



## 1. Project Data

**Project ID**

P104995

**Project Name**

BR Municipal APL5: Santos

**Country**

Brazil

**Practice Area(Lead)**

Social, Urban, Rural and Resilience Global Practice

**L/C/TF Number(s)**

IBRD-78070

**Closing Date (Original)**

30-Jun-2015

**Total Project Cost (USD)**

88,000,000.00

**Bank Approval Date**

24-Nov-2009

**Closing Date (Actual)**

30-Jun-2015

**IBRD/IDA (USD)**
**Grants (USD)**

Original Commitment

44,000,000.00

0.00

Revised Commitment

44,000,000.00

0.00

Actual

24,123,717.34

0.00

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## 2. Project Objectives and Components

### a. Objectives

This project was part of the Brazil Municipal Lending Program, which was structured as a Horizontal Adaptable Program Loan (APL), i.e., Umbrella APL. Eight municipalities were initially selected for the APL, and this project was the fifth (PAD page 8).

The Program objectives were to: (1) make tangible improvements in the participating municipalities, including: (i) better living conditions for municipal residents generally, and low-income communities in particular, (ii) improved capacity for service delivery and fiscal management, (iii) better stewardship of the local urban environment, and (iv) a better climate for local economic development; and



(2) serve as a vehicle for inter-municipal and intergovernmental knowledge sharing and learning, while helping to lay the foundation for Brazil to build a more robust national urban policy framework (PAD page 8).

The objectives of this project were: (a) to enhance the Borrower's capacity in local economic development; and (b) to improve public services in the Northwest Zone (Loan Agreement, February 8, 2010, page 5). This review is based on this project objective.

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

No

**c. Will a split evaluation be undertaken?**

No

**d. Components**

The project was organized in two main components and four sub-components.

Component 1: Municipal Management Enhancement (Appraisal US\$9.0 million; Actual US\$9.08 million):

This component aimed to strengthen the technical capacity of the Municipality of Santos in local economic development. It included two subcomponents that would benefit all city residents.

Sub-Component 1.1: Enhancing Municipal Management Capacity in Local Economic Development.

This sub-component included: (i) a regional economic development study to address constraints to development within the Borrower's (Municipality of Santos) territory and to provide guidance on alternatives for reducing the technical, financial, and timeframe efforts to prepare the environmental impact assessments for investments in the Baixada Santista region; (ii) feasibility studies for the development of the city-port revitalization initiative; and (iii) information technology (IT) program of Municipality of Santos, including the expansion of the fiber-cable network in the northwest zone as part of the large-scale municipal effort to improve urban services and standards and the improvement of the municipal IT Program's efficiency and its operation and maintenance capacity.

Sub-Component 1.2: Enhancing Municipal Administrative Management Capacity

This sub-component included: (i) municipal land planning and control mechanisms to strengthen the Municipality of Santos' capacity for land management by complementing the ongoing modernization process in the land cadaster mechanisms, including principal organizational and processing procedures, recommendations for improvements, and training of staff to implement the new procedures; and (ii) support to project management capacity, including monitoring and evaluation, auditing, financial management, procurement, and works supervision of the Project.

Component 2: Revitalization of the Northwest Zone and Adjacent Hillside (Appraisal US\$ 79.0 million; Actual US\$53.18 million):

This component focused on an integrated package of physical and social investments related to urban



environmental improvements in the northwest zone of Santos, with direct benefits to the 90,000 residents of the northwest zone, including about 2,400 households that would benefit from better living conditions through urban upgrading and resettlement. This component included two subcomponents.

**Sub-Component 2.1: Addressing Social Inequalities.**

This sub-component included: (i) slum upgrading and resettlement, providing infrastructure in Villa Gilda in the northwest zone, such as water and sanitation networks, drainage systems, street opening and paving, public lighting and a gas pipes network, bicycle paths and recreational and park areas, facilities for local commerce and public daycare and community centers, and restoration of aquatic and riparian vegetation along the canal bordering Villa Gilda; and the resettlement of families residing in stilt houses built over the canal adjacent to Villa Gilda and housing units for the resettled families; and (ii) improvements to the municipal job training program for low-income families, and the rehabilitation of municipal facilities which offer professional training courses for low-income families.

