



1. Project Data

Project ID P153012	Project Name Fortaleza Sustainable Urban Development		
Country Brazil	Practice Area(Lead) Urban, Resilience and Land		
L/C/TF Number(s) IBRD-87470	Closing Date (Original) 31-Mar-2024	Total Project Cost (USD) 56,700,544.28	
Bank Approval Date 28-Apr-2017	Closing Date (Actual) 31-Mar-2025		
	IBRD/IDA (USD)	Grants (USD)	
Original Commitment	73,300,000.00	0.00	
Revised Commitment	56,700,544.28	0.00	
Actual	56,700,544.28	0.00	
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2. Project Objectives and Components

a. Objectives

According to the Project Appraisal Document (PAD) (p. ii) and the Financing Agreement of June 5, 2019, (p.7) the objective of the project was to “(a) strengthen the capacity of the Municipality of Fortaleza for land use planning and land-based financing; and (b) enhance urban environment and rehabilitate public spaces, through interventions in selected areas of the Vertente Marítima Basin and of the Rachel de Queiroz Park.”

The original objective will be parsed as follows:



- i. To strengthen the capacity of the Municipality of Fortaleza for land use planning and land-based financing;
- ii. To enhance urban environment and rehabilitate public spaces, through interventions in selected areas of the Vertente Marítima Basin and of the Rachel de Queiroz Park.

The revised objective will be parsed as follows:

- i. To strengthen the capacity of the Municipality of Fortaleza for land use planning and for urban and environmental policy implementation;
- ii. To enhance urban environment and rehabilitate public spaces through interventions in the Vertente Marítima Basin and other selected green areas.

This Review will conduct a split evaluation given the significant changes to the Results Framework that were made during the October 2022 project restructuring.

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

No

c. Will a split evaluation be undertaken?

Yes

d. Components

The project had three components:

Component 1: Urban and Environmental Restoration (appraisal estimate US\$52.1 million, revised US\$49.8 million, actual US\$40.2 million): This component included two subcomponents:

Subcomponent 1.1: Restoration of Rachel de Queiroz Park (RDQP): This subcomponent was to finance the improvement of: i) overall accessibility, including access roads, paving and walking paths; (ii) basic amenities, including lighting, landscaping, signage, outdoor furnishings and sporting equipment; (iii) the connectivity of surrounding neighborhoods to bus transportation lines and commercial areas through, inter alia, bicycle paths and walking paths.

Subcomponent 1.2: Reducing point-source pollution along Vertente Marítima (VM) coastline: This subcomponent was to finance: i) strengthening of the Borrower's monitoring and enforcement capacity to ensure selected households connect to the sewage network; ii) sewage connections for low-income households; iii) carrying out interventions for capturing and diverting dry-weather flows from storm water drains discharging along the coast; iv) piloting on-site water resource treatment technologies to attenuate pollution in selected water bodies; and v) carrying out communication and environmental education campaigns.

When the project was restructured in October 2022, the scope of this component was reduced as follows: Under subcomponent 1.1, interventions in the RDQP were dropped due to land acquisition and associated



resettlement issues. Instead, additional parks and green areas were introduced including microparks, bicycle paths etc. Under subcomponent 1.2, the pilot of on-site water resource treatment technologies in selected water bodies was dropped due to delays. Instead, in the Maceio stream area the sewerage network was to be expanded, and low-income household sewage connections were to be financed.

Component 2: Strengthening Municipal Capacity for Planning and Implementation of Urban and Environmental Policies (appraisal estimate US\$15.0 million, revised US\$18.2 million, actual US\$10.7 million): This component included two subcomponents:

Subcomponent 2.1: Upgrade of planning instruments and licensing tools: This subcomponent was to finance the following activities: i) upgrading the existing cadaster and the development of a spatial information platform; and ii) optimizing processes and services related to environmental and urban management.

Subcomponent 2.2: Implementation of land-based financing instruments: This subcomponent was to finance the following activities: i) designing and structuring of Urban Operation (Operação Urbana Consorciada) in selected areas surrounding the Rachel de Queiroz Park and its surroundings; and ii) strengthening of Secretaria Municipal de Urbanismo e Meio Ambiente (SEUMA's) capacity to promote urban redevelopment.

When the project was restructured in October 2022, a new activity under subcomponent 2.1 was introduced (photogrammetric surveys to update the existing cadaster) and under subcomponent 2.2 original scope of subcomponent 2.2 was increased to include mandated updates to the city's master plan, new activities included revision of the city's master plan, municipal sanitation plan, and a consultancy focused on urban economics, public finances, and urban instruments.

