

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC15471

Project Name	Fortaleza Sustainable Urban Development Project (P153012)
Region	LATIN AMERICA AND CARIBBEAN
Country	Brazil
Sector(s)	Solid waste management (30%), General water, sanitation and flood protection sector (40%), Public administration- Information and communications (30%)
Theme(s)	Urban services and housing for the poor (25%), City-wide Infrastructure and Service Delivery (25%), Municipal governance and institution building (20%), Natural disaster management (10%), Pollution management and environmental health (20%)
Lending Instrument	Investment Project Financing
Project ID	P153012
Borrower(s)	Municipality of Fortaleza
Implementing Agency	Secretaria Municipal de Urbanismo e Meio Ambiente (SEUMA)
Environmental Category	B-Partial Assessment
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Estimated Date of Appraisal Completion	
Estimated Date of Board Approval	16-Nov-2016
Concept Review Decision	Track I - The review did authorize the preparation to continue

I. Introduction and Context

Country Context

Brazil urbanized at a very rapid pace – the share of people living in cities grew from 45 percent in 1960 to 84 percent in 2012. During the same period, per capita GDP grew by a factor of two. Today, cities generate more than 90 percent of the country’s GDP. In most cities, the rapid growth combined with the lack of resources and insufficient planning, has led to high degrees of concentrated poverty in urban areas, enduring inequality, insufficient access to basic services, congestion, inappropriate solid waste management practices, settlement of poor populations in high risk areas, and environmental pollution.

To promote the sustainable growth of urban areas, in 2001 the Brazilian Congress approved the Statute of the Cities (Law 10.257). The Statute provided municipal governments with guidelines for integrated urban and environmental planning, as well as tools and mechanisms for increased citizen participation and transparency. Moreover, it established technical, legal and fiscal instruments capable of regulating and promoting sustainable and inclusive urban land use and management. However, after more than a decade since its approval, many cities still lack the capacity to take full advantage of these instruments, particularly incorporating land use and value capture instruments to increase municipal leverage over real estate and housing markets.

Fortaleza, capital of the Northeastern state of Ceará, is the fifth largest city in the country with a population of almost 2.6 million people (IBGE, 2014). It concentrates approximately 29 percent of the State's population and 67 percent of the population of the metropolitan region, which comprises 15 municipalities. It is the municipality with the largest GDP of the Northeast region and the ninth largest in the country (R\$ 42,010 million in 2011, contributing 1 percent to Brazil's GDP). The service sector is the most important driver of the local economy, generating on average 68 percent of the city's annual GDP during the last decade. Tourism is the largest sector within the service economy, and it has been steadily rising during the last decade – the number of tourists visiting Fortaleza increased by 75 percent in the period between 2002 and 2011, up to a total of 2.8 million visitors in 2011. Poverty and inequality levels have decreased over the past decades, but Fortaleza's Gini coefficient still remains amongst the highest compared to the rest of the state capitals (IBGE, 2010). In addition, Fortaleza had the second highest number of homicides of any state capital in 2012, when a total of 1,920 homicides were reported – corresponding to an annual homicide rate of 76.8 per 100,000 inhabitants.

Sectoral and Institutional Context

Fortaleza has experienced important urban changes resulting in urban sprawl and high inequality. Following the same trends as the rest of the country, the city urbanized fast. The population multiplied by a factor of nine between 1950 and 2010. This population growth was not accompanied by effective planning; plans were developed but not implemented. As a result, today, there are distinct and drastic socio-economic contrasts, as well as sharp spatial divides across the city. Some of the poorest areas and slums are located along the coast (particularly on the West and North East), as well as along the main water bodies, in areas of high risk of flooding – including the Maranguapinho and Ceará Rivers (in the Western area) and the Cocó River and its tributaries (in the Northeastern area). Low income settlements have also grown in the Southern periphery of the city, where urban growth took place in the 70's and 80's without accompanying access to sanitation, paving, drainage, etc. Over 16 percent of the population lives in subnormal settlements and 509 different favelas have been mapped in the city (IBGE, 2010).