**Sub-Component 2.2: Improving Public Services**

This sub-component comprised: (i) storm drainage system improvements, including the rehabilitation of existing canals, installation of canal gates, pumping stations, and a centralized operational control system. Flooding in the area as a result of intense rain and the sea tide levels were to be addressed through a macro-drainage program that would increase flood protection from the two-year flood occurrence rate at the project appraisal to a 25-year frequency in the northwest zone of Santos, directly impacting its 90,000 residents; (ii) preventing risks of landslides in the hillside adjacent to the northwest zone, including preventive works, such as retaining walls and micro-drainage infrastructure, to avoid erosion caused by inadequate drainage in a hilly topography; and vehicles to strengthen the monitoring of high-risk areas susceptible to unregulated occupation; and (iii) increasing urban greening and amenities, including improvements to the Municipality of Santos' botanical garden and planting of street trees in the northwest zone, to promote tourism, increase the urban spaces for absorbing rainwater, and reduce the storm water flow.

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

**Project Cost**

Appraisal estimate of the total project cost was US\$88 million (PAD, October 29, 2009, page 41). Actual total project cost was US\$62.37 million including US\$0.11 million IBRD front end fee, or 71 percent of the appraisal estimate (ICR, June 7, 2016, page 31).

**Financing**

At appraisal, IBRD loan was US\$44 million, planned to finance Project Management under Component 1, and Improving Public Services under sub-component 2.2. At the level 2 project restructuring on June 1, 2013, the financing source of the city-port revitalization initiative studies under Component 1 was changed from the Borrower Municipality of Santos to the IBRD loan (Project Paper, May 28, 2012). Actual IBRD loan disbursement was US\$22.77 million and the undisbursed balance at closing of US\$21.23 million was cancelled with the notification date on August 5, 2016 according to the World Bank Client Connection website.



#### Borrower Contribution

At appraisal, the Borrower Municipality of Santos's contribution was US\$44 million. The actual contribution was US\$38.95 million.

#### Dates

The project was approved on November 24, 2009, become effective on April 19, 2010, and closed on schedule on June 30, 2015.

#### Restructuring

The project underwent level 2 restructuring on June 1, 2012, at the request of the Municipality of Santos to change the financing of city-port revitalization studies from counterpart to Bank loan financing. This amendment did not change the project activities, loan amount or the project description in the Loan Agreement (Project Paper, May 28, 2012).

### **3. Relevance of Objectives & Design**

#### **a. Relevance of Objectives**

##### Relevance to Country Priorities

At appraisal, the project was substantially relevant as it was part of the Santos municipality's strategic vision for promoting the city's development opportunities and addressing obstacles to growth. The municipality placed partnership with the World Bank among the strategic initiatives that strengthened its leading role in the region. The municipality was pursuing integrated development in multiple sectors such as tourism, urban development, information technology, and port-industries.

This project also complemented the Baixada Santista's development initiative. The region faced several constraints to development, notably: inter-institutional coordination, land use and environmental regulation, and logistics. A strategic agenda was developed with a focus on: (i) strengthening inter-governmental coordination to maximize outcomes and reduce negative externalities through developing and information system to facilitate business development, a strategic medium-long term plan to identify local economic opportunities, a port management model, a metropolitan management model, and a shared management model; and (ii) promoting a region-wide environmental vision by developing a strategic environmental study (SES), an environmental management and urban renovation plan, and a land use policy to promote a zone of sustainable development.

##### Relevance to the World Bank Group (WBG)

Under the Country Partnership Strategy (CPS) for Brazil for FY 08-11, the Federal Government specified that the Bank would only engage with municipalities under special circumstances, typically consortia of municipalities dealing with major challenges, such as water and environment in metropolitan Sao Paulo,



when there were significant externalities, such as with the port in the Baixada Santista, and when the project would generate revenues for the municipality. The CPS identified areas for the WBG to do more, including “Improving the environmental and social quality of infrastructure lending” under “Sustainable Brazil” and “Focus on bottom of the pyramid (such as urban/rural poor and lower and mid income groups) access to finance and basic services” under “Equitable Brazil”. The project was relevant to the following four pillars set forth by the Bank for its support to municipal development in Brazil: “Addressing Competitiveness”, “Addressing Creditworthiness”, “Addressing Services Delivery” and “Ensuring Cities as Partners”.

