly high in the Caribbean. In Haiti, the most extreme case in LAC, more than 70% of households lack adequate sanitary services, while in Costa Rica the figure is less than 13% (UN-Habitat, 2016). It is estimated that addressing the deficits in services and basic infrastructure in the region would require adding 2% to 2.5% of the 2103 GDP to the current investment level¹⁸ (Serebrisky et al., 2015). In all countries, public spaces need to be better maintained and improved; insecurity rates in cities in LAC continue to be the highest in the world (IDB, 2014). Lastly, the fiscal capacity of subnational governments is limited and the potential for improvement is uneven: property tax revenue per capita in the Caribbean is one third of the figure in the Andean countries (Sánchez and España, 2014).

¹⁸ This value does not include the costs of adaptation to climate change until 2050, which are projected to range from US\$16.8 billion to US\$21.5 billion per year (World Bank, 2010).

3. Environmental vulnerability is the new urban challenge

- 3.7 Cities in LAC face an asymmetrical situation with respect to climate change: their contribution to climate change is relatively low, since they account for only 10% of total global emissions, but their vulnerability¹⁹ to the negative effects of climate change is extremely high (ICLEI, 2014). Five of the world's ten countries most affected by extreme climate events between 1994 and 2014 are located in the region. They are, in order of magnitude: Honduras, Haiti, Nicaragua, Dominican Republic, and Guatemala (Kraft, 2015). In addition, 56% of the population of Suriname and 20% of the population of Bahamas is located in flood zones (World Bank, 2010). In all cases, cities account for the majority of households vulnerable to extreme climate events (Intergovernmental Panel on Climate Change (IPCC), 2014). Should this trend continue, it is estimated that by 2050, the losses in the LAC region's economy from the impact of climate change could be equivalent to almost 5% of the region's GDP (ECLAC, 2015).
- 3.8 The high vulnerability of cities in LAC contrasts to their low level of per-capita emissions, which is still well below the level of cities in more developed countries. For example, per-capita emissions of carbon dioxide in Sao Paulo are almost eight times lower than in Washington, D.C., United States (Romero Lankao, 2008). However, as income per capita and urbanized land increase in LAC, the region's vehicle fleet also tends to expand, leading to a rise in per-capita emissions. For example, between 1980 and 2000, Mexico's urbanized surface area grew by 600%, from 192,000 hectares to 1.14 million hectares. Over the same period, the motorization rate (number of vehicles per 100,000 inhabitants) grew from 90 to 300 (UN-Habitat, 2015), with transportation being responsible for more than one third of urban carbon emissions (Romero Lankao et al., 2004). (See Figure 4.)

Figure 4: Average per-capita emissions in cities of more than 500,000 inhabitants, 2012



Source: London School of Economics (LSE) Cities 2014 (based on an analysis of data developed by Oxford Economics (data in tons)).

- 3.9 The population and the infrastructure of the cities in the region are particularly vulnerable to heat, floods, droughts, and extreme climate events such as

¹⁹ The European Commission considers that vulnerability is composed of susceptibility and resilience, defined as the capacity to resist and recover (ECLAC, 2012).

earthquakes, storms, and tsunamis (IPCC, 2007). Heat waves boost the rate of respiratory and cardiovascular disease in the population, especially in cities with high levels of air pollution. There is a correlation between the rise in maximum daily temperature and mortality in cities with poor air quality, such as Mexico City, Bogotá, and Santiago de Chile (Romero Lankao et al., 2013). The rise in average temperatures also puts water sources at risk, particularly in Central American and Andean cities. In Central American cities, this risk is associated with the pronounced trend toward lower rainfall and an extended drought season (Bates, 2008). In Andean cities, the risk of water shortage is due to the fact that water is dependent on glaciers masses such as the Cordillera Real, which has seen its volume decline by 50% since 1970. This mountain range is the source of one fourth of the water consumed in La Paz, Bolivia, and large part of the water consumed in Quito, Ecuador, while Lima, Peru, obtains its water from rivers that originate in glaciers (Rodríguez Tejerina, 2015). Floods are a serious threat, since three quarters of the population in LAC lives in low-lying coastal areas. Cities in the Caribbean and those bordering on the Atlantic Ocean are particularly vulnerable, both because of rising ocean levels and due to the lack of adequate infrastructure to handle storms and intense rains. In the Caribbean, Georgetown, Havana, and Kingston are particularly susceptible to floods, and this is also true of Buenos Aires, Montevideo, Sao Paulo, Rio de Janeiro, and Salvador de Bahia on the Atlantic (Satterthwaite et al., 2007).

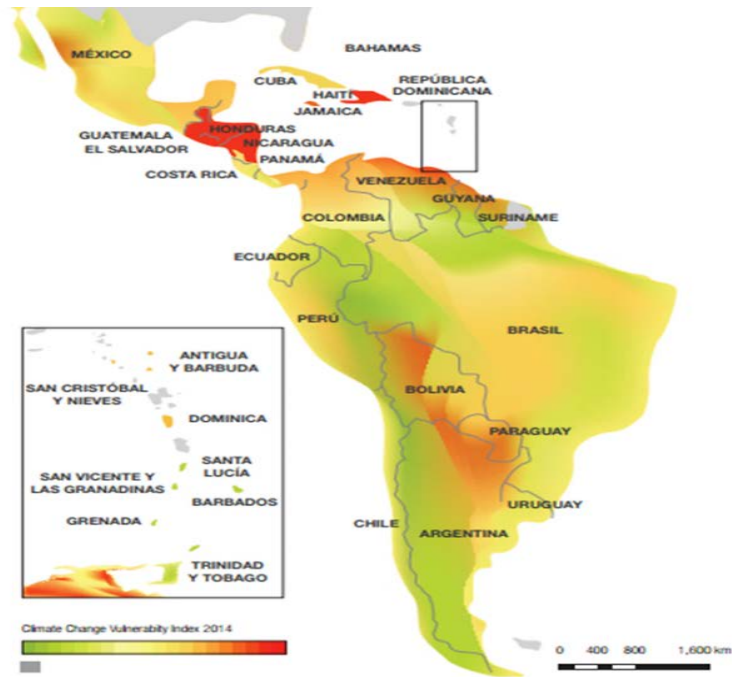
- 3.10 Cities in the region are also highly vulnerable to natural disasters, which take a very high human and economic toll (Hardoy, 2011). For example, the damage caused by the earthquake that hit Port-au-Prince in 2010 amounted to 120% of Haiti's GDP (ECLAC, 2010). The flood in Santa Fe, Argentina, in 2003 caused losses equal to more than a third of the annual provincial budget (World Bank, 2012). The earthquake in Ecuador in April 2016 –the most intense since 1949– caused 633 deaths and forced the relocation of more than 26,000 people to temporary shelters, with damage and losses estimated at US\$3 billion. In addition to these high-intensity disasters, there are climate and geophysical events of lesser impact but of high frequency, and they also cause extensive damage and losses. For example, in Mexico, minor disasters occurring in 2012 and 2013 resulted in 613 deaths, directly affected 3,073,037 people, and destroyed 29,901 homes (UNISDR, 2013).

4. All levels of government play a part in urban sustainability

- 3.11 Addressing environmental vulnerability and enhancing the sustainability of cities require coordinated efforts by the various levels of government and sectors of society (IPCC, 2014). The Paris Agreement of COP21 reflects the commitment of 175 countries to support policies that will enhance sustainability, recognizing that this requires work at “the national, subnational, and local levels” (UN 2016 Art. 11.2). In addition, SDG 11 is a call to “make cities and human settlements inclusive, safe, resilient, and sustainable” (UN, 2015). Along the same lines, the New Urban Agenda of Habitat III, scheduled to take place in Quito, Ecuador, in October 2016, proposes actively seeking “inclusive urban sustainability” (Habitat III, 2016).
- 3.12 Consistency between initiatives by the various government levels and multisector plans is crucial for purposes of implementing sustainable urban plans (Elliot,

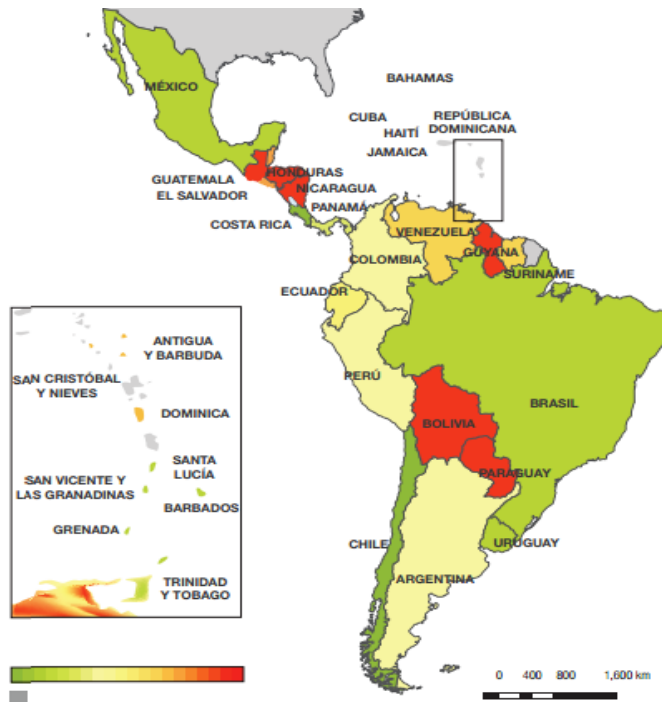
- 2012). It falls to the national governments to establish long-term objectives and provide resources to help in achieving them. In addition, the national governments are responsible for supporting interjurisdictional coordination of municipal risk plans and the systematic inclusion of these plans in sector policies (Echenique et al., 2012). At the same time, the private sector, nongovernmental organizations, and local communities play a key role in improving urban sustainability, both by creating synergies between public and private-sector investments and by fostering the adoption of sustainable practices (Carley et al., 2013).
- 3.13 The high rate of urbanization and primacy in LAC can be an opportunity for encouraging a more sustainable growth, since large agglomerations make it possible to amortize the cost of adopting technologies with a lower environmental impact, such as mass transit or conversion to alternative energy sources (Helsey and Strange, 2014). Cities also enable fast and mass dissemination of new patterns of behavior (Castells, 2015). However, most cities lack the resources needed to carry out effective environmental policies. Subnational governments lack the data and capacity to create environmental vulnerability maps that can identify population groups and infrastructure in critical condition (Smith, 2013). This lack is compounded by fiscal management and funding problems.
- 3.14 Recent years have witnessed a growing interest in introducing the issue of environmental sustainability into urban planning. Increasing numbers of cities in LAC participate in activities aimed at mitigating the carbon footprint and improving the capacity to adapt to climate change. Eleven cities in the LAC region are members of C40 (www.c40.org), the global network of megacities that promotes good practices for reducing environmental risk. These 11 cities, as well as 9 others in LAC, became signatories of the Covenant of Mayors, a commitment by city governments to reduce their emissions levels (www.c40latammayorsforum.org). Cities in LAC are also active members of ICLEI –Local Governments for Sustainability (www.iclei.org), a global association for sustainability comprising more than one thousand local governments, with an office in Mexico City for cities in Central America and the Caribbean, and another in Sao Paulo for South American cities. In addition, 23 cities in LAC participate in the Metropolis network, while more than one thousand smaller municipalities in two Caribbean countries and seventeen Latin American countries participate in the Federación Latinoamericana de Ciudades, Municipality y Asociaciones [Latin American Federation of Cities, Municipalities, and Associations] (FLACMA) (www.flacma.com). Both organizations are part of United Cities and Local Governments (UCLG), which supports knowledge sharing among local governments (www.uclg.org). (See Map 2 and Map 3)

Map 2: Vulnerability to climate change in LAC



Source: CAF & Maplecroft. (2014). Vulnerability and adaptation to climate change in LAC

Map 3: Capacity for adaptation to climate change in LAC



Source: CAF & Maplecroft. (2014). Vulnerability and adaptation to climate change in LAC

5. A framework for sustainable urbanization in Latin America and the Caribbean: productive cities that are less vulnerable and that promote inclusive mitigation

- 3.15 The households most vulnerable to climate change are those located in areas with poor infrastructure, as well as low-income households, female-headed households, senior-headed households, and households with a disabled member (Awuor and Adwerah, 2008). In the majority of cities in LAC, these households are largely concentrated in informal housing developments in environmental risk areas (Hardoy and Pandiella, 2009). For example, more than a million people reside on the slopes of Tijuca, in Rio de Janeiro, and are therefore subject to great risk from rain-induced mudslides (de Sherbinin, 2007). This is similar to the situation faced by the informal neighborhoods of Caracas (Mata and Nobre, 2006). In addition, as temperatures rise, these households, having no sanitary infrastructure, are at greater risk of contracting endemic tropical diseases such as dengue, malaria, and zika (Fauci and Morens, 2016). For example, in Salvador de Bahia, Brazil, the risk of leptospirosis²⁰ infection is four times greater for those lacking sanitary sewerage than for the rest of the urban population (Airol et al., 2011). Furthermore, residents of formal neighborhoods which nevertheless have obsolete infrastructure are at high risk in the event of a flood or earthquake. Moreover, heat waves reduce the longevity of the urban population, particularly of people above the age of 60 (Bell et al., 2008), which is the fastest-rising population segment in the region.
- 3.16 Mitigation involves promoting practices that minimize the negative environmental impacts of urbanization. In countries with higher per-capita income, the State frequently resorts to market mechanisms to encourage such practices on the part of individuals and businesses (Merritt and Stubbs, 2012) by, for example, granting tax benefits to those who adopt sustainable technologies, raising the relative cost of polluting practices, and/or monetizing the value of the environment (International Monetary Fund (IMF), 2016). To date, the only countries in LAC that have elected to explicitly tax carbon emissions are Chile and Mexico (World Bank, 2015), while Sao Paulo has become a pioneer at the subnational level by creating an emissions market (Tejerina, 2015). Other strategies utilized in the region are based on a differential cost structure that rewards sustainable practices. This is the case with the Brazilian Development Bank (BNDES), which offers loans at preferential rates for sustainable infrastructure projects (Miller and Viscidi, 2016). Various countries regulate the construction industry with a view to improving its environmental performance. Peru, Guatemala, and Costa Rica support sustainable architecture programs; Argentina, Brazil, Chile, Colombia, Mexico, and Panama include energy efficiency criteria in low-income housing projects (UNEP, 2014). In addition, the private sector in LAC has shown interest in voluntarily adhering to LEED standards (www.usgbc.org/leed) or to the sustainable construction standards of the International Organization for Standardization (ISO) (www.iso.org).

