

**RIO DE JANEIRO STATE NEIGHBORHOOD UPGRADING PROGRAM
"BAIXADA-VIVA"**

(BR-0242)

EXECUTIVE SUMMARY

BORROWER: State of Rio de Janeiro

GUARANTOR: Federative Republic of Brazil

EXECUTING AGENCY: Planning and Coordination Secretariat

AMOUNT AND SOURCE:	IDB (OC):	US\$180 million (60%)
	Local counterpart funding:	<u>US\$120 million (40%)</u>
	Total:	US\$300 million (100%)

FINANCIAL	Amortization period:	25 years
TERMS AND	Disbursement period:	4 years
CONDITIONS:	Interest rate:	variable
	Grace Period:	4 years
	Inspection and supervision:	1%
	Credit fee:	.75%
	Currency:	US Dollars

OBJECTIVES: The objective of the Program is to improve the quality of life of the population in target neighborhoods of the "Baixada Fluminense" region, in particular their sanitation and health conditions. It seeks to ameliorate the effects of urban poverty for around 360.000 low-income people in the region.

The purpose of the operation is to create a lasting impact in the urban landscape and in urban management practices, as a result of: (i) the introduction of a decentralized urban management model with community involvement, which will improve garbage collection, urban maintenance, and other municipal services; (ii) improvements in sanitary conditions and health care services leading to the reduction in water-borne diseases, infant mortality and improvement in other health indicators; (iii) introduction of an integrated urban development approach for the expansion of physical and social infrastructure which can be replicated throughout the region.

DESCRIPTION: The Program would have three components:
(i) **Neighborhood Upgrading** (US\$212 million);
(ii) **Complementary Infrastructure and Services**

(US\$60.2 million); and (iii) **Institutional Development** (US\$4 million).

Neighborhood Upgrading component finances projects based on master plans and prepared with community inputs, which include the following sectors: (i) basic sanitation (water, sewerage and drainage); (ii) street paving; (iii) street lighting; (iv) solid waste collection systems; (v) parks, recreation areas, and landscaping; (vi) child care centers; (vii) primary health care systems; (viii) sanitation and environmental education and community development activities; and (ix) small business promotion.

Complementary Infrastructure and Services component includes specific projects required to support or complement the implementation of upgrading projects, to be built outside the beneficiary neighborhoods and serving a wider area than the target area of the Neighborhood Upgrading component. They are: (i) sanitation infrastructure (water supply works, sewage lines and sewage treatment stations and macrodrainage works); (ii) Community Service Centers (reform or building of 8 centers); and (iii) Health Centers (reform and equipment of 5 centers).

Institutional Development component includes: (i) technical assistance to the governments of the four participating municipalities in the implementation of financial control systems, and organization and operation of the services supported by the Program and (ii) a monitoring and evaluation system for the Program.

The Program promotes a decentralized and participatory municipal administration model that will have a significant impact on the quality of local services and sustainability of investments. Avoiding a piecemeal approach to urban upgrading, the Program addresses the infrastructure and social service requirements of entire neighborhoods, thus maximizing its social and urban impact and increasing the investments' useful lifespan. Social sustainability of interventions is sought through involvement of community groups in project definition and supervision of delivery of urban and social services.

CESI APPROVAL:

The Committee of Environmental and Social Impact (CESI) approved the Environmental and Social Impact Report (ESIR) on May 30, 1997. The Environmental Impact Assessment was made available to the public in

the country on April 1, 1997. The ESIR was sent to the PIC on June 10, 1997.

BENEFITS:

The Program's most important benefit would be the improvement of living conditions for approximately 360,000 residents of the Baixada region, who are currently exposed to a high incidence of water borne diseases and deficient sanitary conditions. Significant increases in the coverage of water and sewerage services, improvement in urban services such as garbage collection and street paving and maintenance, increased access to health care services and other benefits to the population will result from the Program's infrastructure and social investments. Altogether, they represent a contribution to the building of social capital in these communities, significantly improving the quality of life of the residents. The main results of the Program will be measured in the improvement of health indicators and through community satisfaction surveys.