At project closing, the project remained relevant to the CPS for FY 12-15, in particular its strategic objective 2.2 “Expanded affordable housing and improved living conditions for low-income and vulnerable groups”, including its support to greater integration and coordination between complementary urban development policies in the areas of land use, housing, transport and disaster risk management, in partnership with selected State and Municipal Governments.

## **Rating**

Substantial

### **b. Relevance of Design**

The project design included a clear statement of objectives. The project components were designed to support the realization of objectives in following way:

Activities in the component 1 involved the expansion of information and technology (IT) network to improve urban services including increasing the efficiency and its operation and maintenance capacity and strengthening Borrower’s (Santos Municipality) capacity for land management including training of staff. These were expected achieve the first objective of enhancing borrower capacity in local economic development.

Component 2 of the project was adequately designed to achieve the second part of the project objective “to improve public services in the Northwest Zone” by improving physical and social infrastructure with slum upgrading, job training and critical environmental protections especially with improving storm drainage system.

The Results Framework (PAD, October 29, 2009, pages 30-31 Annex 3) did not follow the causal chain and lacked clear linkage. The causal chain within the framework was that “improved quality of life and urban environment” would result in “improved public services”. However, this causality runs in opposite direction i.e. improved public services (e.g., water, sanitation, housing, job training, drainage and flood control, planting trees, etc.) would contribute to improving quality of life and urban environment.

A horizontal APL was appropriate because at the time of the appraisal, no federal counterpart was prepared to take on the multi-sectoral nature of this project or other municipal operations. Moreover, lending at the federal level for sub-national interventions was proven to be largely inefficient and ineffective in many sectors



in Brazil. The pooling of municipal loans which would address similar challenges and share experiences under a horizontal APL could contribute to reducing transaction costs by consolidating preparation and supervision, and facilitating the approval process within the Bank.

The project met the Bank's APL criteria, which stated that projects should: (i) focus on the priorities of urban poverty, environment, economic development, and municipal management; (ii) serve as models of innovation in municipal management and provision of services, thereby contributing to cross-municipal learning, replication, and federal policy development; and (iii) comply with the Fiscal Responsibility Law (PAD page 9).

## **Rating**

Substantial

## **4. Achievement of Objectives (Efficacy)**

### **Objective 1**

#### **Objective**

Enhance the Borrower's capacity in local economic development.

#### **Rationale**

#### Outputs

- The Metropolitan Strategic Development Plan for the Baixada Santista was drafted and approved under the project. The ICR reports (page 20) that the plan assisted Santos Municipality in local economic development planning. However, the municipality had not initiated the implementation of the plan to address the constraints to the local economic development, as originally envisaged.
- A plan to reduce environmental licensing time was not prepared.
- The city port revitalization study was completed. It evaluated alternatives and feasibility for the rehabilitation and integration between the old port and the historical center.
- The city installed 23.58 kilometer of fiber optic cables in the northwest zone.
- The geographic information system (GIS) system was developed under the project and became operational. It was used to prepare a plan to improve macro-processing routines for land cadaster.
- The decree for improving land management was approved and the committee contingency plan and



monitoring was carried out.

### Outcomes

The project investment in improving the municipal GIS platform has contributed to the development of an advanced land management system called GIS-Santos, and is changing the way the municipality does business in terms of city planning, land tax assessments and payments, and services delivery. The system integrated GIS information with the municipality management system, including land use control, health and education services, planning, and property tax estimates. GIS-Santos is expected to generate significant management efficiency improvements. However, other than this information and some outputs, little direct evidence of “enhanced the Borrower’s (Santos Municipality) capacity in local economic development” was presented in the ICR.

### **Rating**

Modest

## **Objective 2**

### **Objective**

Improve public services in the Northwest Zone.