Component 3: Project Management (appraisal estimate US\$6.0 million, revised US\$5.2 million, actual US\$5.6 million): This component was to finance: i) managing the project including in key areas such as M&E, financial management and procurement; ii) conducting outreach activities in connection with the project; iii) providing equipment and training (on, inter alia, technical, environmental and social safeguards management) to SEUMA's staff for implementation; and iv) providing technical assistance and supplies to strengthen the Borrower's auditing, financial control and procurement capacity.

e. **Comments on Project Cost, Financing, Borrower Contribution, and Dates**

Project Cost: The project was estimated to cost US\$219.9 million. The actual cost was US\$57.7 million.

Financing: The project was financed by a World Bank loan in the amount of US\$73.3 million of which US\$56.7 million was disbursed.

Borrower Contribution: The Borrower was to originally contribute US\$73.3 million, which was revised to US\$29.3 million. However, no contribution materialized.

Dates: The project was restructured twice:

On October 26, 2022, the project was restructured (level 2) to: i) revise the PDO to broaden its first part, reflecting the changes in urban and environmental policy implementation, change the types of interventions



as well as geographic areas targeted by the project to respond to the greater demand for open spaces and green areas; ii) revise the scope of components, and corresponding changes to the results indicators; iii) reallocate funds among project components to reflect the change in PDO; iv) reduce mandatory counterpart funds due to exchange rate fluctuations between the BRL and the US dollar, as well as COVID-related fiscal constraints; and v) change the project's institutional arrangements to include the Municipal Secretariat of Infrastructure (Secretaria Municipal de Infraestrutura – SEINF) as an additional implementing agency to ensure closer technical oversight and efficiency of works execution for Component 1.

On January 22, 2024, the project was restructured (level 2) to: extend the loan closing date from March 31, 2024 to March 31, 2025 (12 months) and update the disbursement projections, considering the revised closing date to allow for the completion of project activities which had been delayed due to procurement related issues, (contract amendments and extensions) as well as delays related to the finalization of detailed designs and institutional coordination for the dry-weather stormwater flow capture works along the VM coastline.

The project was approved on April 28, 2017, and only became effective on June 18, 2019. According to the ICR (para. 69), it was foreseen that the Federal Guarantee (a condition for loan signing and effectiveness) could only be issued in 2018 due to the Federal Government's limited fiscal space for subnational borrowing. However, it ended up taking two years. The project's original closing date was March 31, 2024, and its actual closing date was March 31, 2025, i.e. the project underwent a one year extension. The Mid-Term Review was conducted on September 20-24, 2021.

3. Relevance of Objectives

Rationale

Country/region and sector context. According to the PAD (para. 4), at the time of appraisal, Fortaleza was the fifth largest city in Brazil and the tenth largest in terms of Gross Domestic Product (GDP). Fortaleza experienced high levels of inequality, distinct and drastic socio-economic contrasts, and sharp spatial divides. Also, the city was not able to match its fast growth with adequate planning and management. As a result, the city followed a sprawling growth pattern, characterized by the encroachment of environmentally protected areas, parks and green spaces. Furthermore, investments in sanitation did not keep up with the growth, negatively impacting the urban environment. Only 46 percent of households were connected to the sewage network, with significant spatial variability in terms of access. Discharges of untreated sewage to water bodies caused substantial pollution of beaches, rivers and lagoons.

The Municipal Government of Fortaleza (PMF) identified the need to rehabilitate the urban environment, as well as to improve land use and occupation patterns to promote social inclusion and sustainable growth. Substantial investments in environmental restoration, infrastructure and public spaces, as well as strengthening urban planning, monitoring and management capacity were needed. While the PMF was already financing sanitation, housing, and mobility projects across the city, additional sources of revenue were needed to fund the investments necessary for the city's long-term transformation.

Alignment with the Government strategy. The original and revised objectives were in line with the Municipal Sanitation Plan by the Municipal Government of Fortaleza (PMF) and the Water and Sewage Company of Ceara (CAGECE) which aimed to achieve universal service coverage and treatment of



domestic sewage by 2033 including expanding sewerage systems, increasing the number of connected households and reducing illegal discharges. According to the World Bank team (February 23, 2026), the objective of the project was also in line with the Municipality's broader planning framework, including Plano Fortaleza 2040, Master Plan (Plano Diretor Participativo), land-use regulations, and the use of urban operations (OUCs). These instruments recognized the need to rehabilitate environmental assets to improve urban livability, resilience, and social inclusion.

Alignment with the World Bank strategy. The original and revised objectives were in line with the World Bank's most recent Country Partnership Framework (FY24-28), particularly objective 2.1 "improve access to essential services and products" given the project's activities on water supply, sanitation, sewerage, sidewalks etc. Also, the project supported objective 3.3 "promote green and resilient cities and communities". The original and revised objectives were also in line with the World Bank's Systematic Country Diagnostic "Realizing Brazil's Potential and Fulfilling its Promises", and its priority areas i) higher and more effective public and private investment; ii) infrastructure and the efficient delivery of public services, targeted particularly to the bottom 40 percent of the income distribution; ii) improve mechanisms for planning and implementation of public investment; and iii) strengthen management of natural assets.