The Program seeks to consolidate recent advances in terms of integrated urban/social planning and urban management practices. The Program's design of interventions, provisions for community participation, targeting methods, and monitoring methodologies should constitute a replicable model whereby local governments can address problems of urban poverty.

RISKS:

Technical and financial capacity of the municipalities involved in the Program represents a considerable risk, which can affect the maintenance of part of the infrastructure and operation of urban and social services financed by the Program. To minimize these risks, the municipalities will be required to sign formal agreements providing for firm financial commitments in regards to the continued financing of these services, which will be monitored by the State and the Bank. The continued operation of the preventive health care activities implemented by the Program will be financed by federal funds earmarked for this purpose. An existing program to improve municipal cadastres and the technical assistance in the organization of key services provided by the Program will contribute to strengthening municipal finances and technical capacity.

Although the state government's financial situation is undergoing considerable changes and its prospects for improvement are reasonably optimistic, there is

always a chance of a reversal due to unexpected factors. Although counterpart funds for this Program are assured, a financial crisis could pose a risk to the project's implementation schedule.

The Program involves a relatively large number of complex interventions, both in engineering and in social terms. Program implementation involves issuing and supervising a large number of contracts, and the management of about 12 integrated neighborhood upgrading projects. To support this operation, the Program includes the contracting of a management support firm to assist in the establishment and use of procurement, supervision and management systems.

**THE BANK'S
COUNTRY AND
SECTOR STRATEGY:**

The Program is consistent with the Bank's mandate under the Eighth Replenishment, to give priority to social sectors and poverty alleviation initiatives. The Program combines urban development and poverty alleviation goals, given its targeting towards low-income settlements and broad urban and environmental impacts. The Program greatly improves the manner in which social and urban services are financed, planned and delivered. Thus it would comply with the priorities set by the latest Bank programming mission to Brazil, which emphasized projects aimed at poverty reduction, decentralization and improvement in the management of social expenditures.

**SPECIAL
CONTRACTUAL
CONDITIONS:**

Prior to first disbursement:

Prior to disbursement of the first installment of the loan, the Borrower must demonstrate, to the Bank's satisfaction, that: (i) it has signed an agreement with CEDAE for the operation and maintenance by the latter of the water and sewerage systems covered by the Program (paragraph 4.6); (ii) at least three of the municipalities which are eligible to participate in the Program have signed a Letter of Intent with the State (paragraph 3.5); (iii) the Program's Operations Manual agreed upon with the Bank must be put into effect (paragraph 2.3); and (iv) that the State has issued a decree assigning funds from the state social development fund to finance its counterpart contribution to the Program.

Other special contractual provisions:

- a. prior to the start of the bidding process regarding any work financed by the Bank, the Borrower must demonstrate, to the Bank's

satisfaction, that it has signed an operating agreement with the Municipality where the work will be carried out (paragraph 3.6).

- b. prior to the award of any building contract, the Borrower must demonstrate when applicable, that: the condemnation decree relating to the land where the work will be carried out has been issued.

**POVERTY TARGETING
AND SOCIAL
CLASSIFICATION:**

The Program qualifies in the category of poverty and social equity, in terms of the Eighth Replenishment mandate, in that it supports slum upgrading, primary health care and preschool activities (according to doc. AB-1704, parr. 2.13). In addition to its overall poverty focus, the program design includes a more precise poverty targeting instrument through the neighborhood eligibility and selection process (whereby neighborhoods with greater socio-economic needs were given priority), in an attempt to direct investments to the poorest strata of the Baixada Fluminense region. Approximately 60% of the beneficiary households fall below the Bank's poverty line, another criterion by which the project is classified as poverty targeted (parr. 2.15 of same document). In view of this classification, the Program qualifies to use the financing matrix of 40% counterpart and 60% Bank loan (paragraph 4.33).