### **Rationale**

#### Outputs

- By project closing, 800 households compared to the target of 2,400 households in slum areas in the northwest zone were provided a comprehensive package of municipal services. Of these 800 household, 712 families were resettled to new building complexes as their houses were unsuitable for habitation and the living conditions of 88 households was improved through the provision of water services and adjustments to housing conditions.
- 2,950 families living in the flood prone areas were relocated compared to the target of 45,000 (the target was 50 percent of the 90,000 households living in the flood prone areas).
- The project supported professional training activities in the Northwest Zone, benefiting mainly its vulnerable population. However, the actual costs for the sub-component “improvements to the municipal job training program for low-income families” in the ICR was reported as zero. The Bank team explained to IEG that the training costs were not included in project costs as they were financed and implemented as a wider municipal program.





- No macro-drainage services were completed in the northwest zone sub-basins. By project closing, less than 10 percent of the planned drainage system construction works were completed. This was mainly due to poor engineering designs, procurement issues and implementation problems. The most advanced works at the Haroldo de Camargo Avenue helped improve the local urban environment, where about 600 meters of an open canal was converted to a culvert and the highly degraded canal area was paved and vegetated. The Bank team informed the IEG that "Some designs were improved and the bidding process for some of the works will start by June 2017 and will be partially financed by the Federal Government. The municipality is seeking additional resources (e.g., from Federal or State Governments or the State Water Utility)."
- Two landslide prevention works were completed, among the 28 originally planned interventions. There is some discrepancy in the ICR regarding the number of works completed. The ICR on page 21 refers to two, but on page 33 to only one. The Bank team clarified the two were completed and informed IEG that the municipality was carrying out additional works using its own resources.
- The urban greening program was developed and the municipal botanic garden was rehabilitated.

### Outcomes

Little or no flood protection was achieved because none of the macro-drainage repair works in sub-basins, pumping stations or canal floodgate were completed. Only limited landslide prevention works were done.

The project succeeded in the development of the urban greening program. The rehabilitated municipal botanic garden may provide additional surface area for infiltration and absorption of rainwater, thereby decreasing the flow of storm water into drainage systems.

An ex-post satisfaction assessment of Vila Gilda resettled population found that overall people were satisfied. Among the three new building complexes that received the resettled population, the findings of the assessment were:

- 95% percent of the interviewees in Caneleira IV considered the new houses better and much better than the former occupation.
- The results in Pelé Village II were similar, 94 percent of the interviewees considered the new houses better and much better than the former occupation.
- The results in Quadras 1 and 35 were lower, 64 percent of the interviewers considered the new houses better and much better than the former occupation, 28 percent equal and 8 percent worst. According to the Bank team, the Quadras' low satisfaction rate at 64 percent of new housing was because their





previous housing situation was better (relatively not much changes) than other resettled people whose housing situation was much worse (dramatic changes).

**Rating**  
Negligible

## 5. Efficiency

Economic analysis: An ex-ante cost-benefit analysis was conducted based on "with" and "without" project scenarios and a 20 year-lifetime of the project. Economic costs included capital, operation and maintenance, macro-drainage, rehabilitation, resettlement, environmental mitigation and contingencies. Economic benefits were only quantified for the urban upgrading through increases in property values based on the hedonic price function; and sanitation through the reduction in macro-drainage operation and maintenance. The result was an Economic Rate of Return (ERR) of 20.8 percent and a net present value (NPV) of Brazilian Real (BRL) 28.2 million at 12 percent discount rate.

An ex-post economic analysis used the same methodology at project appraisal. Due to the cost increase and reduced scope and incomplete work especially the macro-drainage system, the result of ex-post analysis (including the ongoing work) showed losses of BRL 92.7 million with a negative ERR and benefit cost ratio of 0.16.

Financial analysis of the project was not available in the PAD or ICR.

### Efficiency Rating

Negligible

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	✓	20.80	100.00 <input type="checkbox"/> Not Applicable
ICR Estimate		0	0 <input type="checkbox"/> Not Applicable

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



## 6. Outcome

The relevance of project objectives and design is substantial. The efficacy of first sub-objective is modest and the second sub-objective is negligible. Project efficiency is also negligible. The overall outcome rating is unsatisfactory.

### a. Outcome Rating

Unsatisfactory

## 7. Rationale for Risk to Development Outcome Rating

There is a low risk that the benefits from optic fiber network, upgraded housings, and the GIS platform would not be sustained because the Santos Municipality has an incentive to maintain these investments as they are revenue generating assets.