While the first part of the objective was phrased at the outcome level, the second part of the objective mixed outputs and higher-level results, as it focused on physical interventions and rehabilitation activities while also implying a broader environmental improvement outcome. Overall, relevance of the objective was High.

Rating
High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

Strengthen the capacity of the Municipality of Fortaleza for land use planning and land-based financing

Rationale

Theory of Change: The theory of change stated that project activities such as upgrading the existing cadaster, developing a spatial information platform, optimizing urban and environmental management processes, designing and structuring an Urban Operation (OUC) in areas around Rachel de Queiroz Park (RDQP), and strengthening SEUMA's capacity to promote urban redevelopment were to result in several outputs. These outputs were to include an upgraded multi-purpose cadaster, a spatial information platform under development, operational urban and environmental permitting processes through Fortaleza Online, and the preparation and submission for approval of a community-supported draft law for the Urban Redevelopment Operation (OUC RDQP). These outputs were to improve the municipality's access to reliable spatial and land information, streamline urban management processes, and establish mechanisms to capture



land value, thereby strengthening the capacity of the Municipality of Fortaleza for land use planning and land-based financing.

The theory of change is overall sound. However, it assumed that the proposed Urban Operation law would be approved and implemented and that improved data systems and permitting processes would be effectively used to support land-value capture and redevelopment. These steps depend on political approval, institutional uptake, and market participation, which are not fully articulated in the results chain.

Outputs:

- 76 urban and environmental permitting processes were operational on Fortaleza Online, not achieving the original target of 90 processes. Fortaleza Online is a digital licensing IT system to facilitate processing, reviewing and approving environmental and urban licensing/permits requests.
- Increase the number of cadaster entries (inscrições cadastrais) that meet formal construction procedures to the target of 40 entries, not measured, not achieved.
- A Communication and Community Engagement Strategy for OUC RDQP developed and under implementation, not measured, not achieved.
- The draft law for OUC RDQP submitted for approval of Câmara Municipal, not measured, not achieved.
- Multi-purpose cadaster upgraded and Spatial Information Platform under development, not measured, not achieved.

Outcomes:

- The Municipality of Fortaleza’s own resource revenue capacity increased with a 28 percent increase in property tax revenue (collected between 2016 and 2024), exceeding the original target of 20 percent.
- Increase in revenues through Fortaleza Online, not measured, not achieved.
- Increase in SEUMA’s revenues from urban instruments, not measured, not achieved.
- Urban redevelopment pilot (OUC RDQ) in preparation and structured, not measured, not achieved.

While the project was able to partially operationalize urban and environmental permitting processes on Fortaleza online and increase the municipalities’ property tax revenue by 28 percent, the project did not measure, and therefore not achieve, any of the other outputs and outcomes under this objective. Therefore, overall achievement of this objective is rated Modest.

Rating
Modest

OBJECTIVE 1 REVISION 1

Revised Objective

To strengthen the capacity of the municipality of Fortaleza for land use planning and for urban and environmental policy implementation

Revised Rationale



Theory of Change: When the project's objective was changed, several activities were dropped such as upgrading a multi-purpose cadaster and developing a spatial information platform as well as increasing the number of cadaster entries that meet formal construction, developing and implementing a communication and community engagement strategy for OUC around RDQP and submitting a draft law for OUC RDQP for approval. Also, new activities aimed at strengthening the municipality's urban planning framework were added. These new activities included conducting photogrammetric surveys to update the existing cadaster and undertaking revisions of the city's master plan and municipal sanitation plan, as well as a consultancy on urban economics, public finances, and urban instruments. These activities were to result in outputs such as updated spatial and cadastral data, revised strategic planning instruments, and enhanced analytical capacity for urban land management and fiscal planning. Together, these outputs were intended to further strengthen the municipality's capacity for land-use planning and for implementing urban and environmental policies, thereby reinforcing the project's overall objective.

The theory of change was generally sound. However, it assumed that improved planning tools and updated regulatory frameworks would result in actual urban redevelopment and improved urban outcomes, but this transition was to depend on political approval, financing, and private sector participation.