²⁰ Leptospirosis, or Weil's disease, is an infectious disease transmitted to humans by animals through direct contact with an infected animal or an environment that has been contaminated by the germ. Frequent infectious agents in urban areas include rodents and dogs or stagnant water. Infection in humans can produce a variety of reactions ranging from fever to death.

- 3.17 Given the high degree of informality in the construction industry and in the provision of urban public services in LAC, it is important to supplement approaches based on tax incentives and regulation with measures that promote a denser urbanization pattern and access to urban infrastructure for all households. Considering the high cost of expanding service networks, there is a need to encourage the use of the existing infrastructure, rehabilitating urban areas and increasing the affordability of housing in city centers. In turn, there is a need to increase the number of trees in urban areas and protect natural reserves from land invasions and commercial development. These reserves are the most efficient means of improving air quality and lowering average temperatures and urban GHG emissions by 5% to 20% (Akbari and Konopacki, 2003). Lastly, there is a need to include local communities in efforts to disseminate and educate households on environmental protection (Carley et al., 2013).
- 3.18 Despite evidence of LAC's vulnerability, adaptation and mitigation actions²¹ are not yet predominant in the region's agenda, often due to the assumption that support for sustainability comes at the expense of investment in social equity. Yet neglecting environmental sustainability further deepens the problems of vulnerability and sociospatial exclusion in LAC cities. Addressing vulnerability simultaneously advances the sustainability and development agendas in accordance with the COP21 agreements and the SDGs.²² The concept of vulnerability encompasses physical, ecological, and socioeconomic aspects (ECLAC, 2012). The poorest households are the first and most seriously affected by environmental problems, and they are also those with the least resources to recuperate after these problems (World Bank, 2011). Floods are worse in neighborhoods with no sanitary or storm water infrastructure, while the lack of adequate streets and pavements hinders the evacuation of residents in cases of emergency (Satterthwaite et al., 2007). In addition, households with no title on their homes lack access to a disaster insurance system and have fewer savings to offset any material losses caused by such disasters (Moser, 2010). Lastly, the poorer the population, the greater its exposure to the problems of environmental pollution, which are worsened by the higher temperatures (Baker, 2012).
- 3.19 Social exclusion encourages disorganized urban expansion, and vice versa, undermining the effectiveness of mitigation policies in urban areas. The high cost of housing –due to a lack of urbanized land– has contributed to the construction of informal neighborhoods in periurban areas (Roy, 2005). At the same time, the lack of adequate urban public services, including security and public spaces, has driven the construction of private housing developments in periurban areas (Libertun de Duren, 2009). Furthermore, unequal access to public services lowers the returns of adopting less polluting technologies. This is the case with solid waste recycling, the benefits of which decrease when one fourth of the population disposes of its waste in informal ways, often polluting watercourses or burning toxic substances. Less than 60% of urban solid waste in LAC –400,000 daily tons– is recycled or properly treated (Marello and Helwege, 2014). Similarly,

²¹ IPCC proposes the following definitions (IPCC, 2007): **Adaptation** is an adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. **Mitigation** is an anthropogenic intervention to reduce the anthropogenic forcing of the climate system; it includes strategies to reduce greenhouse gas sources and emissions and enhance greenhouse gas sinks.

²² www.un.org/sustainabledevelopment/cities

limits on vehicle pollution and municipal regulations for the protection of forest reserves are not effective in the presence of high levels of informality (Satterthwaite, 2008).

- 3.20 Lastly, the region needs to develop a homegrown urbanization model that creates synergies between productive activities and those supporting a reduction in the urban carbon footprint. This suggests a concept of sustainability based on the premise that green projects offset their cost and generate savings that benefit the entire urban system (Conelly et al., 2013). These synergies draw inspiration from the notions of circular economy and urban metabolism (Roseland and Spiliotopoulou, 2016). The former posits that productivity can be substantially boosted by applying designs and technologies that use resources ecologically (von Weizsacker et al., 2009). Urban metabolism establishes efficiency relationships between the use of energy and human waste levels, looking at the complete production and consumption cycle of goods and services (Moore et al., 2013). These strategies have the potential for higher economic and environmental returns when they are implemented at conurbation levels and are coordinated with national policies (Marull et al., 2013).

B. Main challenge and areas of Bank intervention in the Sector

- 3.21 The main challenge facing the region in the urban development and housing sector is to extend the full benefits of a sustainable and productive urbanization to all residents of the region's cities. Unsustainable urbanization punishes the poorest the most, while the lack of social inclusion erodes the effectiveness of mitigation actions. In addition, a decline in urban productivity affects national development and the chances to prosper of those who need it most. Therefore, in the urban area, there is a need to integrate policies that pursue equity with those that promote sustainability and productivity, and to do so in coordination with the various levels of government as well as with the local communities and private sector. Institutional weaknesses in regulating urbanization, whether at the national, regional, or municipal level, are evident in the four great problems that affect the cities in the region: (1) deficits in urban governance; (2) deficits in urban infrastructure and public services; (3) deficits in housing; and (4) deficits in the urban habitat.

1. Deficits in urban governance

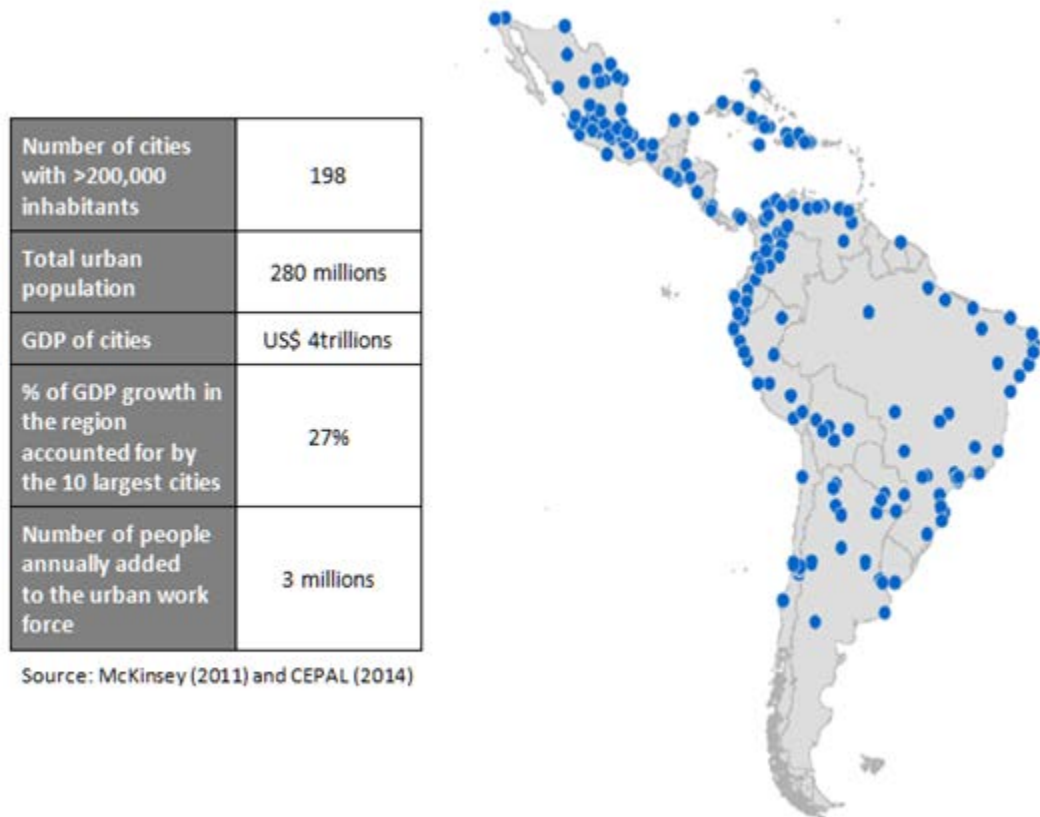
- 3.22 As a result of rapid urbanization without a proper institutional structure to guide it, there is an endemic lack of national and subnational territorial planning policies, leading to fragmented governance of the urban territory. This absence of institutional mechanisms and incentives for coordination between the different levels of government reduces the productivity of metropolitan areas (Ahrend et al., 2014), increases sociospatial segregation (Aquino and Gainza, 2014), and hinders sustainable management of urbanization (Belsky et al., 2014). Municipal governments have neither the proper tools nor the regulatory context required to manage common natural resources, such as watersheds and forest areas (Merlinsky, 2016); (Pauchard, 2013). Intermunicipal coordination is still weak; even the major metropolitan areas lack the appropriate legal mechanisms to formalize coordination arrangements between municipal urban plans and budgets (Bahl and Bird, 2013). Coordination is even weaker in conurbated

municipalities, which lack an adequate institutional structure to manage issues related to climate change and environmental risk (Hardoy et al., 2013). It is important to recognize the diversity of governing institutions within the region. In particular, the territorial organization of the Caribbean presents low levels of fiscal and political decentralization. In addition, local institutions lack the data and the technical capacity needed to manage environmental risks, and do not have a system of municipal reserve funds or insurance in place to mitigate disasters (Jones and Strand, 2013). It is essential that municipalities have access to smart management and proper planning instruments, as well as the proper means of migrating to them. Lastly, local governments need to proactively promote sustainable practices and low-polluting technologies (Lehman et al., 2015) in collaboration with the private sector and the local communities.

- 3.23 In view of this context, it is not surprising that the governance capacity of cities is weak and characterized by limited financial autonomy, low competitiveness, scant and unrepresentative citizen participation, and difficulties in managing territory and environmental risks (Clarke and Pineda, 2007). There is a need to reverse the trend toward urbanization without productive development (Fay and Opal, 2000). In LAC, unlike the case in industrialized countries, there is no correspondence between advances in the urbanization rate and an increase in productivity per capita (Jedwab and Wollrath, 2015). National governments play a key role in promoting long-term territorial development, which prevents migrations to large cities due to a lack of opportunities in rural areas and smaller cities (Portes and Walton, 2014). In turn, cities need to have infrastructure investment plans that integrate urban planning with productive development (Glaeser and Joshi-Ghani, 2014).
- 3.24 The weaknesses in municipal governance impair urban competitiveness. On average, it takes 55 days to complete the procedures needed to open a new business in one of the region's cities, one third less time than ten years ago, but still twice as long as in OECD cities (World Bank, 2013). Only a few city governments in LAC have units devoted to promoting competitiveness and innovation. Sao Paulo, Mexico City, Santiago de Chile, and Bucaramanga, Colombia, have achieved significant improvements in their competitiveness indices thanks to economic development plans (Economist Intelligence Unit (EIU), 2013; World Bank, 2015). Strengthening governance and the economy enables the implementation of mitigation policies, which need to be coordinated with the private sector. In addition, governance's weaknesses disincentive private investment, inasmuch as they increase transaction costs and risk levels.
- 3.25 At present, 80% of the region's citizens receive services through municipal governments, making it essential to improve the governments' capacity to serve their citizens. To this end, it is critically important to boost the level and representativeness of citizen participation (Devas, 2014). At the present time, less than 8% of LAC residents participate in municipal councils (half as many as in the United States), and women as well as residents of large cities are severely under-represented (Montalvo, 2008; Helms et al., 2016). While subnational governments have begun to introduce new virtual platforms for communicating with residents, this does not of itself ensure that the population is well represented. Internet use has been significantly expanded, from an average of fewer than 2 broadband subscribers per 100 inhabitants in 2006 to more than ten

broadband subscribers per 100 inhabitants today, but access to digital information is still highly stratified by income level (Gallego and Gutiérrez, 2015). (See Map 4.)

Map 4: Basic statistics for cities in Latin America and the Caribbean



Source: Clark, G (2015). Examination of the IDB Urban Environments Program and the future role of the Emerging and Sustainable Cities Initiative (ESCI). Final version. IDB.

2. Deficits in urban infrastructure and public services

- 3.26 The region has serious shortcomings in the provision of urban infrastructure and public services, in spite of which State investment in infrastructure has declined with respect to 1980 (Serebrisky, 2015). According to ESCI estimates, close to US\$29 billion would be needed to close the gaps in infrastructure provision in 34 medium-sized cities in the region. Addressing this demand requires improving territorial planning to take better advantage of the service capacity of the existing infrastructure and anticipating the demand for new infrastructure due to an expanding urban footprint. It also requires diversifying the sources of financing available to subnational governments, boosting their tax revenue collection, stabilizing intergovernmental transfers and making them more transparent, and attracting private-sector capital to finance urban infrastructure. However, local governments in LAC have difficulty in moving forward in this direction.