The ICR reports (para 101) that there are significant financial, technical, and management hurdles for the Municipality in continuing the flood control and slope stability construction works. Due to financial constraints (ICR, page 25), there is a high risk that the municipality may have to reduce investment and suspend construction. Also, since the project closed prior to the completion of flood control and slope stability construction works, the risk of encroachment in the areas cleared for the drainage system construction is high. Therefore, the risk of the drainage system not being concluded in the near term is high.

### a. Risk to Development Outcome Rating

Substantial

## 8. Assessment of Bank Performance

### a. Quality-at-Entry

At appraisal, the Municipality of Santos was assessed as the center of economic growth in the Baixada Santista metropolitan region with a solid economic base. Yet, the Municipality faced challenges to realize its development potential and to address extreme poverty. Among these needs were (i) better inter-governmental coordination; (ii) a city-port initiative and downtown historic center renewal; (iii) improving information technology infrastructure to stimulate the local economy and attract private sector investment; (iv) significant investments in the northwest zone to address poverty, drainage and flood control; (v) land use conflicts; and (vi) adequate transportation network.



The Bank's project preparation team took into consideration lessons from similar projects to support the project design. A series of studies were conducted to determine the technical, economic, social, and environmental interventions to enhance municipal management capacity and for physical and social activities in the northwest zone. However, insufficient technical analysis was done in designing the foundations of the structures planned to be constructed under the project. The Bank team's technical reviews of the feasibility studies, designs and costs estimates were insufficient. The cost estimates for the macro-drainage works were unrealistically low.

The Bank team underestimated the technical risks, and the municipality's capacity for evaluation of detailed engineering design, procurement, contracts management, and supervision of works,

### **Quality-at-Entry Rating**

Unsatisfactory

#### **b. Quality of supervision**

A mid-term review in late 2012 and early 2013 (two missions) called for a second project restructuring, due to low disbursement and delays in key activities. At that time, the municipality had not yet finalized the procurement of construction works. The restructuring proposed to extend the closing date by 12 months to finalize the macro-drainage construction works, review and revise the project results framework and indicators, and replace the requirement of a local economic development plan with the macro metropolitan development plan.

In 2014, when the macro-drainage contract issues, including cost overruns, inconsistencies in the engineering design, bills of quantities and engineering drawings etc. became evident, the Bank team immediately brought these issues to the attention of the Bank management. The Bank team made considerable efforts to resolve the issues, and intensified supervision - six missions were conducted in 2014 and several meetings in Brasilia to assist the municipality in resolving the problems. In response to the team's assessment regarding weak contract management and oversight by the municipality's Project Coordination Unit (UGP) of the engineering consultant and contractor, the Bank team initiated a financial and technical audit using Bank funds to verify if all claims by the contractor to the municipality were in accordance with the contracts. Draft audit reports were shared with the municipality and new documents and explanations were provided and considered in the final report delivered in May 2016. A number of ineligible expenditures were identified and the Bank team noted that the total amount of ineligible expenditures was reimbursed by the municipality and was confirmed by the Bank on June 27, 2016.

The second restructuring process was halted in late 2014 when the Bank identified the macro-drainage construction problems. Eventually, the team concluded that a closing date extension was not appropriate because: (a) the macro-drainage design and construction limitations posed serious challenges, and (b) UGP's lacked capacity to rectify the problems.

### **Quality of Supervision Rating**

Moderately Satisfactory



## **Overall Bank Performance Rating**

Moderately Unsatisfactory

## **9. Assessment of Borrower Performance**

### **a. Government Performance**

The Municipality of Santos was the Borrower of the IBRD loan. The Municipal Secretariat of Government was the overall responsible government agency for the Project. The municipality established and maintained a Unidade de Gerenciamento do Programa (UGP, Project Coordination Unit) throughout the project implementation, provided the required counterpart funding and issued the decree for improving land management. However, the Government did not implement the improved financial control mechanisms, including an internal control secretariat as agreed during the project preparation. The ICR reports (page 27) that the termination of the Engineering Consultant in August 2014 clearly indicated that the Secretariat of Government accepted that there were serious problems with the drainage contract. From that point forward, though extremely critical, the Municipality was not able to actively engage and resolve problem with the Contractor.