Fortaleza has a deteriorated urban environment. The city has been traditionally rich in natural resources (see Map 1, Annex 3). It is flanked by long stretches of beaches, it is crossed by two main rivers and its many smaller tributaries, and it has an extensive network of lagoons. The city had abundant vegetation, and still retains a network of parks and green areas. Population growth and rapid unplanned urbanization in the past decades have resulted in distinct impacts on the urban environment, including:

(i) Pronounced sprawl combined with low-density pockets. A dense area of high-rise construction has developed along the coastline. Across the majority of the city, lower density areas with lower construction heights are prevalent;

(ii) Severe water quality issues, primarily as a result of poor sanitation and solid waste management. Rivers and lagoons are contaminated, mostly from untreated sewage discharges of illegal settlements. The seashore is polluted, mostly from discharges of drainage systems that carry sewage from illegal connections, and polluted streams (see Map 2 and Map 3, Annex 3);

(iii) Significant air pollution caused primarily by transportation. The number of private vehicles has more than doubled since 2000, resulting in congestion and distinct impacts on air quality; and

(iv) Visible deforestation mostly as a result of the informal occupation of green areas and inadequate planning. This is shown by dispersed pockets of green among areas of no vegetation (see Map 4, Annex 3).

There is substantial need for additional sanitation infrastructure, as well as for measures to increase the efficiency of the existing sewerage network. It is estimated that 60 percent of the households in Fortaleza have access to the existing sewerage network; while 15 percent use septic tanks and the remaining 25 percent discharge illegally to storm drains and/or streams (IBGE, 2010). There are significant differences in terms of network coverage between different areas of the city. For instance, while the Vertente Marítima basin has 100% coverage, the Miriú basin has only 18% (see Map 5, Annex 3). In addition, there is a significant proportion of households not connected to the existing network. In the Vertente Marítima basin, for instance, the city's most dense and best serviced area, approximately 15% of the households with available networks are not connected (PMF, 2014). The Municipality of Fortaleza (Prefeitura Municipal de Fortaleza, PMF) in collaboration with the Water and Sewage Company of Ceará (Companhia de Água e Esgoto do Ceará, CAGECE), has developed a Municipal Sanitation Plan that aims to achieve universal service coverage and treatment of domestic sewage by 2033. An effective solution to the sanitation challenge in the municipality, however, will require not only investments in the expansion of the network and the construction of new treatment plants, but also in the optimization of the existing systems.

The management of solid waste, although inadequate, represents a high cost for the PMF. Although the PMF has set up arrangements for collection, transport and disposal of solid waste, the resulting performance of the system is not adequate. Litter is visible throughout Fortaleza, negatively impacting the city's image, and increasingly becoming a concern for human health and the environment. Moreover, litter is routinely the cause of blockage of channels and drainage systems. Construction waste is not currently covered under the collection concession, and often dumped in public spaces, where it is ultimately collected by the PMF. There are estimated 6,000-8,000 scavengers in the city, represented by several waste pickers associations, which contribute, mostly in an independent manner, to the recycling activities of the city.

The city's risk profile is marked by urban flooding and coastal erosion. The location of Fortaleza along the northeastern coast of Brazil, the presence of major rivers and other water bodies within the city limits and the abundance of flat land have conditioned the city's urban development. These same natural elements have also shaped the hazard profile of the city. The Metropolitan Region of Fortaleza is exposed to regular flooding events during the high intensity rainfall period (such as the 2004 floods). The size and frequency of floods can be attributed to the inadequate urbanization pattern of the city, characterized by the occupation of river banks and low land (such as the urbanization process along the Maranguapinho River, in the West side). These hazards are also significantly driven by inappropriate disposal of solid waste into the existing drainage infrastructures, thus affecting its performance. The city is also affected by coastal erosion, which combined with the effect of climate change, could increase the risk of coastal flooding. This risk

profile requires a better integration of Disaster Risk Management (DRM) actions within the PMF to ensure the effectiveness of urban planning.

The municipal government of Fortaleza has put forward an ambitious Development Plan (Plano Plurianual 2014-2017) that focuses on promoting a more sustainable, inclusive local development. The city is implementing its Plan and has accessed diverse sources of financing. Several Bus Rapid Transit (BRT) corridors are under construction, financed through the National Infrastructure Growth Acceleration Program (Programa de Aceleração do Crescimento, PAC) and the Inter-American Development Bank (IADB). Resources of the Development Bank of Latin America (CAF) are being channeled to investments in tourism infrastructure, as well as municipal upgrading programs. The city's drainage program (Programa de Drenagem Urbana de Fortaleza, DRENURB) is under implementation with the support of CAF and the National Development Bank (Banco Nacional de Desenvolvimento Econômico e Social, BNDES).

The PMF has requested the Bank's support to undertake integrated investments in strategic areas of the city, focused on improving the urban environment and strengthening the government's planning and management capacity. As proposed, the investments to be supported by the World Bank will complement the ongoing projects in the areas of transportation, sanitation, drainage and tourism, while increasing the PMF's overall capacity for planning, implementation and management of urban and environmental aspects. The vision of the PMF is that this Project will help promote a better integrated approach for the development of the city and constitute a first step in the planned long-term transformation of Fortaleza.