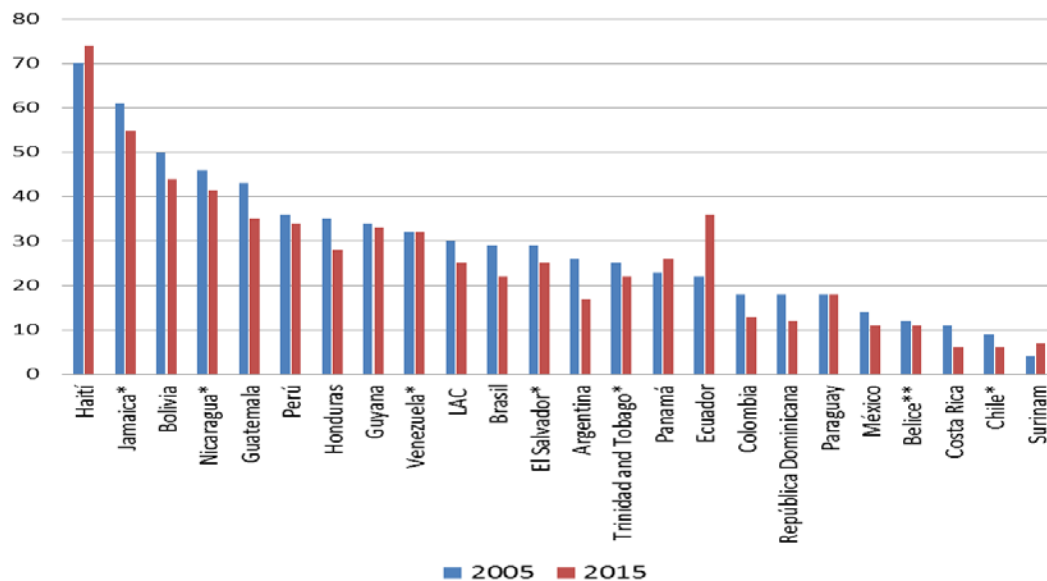
- 3.27 Subnational governments face technical limitations that limit their capacity to increase their own revenue and to address demand for urban public services. In addition, the institutional framework of subnational governments does not always maximize their performance. This is particularly the case when there are no incentives to improve spending or own revenue collection (Fretes and Ter-Minassian, 2015). Recent figures indicate that property tax collection constitutes 0.3% of the region's GDP, six times less than in OECD countries (IDB, 2015). In addition, intergovernmental transfers, which account for close to 67% of the region's subnational revenue, are typically allocated by the central governments on a discretionary basis. This impairs the capacity of local governments to prepare multiyear investment budgets and to obtain access to loans and other debt instruments (IDB, 2015).²³
- 3.28 Despite persistently high deficit and informal urbanization levels, the region continues in its trend toward improved provision of water and sanitation services to urban households. From 2005 to the present date, the proportion of urban households with access to drinking water, which is one of the SDG objectives, has increased slightly in the region, from 93% to 94%. The greatest progress over this period has been made by Belize and Paraguay, while coverage of water service for urban households in Haiti has dropped from 76% to 65%. LAC has also witnessed an improvement in the percentage of urban households with homes connected to sanitation networks. This percentage has gone from 83% to 86%, with improvements in all countries in the region and gains of more than five percentage points in Barbados, Bolivia, Ecuador, Honduras, and Nicaragua (UN, 2016). Approximately 45% of the LAC population has daily waste collection service, while 53% receives this service every two to five days and 2% receives it once a week (Grau, Terraza et al., 2015). Expanding access to basic municipal services, such as water, sanitation, and waste collection, lowers the impact of heat waves on the vulnerable population groups and at the same time reduces soil and groundwater contamination.
- 3.29 Informal neighborhoods with deficient water and sanitation infrastructure, and neighborhoods located in areas at high risk of environmental disasters, are home to more than 86 million households in LAC, almost 25% of the region's urban population. While high, this percentage is significantly lower than in other developing regions (Habitat III, 2015).²⁴ Furthermore, the positive trend in LAC continues, with a reduction of 5 percentage points over the last ten years and of more than 20 percentage points since 1990. Since 2005, 20 million urban residents –for the most part Brazilian and Argentinian– have gone from living in an informal settlement to living in a formal one. However, Bolivia, Guatemala, Guyana, and Peru have added residents despite reducing the percentage of their population in informal neighborhoods. Moreover, since 2005, Ecuador, Panama, Haiti, and Suriname have recorded an increase of 2% to 15% in households living in informal neighborhoods, with almost 1.5 million households being added in Haiti and 1.8 million households in Ecuador (UN, 2016).

²³ Private-sector participation in urban infrastructure is relatively low, due to both the limited development of the financial markets and the limited borrowing capacity of local governments (ESCI, 2016).

²⁴ The percentage of households living in informal neighborhoods in Africa and in Asia is 62% and 30%, respectively. UN-Habitat (2013), The State of the World Cities Report 2012/13.

3.30 Rapid territorial expansion and an increase in the motorization rate have worsened urban mobility (Suzuki, Cervero, and Luchi, 2013). For example, in Mexico City, two new vehicles are added for every new inhabitant (Jirón, 2011). A resident of any of the region’s 15 largest cities devotes on average an hour per day to intra-urban travel, with the exception of Mexico City and Santiago de Chile, where the average time is more than one and a half hours (CAF, 2016). The lack of mobility reduces household productivity, creating negative externalities equivalent to almost 15% of the average income of an urban household and as high as 30% in Lima (Hidalgo and Huizenga, 2013). In addition, vehicle congestion increases environmental pollution and GHG emissions (Jirón, 2013). The poorest segments of the urban population are the most affected by mobility problems, since they typically reside in areas with limited connectivity and spend a larger percentage of their income on transportation (Cervero, 2013). Despite this, only a few cities integrate investments in transportation with the urban planning modality known as transit-oriented development (TOD) (Cervero, 2014). In addition, the region has a long way to go in applying intelligent systems (Smart Cities) to optimize expenditure in services and better regulate urban energy consumption, reduce vehicle congestion, and monitor urban security (Townsend, 2013) (see Figure 5).

Figure 5: Percentage of urban population in informal neighborhoods by country for the years 2005 and 2015



* Data extrapolated from 2005 to 2015; ** Data extrapolated from 1995 to 2005

Source: [Prepared in-house based on United Nations data regarding the Millennium Development Goals](#) (MDG, 2016)

3. Deficits in Housing

3.31 The region has improved in terms of the percentage of households with access to housing. However, 55 million households are still affected. It is estimated that 45% of the LAC population is in a housing-deficit situation, although at the national level, this percentage ranges from less than 20% in Chile to more than

- 75% in Bolivia. Of the households with deficits, 75% are subject to a qualitative deficit (overcrowding with three or more people per room, lack of water, sanitation, or electricity services, or lack of secure tenure), and the remainder is subject to a quantitative deficit (makeshift housing or housing shared with another household). While the housing deficit affects all quintiles, one third of housing-deficit households belong to the poorest quintile (Rojas and Medellín, 2011).
- 3.32 Several countries have a long history of policies in support of access to low-income housing, Brazil, Mexico, and Panama being the countries that have invested the most in this sector between 2001 and 2012, with an average annual investment of 1.8% of GDP (OECD, 2015). While the OECD countries typically fund low-income housing through the capital markets, the less developed countries do so based on national savings and sovereign-guaranteed loans, which increases the sensitivity of housing finance to the countries' economic cycles. In addition, this means that investment in housing competes with investment in other essential social services, such as health and education (Dasgupta et al., 2014).
- 3.33 Most policies in support of low-income housing have favored tenure over rental housing, even when assisting households with limited home purchasing ability or interest. More than 70% of households are self-declared homeowners, but this figure includes both formal and informal housing and does not indicate the quality of the home (Bonomo, 2015). However, current housing policies based on demand subsidies and regularization of informal neighborhoods are not fiscally sustainable (Blanco, Fretes, and Muñoz, 2014). In addition, owner-occupied housing is not the most appropriate solution for every household, particularly for young, divorced, and migrant worker households. For both reasons, there is a need to promote a diversification of the housing supply, simplifying the regulatory framework, which discourages private-sector investment in rental housing (Gilbert, 2016). Recently, several countries have shown growing interest in policies aimed at supporting rental housing, such as rental support in Chile through demand subsidies in response to demand for well-located homes (Bain et al., 2014) and rental legislation reform in Peru and Colombia to streamline the housing market (Ramírez, 2014; Calderón, 2014).
- 3.34 With the exception of Chile, development of the mortgage market in the LAC countries is limited, even in comparison with other developing regions, accounting for 7% of GDP and less than 20% of private-sector bank portfolios. It is worth noting the strides made in the last decade by several countries in the region, including Brazil, Chile, Colombia, Mexico, Peru, and Uruguay, in expanding mortgage availability. This progress has been made possible by a series of structural reforms in the systems regulating real estate properties and mortgage lending. For example, Brazil in 2005 and Mexico in 2007 reformed the regulatory provisions regarding bankruptcy and property rights and updated the systems for recording credit history (Cubeddu et al., 2012). However, as long as high levels of job informality and instability continue to exist in the region's economies, there will be serious barriers to expanding access to household credit (Bouillon, 2012). In addition, deficiencies in financial regulations and credit institutions limit the supply of mortgage loans (Bebczuk and Demaestri, 2014).

- 3.35 The deficit in urban housing is attributable not only to the shortcomings of the mortgage market but also to the high cost of homes. A lack of urban lots with services makes housing a scarce good, unaffordable for low-income households (Smolka and Biderman, 2011). For this reason, in the absence of State intervention, the construction industry does not build homes for the low-income segments of the population (Bouillon, Medellín, and Boruchowicz, 2012). In recent years, several countries in the region, such as Brazil, Colombia, and Mexico, have created subsidy arrangements to foster private-sector construction of low-income housing. These arrangements have succeeded in expanding the housing supply, but at the expense of increasing sociospatial segregation (Gilbert, 2013). In addition, covering the distance from these homes to the employment hubs is too onerous for households (Libertun de Duren, 2016). For example, in Mexico, one of every seven homes –five million units– is vacant (Monkkonen, 2014). The vacancy percentage in Ciudad Juárez, Nueva Laredo, and Reynosa exceeds 20% (OECD, 2015). It is estimated that 400,000 of these homes are abandoned and 200,000 are illegally occupied (Bloomberg, 2013). In all countries, a large part of urban housing is empty (18% in Argentina and 14% in El Salvador and in Ecuador), revealing the disparities between housing supply and demand prices, the legal weaknesses of the rental market, and the shortcomings in coordination between national housing policies and municipal plans. A critical issue in housing production is the availability of land with services in urban areas, where private-sector participation is still very limited (Stickney, 2014). The programs that promote affordable housing in urban areas discourage periurban growth and lower the use of motorized transport, minimizing the negative environmental impacts of urbanization.
- 3.36 The region continues to lag in the use of sustainable construction techniques, particularly in low-income housing (Sullivan and Ward, 2012). In addition, the housing stock in LAC continues to be insufficient. Thus, the rate of housing units per 1,000 inhabitants is 300, one quarter lower than in Western Europe (Gilbert, 2012). In addition, the legal framework governing the tenure of homes is obsolete. Despite efforts to update the construction codes, environmental practices in the housing sector are still not properly regulated (Peña, 2015). Furthermore, housing allocation and design policies do not consider demographic changes, such as the rise in senior or female-headed and unmarried-partner households.
- 3.37 Lastly, in line with the region's high rate of urbanization, large part of the housing deficit –more than 70%– is concentrated in urban areas. However, housing deficit in rural areas is profound (UN-Habitat 2011). For example, in Brazil, where only 15% of the population lives in rural areas, 19% of households with a housing deficit are located in these areas. In El Salvador, the situation is even more extreme: rural areas account for 45% of the nation's population and for 75% of households with a housing deficit. The most frequently shortcomings that classify rural homes as subject to a housing deficit are different than for homes in urban areas. While overcrowding is more prevalent in cities, makeshift housing affects the majority of households in rural areas. More than half of rural homes subject to a housing deficit lack water, sanitation, and electricity services. In addition, homes with poorly constructed floors and ceilings are common, thereby increasing their residents' exposure to endemic vector-borne diseases (Tarleton et al., 2007).

4. Deficits in the urban habitat

- 3.38 For the most part, the urban habitat in LAC has not been properly planned or maintained. Large part of the region's heritage areas is deteriorated in terms of both architecture and functionality. Urban expansion has not followed territorial plans that seek to balance the availability of built-up areas with public spaces. As a result, formal as well as informal neighborhoods lack access to adequate green spaces (Libertun de Duren, 2009). During the past decade, the quality of the urban habitat in LAC has worsened in several key aspects. Maintenance of urban parks and recreational spaces is inadequate and scarce. With the exception of Curitiba, the average number of square meters of green spaces per inhabitant is 20, well below the average of 50 at cities in the United States and Western Europe (ESCI, 2015). These spaces are the foundation of the so called urban green infrastructure (Sandström, 2002), helping to control flooding and acting as GHG sinks (Wu, 2010). In addition, they are vital to promoting the physical health of the population, improving coexistence and social welfare, and lowering the rate of chronic diseases, especially in neighborhoods with vulnerable households (Cohen et al., 2007).
- 3.39 Habitat degradation is also reflected in a neglect of urban heritage. LAC has 108 historical and cultural heritage sites (as declared by the United Nations Educational, Scientific and Cultural Organization (UNESCO)), 80 of which are in urban areas. Less than half of these sites have mechanisms to preserve their value, and four of them are at risk (UNESCO, 2016). This is compounded by the frequent formation of slums in historical areas and the use of streets for informal trade, which further deteriorates the architectural heritage and promotes social fragmentation (UN-Habitat, 2005). The cultural industry accounts for less than 2% of the region's GDP, barely a quarter of its relative size in the United States (Quartesan, 2007). Considering the rich heritage of local traditions and historical districts in the region, this industry has great potential in LAC.
- 3.40 In addition, cities are increasingly exposed to the risk of serious disasters. A large percentage of cities in the region are vulnerable to rising sea levels, and more than 26 million inhabitants of Latin America live less than 5 kilometers from the coastline²⁵. In the Caribbean, approximately 70% of the population resides in flood zones (ECLAC, 2012). Some cities have started to develop plans to mitigate climate change. These plans include promoting architectural designs that enable low energy consumption, reforesting parks, and supporting low-emission mass transit programs, the latter being the most widely adopted initiative in LAC cities (Broto and Bulkeley, 2013). Nonetheless, only one third of the region's cities have plans for identifying and reducing disaster risks (Fraser and Lima, 2012). In addition, there is a lack of databases that can systematically document environmental risks or identify the cities that are most vulnerable to these risks (Hardoy and Pandiella, 2009).
- 3.41 Insecurity and the prevalence of crime continue to be a serious urban problem; the homicide rate in the region, 24 homicides per 100,000 inhabitants (United

²⁵ It is worth mentioning that coastal cities exhibit their own set of competitive advantage, which could be utilized to increase their productivity and the life quality of their citizens. These advantages include facilities for establishing trade agreements, and tourist and recreational activities.