The Bank team informed the IEG all covenants were complied with. However, the municipality failed to ensure to follow the World Bank fiduciary and safeguards policies and submit quarterly progress reports on time.

### **Government Performance Rating**

Moderately Unsatisfactory

### **b. Implementing Agency Performance**

The Secretariat of Government and its appointed Project Implementation Unit (UGP) were directly responsible for the coordination and supervision of the Project activities, and responsible for procuring and managing contracts of all activities funded by the Project. The Secretariat and UGP performed well in leading the project preparation phase with technical assistance from a consulting firm using a Japanese Policy and Human Resources Development Fund (PRHD) grant. Additionally, the municipality secured a cooperation agreement with the Baixada Region Housing Company (COHAB) to oversee housing construction and the Vila Gilda population resettlement activities.

The UGP had dedicated staff for engineering supervision, procurement and contract related activities, financial management, safeguards, and construction works supervision (around 15 professionals). Although well-staffed and supported by an Engineering Consultant, the UGP did not have the technical capacity to properly supervise the different contracts and failed to monitor and communicate problems with the Bank in a timely and transparent manner. Initially, the municipality hired an engineering consultant to support the UGP with: (i) preparation of the detailed design of the macro-drainage civil works and pumping equipment, (ii) engineering supervision during construction, and (iii) project management. The main issue was that as the function of overall project management was included within the same contract, there was no independent supervisor of the project to prevent potential errors/deficiencies or fraud or identify and



recommend areas to improve the project performance. The problems escalated during the implementation of the macro-drainage works contract when poor designs and inconsistencies in the bill of quantities were not identified in advance and required many rectifications that increased the costs of the contract considerably.

During the July 2014 mission when the Bank team found the design and contract problems, the Municipal Government and UGP decided to continue with the civil works and agreed on an action plan and the immediate formation of a Dispute Resolution Board (DRB) as specified in the International Federation of Consulting Engineers (FIDIC) Conditions of Contract. The action plan was not satisfactorily accomplished. The Secretariat of Government eventually terminated the engineering consultant contract due to the unsatisfactory performance in August 2014. However, Secretariat of Government was not able to actively engage and resolve problem with the contractor. Moreover, the new supervising engineer was contracted only in December 2015, six months before the project closing date of June 2016.

The Secretariat of the Government did not always follow the social safeguard policy (see section 11.a) and in March 2015 signed the construction contract's first amendment and extended the construction period for six months, despite the lack of a no objection (NO) from the Bank. A few days after that, the Secretariat submitted a NO request for a second construction contract amendment. However, the Bank never gave the NO for the second contract amendment.

### **Implementing Agency Performance Rating**

Unsatisfactory

### **Overall Borrower Performance Rating**

Unsatisfactory

## **10. M&E Design, Implementation, & Utilization**

### **a. M&E Design**

The design of monitoring and evaluation (M&E) was weak. The project indicators were mainly output indicators and project outcomes were not measured. For example, the first PDO indicator, "commencement of implementation of a plan to address constraints to local economic development by 2011" did not measure the first PDO sub-objective - improving municipal management capacity. The second and third PDO indicators of at least 2,400 households in slum areas are provided with a comprehensive package of municipal services (e.g., water and sanitation, etc.) and establishment of a macro- drainage system were outputs, and did not measure the project's achievements. Three similar flood related intermediate outcome indicators were included while there were no intermediate outcome indicators relating to landslides, greening and job training.

According the PAD, the Municipal Secretariat of Government along with specialized consultants would be responsible for project M&E. However, arrangements to ensure the quality of data were not explained in the PAD. Mostly, baseline data were expected to be provided by consultants and the UPG had overall responsibility of data collection.



## **b. M&E Implementation**

The above mentioned M&E design flaws made monitoring the project progress difficult. In addition, the Bank team faced problems in collecting appropriate data, as the Government Secretariat neither delivered progress reports on time nor monitored the project indicators as planned. The mid-term review concluded the need for a project restructuring and proposed modification of the first PDO indicator and revision of several intermediate outcome indicators. The revised framework included four new intermediate indicators, and dropped the indicators related to resettled population satisfaction and reduction in area affected by recurrent flooding. However, none of this was formally included in the project as the second restructuring was not carried out.