Relationship to CAS

The proposed Fortaleza Sustainable Urban Development Project is aligned with the Country Partnership Strategy (CPS) FY 2012-2015. The CPS states that its goal is for the Bank to contribute to Brazil's aim of faster, more inclusive and more environmentally sustainable growth, with macroeconomic stability. In this context, the Project will contribute to the four CPS strategic objectives in the following way:

Objective 1: Increase the efficiency of public and private investments. In line with the results area "Enhanced Private Sector Development Policies", the identification, structuring and implementation of urban operations planned under the Project will help attract private sector investment for urban redevelopment. At the same time, the Project's goals to improve the urban environment and help reduce the pollution in the coastline are expected to positively contribute to the growing tourism sector, which attracts private investments. Additionally, a more efficient implementation of urban planning instruments is expected to increase the return on public investments and the municipality's tax collection capacity, in line with the results area "Improved Fiscal and Public Sector Management";

Objective 2: Improve quality and expand provision of public services for low income households. Investments in sanitation and restoration of green spaces will directly improve the living conditions of low income populations in priority areas, in line with the results area "Expanded affordable housing and improved living conditions for low-income and vulnerable groups";

Objective 3: Promoting regional economic development. By prioritizing activities to increase access to sanitation, improve solid waste management practices, and promote urban operations in strategic areas of Fortaleza, the Project is expected to attract private investment and to contribute to the

economic development of the second largest city of the Northeast Brazil in terms of population, a priority region for the Bank engagement, as clearly stated in the CPS;

Objective 4: Improving sustainable natural resource management and climate resilience. The Project aims to strengthen the PMF's capacity to better manage solid waste and therefore reduce the likelihood and/or impact of flood events by improving the drainage systems' performance.

The Project takes into account aspects raised during the ongoing preparation of the Brazil Systematic Country Diagnostic (SCD). The SCD, to be completed by mid-2015, is intended to inform the development of the new Country Partnership Framework.

The Project's proposed design is fully aligned with the World Bank Group twin goals. Investments in sanitation and solid waste management, regeneration of green areas and development of urban operations will be designed to improve the living conditions, promote social inclusion, improve quality of life and reduce the vulnerability of the poor populations in the targeted areas. The improvement of the urban environment and the design and implementation of strategic redevelopment operations are expected to result in increased employment opportunities. All of the above, in addition to the activities to strengthen the planning, implementation and management capacity of the local government, integrate what is expected to be the first steps of a long-term transformation of Fortaleza.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

The proposed Project Development Objective is to assist the Municipality of Fortaleza in enhancing the quality of its urban environment through integrated infrastructure investments in priority areas, and strengthening its urban planning and management capacity.

Key Results (From PCN)

The preliminary expected outcome results of the Project, to be revised and adjusted during Project preparation, include the following:

- (i) Improved water quality in the coastline along the Vertente Marítima basin, as a result of investments in sanitation and solid waste management;
- (ii) Increase in the ratio of green areas per inhabitant, as a result of the investments in the restoration of Rachel de Queiroz Park;
- (iii) Increase in property values in target areas, resulting from updated planning and land-use changes;
- (iv) Fortaleza's development policy informed by updated and integrated planning tools, as a result of activities such as the review process of the city's urban planning and legal framework, and the update / integration of the existing urban and fiscal cadasters.

III. Preliminary Description

Concept Description

The Project will have three main components: (i) Urban and Environmental Restoration; (ii) Strengthening Municipal Management Capacity for Urban Planning, Disaster Risk Management and Environmental Management; and (iii) Project Management. The Project components described below are based on a budget of US\$ 146.60 million.

Project focus area. The Vertente Marítima basin (in the Northern part of the city) and the Rachel de Queiroz Park were selected as the primary areas of focus of the Project's interventions in urban and environmental restoration. Criteria for the selection included: (i) impact on low income residents; (ii) transformative potential for the city, given its economic dependency on the tourism sector; (iii) innovative approach for the city, given its objective to promote a strategic partnership between the PMF and the State water and sewerage company (CAGECE) and to enable private sector participation in urban redevelopment; (iv) geographic focus; and, (v) potential to leverage other ongoing investments.