Nations Office on Drugs and Crime (UNODC), 2014), is three times the global average rate. In addition, nine of the ten cities with the highest number of homicides worldwide are in the region (UNODC, 2011). Other types of crime are disproportionately more prevalent in urban areas and primarily affect youths and women (Imbusch, 2011). While there are differences among the various countries, insecurity continues to be one of the primary concerns in LAC. Almost 40% of the population reports having been the victim of a crime, and LAC is the only developing region in which violence has been continuously rising since 2005 (Latinbarómetro, 2015). Crime has a high human and economic cost. It is estimated that crime absorbs 3% of the region's GDP, this amount being equal to LAC's annual expenditure in infrastructure or to the income of the poorest 20% of the region's inhabitants (Jaitman, 2015). As expected in view of the sociospatial disparities in the region's cities, the geographic distribution of crime in urban areas is not homogenous. A recent study of four cities shows that 50% of urban crime is concentrated in less than 8% of street segments (both sides of a city block between two intersections) (Jaitman and Ajzenman, 2016). The distribution and patterns of crime in the cities have implications for urban design and for crime prevention and control policies.

- 3.42 Lastly, cities are less sustainable as they become increasingly less dense, with a fragmented pattern of land use and a high dependence on motorized transport. Over the past five years, cities have lost population in urbanized areas while growing toward the periphery, with land occupancy rates that are double the demographic growth and with a decline in average population density (Ángel, 2012). The spread of low-density urbanized areas reduces the advantages of agglomeration economies (Glaeser, 2011) and raises the cost of expanding water, sanitation, and waste management networks, the time and resources devoted to transportation, GHG emissions (Liddle, 2013), and the occupation of polluted land areas or high disaster risk areas (UN-Habitat, 2016). In addition, expansive growth of the urban footprint is associated with an increase in energy consumption. This is because housing units located far from one another use up more energy for heating, as well as because of increased energy losses throughout the distribution network (Ewing and Rong, 2008).

IV. LESSONS LEARNED FROM THE BANK'S EXPERIENCE IN THE SECTOR

- 4.1 In the last three years, the urban development and housing sector has displayed intensive activity, both in operational terms and in terms of knowledge generation and dissemination. During these years, 18 sovereign-guaranteed operations were approved in an aggregate amount of US\$1,426,170,000, distributed among the Bank's 4 regions.²⁶ During the same period, ESCI has applied its methodology in 55 cities, serving 20 countries in the 4 regions. By year-end 2016, ESCI will have reached 70 cities in all LAC countries. In addition, over the course of these years, the Bank has produced more than 50 original publications and ten regional events,²⁷ disseminating innovation themes. Below is a

²⁶ Includes two fiscal operations, by the Fiscal and Municipal Management Division, with urban components exceeding 50% of the total amount.

²⁷ Noteworthy events include events with the Korean Research Institute for Human Settlements (KRHIS), with the Chinese Academy of Social Sciences, on the revitalization of historical urban centers, and ESCI cities forums.

description of: (A) evaluations by the Office of Evaluation and Oversight (OVE); (B) the results of the Development Effectiveness Matrix; (C) the main lessons learned from the Bank's experience; and (D) the Bank's comparative advantages in the Sector. The lessons set forth herein reflect the Bank's experience in the Sector between 2013 and 2016, based on an analysis of sovereign- and non-sovereign guaranteed loans²⁸ and the experience of ESCI.

A. Evaluations by the Office of Evaluation and Oversight

4.2 Between 2013 and 2016, OVE evaluated the PROCIDADES program (2015) and the Bank's country programs with Colombia 2011-2014, Bolivia 2011-2015, and El Salvador 2009-2012, which were significant for the Sector portfolio.²⁹ The main conclusions and recommendations of these evaluations are as follows:

1. PROCIDADES

4.3 PROCIDADES is a lending mechanism designed to finance comprehensive urban interventions by means of direct loans to municipalities in Brazil. This mechanism was approved in 2006 in the amount of US\$800 million, making loans of up to US\$50 million available to each of the eligible municipalities. Municipalities with populations of 100,000 to one million and with sufficient capacity to finance up to 50% of the proposed project with their own resources were considered eligible. Between 2007 and year-end 2015, the Bank approved 22 PROCIDADES projects for a total amount of US\$512 million, of which 42% (US\$212.5 million) has been disbursed and 14% (US\$70.8 million) has been cancelled. Out of these 22 projects, five has been closed and three has been cancelled. It is particularly important to understand the achievements and challenges of this program as the Bank moves forward with the strategy of reinforcing its partnership with subnational governments and creating multisector urban development programs (Eguino, 2012).

4.4 PROCIDADES was an effective and innovative mechanism in terms of positioning the Bank as a source of financing for municipalities and promoting multisector work at the urban level. At the same time, PROCIDADES was a pioneering program in decentralizing the responsibilities for the design and supervision of operations from Headquarters to the country offices. This program's experience has generated interest in the Bank's subnational work outside of Brazil, and has advanced the Bank's knowledge of how to create sovereign loans based on comprehensive urban operations. The OVE evaluation report and the supplementary studies from the Knowledge and Learning Sector (KNL) provide particularly significant lessons for multisector programs that involve subnational governments.

4.5 **The institutional capacity of municipalities needs to be reinforced, particularly in programs in which municipalities are responsible for the execution and maintenance of the interventions.** The design of projects should identify the weaknesses of the executing units and include specific

²⁸ The analysis of the reports of the Office of Evaluation and Oversight (OVE) and of the sovereign-guaranteed (SG) and non-sovereign guaranteed (NSG) loan operations was carried out with the KNL team.

²⁹ The evaluations of the Bank's country programs with Argentina (2003-2008) and Ecuador (2007-2011) predate the period of this SFD.

components to strengthen them, aside from the support of external consultants. One of the tools that reinforce the municipal management capacity for these projects is the inclusion of master plans in the operating regulations of the program.³⁰ In addition, the existence of local community participation from the outset promotes maintenance of the interventions. Without this commitment on the part of the residents and without municipal resources, works rapidly deteriorate.

- 4.6 **Subnational programs should compensate for the disparity in municipal government resources.** There is great diversity in the financial and technical capacities of municipal governments. In general, only a few municipal governments have been able to satisfy the technical and fiduciary demands of PROCIDADES. The vast majority of the poorer municipalities failed to meet the eligibility criteria and, as a result, loans have been concentrated in the most prosperous areas of the country rather than in the most deprived.
- 4.7 **The national government is a key to improving the operativeness of the subnational programs.** Facilitating a robust relationship between levels of government helps in overcoming the difficulties that arise from the differences between the municipal and national political cycles. The former tend to be shorter and more volatile, leading to delays in loan implementation. National governments can simplify the internal loan approval processes, thereby shortening the timeframes prior to disbursement.
- 4.8 **The transactional costs of subnational projects need to be properly taken into account.** It is recommendable to carry out a small-scale pilot program before creating a sizeable line of credit. The cost of preparing the PROCIDADES projects was twice as large as for other municipal loans provided in Brazil between 2007 and 2014. This was attributable to the low approval amount per project as well as to the fact that most of the municipalities served were new Bank clients.
- 4.9 **Sector outcome indicators do not reflect the impacts of comprehensive urban projects.** The complexity of these projects makes it difficult to capture their outcomes by means of the typical sector indicators. The quality of life index is also a less than adequate indicator, since it reflects measurements at the urban level while these projects only target certain urban areas. Similarly, the results of satisfaction surveys are influenced by factors that are not dependent on the project. The Bank needs to develop new ways of measuring the benefits and impacts of multisector urban operations.

2. Country Programs

- 4.10 **A multisector and territorial vision improves the outcomes of operations.** Neighborhood improvement interventions are still weak in terms of integrating the targeted neighborhoods into their environment (Bolivia). Similarly, housing operations still fail to include the appropriate mechanisms for integrating

³⁰ This lesson is derived from the KNL report PROCIDADES, El Observatorio de Procidades – Fase II [PROCIDADES – The Procidades Observatory – Phase II] (KNL, 2012).

low-income housing into the existing urban fabric, leading to homes being located in peripheral and isolated areas (El Salvador).

- 4.11 **The financial sustainability of housing programs needs to be reinforced.** This includes taking into account the daily maintenance and travel expenses of beneficiary households. In addition, the high costs of the executing units weaken the financial sustainability of the programs. It is useful to leverage efforts with remittance and private-sector funding sources (El Salvador) and reinforce the work with public entities with a national reach that support territorial bodies (Colombia).

B. Results of the Development Effectiveness Matrix (DEM)

- 4.12 The evaluability of operations in the Sector improved between 2013 and 2016, thanks to the efforts expended on the ex-ante economic analyses included in the loan proposals. All operations benefitted from a cost-benefit analysis of the economic returns of the interventions financed by their main components. In addition, these analyses described the incremental costs of the investment as well as the operating and maintenance costs associated with the expected outcomes of each project.
- 4.13 However, it should be noted that the typical evaluation methodologies still fail to fully capture the synergistic benefits of comprehensive urban projects. This is due to the difficulties both in compiling adequate data and in attributing the perceived changes in the targeted territories and households to a specific intervention (World Bank, 2016). As the OVE evaluation of the PROCIDADES program correctly identified, the DEM does not reflect a large part of the impacts derived from multisector urban interventions (Crespo et al., 2015).
- 4.14 In recent years, as a result of the mass dissemination of new information and communication technologies (big data), new possibilities have opened for measuring the impact of comprehensive urban interventions. At the present time, there is a possibility of obtaining and processing georeferenced longitudinal data series. These data can also make up for shortcomings in the frequency and scale of national statistics, which are often generated on the basis of jurisdictions that do not match the area of the proposed urban interventions (Glaeser et al., 2015). For this reason, both the Sector and several of the international development agencies³¹ are exploring the best way of incorporating big data in the economic evaluation of urban interventions (<http://unstats.un.org/bigdata/>).

C. Lessons learned regarding the Sector portfolio 2013-2016

- 4.15 The lessons for the 2013-2016 cycle regarding operations in the Sector are derived from: (i) an analysis of the portfolio of sovereign-guaranteed (SG) loans, both closed and underway; (ii) the non-sovereign guaranteed (NSG) loan

³¹ The United Nations, together with national and academic statistics institutions, are carrying out research on how to incorporate bid data in measuring the SDGs. The list of participating institutions includes: Harvard University; Instituto Nacional de Estadísticas y Geografía [National Statistics and Geography Institute] (INEGI); Massachusetts Institute of Technology (MIT); NASA/Jet Propulsion Laboratory; Paris COP21; UN DESA; and the World Bank (<http://unstats.un.org/bigdata/taskteams/sdgs/>).

portfolio; and (iii) the operational experience of ESCI. The active SG loan portfolio between 2013 and 2016 consists of 55 projects at various stages of progress: 17 new operations, ten closed operations, and 28 operations underway. The lessons for the NSG loans are based on a review of the project documents for a sample of ten housing operations. The lessons from the ESCI are derived from the initiative's experience of having applied the ESCI methodology in more than 50 cities in the region.

1. Sovereign-Guaranteed (SG) loans

- 4.16 The Project Completion Reports (PCR) have two recurrent operational themes: (i) support the executing units; and (ii) improve coordination between the institutions involved in the project. In terms of the design of operations, the focus continues to be on generating comprehensive projects, ensuring the sustainability of the investments, and improving the quality of the preinvestment studies. In line with the OVE analysis, the PCRs emphasize the need to have appropriate impact indicators for comprehensive operations, since sector outcomes do not properly measure the impacts of these operations (Crespo et al., 2015). In addition, various specific lessons have been learned for each dimension of the Sector.
- 4.17 All Project Monitoring Reports (PMR) point to the challenges of coordination among multiple subexecuting units, delays due to the large number of procurement processes, and scheduling changes caused by budget cuts and turnover of authorities. In general, as observed throughout the Bank's portfolio, the PMRs describe various problems yet fail to focus on their causes or identify execution strategies that have proven effective. The lessons learned are listed as applicable to: (a) execution issues; and (b) design issues, including lessons on how to introduce questions related to climate change and gender, into the Bank's operations in the Sector.

a) Lessons on execution issues

- 4.18 **Urban development programs are more effective when their interventions use a multisector approach in terms of both project design and project implementation.** This approach makes it possible to achieve synergies among various interventions in a single territory, thus lowering the transaction costs of the operations both within the Bank and for the counterparts, while boosting the positive impact of the operations. For example, upgrading an informal neighborhood may require investments in infrastructure, in housing, in job training for the local population, and in strengthening the cadastral and property tax collection systems. Each of these interventions requires specific sector knowledge. However, the absence of proper coordination leads to a loss of potential synergies among the interventions and delays in the expected benefits of the project.
- 4.19 **New executing units also need to be supported during execution of the interventions.** Executing units with no experience in external financing contracts need continuous Bank support in implementing ex-ante evaluation processes, preparing terms of reference, and adopting management systems, among other responsibilities. This need is even more pressing in cases of high turnover of

authorities, administrative personnel, and government priorities (1786/SF-HO, 1479/OC-BR, 2072/OC-PN). In contrast, other programs have benefitted from capacities built in prior operations with the same executing unit (3458/OC-AR).