## **c. M&E Utilization**

No information on how or if the M&E was utilized in the ICR.

### **M&E Quality Rating**

Negligible

## **11. Other Issues**

### **a. Safeguards**

The project was classified as Category A. Following safeguard policies were triggered: OP 4.01 (Environmental Assessment); OP 4.04 (Natural Habitats); OP 4.09 (Pest Management); OP 4.11 (Physical Cultural Resources); OP 4.12 (Involuntary Resettlement); OP 4.36 (Forests); and Safety of Dams (OP 4.37).

#### Environmental Safeguards

At appraisal, in accordance with Environmental Assessment (OP 4.01), an Environmental Impact Assessment (EIA), including a Resettlement Action Plan (RAP) and Environmental Management Plan were prepared by the Santos Municipality. A public consultation process was carried out and documented. The document was sent to InfoShop on August 15, 2008 and disclosed in country on October 3, 2008 (PAD, page 31).

Natural Habitats (OP4.04) and Forest (OP4.36) policies were triggered because the project supported the rehabilitation and protection of degraded mangrove areas.

The Pest Management Policy (OP 4.09) was triggered due to the envisioned tree planting activities which would require pest control.



The Safety of Dams Policy (OP4.37) was triggered because the project included construction of a relatively small retention pond (less than 8 meters in height in a 25-year storm event) to temporarily store excess drainage coming from the hilly area during large storm events. The terrain was privately owned and had never been used because it was unsuitable for urban use as it retains storm water naturally.

The Physical Cultural Resources Policy (OP4.11) was triggered because of chance find and procedures were included in the environmental manual for civil works.

The Bank team informed IEG that the project fully complied the environmental safeguards. The municipality's dedicated staff for environmental issues observed the Project Environmental Management Plan requirements throughout its implementation. Initially there were some construction safety issues identified related to the macro-drainage civil works contract. Progressively, the works were constructed in accordance to the Environmental Construction Manual, and the municipality addressed the Bank's additional demands on health and safety procedures (page 60).

### Social Safeguards

At appraisal, the Involuntary Resettlement Policy (OP4.12) was triggered because the project included resettlement of 1,100 families living in stilt houses in the slums, and a few families living in hill areas. A Resettlement Policy Framework (RPF) was prepared, consulted, and disclosed by the municipality during project preparation. This was disclosed in Brazil on October 3, 2008 and sent to Infoshop on November 12, 2009 (PAD page 22).

The project resettled 712 families, but at project closing there were three pending expropriations authorizations affecting the site of the macro-drainage works. The municipality did not present an appropriate abbreviated resettlement plan for potentially affected families surrounding the Estancia Elevattally E Comportas (EEC 7) culvert construction and the future pumping stations. The Bank team confirmed that at the project closing social safeguards were partially complied with. The Bank team informed IEG that agreements have been reached on the payment amount for the two areas.

## **b. Fiduciary Compliance**

### Financial Management

Financial management performance ratings were satisfactory from the beginning of the project implementation to early 2015 when the ratings became moderately unsatisfactory because of inaccuracies in the tracking of the macro-drainage construction works and billing. The Bank team confirmed the IEG that the financial covenants were complied with.

Although the independent project audits were all unqualified. However, the payments to contractors did not reflect actual physical progress on the ground but the UGP failed to provide alternative arrangements and





action plans to avoid and mitigate potential financial management risks.

In May 2015, the Bank team's financial management and technical auditing missions assessed the billing inconsistencies of the macro-drainage works contract. The information presented by the municipality was insufficient to clarify a number of measuring and billing discrepancies. As a result, the Bank hired a technical and financial auditing firm in September 2015 to provide an independent technical and financial opinion on both the macro-drainage civil works contract and the design, supervision, and project management consulting services contract.

### Procurement

The project suffered significant procurement shortcomings. Overall, procurement took longer than expected due to the delays in concluding the terms of reference, engineering designs and preparing the invitations for bids documentation. The two largest contracts for design, supervision, and project management consulting services and macro-drainage civil works had procurement and execution problems. The terms of reference were inadequate and the UGP did not properly supervise the execution of the contracts with detailed plans, monthly time sheets and expected deliverables. The justifications for the contract amendments submitted to the Bank were inadequately prepared and substantiated. These issues were also addressed in the financial and technical audit.