Outputs:

- 76 urban and environmental permitting processes were operational on Fortaleza Online, exceeding the revised target of 70 processes.
- A cartographic update for territorial management was operational, achieving the new target of the update being operational. This indicator included aerial photogrammetric survey, three survey and identification by NDVI, 360 mobile mapping update, 3D modeling, and orbital images.
- The Fortaleza Participatory Master Plan, 24 urban parks management plans, and four management plans for storage units were updated. The updating of the Water and Sanitation Plan was not completed. Therefore, the new target of 30 updated/elaborated urban and environmental policy instruments was not achieved.
- 65,000 people participated in community engagement and environmental education activities including community meetings, workshops, door-to-door information campaigns, thematic lectures and participatory evaluations, exceeding the new target of 10,000 people. According to the World Bank team (February 23, 2026), the target was substantially exceeded due to the high performing of the hired contractor who contributed to streamlining implementation and engaging communities in the participatory management of supported investments. Community engagement and environmental education activities under the Environmental and Sanitary Education Plan (PEAS) were implemented across all major investments, particularly sanitation works and green-space restoration, and included permanent mobilization, workshops, engagement with schools, and participatory activities across multiple neighborhoods, which significantly expanded the scale and frequency of activities, leading to exceeded targets.
- 94 percent of beneficiaries were satisfied with community engagement and environmental education activities, exceeding the new target of 70 percent.
- 89 percent of participants of community engagement and environmental education activities considered that project investments reflected requested demands, exceeding the new target of 60 percent.
- 95 percent of complaints and grievances related to the project were responded to within the established deadline, exceeding the new target of 90 percent.



- The ICR recorded an additional output that was not included in the Results Framework and hence does not have a target value:
- A Spatial Information Platform (IDE) was developed to integrate territorial thematic layers and enable geospatial consultations to assist SEUMA in providing services such as issuing certificates, official opinions, licenses more efficiently to citizens or government entities.

Outcome:

- The Municipality of Fortaleza’s own resource revenue capacity increased with a 28 percent increase in property tax revenue (collected between 2016 and 2024), exceeding the revised target of 10 percent.
- The indicators “Increase in revenue through Fortaleza Online” (target: 100%) and “Increased revenue from improved tools (Spatial Data Infrastructure) for territorial control and management (target: not stated in PAD) were not measured at project closing. Since they were not formally dropped, they are assessed as not achieved.
- The indicators “Increase in revenue through Fortaleza Online” (target: 100%) and “Increased revenue from improved tools (Spatial Data Infrastructure) for territorial control and management (target: not stated in PAD) were not measured at project closing. Since they were not formally dropped, they are assessed as not achieved.

The PDO indicator was not strongly linked to the outcome it was supposed to measure since increased own-source revenue is an indirect proxy and the Fortaleza could increase revenue without actually improving planning or environmental policy implementation. Furthermore, this indicator measured financial performance, not planning capacity.

The project achieved most planned outputs, exceeding targets for operational permitting processes, cartographic updates, and community engagement, though some planning instruments were not completed and two outcome indicators were not measured at closing. Despite limitations in the outcome measurement framework, the delivery of key planning, data, and management tools suggest the project substantially strengthened the capacity of the Municipality of Fortaleza for land-use planning and urban and environmental policy implementation. Therefore, this objective is rated as Substantially achieved with shortcomings.

Revised Rating

Substantial

OBJECTIVE 2

Objective

Enhance urban environment and rehabilitate public spaces, through interventions in selected areas of the Vertente Marítima Basin and of the Rachel de Queiroz Park (RDQP)

Rationale

Theory of Change: The project’s theory of change stated that project inputs/activities such as restoring the Rachel de Queiroz Park (RDQP) through improving access roads, paving and walking paths, lighting, landscaping as well as improving sewage connections for low-income households, and carrying out interventions for capturing and diverting dry-weather flows from storm water drains discharging along the



coast were to result in several outputs. These outputs were to include residents having better access to the park, infrastructure within the park improved, as well as low-income households sewage connections improved. These outputs were to result in the outcome of urban environment enhanced and public spaces rehabilitated in the Vertente Marítima Basin and the RDQP.

The theory of change presented a plausible link between infrastructure improvements and better public spaces but it did not clearly explain how the interventions were to lead to broader urban environmental enhancement.

Outputs:

- Feasible household connections to sewage network completed in western portion of the VM Basin (target: 80 percent), not measured, not achieved.
- Number of residents within 15 minute walking distance to quality public space within the revitalized RDQP (target: 145,433), not measured, not achieved.
- Increase of pedestrian and bicycle flows within areas of intervention in RDQP (target 30 percent), not measured, not achieved.
- Multi-purpose cadaster upgraded and Spatial Information Platform under development (target: operational), not measured, not achieved.
- Urban redevelopment pilot (OUC RDQP) in preparation and structured (target: structured), not measured, not achieved.

Outcomes:

- 38,634 people in urban areas were provided with access to improved sanitation, exceeding the original target of 27,200 people.