- 4.20 **The executing units need support in selecting suppliers and contractors.** This support includes the stages of due diligence on bidders, monitoring and supervision of the construction of infrastructure works, and provision of services to users. This support is needed because, if the executing units lack the capacity to properly evaluate bidding terms and conditions, there is a risk that contracts will be incorrectly awarded. For example, it frequently happens that companies bid on the construction of small infrastructure works without having the requisite financial or technical capacity, sometimes even presenting bids containing false information. If these companies are awarded the contract by the executing units, the result is poor-quality construction or termination of the contract. In either case, there are cost overruns and delays.
- 4.21 **There is a need to reinforce the coordination of roles between the executing agencies, the levels of government, and the Bank.** Previously signed collaboration agreements are not enough to ensure communication between the parties. The bodies responsible for regularizing property ownership and those approving urban plans and services should be aligned. A lack of coordination with the service operators has prevented prompt connection to the water and sewerage or natural gas networks, at times even requiring the rebuilding of already completed streets (2082/BL-BO). Interinstitutional agreements and ad-hoc technical coordination committees at both the design and the construction stages enhance coordination with the service operators.
- 4.22 **Preinvestment studies should improve their cost and benefit calculations.** Preinvestment studies of good quality are essential in order to avoid multiple adjustments during execution. Land use, service quality, easements, property rights, and climate change adaptation, among other variables, require time to be studied. These studies can prevent eligibility problems, cost overruns during execution, and subsequent deterioration of the financed works (2082/BL-BO, 3458/OC-AR, 1960/OC-BR).
- 4.23 **Post-disaster urban reconstruction programs require both a short- and a long-term vision when being implemented.** These programs typically consist of two clearly defined stages. The first is very short but is clearly focused on the most urgent needs, such as providing minimum emergency services. The second stage is less urgent but requires a greater level of coordination among participants and a long-term vision that can help transform the reconstruction processes into an opportunity to build a more inclusive city. The success of this stage depends on effectively coordinating the physical reconstruction processes with the interests of the affected communities and the various levels of government.

b) Lessons on design issues

- 4.24 **The design of urban operations needs to be even more comprehensive.** This combined with a multisector vision prevents the fragmentation of investments, making it possible to achieve greater impacts with fewer resources.

Despite agreement on this principle, the smaller scale of works, tight preinvestment time frames, and budget limitations create challenges to working comprehensively in each intervention. In addition, the authorities do not always support the supplementary actions needed to maximize the impact of the investments (2082/BL-BO, 1960/-BR).

- 4.25 **There is a need to develop specific strategies aimed at generating synergies with the private sector and increasing private-sector participation in addressing urban deficits.** Although some strides have been made in securing private-sector participation in the production of affordable housing, these efforts are still not sufficient or properly regulated under national territorial plans. These shortcomings are even more pronounced with regard to the private sector's participation in providing urban infrastructure, where there have been no incentives for private firms to take part in creating urbanized land in the framework of a territorial development plan.
- 4.26 **The plans for maintenance of the investments to be financed should be included from the outset.** Some operations have encountered difficulties in terms of the capacity of the municipal counterparts to maintain the works once completed. For example, this has been the case with the wastewater treatment plants in Bolivia (2082/BL-BO), the parks in Catanduva, Brazil (2268/OC-BR), the Orla Ferroviária linear park in Campo Grande, Brazil (1960/OC-BR), and the residential complexes in Olarias and Parque do Gato park in Sao Paulo, Brazil (1479/OC-BR). The PCRs identify several strategies to improve the sustainability of the works. One is to include components to promote community and civil society participation, as in the cases of the association of friends of Orla Morena in Campo Grande, Brazil (1960/OC-BR) and the water communities of the colonias of Villafranca and Villa Cristina, Honduras (1786/SF-HO). Another strategy is to create sustainability and preventive maintenance units, as in La Paz, Bolivia (2082/BL-BO). Lastly, a third strategy is to include contractual provisions designed to encourage maintenance, such as lower interest rates when the activities envisaged in the plans for transfer to the relevant entities are fully carried out (2268/OC-BR).
- 4.27 **Programs that insert interventions into large-scale master plans yield better outcomes.** The neighborhood improvement program in Argentina includes general strategic projects for more extended areas, making economies of scale possible in the interventions and successive financing stages (3458/OC-AR). Similarly, the series of programs in Paraná, Brazil, structures the interventions in the context of the urban development plans and the programming of local investment, thereby creating a virtuous synergy between the interventions and the municipal planning capacity (3458/OC-BR) and facilitating the subsequent maintenance of the completed works (2054/OC-BR).
- 4.28 **Neighborhood improvement programs need to analyze the legal mechanisms for granting property rights to the beneficiary households.** Managing property rights demands time and coordination. On occasion, it is subject to independent municipal entities, which in turn requires arriving at prior agreements to streamline procedures. To address this issue, it is necessary to coordinate actions between municipal and national institutions. For example, PROMEBA, in Argentina (3458/OC-AR), uses general administrative acts to

solidify household's tenure security. In addition, it makes State ownership of the targeted land parcels a condition precedent to disbursement.

- 4.29 **Programs that address housing deficits need to strengthen the controls of eligibility for household subsidies.** In some cases, financial intermediary institutions succeed in absorbing the extra cost of reaching poorer beneficiaries, serving cohorts of ever lower average income (1786/SF-HO). In other cases, however, as the program moves forward, the proportion of beneficiaries with monthly income below the threshold decreases, indicating poor eligibility controls (1982/OC-PN; 2025/OC-PN). In addition to taking into account the extra costs of reaching low-income households, it is necessary to reinforce the mechanisms for beneficiary identification. In the absence of adequate controls, some programs have tried to compensate for this shortcoming with sworn statements by the potential beneficiaries. This strategy is onerous and of questionable effectiveness, in addition to requiring an amendment of the operating regulations (2279/OC-EC).
- 4.30 **Programs aimed at revitalizing urban areas of heritage value need to include components to serve the vulnerable households in those areas.** Several downtown renewal programs include mechanisms for providing social services on a priority basis to the vulnerable population sectors (3312/OC-BR). For example, the program in Sao Paulo (1479/OC-BR) includes support for comprehensive service programs for the homeless population as well as the provision of low-income housing solutions. However, these mechanisms have to a large extent faced management and coordination problems that prevented their implementation, showing that there is still work to be done in merging heritage renewal interventions with social service interventions.
- 4.31 **Post-disaster housing reconstruction programs require a long-term urban vision.** The proposed intervention needs to consider how the housing fits into an urban fabric that allows residents to have access to basic urban services outside their home. For example, several of the housing reconstruction projects designed to address Haiti's population following the earthquake of 2010 failed to adequately consider the relationship between the home and its environment, resulting in neighborhoods that lack public spaces and quality services. Moreover, in order to create positive synergies with other development programs, housing projects should take into account existing urban plans as well as tenure regularization plans in the process of being implemented.

i. Lessons on issues related to climate change

- 4.32 In recent years, the Bank has been intensively involved in financing green projects, supporting the sharing of experiences in the region and positioning housing at the center of the sustainable development agenda. The Sector has 135 approved projects, which include specific climate change adaptation and mitigation interventions for a total amount of US\$2.45 billion. Of this total, US\$456.52 million was allocated to housing, US\$150 million to sustainable cities, and US\$12 million to urban development and housing. At the present time, the Bank is involved in sustainable housing projects in Mexico, Argentina, Jamaica, Panama, and Peru, among other countries. The best-known of these projects is ECOCASA, a program designed by the Mexican government, through Sociedad

Hipotecaria Federal, S.N.C. (SHF), jointly with the IDB and the German bank KfW. ECOCASA finances 27,000 low-income green housing units. These units produce GHG emissions that are 20% lower than homes built using traditional techniques. The program yields a series of important lessons for green housing in the region, including the following:

- 4.33 **The costs of building green homes can be offset by arraying a diversity of financing sources.** The Bank channeled concessional grant resources in the amount of US\$52 million from the Clean Technology Fund (CTF). These favorable terms enabled SHF to cover the extra costs of building the ECOCASA housing and leverage resources from the private sector. Added to this is US\$9.3 million from the European Commission's Latin America Investment Facility (LAIF) for a pilot program of passive homes,³² arranged for by the Bank together with KfW. The success of the program is largely attributable to promoting interventions for which there is already an available supply of funding. In addition, the public policy conditions in the country were exceptionally favorable, since ECOCASA was structured within a national legal framework.
- 4.34 **The large scale of the green-housing program is an incentive to private-sector participation.** The manufacturers and suppliers of ecotechnology have an interest in being listed as suppliers in programs that generate high demand. In the case of Mexico, the size of the INFONAVIT operations is a stimulus for the private sector to improve its green construction standards. Transparency and coordination between the supervising institutions and the technical experts is essential in order to ensure consistent standards.
- 4.35 **Educating users on the use and maintenance of a green-house enhances the home's sustainability.** ECOCASA educates residents, which facilitates the use and maintenance of the equipment and improves household satisfaction with the house. It is also important to update the technical training of the government's project team and the financial institutions to enable them to properly evaluate the project proposals submitted by developers.
- 4.36 **Fluid communication and coordination between the public and private sectors is critically important for introducing innovations into the housing sector.** SHF worked intensively with housing developers to create an efficient avenue for cooperation and design innovation and for estimating potential reductions in carbon emissions. This avoids a duplication of efforts and makes it easier to standardize tools. In addition, by having a technical database at the national level, different housing prototypes can be proposed to suit the various bioclimate zones, allocating estimated costs and expected GHG reductions.

ii. Lessons on gender-related issues

- 4.37 **Gender issues need to be addressed as early as in the design stage.** The Sector has focused its efforts on introducing gender issues as soon as a project is identified, using the tool "address social vulnerability in urban development and housing operations" (IDB 2014). This tool prioritizes a diagnostic assessment of the specific needs of vulnerable population groups in the territory covered by the

³² This is the name given to homes that have maximum energy and resource efficiency.

interventions. Implementing this strategy has allowed the Sector to improve the quality of gender indicators according to the quality parameters used by the Bank's Gender and Diversity Division (GDI). Between 2013 and 2016, half of the operations in the Sector included specific indicators to treat the issue of gender in their results matrix. In 2015, 83% of the interventions included crosscutting gender themes.³³ Particularly worth of note are the Neighborhood Improvement Programs in Uruguay (3097/OC-UR) and Argentina (3458/OC-AR), for US\$70 million and US\$200 million respectively, and the Improvement of Housing and Habitat Program in Paraguay (3538/OC-PR), for US\$30 million.

- 4.38 **National data on gender cannot be extrapolated to the urban territory.** One of the difficulties that have arisen in the execution stage is that despite increasing collection of gender data (as specified in the results matrices of the operations), these data are typically collected at the national or major-cities level, leading to a lack of data at the territorial level and thereby preventing the gender theme from being addressed more effectively.
- 4.39 **There is scant evidence on the effectiveness of measures promoting gender equality.** Between 2013 and 2016, with a view to closing the knowledge gap on what works in promoting gender equality in urban development and housing operations, quasi-experimental impact assessments with gender indicators were begun for three Sector projects with gender indicators: (i) Barrios de Verdad [Real Neighborhoods] in Bolivia³⁴ (2908/BL-BO), which titled women, built daycare centers, and installed sanitary facilities in homes and lighting in streets to reduce violence against women; (ii) neighborhood improvement program in Guyana (2102/BL-GY), which upgraded homes and titled women heads of household; and (iii) urban integration and coexistence program in Tegucigalpa (2017/BL-HO), which compares the social and economic conditions of women in neighborhoods with and without interventions. It is expected that the design of new operations in the Sector will be informed by the knowledge generated by these evaluations.

2. Non-Sovereign Guaranteed (NSG) loans and operations

- 4.40 The Bank's work with for-profit and not-for-profit nongovernmental organizations is very relevant for the Sector. Between 2013 and 2016, operations by Opportunities for the Majority (OMJ) and the Financial Markets Division (FMK) helped produce more than 819,000 housing units. These units are distributed among 10 countries in the region but area heavily concentrated in Mexico, where program 2559/OC-ME was responsible for more than 690,000 units. In addition, the work of the Multilateral Investment Fund (MIF) is of interest for the Sector since it fosters innovation aimed at building networks among urban companies and leverages private-sector resources to promote territorial economic development.

³³ The gender theme is deemed to be comprehensively included when it is reflected in the diagnostic assessment, interventions, and monitoring indicators.

³⁴ Together with the Department for International Development, the World Bank, and the United Nations Entity for Gender Equality and the Empowerment of Women.

- 4.41 The lessons set forth below are based on operations that were in their implementation phase during the 2013-2016 period³⁵ and focus on operational and design considerations as well as on coordination between the private and public sectors.³⁶ The operations selected for the sample support the purchase or construction of new or incremental housing as well as home improvement. The beneficiaries of the financing are primarily formal workers in the case of new housing and informal workers in the case of home improvement. In terms of economic level, the majority of the operations benefit the population at the base of the pyramid, that is, individuals with per-capita income of up to US\$10/day (2005).
- 4.42 Since many of the lessons from SG operations are applicable to NSG operations, the lessons described below emphasize aspects that were not previously included. Specifically, these are: (a) operational lessons classified by type of sponsoring client (financial institution, housing developer, not-for-profit organization, or State enterprise); (b) private financing for green-housing;³⁷ and (c) support for private-sector productivity in urban areas, based on the experience of the MIF.

a) Operational lessons classified by type of sponsoring client

i. Operations with financial institutions

- 4.43 **A combination of financing for home improvement or construction of incremental housing and technical assistance to the beneficiaries mitigates the operational risks of the loans.** Many of the institutions that support home construction or improvement have developed partnerships with nongovernmental organizations and with suppliers of construction materials to provide technical assistance to the beneficiaries. The combination of financing and technical assistance improves and standardizes the quality of the homes. Large-scale financial institutions such as Visión Banco and EDYFICAR-MIBANCO have the capacity to build these major partnerships.
- 4.44 **Home improvement and home construction credit drives the financial inclusion of households at the base of the pyramid.** The impact assessment of the Visión Banco project in Paraguay reports this finding and attributes it to two reasons: (i) when home improvement financing is a household's first credit, this household immediately acquires a credit history and thereby moves from financial informality to formality; and (ii) the home improvement enhances the

³⁵ The lessons are based on a sample of ten housing operations led by the private sector (IIC): 2488/OC-PR, 2722/OC-ME, 3208A/OC-ES, 3421A and 3421B/OC-DR, 3310/CH-PE and 3310A/OC-PE, and 3056A and 3056B/OC-PE (3 IIC-VINTE). These lessons are derived from a review of the project documents for the operations; interviews with the respective investment and supervision officers; and the OMJ publication "Many Paths to a Home" (OMJ, 2014). Operation PE-L1170 was not included in the sample since it has had no disbursements to date.