Component 1. Urban and Environmental Restoration

1.1 City Water Program (Programa Águas da Cidade). The objective of this subcomponent is to improve the water quality in the city's seashore along the Vertente Marítima basin (see Map 6, Annex 3). The activities will focus in this Basin where there are problems related to the pollution of the seashore, which affects the quality of life of the population as well as the city's economy. The primary sewage network coverage in this Basin is almost 100 percent. However, the PMF estimates that 16,202 households are not connected to the main network, representing about 15 percent of the total (Map 7, Annex 3, shows the rate of usage of the existing system). Most of these households are illegally connected to the storm drainage system or septic tank galleries, resulting in the pollution of water bodies.

The proposed solutions are targeted at the optimization of the existing infrastructure, including financing household connections to the existing networks in order to reduce the pollutant load present in streams and drainage channels that discharge into the ocean. These proposed solutions include: (i) 16,000 new household connections to the existing sewerage network; (ii) capture and diversion of dry-weather flows discharging in the ocean; and, (iii) technical assistance for the identification and analysis of pollution sources, modeling of the seashore pollution, analysis of technologies/engineering projects for the different typologies identified, and technical consultancies to support legal, institutional, tariff and social issues. This subcomponent will be designed taking into account the lessons learned from the sanitation activities under the ongoing project Strengthening Service Delivery for Growth, Poverty Reduction and Environmental Sustainability in the State of Ceará PforR (P127463).

1.2 Regeneration of Green Spaces and Implementation of Urban Operations. This subcomponent will focus in the environmental restoration and urban renewal of the Rachel de Queiroz Park, located in the western portion of the city (see Maps 8 and 9, Annex 3). It is a linear park instituted by Municipal Decree in January 2014, with more than 12 Km long and an area of approximately 254 hectares, the second largest park in the city. Its area of influence extends to 22 of the 119 neighborhoods in Fortaleza. The park includes several water bodies, which are polluted primarily by illegal sewage connections. It traverses commercial areas, residential areas of average income and low-income populations, substandard settlements, and large areas of institutional use (such as the campus of the Federal University of Ceará).

The area exemplifies the rapid and unplanned growth trends of the city, which led to highly urbanized zones, primarily characterized by low-rise, residential developments. Commercial areas (i.e. shopping center) have started to appear in the northern region of the park, adjacent to the Vertente Maritima. New construction has followed, characterized by high rise, higher-end buildings

hinting to increasing development pressure and lack of available land in the areas adjacent to the Vertente Maritima. The park is an environmentally degraded area, lacking adequate infrastructure for public leisure. Many sections along the margin of the streams have been occupied by low-income populations and are vulnerable to flooding. SEUMA has identified the park and its surrounding areas as critical to promote more compact, mixed-use development, as well as the use of planning and land-use-based instruments to promote the involvement of private sector in approaches to redevelop the area. The Project will support SEUMA in these efforts.

The PMF is overseeing the preparation of detailed studies and design projects for the revitalization of the Rachel de Queiroz Park. These studies, expected to be partly completed by March 2015 will inform the definition of this subcomponent. Possible investments under this subcomponent include sanitation, drainage, roads, electrification, lightning, paving and landscaping. In addition, requalification of areas around the park is anticipated. Moreover, this subcomponent will include the design of an urban operation (as defined in subcomponent 2.4), identified and structured under Component 2, which will help revitalize the area, attract private investment and generate economic growth. Overall expected benefits include not only those related to environmental conservation and preservation, but also improved accessibility, livability and vibrancy around the area, aspects considered critical to social and economic inclusion. In addition, coordination with the Technical Assistance Mainstreaming Violence Prevention in Urban Development Projects in Brazil (P152338) is planned. The objective will be to incorporate good urban development practices that prevent or reduce crime and violence, given the high rates of crime in some of the neighborhoods around the park.

1.3 Solid Waste Management. This subcomponent will promote a comprehensive approach for solid waste management, which will include improving coordination among various agencies and private sector entities involved, as well as focus on recycling activities, public awareness, and communication and education programs. This subcomponent will complement the planned sanitation activities with the objective of reducing pollution along the coastline, and it will contribute to reduce the risk of flooding due to the blockage of the drainage systems.

Component 2. Strengthening Municipal Management Capacity for Urban Planning, Disaster Risk Management and Environmental Management

2.1 Disaster Risk Management (DRM). The objective of this subcomponent is to ensure a better integration of DRM and resilience activities into the city's urban planning and management process, as well as ensuring the investments under Component 1 promote the development of a more resilient and sustainable city. In this context, the activities under this subcomponent will be mainly advisory in nature and technical assistance, including: (i) supporting the development of risk identification activities; (ii) supporting the dialogue with the United Nations' Center of Excellence for Disaster Risk Reduction in Rio de Janeiro for the inclusion of Fortaleza in the Resilient Cities Program as well as the design of its associated Plan of Action; (iii) monitoring the urban growth in order to promote the use of these information as guidance for new investments; (iv) promoting institutional cooperation to ensure an efficient operation of drainage systems and facilitate the maintenance processes; and (v) integrating the different Project activities with those already being developed by the PMF in terms of resilience within one agenda to promote synergies.