The project restored infrastructure in Rachel de Queiroz Park and expanded low-income household sewage connections, reporting improved sanitation for 38,634 residents (exceeding the target) but most planned outputs were not documented and broader environmental improvements were not measured. Given the limited evidence and reliance on a single outcome indicator, overall achievement under this objective is assessed as **Modest**.

Rating

Modest

OBJECTIVE 2 REVISION 1

Revised Objective

To enhance urban environment and rehabilitate public spaces through interventions in the VM Basin and other selected green areas

Revised Rationale

Theory of Change: The project's theory of change stated that project inputs/activities such as rehabilitating microparks, requalifying green areas, constructing and upgrading bicycle paths, and expanding the Maceió



Stream sewerage network including financing low-income household connections were to result in several outputs. These outputs were to include rehabilitated microparks, requalified parks, improved sanitation coverage, and upgraded bicycle paths. These outputs were to result in the outcome of enhanced urban environment and rehabilitated public spaces through interventions in the VM Basin and other selected green areas.

When the project was restructured in October 2022, several activities such as interventions in the RDQP and pilot of on-site water resource treatment technologies in selected water bodies were dropped and the scope was increased beyond the RDQP and included microparks, bicycle paths, Passaré Biopark, urbanization of Messejana and Opaia Lagoons, and management plans for RDQP and lagoons.

The theory of change was sound for delivering urban space and infrastructure improvements, but its contribution to environmental outcomes, particularly water quality, was limited by factors beyond the project's direct control such as pollution entering the Maceió Stream from areas not covered by the project.

Outputs:

- 134.4 hectares of green area was requalified, exceeding the new target of 57.04 hectares. The area combined completed parks and microparks including sections 1-6 of Rachel de Queiroz Park, Messejana Lagoon, Opaia Lagoon, the Zoo and Botanical Park, and 13 microparks.
- 38,634 people in urban areas were provided with access to improved sanitation under the project, exceeding the revised target of 29,070 people. A total of 3,177 low income sewerage household connections were completed under the Se Liga Na Rede and Riacho Maceio projects. Also, through strengthening an enforcement team under SUMA and financing video inspection services of sewerage system. 8,186 inspections were conducted in middle-income households, starting regularization processes for sewerage connections.
- 13 microparks aimed at early childhood education were rehabilitated, not achieving the new target of 32 public spaces.
- 74 kilometers of bicycle paths were implemented and rehabilitated, not achieving the new target of 84.6 kilometers.

Outcome:

- 40 percent of sampling points along the western portion of the VM coastline had adequate water quality (for bathing) during the dry season, not achieving the original target of 80 percent.

The project substantially enhanced the urban environment by restoring and expanding green and recreational spaces across multiple neighborhoods, significantly exceeding targets for requalified green areas and improving access to sanitation services beyond expectations. Although some outputs such as the number of rehabilitated microparks and kilometers of bicycle paths, fell short of targets, they still contributed meaningfully to improved urban mobility and livability. Progress toward environmental outcomes was more limited, as water quality along the VM coastline did not reach the targeted standards. However, this indicator captured only a narrow dimension of environmental improvement and was influenced by factors beyond the project's direct control such as pollution from other sources entering the Maceió Stream Overall, the project's achievement under this objective was Substantial with shortcomings.



Overall, the project benefited 492,934 beneficiaries, not fully achieving the target of 523,143 beneficiaries. Of those beneficiaries, 53 percent were female, achieving the target of 53 percent. The achievement of this objective is rated Substantial with shortcomings.

Revised Rating
Substantial

OVERALL EFFICACY

Rationale

Original overall Efficacy: Achievement of the original first and second objectives was Modest. Overall achievement of the original Efficacy is therefore rated Modest.

Overall Efficacy Rating
Modest

Primary Reason
Low achievement

OVERALL EFFICACY REVISION 1

Overall Efficacy Revision 1 Rationale

Revised overall Efficacy: Achievement of the revised first and second objectives was Substantial with shortcomings. Therefore, overall achievement after project restructuring is rated Substantial (with shortcomings).

Overall Efficacy Revision 1 Rating

Substantial

5. Efficiency

Economic efficiency:

Both the PAD and the ICR conducted a benefit-cost analysis. The PAD (para. 38) measured the benefits of Subcomponent 1 (upgrading of the RDQP) using properties' market price increase in a comparable area of Fortaleza. To measure the benefits of Subcomponent 1.2 (reducing point-source pollution along VM coastline monthly) sewerage bill as an approximation of the willingness to pay were used. Health benefits resulting from improvements in bathing water quality along the coastline were added. Benefits from Subcomponent 2.1 (upgrade of planning instruments and licensing tools) were measured through increase of own-source revenues. Applying a discount rate of 12 percent, the PAD calculated the Internal Rate of Return (IRR) for Subcomponent



1.1 as 27 percent. Subcomponent 1.2 as 9 percent, and Subcomponent 2.1 as 49 percent. The project’s overall IRR was calculated at 32 percent. Also, the PAD calculated a Net Present Value (NPV) of US\$2.2 million.