³⁶ The main questions were: (i) What is the most valuable thing you learned from housing operations? (ii) What could we improve or avoid in operations in the Sector, both in the design and execution phases? (iii) How do private-sector projects contribute to the development objectives of the IDB Group? and (iv) In your opinion, what are the opportunities to improve coordination between the private and public sectors in housing operations?

³⁷ Green housing refers to support for home construction or improvement with little environmental impact, including low consumption of energy and of polluting or nonrenewable materials.

value of this asset, which can then be used as collateral to secure new loans. Financial institutions are discovering the benefits of home improvement loans as an attractive business opportunity to reach new markets, retaining clients and diversifying their portfolio with a low-risk product.

ii. Operations with housing developers

- 4.45 **Heavy dependence on government subsidies poses a risk to the financial sustainability of developers.** Subsidies have made housing more affordable for the poorest households, but they have also posed a financial risk for developers given the potential for changes in housing policy. In these cases, it was important to assess the financial sustainability of the operation, analyzing criteria such as the diversity of the financing sources available to the developer, the medium-term government support for the low-income housing sector, the company's compliance with low-cost housing standards, and the existence of alternative financing solutions, such as micromortgages. The evidence showed that there is capacity for repaying home improvement loans at the base of the pyramid, provided the loans take into account the socioeconomic characteristics of the beneficiaries, including their informal worker status.
- 4.46 **The formal partnerships between developers and microfinance institutions make it easier for households without access to traditional mortgages to participate in housing programs.** Loans that follow the basic principles of microfinance (small amounts, short terms, and no collateral) are affordable and in demand by low-income households. The Bank's successful experience indicates that these solutions can allow households at the base of the pyramid to find a viable financing option for purchasing a home. Another good practice is to combine financial advice with financial literacy programs for beneficiaries.
- 4.47 **Developers with long-term financial flexibility, good land development policies, and capacity to offer products aligned with available mortgage loans are the ones with the greatest impact on the housing market.** VINTE, a strategic client that has already carried out four operations with the IDB Group, has long-term planning capacity, with annual targets and financial flexibility. However, in the case of most small developers that lack enduring capacity, NSG operations in the low-income housing sector require medium-term financing in local currency. Local currency financing minimizes the foreign exchange risk, since the sources of revenue of IDB Group clients in the sector are primarily in local currency.

iii. Operations with not-for-profit organizations and State enterprises

- 4.48 **The management capacity of nonprofit organizations is critically important to the success of the operation.** These organizations are the ones that succeed in reaching the most vulnerable population sectors, but they are very uneven in terms of institutional capacity. For example, an operation in El Salvador is exceeding its targets thanks to the housing expertise, financial soundness, and volunteer staff of the responsible organization. However, in other countries, implementation of the operations is delayed because of a lack of

capacity to execute the home improvement projects originated by the partnering financial institution.

- 4.49 **Operations with State enterprises typically take longer to materialize but have greater impact.** Operations with the enterprises responsible for implementing national housing policy can be delayed due to internal administrative processes, sensitivity to political cycles, or the economic situation. However, it is still in the Bank's interest to carry out operations with this type of client because of the enormous impact that these enterprises can achieve, particularly in terms of scale and dissemination of best practices. An example of this is the introduction of innovations, such as the green-mortgage market.

b) Private-sector financing of green-housing

- 4.50 **Green housing. The IDB Group can drive green housing and mortgages in emerging markets by leveraging technical cooperation resources related to climate change.** For example, as a preliminary stage to an NSG loan operation, the Bank arranged for a knowledge exchange between Peru and Mexico in collaboration with INE/CCS. As a result of this exchange, the IDB Group was invited to take part in developing nationally appropriate mitigation actions (NAMAs) to reduce GHG emissions by the housing sector.

- 4.51 **Educating the beneficiary on the uses and benefits of ecotechnology is essential in order to generate demand for green housing.** The majority of households are still unaware of the benefits of green housing in the form of energy savings and environmental quality. VINTE, a leader in green housing, combines its marketing strategy with client education on available technology alternatives and their costs in energy and water. In addition, clients are educated on how these technologies work and the time it takes to obtain a return on the investment made when opting for them.

c) Support for private-sector productivity in urban areas

- 4.52 **Productivity. Revitalizing urban centers through productive activities requires partnerships between public- and private-sector developers.** The MIF project for urban and social redevelopment in the district of San Benito, El Salvador (ES-M1027), promotes economic activity in the targeted territory based on partnerships, without the need for new legislation. The project has focused on improving public spaces, promoting tourism, attracting new private-sector investments, and creating social integration by revitalizing informal sectors and small businesses in the district.

- 4.53 **Informal workers can be included in productive value chains for urban sustainability.** The Regional Initiative for Inclusive Recycling (IRR),³⁸ in partnership with the public and private sectors, promotes the inclusion of informal recyclers in the municipal solid waste management systems. The IRR involves more than 40 municipalities in 16 countries, with approximately 17,000 recyclers. There are approximately four million informal recyclers in the region, recycling

³⁸ IRR is led by the MIF, INE/WSA, Avina Foundation, the Latin American Recyclers Network, Coca-Cola Latin America, and Pepsico Latam. Danone and Gerdau collaborate on specific projects.

90% of the materials used by the industry, working in poor health conditions, and subject to high risk and job insecurity. The MIF integrates the IRR into various informal neighborhood improvement programs, thereby improving the working conditions of the recyclers and reducing waste disposal in open dumps.

3. Emerging and Sustainable Cities Initiative (ESCI)

4.54 The ESCI program, established as a special program in 2012 following a pilot year in 2011, has applied its methodology in more than 50 cities in LAC.³⁹ As of December 2015, 36 of these cities had finished formulating an action plan and were preparing preinvestment studies on priority policy and sustainable infrastructure issues.⁴⁰ It is projected that by year-end 2016, the ESCI network will have reached a total of 70 cities. From its inception to the present date, ESCI has evolved its methodology and scope and is now firmly established as one of the Bank's regular technical assistance programs. ESCI's systematic work, in the cities it has served, has allowed the Bank to solidify a methodology that provides a diagnostic assessment rapidly, and is highly capable of guiding urban sustainability agendas in the short, medium, and long term. Thanks to this, ESCI has created a unique space to facilitate a comprehensive, innovative, and pragmatic dialogue on how to improve the quality of life in cities, contributing valuable inputs to support the Bank in adapting to the current challenges of urbanization.

4.55 ESCI's capacity to respond to the real needs of emerging cities in LAC has transformed both ESCI and its methodology into a regional public good. This status is reflected in the decision by multiple development institutions to incorporate the ESCI methodology as an instrument for project prioritization and technical-financial structuring of interventions. To date, ESCI's main strategic partnerships have been with Findeter (Colombia), Caixa Econômica Federal (Brazil), YPF (Argentina), BANOBRAS (Mexico), SubDeRe (Chile), and Ministry of the Interior and Transportation (Argentina). These partnerships have made it possible to replicate the ESCI methodology in 25 cities in the region, in addition to the cities included in the regular ESCI program financed with the Bank's Ordinary Capital. The primary lessons arising from ESCI implementation are presented as: (a) strategic lessons for fully integrating ESCI's work with Sector work; and (b) design lessons based on operational experience in comprehensive urban programs.

a) Strategic lessons

4.56 **Structuring high-impact projects requires multisector work.** Thanks to its crosscutting approach on issues that affect the quality of life in cities, ESCI has made it possible to identify synergies among themes. In turn, this has resulted in

³⁹ The ESCI methodology begins with a technical and participatory process of evaluating the quality of urban life and identifying priorities. It continues with the development of an action plan that includes an explanation of the evaluation process and proposes strategic interventions in critical sectors to enhance the quality of life in the cities. The methodology ends with the preparation of preinvestment studies for these interventions and the implementation of a citizen monitoring system.

⁴⁰ In several of the cities that have an ESCI action plan, there are operations associated with the Bank's regular programming. These operations are in the design stage or the approval process or have been approved. At the present time, ESCI is associated with 19 operations in the amount of US\$1.624 billion.

territorially coordinated interventions capable of enhancing the sector-specific work that the Bank has already been doing in countries and regions through its various divisions. Given the nature of urban development projects, the Sector has the potential to lead this approach within the Bank. It should be noted that the design of multisector operations does not mean working with multiple executing units simultaneously but rather having a foundational plan that organizes the interventions within a specific territory.

- 4.57 **Environmental urban studies and spatial information should be systematically generated in urban projects.** The methodological core of the initiative has included designing and continuously improving the standards for preparing three types of basic studies in all ESCI cities: a GHG inventory (C1), an analysis of natural disaster risks (C2), and a study of urban growth (C3). These studies have created a wealth of knowledge and georeferenced databases that constitute a valuable technical input both for local planning activities and for the design of operations. The Sector should continue to work on enhancing the utility and impact of the studies.
- 4.58 **Innovation should be actively promoted.** ESCI has become a testing ground for implementing many of the new ideas that the countries in the region and the various sectors of the Bank have had an interest in developing. This space for experimentation should be preserved, since it will allow the Bank and its clients to generate solutions for adapting to the fast pace of technological innovation as well as to the uncertainties associated with phenomena such as climate change and market volatility.
- 4.59 **Geospatial information themes need a space for multisector dialogue within the Bank.** In some cases, local governments in the region have very limited georeferenced data and lack the capacity to ensure maintenance and applied use of this data. ESCI has put in place a significant legacy of structured knowledge, as well as opportunities for open data access.⁴¹ Efforts will be made to take advantage of these data as explicitly as possible within the initiative and the Sector. To this end, it is critically important to have a dialogue with the specialists of different sectors on each of the reviewed issues.
- 4.60 **Comprehensive planning is the basis for productive and sustainable urban development.** The ESCI methodology has succeeded in integrating indicators at the urban scale. This is of key importance in enabling Sector operations to improve the capacity for climate change adaptation and mitigation and the functioning of urban economies. Atomized interventions cannot achieve the synergy required to produce an impact on urban sustainability and competitiveness.

b) Lessons on design issues

- 4.61 The experience of ESCI points to three key issues for the design of future interventions in the Sector: the lack of financing for urban infrastructure; the weakness of planning instruments; and the need to support governance in the metropolitan areas. Below are the primary lessons regarding these issues:

⁴¹ The new trends in urban management, such as big-data and smart cities, favor this exercise.

- 4.62 **Subnational government financing to close the urban infrastructure gap needs to be reinforced, particularly in emerging cities.** The subnational governments of medium-sized cities typically lack the technical and financial capacity needed to optimally collect local taxes and to effectively collect payment for the provision of urban public services. This results in significant limitations for municipal finances, adversely affecting the borrowing capacity of local governments and discouraging private investment in urban infrastructure. As a consequence, urban infrastructure projects have to go through long project cycles (an average of seven years), impairing financial sustainability and the impact of the interventions.
- 4.63 **Urban planning requires tools that integrate various scales and studies based on each specific context.** Each of the three base studies for the ESCI diagnostic assessment analyzes phenomena that act on particular administrative, biophysical, and urban morphology areas. For example, the scale of analysis for watersheds differs from the scale for productive activities. Once the criteria are standardized, consistency of the technical analysis requires the use of several scales for studies in a single city. The three ESCI base studies respond to the challenges of climate change and rapid urbanization. However, there are at least nine sectors that can prove critically important in several of the cities, and studying them helps to properly prioritize the interventions. Examples include the study of urban mobility and public spaces in Xalapa, of tourism and the historical city center in Cuenca, of competitiveness in Quetzaltenango, and of public management and transparency in Panama.
- 4.64 **Urban planning is strengthened through coordination and technical training of urban governments.** Technical or operational limitations have been identified in the local governments of many of the cities in which ESCI has worked. This hinders the application of the ESCI methodology and can compromise the technical feasibility of the investment projects proposed under the ESCI action plans. In view of this, Sector programs should incorporate even more training activities, such as workshops and virtual training sessions, to train officials and other local actors. In addition, it is important to coordinate the project timeframes with the local political cycles. For example, there should be an effort to ensure that the initial results of the ESCI diagnostic assessment for the action plans are obtained when a new mayor takes office. This coordination prevents the result of the process from being interpreted as a censure of the work in progress. Moreover, it helps to guide the new government administration's programs by presenting an up-to-date analysis of the city.
- 4.65 **Governance of a metropolitan area begins by including all of its constituent entities.** The number of jurisdictions involved in the urban footprint is becoming increasingly larger. Whenever ESCI has recognized only the central government of a metropolitan nucleus, technical and political dialogue problems have ensued. There is a need to identify the current or imminent state of metropolitan expansion before a letter of interest is signed, and to involve all relevant entities from the outset. In this regard, the case of Asunción, Paraguay, is emblematic. The inefficiencies created by a lack of metropolitan coordination were identified from the start, resulting in a dialogue that made it possible to include the provision of services at the metropolitan level as one of the strategic lines of the action plan.