2.2 Elaboration/Modernization of the Cadaster. The PMF currently has a cadaster managed by the Municipal Secretariat of Finance (Secretaria Municipal de Finanças, SEFIN), the entity responsible

for property tax collection. The data on SEFIN's cadaster is not always consistent with that utilized by SEUMA for planning, environmental and urban licensing purposes. The objective of this subcomponent is to develop an integrated multipurpose cadaster, to be used not only for tax collection, but also as a planning tool for the city, improving access to land-related information, providing a more accurate evaluation of property value, and facilitating the layout and provision of urban infrastructure and services (e.g. water and sewerage networks, roads, transport) through a mapping tool, among others.

2.3 Optimization of SEUMA's Processes and Services. This subcomponent will support SEUMA's "Fortaleza Online Program", aiming at expanding the current online system to over 80 licensing services. This action will not only help improve the efficiency and transparency of SEUMA's internal processes, but also strengthen the relationship with citizens and promote innovation in the PMF. In addition, assistance will be provided to develop the institutional capacity to implement this e-government activity, including security protocols, digital certification and updating of internal regulation, among others.

2.4 Identification and Structuring of Urban Operations. The urban operation (Operação Urbana Consorciada, OUC) is a legal instrument that allows both the private and public sectors to propose and enter partnerships with the objective of promoting the redevelopment of selected areas, provided there are proven social benefits. The PMF has started the implementation of a few OUCs in the city, though has not yet been able to take full advantage of the transformational potential of such a sophisticated tool. Under this subcomponent, possible areas for the implementation of OUCs will be identified, delimited and prioritized based on their transformational impact. The Project will also lay the foundations necessary for the PMF to structure OUCs. SEUMA has already pre-identified a few areas around the Rachel de Queiroz Park that could be the object of an OUC (to be developed under Component 1).

2.5 Review of the Master Plan and Land Use and Zoning Law. SEUMA will revise the city's Master Plan and Land Use and Zoning Law (Lei de Uso e Ocupação do Solo, LUOS). The revision will be complemented by the regulation of the available urban instruments defined by the Brazilian City Statute (e.g. Granting Right to Build, Transfer of Right to Build, OUCs). Among other adjustments, the PMF intends to capture gains through the efficient use of available urban instruments, which is not currently happening.

2.6 Strengthening of Urban and Environmental Monitoring Systems. SEUMA will structure Environmental Pollution Control Units to support their monitoring capacity for several investments under Component 1. This activity will support the structuring of the Units and capacity building, as well purchase of the necessary equipment.

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04	x		
Forests OP/BP 4.36		x	
Pest Management OP 4.09	x		
Physical Cultural Resources OP/BP 4.11	x		

Indigenous Peoples OP/BP 4.10		x	
Involuntary Resettlement OP/BP 4.12	x		
Safety of Dams OP/BP 4.37		x	
Projects on International Waterways OP/BP 7.50		x	
Projects in Disputed Areas OP/BP 7.60		x	

V. Financing (in USD Million)

Total Project Cost:	146.60	Total Bank Financing:	73.30
Financing Gap:	0.00		
Financing Source			Amount
Borrower			73.30
International Bank for Reconstruction and Development			73.30
Total			146.60

VI. Contact point

World Bank

Contact: Catalina Marulanda
 Title: Lead Urban Specialist
 Tel: 473-8616
 Email: cmarulanda@worldbank.org

Contact: Emanuela Monteiro
 Title: Urban Specialist
 Tel: 5761+1061 /
 Email: emonteiro@worldbank.org

Borrower/Client/Recipient

Name: Municipality of Fortaleza
 Contact:
 Title:
 Tel:
 Email:

Implementing Agencies

Name: Secretaria Municipal de Urbanismo e Meio Ambiente (SEUMA)
 Contact: Agueda Muniz
 Title: Secretaria Municipal de Urbanismo e Meio Ambiente
 Tel: 55853452-6903
 Email: agueda.muniz@fortaleza.ce.gov.br

VII. For more information contact:

The InfoShop
 The World Bank
 1818 H Street, NW
 Washington, D.C. 20433

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Telephone: (202) 458-4500
Fax: (202) 522-1500
Web: <http://www.worldbank.org/infoshop>

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