The ICR (para. 58-60) applied the same methodology as the PAD while using actual data. The IRR for subcomponent 1.1 was calculated at 158 percent (given a much higher increase in property values and lower financing than originally planned), an IRR of 6 percent for subcomponent 1.2. and an IRR of 304 percent for subcomponent 2.1 (due to higher actual values of revenues from property taxes and fees from Fortaleza online). The project’s overall IRR was calculated at 112 percent at closing which was substantially higher than at appraisal due to higher returns on own source revenue and property valuation.

Operational efficiency:

The actual project’s cost was only 61 percent despite the increase in the project’s scope and intervention areas. The project experienced delays related to procurement and staff turnover. The project experienced a two-year delay after the project was approved to become effective due to the Federal Guarantee. While a one-year delay was expected, it ended up being two years. The project’s implementation period was extended by 12 months delays as a result of procurement related issues, (contract amendments and extensions) as well as delays related to the finalization of detailed designs and institutional coordination for the dry-weather stormwater flow capture works along the VM coastline.

Despite some delays, operational efficiency was adequate resulting on an overall Substantial project’s efficiency.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	32.00	100.00 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	112.00	100.00 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

Relevance of the original objective is rated High given its alignment with the World Bank’s most recent Country Partnership Framework (FY24-28). Achievement of the original overall Efficacy is rated Modest and Efficiency is rated Substantial resulting in an overall project outcome rating of Moderately Unsatisfactory.



Relevance of the revised objective is rated Substantial given its alignment with the World Bank’s most recent Country Partnership Framework (FY24-28). Achievement of the first and second revised objectives was Substantial with shortcomings. Efficiency is rated Substantial resulting in an outcome rating of Satisfactory.

Based on the assessment below, the overall outcome rating is Moderately Satisfactory.

	Original PDO	Revised PDO
Relevance of Objective	High	High
Efficacy	Modest	Substantial
Objective 1	Modest	Substantial
Objective 2	Modest	Substantial
Efficiency	Substantial	Substantial
Outcome rating	Moderately Unsatisfactory	Moderately Satisfactory
Numerical value of outcome rating	3	4
Disbursement % at time of restructuring	19%	81%
Weighted value of the outcome rating	$3 \times 0.19 = 0.57$	$4 \times 0.81 = 3.24$
Final outcome rating	$0.57 + 3.24 = 3.81$ (rounded up to 4)	
	Moderately Satisfactory	

- a. **Outcome Rating**
Moderately Satisfactory

7. Risk to Development Outcome

Government commitment risk: The government continues to be committed to the project’s objectives as demonstrated through the ongoing cooperation with the World Bank through the follow-on Development Policy Financing (DPF) operation (P512540), building on this project to support reforms under two pillars: urban development and fiscal sustainability. Under the urban development pillar, activities include approval of the Participatory Master Plan to incentivize density and prioritize low-income areas, adoption of a Climate Change Policy and Climate Action Plan, and revision of the Urban Development Fund to increase capitalization and better target priorities such as housing. Under the fiscal sustainability pillar, activities include updating property values through aerial surveys to modernize the property tax and promote equity, revising municipal tax legislation, and updating fiscal rules.



Financial Risk: The project could face financial risks such as funding shortfalls, delays in resource allocation, or budget constraints. Potential mitigation measures could include closer financial monitoring, aligning project activities with government budgeting processes, and ensuring contingency funding.

Environmental Risk: Urban development activities may pose risks to wetlands, green spaces, or other climate-sensitive areas. Potential mitigation measures could include environmental assessments, planning safeguards, and incorporating climate adaptation measures into project design.

8. Assessment of Bank Performance

a. Quality-at-Entry

According to the PAD (para. 23), the project built on lessons learned from past World Bank urban, water and sanitation projects in Brazil. Key lessons included: i) setting realistic expectations of potential impacts; ii) aligning components with government strategies and investments; iii) minimizing the need for resettlement; and iv) ensuring the readiness of procurement packages at project effectiveness.