- 4.66 **Urban governance is reinforced through a culture of open and inclusive civic participation.** The ESCI methodology involves civil society through multiple channels, including indicators, public opinion surveys, citizen monitoring systems, and hackathons. However, in cities that have no tradition of citizen participation, the methodology's components have not been enough to create it. This may be due to the absence of participatory habits or to the low transparency levels in public management. Since the programs and the citizen monitoring systems have been implemented only recently, these analyses are premature. In the future, the channels for citizen participation should be reinforced in accordance with the Bank's guidelines for citizen consultations.
- 4.67 **Urban projects should focus on sector priorities on the basis of a comprehensive analysis.** The ESCI action plans for 34 cities identify three sectors that account for 74% of priority urban interventions: mobility and transportation (33%); water and sanitation (27%); and adaptation to climate change (14%) (ESCI, 2016). Other identified sectors include competitiveness, urban renewal, solid waste management, and citizen security. Deficiencies in mobility and transportation have an impact on the level of carbon dioxide emissions and on vehicle congestion, which in turn impair urban sustainability and productivity. In addition, the supply of water service is not keeping up with the growing demand, in part due to unbilled water losses. Lastly, urban vulnerability to climate change has yet to be addressed. For these reasons, investing in renovating and adapting the urban infrastructure is a priority in order to protect urban assets and boost urban resilience.

D. The Bank's comparative advantages

- 4.67 In recent years, various governments in LAC have started to search for more comprehensive and metropolitan-based approaches to address the urban deficits. The Bank can support this search based on its ability to implement and coordinate large-scale interventions that rely on the Bank's solid technical knowledge of the Sector, taking institutional considerations into account as well as aspects related to the provision of urban public services (Clark 2015). There are certain areas of work in which the Bank, recognizing the expertise and institutional capacity already developed by other institutions, opts for assisting these institutions in their activities, strengthening partnerships and promoting joint actions. Specific examples include serving small rural settlements disconnected from urban areas and managing and building camps for refugee or displaced populations.
- 4.68 Today the Bank is well positioned to lead the development of a sustainable, productive, and inclusive urbanization, putting forth a model that comprehensively addresses the deficits of management, urban public services and infrastructure, housing, and habitat quality that affect approximately 495 million people in the region. To this end, the Bank possesses five essential characteristics that may be summarized as multisectoriality, experience, jurisdiction, opportunity, and relationships (MEJOR). Below is a description of these characteristics and the role they play in the Bank's vision for its work in the Sector.

- 4.69 **Multisectoriality.** Under the banner of comprehensive urban planning and development, the successful interventions in the Sector incorporate the themes of provision and management of urban public services and infrastructure, transportation and mobility, natural or anthropogenic risk management, and fiscal policy and administration. In addition, certain critical crosscutting themes are included, specifically climate change mitigation and adaptation, and gender and diversity. The Bank has specialists in each of these areas and is therefore able to provide the sector-specific knowledge needed to design and implement comprehensive and effective urban interventions.
- 4.70 **Experience.** From its inception to the present time, the Bank has financed more than 230 projects in the amount of US\$12.59 billion, helping to build millions of housing units and develop more than 100 cities. The Bank has more than 50 years of experience working in the region's Sector; affordable housing was one the first areas of Bank's intervention. In the mid-1980s, the Bank expanded its Sector portfolio to include neighborhood improvement projects. The Sector has evolved from a vision focused on housing production to a comprehensive vision of urban development.
- 4.71 **Jurisdiction.** Good urban development and housing affordability support policies involve a large number of entities and require coordination between jurisdictions and between levels of government. The Sector has a proven capacity for dialogue with national and subnational authorities as well as with territorial entities and metropolitan consortia. For the most part, housing programs are developed jointly with the national authorities and are then implemented throughout the territory or in certain regions of the country. In addition, the Sector has intensified its involvement in urban programs of national scope, as in the cases of PROCIDADES in Brazil, of Colombian cities through FINDETER, and of the Development Program for Metropolitan Areas outside the Capital in Argentina. Added to this is the ESCI network of cities, which covers more than 70 cities in all countries in the region.
- 4.72 **Opportunity.** In 2015, the United Nations decided to replace the eight Millennium Development Goals (MDG) with 17 SDGs, for the first time including a specific goal to address urbanization (SDG 11). This goal recognizes that cities should be approached comprehensively and that the development challenges related to cities should not be considered separately from the problems of housing affordability and informal neighborhoods. The significance of an urban-scale vision is also in keeping with the urgent need to address the challenges of climate change. Cities are the highest GHG emitters, but at the same time they are centers of opportunity for creating and quickly disseminating new ways of interacting with the environment.
- 4.73 **Relationships.** The Urban Development and Housing Sector is consolidated within several knowledge networks both within and outside the Bank. Thanks to ESCI's dissemination work, the MINURVI networks, and the Bank's active participation in Habitat III, the Sector is one of the region's key players in innovation and knowledge dissemination regarding urban development and housing. Furthermore, the increased relation between urban and sustainability themes renews the Sector's vision through a more comprehensive approach to

the territory that closely connects with territorial work on all scales, natural and anthropogenic risk prevention, and climate change adaptation and mitigation.

V. GOAL, PRINCIPLES, DIMENSIONS OF SUCCESS, AND LINES OF ACTION GUIDING THE BANK'S OPERATIONAL AND RESEARCH ACTIVITIES IN THE SECTOR

A. Goal and principles underlying work in the Sector

- 5.1 The Bank's primary goal in the Urban Development and Housing Sector is to extend the full benefits of sustainable and productive urbanization to all residents of Latin American and Caribbean cities. This goal is aligned with the Update to the Institutional Strategy of the IDB, directly contributing to the crosscutting theme of mitigating climate change and improving environmental sustainability, and helping to address two of the three structural challenges faced by the region: (i) reducing social exclusion and inequality; and (ii) boosting productivity and innovation (IDB, 2015). In addition, the Sector's goal is aligned with SDG 11, which promotes "cities and human settlements" that are "inclusive, safe, resilient, and sustainable" (UN, 2015b).
- 5.2 To achieve these goals, this SFD proposes four dimensions of success in response to the diagnostic assessment set forth in Section III, integrating physical interventions with the creation of appropriate institutional incentives. Each dimension identifies the main lines of action and operational activities aligned with the lessons learned and the Bank's comparative advantages identified in Section IV. This SFD also includes knowledge and dissemination activities based on the experience in other regions described in Section II, dialogue with Bank specialists, ESCI's experience, and the region's emerging themes (financing of urban infrastructure, metropolitan areas, and planning instruments), this being the basis for developing further innovations in the Sector. In addition, in line with the multisector approach to interventions that is required to achieve the Sector goals, this SFD identifies certain other sectors for particularly assiduous collaboration in implementing the proposed activities.
- 5.3 The design of Sector interventions will be guided by the lines of action proposed herein. In addition, in the design of operations, whenever possible and relevant for purposes of learning about the effectiveness of the interventions, efforts will be made to include the appropriate methodologies to evaluate the expected impact, in accordance with the Development Effectiveness Matrix for Sovereign-guaranteed and Non-sovereign Guaranteed Operations (document GN-2489). There will also be an effort to make the impact metrics of the projects consistent with the SDG indicators in order to help monitor progress on the SDGs (<http://unstats.un.org/sdgs>), and to promote new monitoring and evaluation techniques based on the most recent big-data management and generation technologies in order to capture the multisector impacts of the interventions (UNDP 2013). In addition, the Bank will promote knowledge dissemination on, and public access to, the information produced. Lastly, the Bank will design the interventions in line with the specific conditions in each country and city, in accordance with the principles of Sector work derived from an analysis of the international evidence, the lessons learned, and the more than 50 years of Bank experience in urban development and housing projects.

5.4 The principles that will guide Bank interventions in the Sector are the following:

1. **Interventions displaying consistency between the physical works and the institutional incentives.** Analyze and improve the regulatory context in which urban interventions are carried out, with a view to supporting interventions that are consistent with national and subnational policies, and that promote effective arrangements among the various levels of government with jurisdiction over a territory and between contiguous territorial entities within the same level of government.
2. **Territorially comprehensive and multisector interventions.** Design interventions based on the characteristics of a specific territory, considering the various interventions' interactions and externalities on the territory and the nontargeted population and including knowledge of the Bank's various sectors, seeking a comprehensive and multisector vision of urban development.
3. **Sustainable and effective interventions.** Consider the short- and long-term impact of the interventions on the environment, public finances, and urban governance. In addition, consider how these interventions act to boost the resilience and minimize the contribution of urban areas to climate change.
4. **Interventions to serve all residents.** Focus on improving the quality of life of urban households, particularly those most vulnerable to climate-related and geophysical environmental risks, actively promoting inclusive participation by all residents in productive urban activities and in the design and use of public spaces.
5. **Non-atomized interventions.** Generate projects sufficiently large-scale to create the desired impacts. These projects will be guided by master plans, including coordination among the various institutions involved and reflecting a long-term vision.

B. Dimensions of Success, Lines of Action, and Activities⁴²

5.5 **Dimension of Success 1. National and subnational institutions acquire greater capacity for management of urban areas, including by promoting more equitable and productive societies and sustainable urbanization patterns.** Activities will reinforce the capacity of the national and subnational institutions involved in the management of urban areas, particularly their capacity to: develop coordinated, sustainable, and financeable territorial development strategies; promote productivity and innovation; and adequately represent the needs of all residents. In addition, the activities will help to ensure that these institutions have a high technical capacity and are transparent, inclusive, and participatory. The lines of action for this dimension of success are the foundation of the operational activities of this and the following dimensions, enabling

⁴² The lines of action and activities to be financed by the Bank will follow the guidelines of this SFD and any other SFDs that are applicable to the specific proposed interventions.

multisector work and the social, fiscal, and environmental sustainability of the proposed interventions.

5.6 **Lines of action.** The lines of action will include the following: (i) strengthen the capacity for coordination, efficiency, and transparency in national and subnational institutions with authority over urban planning; (ii) improve access to financing and the capacity to generate local economic promotion projects on the part of subnational governments; and (iii) improve the quality, efficiency, resilience to climate change, and environmental and financial sustainability of entities providing urban public services.

a. **Operational activities.** Operational activities will include the following: (i) support integrated urban planning, including coordinated development of national, metropolitan, and municipal master plans that reduce the urban population's exposure to environmental, climate-related, or geophysical risks and promote sustainable use of the territory;⁴³ (ii) support national and subnational governments in the use of coordinated platforms to manage anthropogenic and geophysical environmental risks, including by creating environmental management units at the municipal level with access to and training in the use of early warning systems; (iii) strengthen the official environmental statistics systems with a view to supporting the development of evidence-based territorial development and risk prevention policies; (iv) work with national and subnational governments to create lines of credit for municipalities to mitigate climate change and respond to climate-related and geophysical disasters in urban areas; (v) reinforce municipal finances through medium-term fiscal planning, capture of increases in property values, cadastral updates, including the use of new technologies to improve the design and implementation of tax revenue collection systems,⁴⁴ and strengthening of the local governments' capacity to prepare and evaluate economic promotion projects, including innovation hubs in urban areas;⁴⁵ (vi) strengthen the creditworthiness of subnational governments, including their access to financial markets, and their ability to create PPPs; (vii) support the modernization of public management at the local level,⁴⁶ strengthening the internal management capacity, including in the management of integrity risks, in the use and generation of digital data, and in citizen service, enhancing transparency and participation;⁴⁷ (viii) promote efficient, progressive, and low-environmental-impact management models for the operation and maintenance of urban infrastructure, equipment, and services, taking into account the financial sustainability of the institutions involved;⁴⁸ (ix) support a review of national and subnational land-use legislation to promote better governance of metropolitan and conurbation areas; (x) promote improvements in metropolitan governance, taking into

⁴³ This issue is dealt with in greater detail in the Climate Change SFD.

⁴⁴ This issue is dealt with in greater detail in the Fiscal Policy and Management SFD and is an area of joint work by FMM and HUD.

⁴⁵ This issue is dealt with in greater detail in the Innovation, Science, and Technology SFD.

⁴⁶ This is an area of joint work by FMM, ICS, and HUD, in accordance with the Sector Strategy on Institutions for Growth and Social Welfare.

⁴⁷ The planning and accountability processes will promote effective participation by the population, especially women, indigenous peoples, and Afro-descendants, taking cultural and gender diversity into consideration.

⁴⁸ See Public Utilities Policy (document GN-2716-6).

account the specific needs of large and medium-sized cities; (xi) support the creation of specialized economic development hubs, particularly in medium-sized cities; and (xii) support institutional agreements favoring the development of creative industries in urban areas. These interventions will promote the use of innovative information and communication technologies that can facilitate access to information for the entire population.