Overall, the cost overruns on macro-drainage work were experienced several times and the last reported cost in the ICR was 84 percent more than the consultant firm's detailed design estimate (pages 68-71). The Bank did not give the no objection to this last reported cost (page 71).

Neither the engineering consultant nor the UGP identified quantity miscalculations and unit prices divergences in the contractor's bid for the macro-drainage work and endorsed the contractor's higher bid price. The Secretariat acknowledged that it did not evaluate in detail all items in the Bill of Quantities (BoQ) used for the works bid, but only through a sampling procedure.

By the end of the project, it became clear that the macro-drainage work problems were due to the deficiencies in detailed engineering design (DED), notably the Bill of Quantities (BoQ) preparation, foundation design, culvert's construction specifications, geotechnical instrumentation, as well as the billing and supervisions. The engineering concept, locating the pumping stations in the middle of the marshes, without a detail location alternative analysis, could not be easily justified. The design and BoQ limitations contributed to an inaccurate construction works bid and contract value that resulted in the cost overruns.

### **c. Unintended impacts (Positive or Negative)**

Not applicable

### **d. Other**



Not applicable

## 12. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Unsatisfactory	Unsatisfactory	---
Risk to Development Outcome	Substantial	Substantial	---
Bank Performance	Moderately Unsatisfactory	Moderately Unsatisfactory	---
Borrower Performance	Unsatisfactory	Unsatisfactory	---
Quality of ICR		Substantial	---

### Note

When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.

The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

## 13. Lessons

The ICR included five lessons of which following three have broad applicability:

**1. Stronger efforts are required to ensure that the Feasibility Study Report and Preliminary Engineering Designs (PED) are as accurate as possible.** Preliminary engineering designs only provide approximate cost estimates. Trust funds are often used for PED, because of perceptions of conflict of interest in appraising the detailed engineering designs (DED). Furthermore, the client may not have the procurement, technical, supervision and management capacity to properly assess the detailed engineering design and supervise the work. Therefore, a project could fund an independent well-qualified engineer under the loan, housed in the project implementing agency.

**2. Concentrating many consultancy activities in one single contract holder may create a risk of implementation problems.** The hiring of one consulting firm to perform the three functions of: (i) engineering design, (ii) supervision of the civil works, and (iii) project and contract management support to the UGP created implementation problems. It is a common practice to combine the design and supervision of construction tasks under the same consultant firm. However, adding the function of overall project management within the same contract does not allow for the dimension of an independent project supervision. This lack of an independent supervisor is a missed opportunity to mitigate the risks of incompetence and / or fraud within the civil works contract(s). A project could ensure that the implementing agencies have adequate capacity for all phases of the project, with an experienced independent owner's engineer to support implementation.

**3. Bidding processes whereby only one bidder submits should be reviewed very carefully and possibly**



**re-launched with a different approach if appropriate.** Thirty-nine firms bought the bidding documents for the project drainage works, but only one contractor composed of two firms submitted a bid, which was of a much higher cost than the design engineering estimate, i.e. 50 percent higher.

#### 14. Assessment Recommended?

No

#### 15. Comments on Quality of ICR

This ICR was detailed, candid and evidence based, notably the macro-drainage work, result framework and monitoring and evaluation (M&E). However, there was no discussion on job training activities. While the ICR discussed environmental management and resettlement issues, the ICR did not include information on the implementation of following safeguards: OP 4.04 (Natural Habitats); OP 4.09 (Pest Management); OP 4.11 (Physical Cultural Resources); OP 4.36 (Forests); and Safety of Dams (OP 4.37). The ICR provided no information on the utilization of M&E.

There are a number of internal inconsistencies: ICR noted “at the project close, the actual fiscal situation improved” (page 23, page 42). However, the ICR also noted “the municipality had financial constraints” (page 25). Also, the project activities supported professional training activities in the northwest zone, benefiting mainly its vulnerable population. But “Improvements to the municipal job training program for low-income families” under Component 2 had zero expenditure and no further explanation was available in the ICR (page 31).

##### **a. Quality of ICR Rating** Substantial