The World Bank team identified relevant risks to project implementation and rated the following as Substantial: i) Political and Governance risk, due to possible staff changes after future elections; ii) Macroeconomic risk, since related changes might result in reduced counterpart funding; iii) Institutional Capacity risk, for Implementation and Sustainability due to SEUMA's lack of experience in working on a World Bank project; iv) Fiduciary risk, due to limited capacity; and v) Environment and Social risk due to SEUMA's lack of experience in World Bank's safeguard policies. Mitigation measures included capacity evaluation of the main agencies, providing technical support and fiduciary capacity activities as well as hiring specialized consultancy services to implement the Resettlement Action Plans (RAPs) prepared during preparation. Most mitigation measures were adequate. However, political changes led to implementation delays and slower disbursement rates, due to leadership transitions at SEUMA, changes in the PIU management, and a period of significant staff turnover. The World Bank team did not identify the risk of effectiveness taking 12 months longer than planned. While the World Bank team took advantage of this time to build capacity, the project still experienced procurement related capacity issues resulting in implementation delays.

The Results Framework had several shortcomings including PDO indicators that were weakly linked to intended results (with one focusing on financial performance rather than planning capacity and another narrowly measuring environmental quality), and a lack of clarity in indicator definitions, methodology, and geographic and thematic coverage (see section 9a for details).

Quality-at-Entry Rating
Moderately Satisfactory

b. Quality of supervision



The World Bank team conducted 15 implementation support missions during the project's six years and four-month implementation period. According to the ICR (para. 86), the project benefitted from one Task Team Leader (TTL) staying on the project during preparation and implementation ensuring continuity and allowing to establish a strong relationship with the counterpart.

The World Bank team conducted the project's Mid-Term Review in late 2021 when only 10 percent of project financing had been disbursed. To address the identified issues, the World Bank team restructured the project to revise the PDO, adjusted and expanded the target areas, partially cancelled counterpart funding, modifying the implementation arrangement by adding another implementing agency (Municipal Secretariat of Infrastructure – SEINF), and cancelling some activities. According to the World Bank team (February 23, 2026), the addition of SEINF to oversee the key works was fundamental to accelerate project implementation.

However, the World Bank team did not sufficiently address the weaknesses in the Results Framework to ensure PDO indicators were clearly linked to outcomes, broader in scope, and supported by reliable and well-defined data.

Quality of Supervision Rating

Satisfactory

Overall Bank Performance Rating

Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The theory of change and how key activities and outputs were to lead to the intended outcomes was sound.

However, while the first objective was appropriately stated on the outcome level, the second objective mixed outputs and higher-level results, as it focuses on physical interventions and rehabilitation activities while also implying a broader environmental improvement outcome, making it insufficiently specific for a clear outcome-level objective.

Also, the PDO indicators were not strongly linked to the outcome they were supposed to measure. The first PDO indicator (“increase of municipality of Fortaleza own-resource revenue capacity through planning and land-value capture instruments”) was not entirely appropriate to measure “strengthened capacity for land use planning and for urban environmental policy implementation” since increased own-source revenue is an indirect proxy and the Fortaleza could increase revenue without actually improving planning or environmental policy implementation. Also, this indicator measured financial performance, not planning capacity. In addition, the PDO indicator consisted of three sub-indicators (i) increase in property tax revenue (target: 20 percent), ii) Increase in revenue through Fortaleza Online (target: 100 percent), and, iii) increased revenue from improved tools (Spatial Data Infrastructure) for territorial control and management),



each with its own target and without a clear definition and methodology how the results of the sub-indicators were calculated.

The second PDO indicator (percentage of sampling points along the western portion of the VM coastline with adequate bathing water quality (balneabilidade) during dry season“) was a strong, objective environmental indicator especially since project interventions were related to sanitation. However, it did not capture “public space rehabilitation” and was geographically and thematically narrow since it reflected only on one environmental dimension and one location – western VM coastline.

The intermediate outcome indicators were specific, measurable, achievable, relevant and time-bound (SMART).

According to the PAD (para. 26), M&E data were to be collected by institutions outside of SEUMA, namely Municipal Secretariat of Finance (SEFIN), Water and Sewage Company of Ceará (CAGECE) and Ceara State Secretariat of Environment (SEMACE).

b. M&E Implementation

When the project was restructured in October 2022, the PDO was revised to broaden its first part, reflecting the changes in urban and environmental policy implementation, and to change the geographic areas targeted by the project to respond to the greater demand for open spaces and green areas. Also, a large number (seven in total) of intermediate outcome indicators was dropped and replaced by new intermediate outcome indicators to reflect the change in activities of the components. Also, under PDO indicator 1, the target of the first sub-indicator related to the increase in property tax revenue was decreased from 20 percent to 10 percent, while the targets of the two other sub-indicators remained the same. According to the ICR (para. 75), at project closing, the PDO indicator was simplified to only focus on property tax revenue. However, no formal project restructuring took place.

According to the World Bank team (February 23, 2026), the PIU ensured attention to effective M&E implementation. Despite some weaknesses in indicator definition and measurement, the PIU remained engaged in monitoring progress and adapting M&E arrangements as implementation evolved. Furthermore, M&E data was found reliable and methodologically sound, particularly those based on administrative records, IT platforms, and official monitoring programs. However, the project’s M&E faced data limitations related to indicator design and clarity.