- b. Knowledge and dissemination activities.** These activities will include studies and dissemination of the following themes: (i) incentives for efficient coordination of land-use plans between conurbation municipios and metropolitan areas; (ii) methodologies for estimating the funds needed by municipios and metropolitan regions to directly address disasters and for environmental risk insurance; (iii) strategies to capture increases in the value of urban properties in medium-sized cities; (iv) planning instruments and data platforms to improve urban governance and residents inclusive participation; (v) appropriate methodologies for the monitoring and evaluation of multisector urban projects; and (vi) use of public-sector investment to promote productivity, innovation, and competitiveness in the urban private sector.
- 5.7 Dimension of Success 2: City residents have access to quality urban infrastructure and public services, which helps to reduce their vulnerability to climate-related and geophysical risks and support environmental stewardship.** Urban interventions will address the accessibility and quality gap in urban infrastructure and public services for the various segments of the population, focusing on the poorest and most vulnerable households⁴⁹ and on critical infrastructure for productivity. In addition, the interventions will consider institutional reforms that can promote improvements in the quality and scope of urban infrastructure and public services. These interventions will be implemented as part of a comprehensive urban plan in a properly regulated institutional context that promotes the inclusive participation of all residents and includes incentives to encourage good use of the territory at all scales. These plans need to be informed by a long-term vision that envisages the capacity to operate and maintain the completed works. The neighborhood improvement programs will be contained within a local development plan that takes environmental risks and urban productive functions into account and will provide for inclusive participation by beneficiary households. Moreover, the programs will encourage private-sector participation in providing resilient urban public services and in promoting actions to mitigate the climatic impact of urbanization.
- 5.8 Lines of action.** The lines of action will include the following: (i) support programs for the improvement of informal neighborhoods, particularly in areas with a large number of households highly exposed to climate-related, geophysical, and environmental risks in large and medium-sized cities;⁵⁰ (ii) improve the maintenance, coverage, quality, and environmental sustainability of urban services and infrastructure and improve the functioning of the institutions that regulate and promote them; (iii) promote sustainable and safe urban mobility systems, integrated with land uses and urban planning; and (iv)

⁴⁹ The specific needs of vulnerable population groups (with a special focus on women, indigenous peoples, Afro-descendants, and the disabled) will be taken into account in determining these gaps.

⁵⁰ Cities will be classified on the basis of each country's census data.

strengthen the institutions involved in planning, building, and maintaining the urban infrastructure and public services.

- a. Operational activities.**⁵¹ Operational activities will include the following: (i) support comprehensive informal neighborhood improvement programs that foster social participation to all residents and can include programs to reduce climate-related, geophysical, and environmental vulnerability, enhance the neighborhood's connectivity with the rest of the city, regularize home and land tenure, provide basic infrastructure and social services, and prevent social violence, especially against women;⁵² (ii) promote integrated investments based on land-use plans to expand and improve the quality of basic urban services, minimizing their vulnerability and helping to mitigate climate change; (iii) support national and subnational governments in developing sector master plans consistent with the urban master plans, promoting citizen participation and including urban watershed management plans to protect access to water and reduce the urban population's vulnerability to disasters; (iv) support the use of information and communication technologies to improve the capacity of local governments and service providers to monitor and evaluate the functioning of the urban infrastructure and public services; (v) support investments that promote public transportation systems that have low emission levels and are low-polluting, accessible to handicapped and aged residents, planned and coordinated with land-use plans that include design parameters aimed at optimizing transportation use and reducing accident rates on public roads;⁵³ (vi) support interventions in infrastructure and services in border cities in coordination with territorial development plans, promoting regional integration and competitiveness; (vii) support a comprehensive review of urban plans with a view to intensifying the use of the existing infrastructure and reducing the environmental, climate-related, and geophysical vulnerability of the urban population; and (viii) strengthen the institutions responsible for planning, building, and maintaining the urban infrastructure, particularly their capacity to coordinate with national plans, suppliers, social development plans, and production hub development plans. The proposed activities will include specific considerations regarding the financial, fiscal, and social viability of the works⁵⁴ and provisions for their maintenance. The latter includes exploring the creation of service operators⁵⁵ and programs to educate the population on the proper and sustainable use of electricity, water, sanitation, drainage, and waste management services. The interventions will also consider private-sector participation in reducing the infrastructure and services gap by means of regulatory incentives and PPPs.

⁵¹ The proposed activities will be carried out in collaboration with other areas of the Bank, particularly those that work with citizen security, gender and social protection, water, sanitation, and drainage infrastructure, transportation, environmental risk, and climate change issues.

⁵² Violence prevention encompasses social prevention issues, including actions explicitly designed to protect women, strengthen security-related services, and improve local governments' capacity to manage security and its risk factors. This issue is dealt with in greater detail in the Citizen Security and Justice SFD, and in the Gender and Diversity SFD.

⁵³ This issue is dealt with in greater detail in the Transportation SFD.

⁵⁴ The financial viability of the service providers and the social viability of their rates will be analyzed in accordance with the Bank's Public Utilities Policy (document GN-2716-6).

⁵⁵ This issue is dealt with in greater detail in the Water and Sanitation SFD.

- b. Knowledge and dissemination activities.** These activities will include studies and events on the following topics: (i) impact of the neighborhood improvement plans on citizen security levels in the targeted neighborhoods, with particular emphasis on their impact on women; (ii) effective strategies to promote urban densification and equity in access to services in medium-sized and large cities; (iii) strategies to encourage private-sector participation in the provision of urban infrastructure; (iv) urban plans integrating transportation and land use that can help mitigate climate change and optimize urban transportation, adapted to the institutional capacities of medium-sized cities; and (v) studies on the appropriate regulatory systems to encourage the use of public and non-motorized transportation and reduce the use of private vehicles in urban areas.

5.9 Dimension of Success 3. Housing allows the population to improve its access to basic social services, green spaces, and job markets, while reducing the quantitative and qualitative housing deficits.

The interventions will promote access to housing services,⁵⁶ supporting housing improvement, construction, and rental in areas with basic infrastructure and services and accessibility to job markets. The interventions will target the poorest households, considering their location needs and including these needs in the housing design process, and incorporating vernacular knowledge of the use of local materials. In addition, the interventions will promote projects designs without architectural barriers that address the housing needs of handicapped and aged residents. These activities will promote sustainable housing, which includes architectural design with low-environmental-impact materials, considerations for the rational use of water and energy, protection from environmental, climate-related, or geophysical risks, and for the location of housing in non-vulnerable areas with access to public transportation. In addition, these activities will promote the development of an inclusive and sustainable housing financing market.

5.10 Lines of action. The lines of action will include the following: (i) foster and expand access to public and private financing for housing services for the poorest households or in areas of high environmental, climate-related, or geophysical vulnerability; (ii) foster and expand the supply of housing services with low environmental and climate impact in areas with access to services and job markets; and (iii) reinforce the capacity of the institutions involved in producing, financing, and regulating affordable housing.

- a. Operational activities.**⁵⁷ Operational activities will include the following: (i) focus on the housing services needs of the poorest households, considering the income levels, characteristics, and composition of the beneficiary households and the behavior of the housing market as a whole,⁵⁸ and promote a housing supply that includes new, improved, and incremental

⁵⁶ The term housing services is understood to refer to access to basic residential infrastructure services (water, sanitation, electricity, waste collection) in areas with access to basic urban infrastructure (streets, lighting, public transportation, parks, shops).

⁵⁷ The proposed activities will be carried out in collaboration with other areas of the Bank, particularly those working with financial services, expenditure efficiency, gender and social protection, environmental risk, and climate change issues.

⁵⁸ The design of the programs should specifically address protection of housing and land ownership rights of women.

housing;⁵⁹ (ii) support the supply of rental housing in urban areas and of rent-to-buy mechanisms, making the incentives involved in this type of housing equivalent to those of owned housing, balancing the rights and obligations of owners, and offering guarantees for private investment in rental housing; (iii) support mechanisms aimed at generating urban land for housing, including partnerships with the private sector and land readjustment mechanisms; (iv) promote housing programs, adapted to the local bioclimate and geophysical conditions, that reduce the vulnerability of residents and help diminish the urban carbon footprint and the invasion of rural land and ecosystems in periurban areas; (v) promote private-sector and third-sector participation in the development of affordable housing with low environmental impact and in the creation of new mortgage instruments;⁶⁰ (vi) support housing programs that respond to the specific needs of rural households; (vii) support post-disaster housing reconstruction programs for the low-income or vulnerable population; and (viii) strengthen the institutions involved in producing, financing, and regulating affordable housing, particularly their capacity to properly target affordable housing programs by coordinating the location of the housing supply with household demand and with national and urban development plans. These activities will address the characteristics and needs of the beneficiary population, and will strengthen the public and private institutions involved in the delivery of housing services.

- b. Knowledge and dissemination activities.** These activities include events and studies on the following topics: (i) impact of improvements in access to and functioning of mortgage loans on the poorest households' access to housing, considering the entirety of the financial systems; (ii) efficiency of housing expenditure, considering the impact of housing subsidies on the territorial expansion patterns of medium-sized cities and on investment in infrastructure; (iii) changes in demand for low-income housing as a result of changes in the demographic structure and social patterns of urban households, disaggregating results by gender and income quintile; (iv) strategies to foster private-sector participation in building affordable housing with low environmental impact; (v) study of management models and impacts of programs to support incremental housing construction;⁶¹ and (vi) study of the housing supply for the various income levels, with a view to improving housing subsidy calculations and targeting.

5.11 Dimension of Success 4. The cities in the region intervene in their habitat to improve the quality, accessibility, use, and sustainability of urban spaces. These interventions will focus on upgrading degraded public spaces and areas of heritage value, and on expanding the supply and enhancing the quality of urban green areas, helping to reduce the population's vulnerability to environmental and climate-related risks and mitigate urban GHG emissions. The

⁵⁹ The Bank will finance efficient, equitable subsidy programs for low-environmental-impact housing to stimulate access to housing services for the poorest households. The subsidies will always be transparent and targeted, and will be explicitly shown in government budgets. There will be sufficient evidence that the subsidies are sustainable until the Sector objectives for these households are achieved.

⁶⁰ This issue is dealt with in greater detail in the Financial Markets SFD.

⁶¹ This study will incorporate the lessons derived from the impact evaluation of the Bank's NSG operation in Paraguay PR-L1057: Vision Banco - Habitat Humanity's Improved Housing Initiative for Low-income Families.

interventions will be part of a comprehensive urban development plan that will include risk mapping and climate change mitigation and adaptation measures. These interventions will seek to provide for inclusive resident and private-sector participation in the design as well as in the implementation and maintenance stages of the works. Steps will also be taken to help cities adopt better practices in terms of preservation of the natural and the built habitat of urban areas, disaster risk management, and climate change adaptation and mitigation.

5.12 **Lines of action.** The lines of action will include the following: (i) revitalize degraded urban areas and preserve the historical heritage of the cities without harming the residents of these areas; (ii) expand the supply and improve the accessibility and quality of urban green areas; (iii) reduce geophysical or climate-related disaster risks, protecting the most vulnerable residents from their adverse impacts and enhancing the cities' capacity to adapt to climate change; and (iv) reinforce the capacity of the institutions involved in planning, developing, and maintaining the natural and the built urban habitat.

a. **Operational activities.**⁶² Operational activities will include the following: (i) rehabilitate and redevelop underused public spaces and urban areas of historical heritage, maintaining their sociocultural diversity, promoting sustainable productive and tourism activities,⁶³ and adopting participatory management arrangements; (ii) improve the quality and accessibility of green spaces and increase the reforestation of urban areas, using design standards that maximize the environmental and climate-related benefits of urban parks and promote their inclusive use; (iii) promote the adoption of low-environmental-impact construction and maintenance techniques in public spaces. These activities will take into account the cultural and climatological characteristics of the beneficiary cities, preserving local biomes and using local and sustainable technologies; (iv) promote private-sector participation in creating, upgrading, and maintaining the urban habitat based on comprehensive urban plans; (v) support the creation of databases to document and monitor anthropogenic or geophysical environmental risks to the population and to the architectural and natural heritage of urban areas; (vi) support the development of comprehensive projects designed to improve the use of, access to, and security in urban public spaces; and (vii) promote urban designs that are accessible to handicapped and aged residents, and the removal of the existing architectural barriers in public spaces.

b. **Knowledge and dissemination activities.** These activities include events and studies on the following topics: (i) impact of the renovation of historical centers on their productivity and the quality of life of their residents; (ii) creation of strategic plans for service provision, quality enhancement, and access to public parks in medium-sized cities, developing institutional models for PPPs to maintain and promote the use of these spaces; (iii) systematic and specific analysis of the environmental vulnerability of metropolitan areas and their disaster risks so as to prioritize territorial planning actions; (iv) analysis of strategies to improve the borrowing capacity

⁶² The proposed activities will be carried out in collaboration with other areas of the Bank, particularly those working with health, gender and social protection, tourism, environmental risk, and climate change issues.

⁶³ Tourism in heritage areas will be dealt with in greater detail in the Tourism SFD.

of subnational governments for urban habitat improvement interventions; (v) analysis of the regulatory systems, including incentives and actions that might be included in operations to renovate historical centers, so as to avoid undermining the income of the poorest population groups residing in these areas or forcing their relocation; and (vi) study of the conditions for success in implementing and sustaining comprehensive projects designed to improve citizen security in urban public spaces.

- 5.13 These four dimensions of success will guide the Bank's operational and analytical activities in the Sector of urban development and housing. The overarching purpose of the set of policies, programs, and studies presented in this document is to create a region where all city residents have access to the benefits of sustainable and productive urbanization today and tomorrow.

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Brookings Institute _Productividad urbana en Latinoamérica

<http://www.brookings.edu/blogs/the-avenue/posts/2015/03/05-latin-americas-stagnating-global-cities-parilla-trujillo-berube>

Bloomberg- Vivienda abandonada en México

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City of New York _A Stronger, More Resilient New York.

http://www.nyc.gov/html/sirr/downloads/pdf/final_report/001SIRR_cover_for_DoITT.pdf

City of Vancouver greenest City 2020 Action Plan

<http://vancouver.ca/files/cov/greenest-city-2020-action-plan-2015-2020.pdf>

Copenhagen Climate Adaptation Plan

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Copenhagen Plataforma de participacion Ciudadana

<http://www.citiesforpeople.net/home.html>

Greater London Authority climate change adaptation strategy.

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Global Climate Risk Index

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ICES Planes de Acción

<http://www.iadb.org/en/topics/emerging-and-sustainable-cities/sustainable-cities-publications,18715.html>

ICES Tasa de crecimiento anual de la huella urbana.

www.urbandashboard.org/

ICLEI Resilient Cities Report

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Municipio del Distrito Metropolitano de Quito, Estrategia Quiteña al Cambio Climatico.

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