The World Bank team stated that the project supported the institutionalization of core information systems i.e., multipurpose cadaster, spatial data infrastructure, and digital licensing platforms which continue to generate data for urban management and policy implementation for Fortaleza. These systems are embedded within municipal structures and are being used to inform ongoing reforms and follow-on operations, indicating a high likelihood of sustainability beyond the life of the project.

c. M&E Utilization

According to the ICR (para. 77), the project’s M&E data were used to inform decision making such as restructuring the project in 2022 and 2024.



However, given the weaknesses of the two PDO indicators, overall M&E quality is rated Modest.

M&E Quality Rating

Modest

10. Other Issues

a. Safeguards

The project was classified as category B and triggered the World Bank's safeguard policies OP/BP 4.01 (Environmental Assessment), OP/BP 4.04 (Natural Habitats), OP/BP 4.09 (Pest Management), OP/BP 4.11 (Physical Cultural Resources), and OP/BP 4.12 (Involuntary Resettlement). According to the ICR (para. 80), the project prepared an Environmental and Social Management Framework (ESMF). Most of the implementation period the implementation of the environmental instruments was Satisfactory except in June 2023 when the compliance rating was downgraded to Moderately Satisfactory due to the need to strengthen the environmental control measures as well as coordination among implementing agencies to improve the enforcement of Environmental, Health, and Safety Guidelines (EHS). Also, according to the ICR (para.81), the project prepared a Resettlement Policy Framework (RPF) and two Abbreviated Resettlement Action Plans (ARAPs) that addressed the identified risks.

After the first restructuring, the resettlement issues were no longer given since the removed sections from the RDQP were the ones that triggered that safeguard policy in the first place. The ICR (para. 81) stated that the project also addressed the risk of economic displacement since informal traders needed to be relocated in the Opaia Lagoon. However, construction in the areas only started once the traders were relocated to newly built commercial units within the park, which resulted in high satisfaction level among traders due to a substantial profit increase.

b. Fiduciary Compliance

Financial Management

According to the ICR (para. 84), the project complied with the World Bank's policies including staffing, budgeting, internal controls, flow of funds, financial reporting and auditing. All Interim Financial Reports (IFRs) and auditing reports were submitted on time and all auditing reports had unqualified opinions. According to the World Bank team (February 23, 2026), all of the external auditor opinions were unqualified throughout project implementation.

When the project closed, the project's Financial Management was rated Satisfactory.

Procurement

According to the ICR (para. 83), procurement was rated Moderately Satisfactory for most of the implementation period due to procurement delays and staff turnover. Frequent contract modifications and challenges in complying with World Bank procurement rules also led to inconsistent documentation and



reporting. To address these challenges, the World Bank provided training on World Bank procurement policies, which resulted in better procurement performance.

When the project closed, the project’s procurement performance was rated Moderately Satisfactory.

c. Unintended impacts (Positive or Negative)

NA

d. Other

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	
Bank Performance	Satisfactory	Moderately Satisfactory	Shortcomings in quality at entry
Quality of M&E	Modest	Modest	
Quality of ICR	---	Substantial	

12. Lessons

The ICR (para. 89-93) included lessons learned, which were modified by IEG:

- **Complex urban nature-based investments in wetland areas can benefit from early strategic planning and ensuring land and institutional readiness. Using adaptive, phased implementation can help manage technical and legal risks while maintaining long-term design goals.** In this project, unresolved land tenure and pandemic-related delays made sections 7–10 of RDQP unfeasible within the implementation period. As a result, the restructuring focused on sections that were technically and legally ready, while completing designs for the remaining areas to ensure continuity and readiness for future financing.
- **Community engagement can positively impact the success and sustainability of urban green space projects.** In this project, participatory planning, local initiatives, and environmental education fostered ownership, improved maintenance, reduced vandalism, and enhanced social cohesion, demonstrating the value of embedding citizens into project design and implementation.
- **Successful multipurpose cadaster implementation can depend on institutional collaboration, phased reorganization, and ongoing data management, not just**



technology. In this project, delays in the city master plan and shifting political priorities limited application, highlighting the need to consider governance and policy constraints in design.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The project included an adequate overview of project preparation and implementation as well as an appropriate economic analysis. Also, the ICR was relatively concise and internally consistent. However, the ICR did not conduct a split rating even though the project and the Results Framework were substantially changed during the October 2022 restructuring. Also, the ICR was not sufficiently candid about how the selected PDO indicators were inappropriate to measure the desired outcomes. Overall, the quality of the ICR is rated Substantial.

a. Quality of ICR Rating

Substantial