**EXCEPTIONS TO BANK
POLICY:**

The federal government will guarantee the loan, but this sovereign guarantee will cover only the repayment of the loan (including interest and fees), not the local contribution or any obligations to perform that are not by law within the purview of the federal government. The financial analysis shows that the borrower has the financial capacity to furnish the necessary counterpart funding for the program.

PROCUREMENT:

Following standard Bank procedures, procurement of works in excess of US\$5,000,000 and of goods in excess of US\$350,000 will be undertaken through international competitive bidding, according to the terms set in the Annex "B" of the loan contract. Procurement of goods and works for lesser amounts will follow national bidding procedures without restriction to the participation of bidders from the Bank's member countries. Also, as is standard, the procurement of consulting service contracts which are greater than US\$200,000 will be publicized internationally. The Bank must approve the terms of reference and fees of the selected consulting firms.

I. FRAME OF REFERENCE

A. Urbanization pattern in the Baixada region

- 1.1 The "Baixada Fluminense" region, which is part of Rio de Janeiro's metropolitan area, consists of 9 municipalities and approximately 3 million inhabitants, representing over 1/3 of the population of the metropolitan area. The Baixada region has developed as a primarily residential area, connected to the city of Rio by two railways and a major road axis. Its population growth peaked during the 70s and mid 80s, with annual growth rates averaging 1.6%, three times the rate of the city of Rio. Presently, the Baixada continues to post the state's highest rate of population growth.
- 1.2 Typically the settlers of the Baixada have been low-income migrants arriving to the region in search of employment and low-priced housing. Weak enforcement of subdivision legislation by municipal governments and underinvestment in urban infrastructure have created an ample supply of low-cost plots lacking all but the most basic of urban services. Developers have played an important role in the region's settlement, creating conditions for its fast growth, but failing to comply with the strict, hence unrealistic, federal mandates for local subdivision legislation. This pattern explains the large number of underserved and underequipped plots found in the area, which have been bought by residents counting on future investments by state and municipal governments.
- 1.3 Traditionally, the region's municipal governments have been technically ineffective and financially weak. This results from a vicious cycle of inadequate fiscal revenues, low paid municipal personnel, and the population's distrust of their local government. As a result, low rates of tax compliance are matched by the pitiful condition of urban services. The state government, which is responsible for few, but critical, services such as roads, water and sewage, has played a significant role in compensating for these shortcomings by investing in urban infrastructure and in large sanitation projects. However, given the magnitude of the problems, such efforts have not been sufficient to reverse the bleak sanitary situation and infrastructure deficits found in the majority of the residential areas of the Baixada.

B. Infrastructure and social needs of the target population

1. Poverty indicators

- 1.4 In the Baixada region, the average income of a head of household is 2.19 minimum wages (m.w.), or approximately US\$219 a month (1995) 1/. In terms of income distribution, 32% of these

1/ In contrast, the average in the city of Rio de Janeiro is 5.94 m.w. and in the State it is 4.19 m.w.

household heads earn less than 1 m.w., while only 9.4% earn more than five. The Bank's poverty line for Brazil is US\$104 per person per month (1995). Considering an average of 4 people per family, with the head of household earning approximately 50% of the household income, in order for a family to be above this poverty line the head of household would have to earn more than 2 m.w. Based on these calculations and the census income data, approximately 57% of the region's population falls below the Bank's poverty line, as compared to 48% of the state population.

Table I-1: Average Income of Head of Household in the Metropolitan Region and in Program's Targeted Area (in m.w.)

Region/Municipality	Region/ Municipality	Program's Neighborhoods
Baixada Fluminense Region	2.19	2.02
Duque de Caxias	2.23	1.95
Belford Roxo	N.A.	1.82
Nova Iguaçu	2.09	1.82
São João de Meriti	2.18	2.34

2. Sanitation conditions

- 1.5 As a result of topographic (below sea level) and hydrological conditions, the region has severe drainage problems, and is subject to periodic flooding. The lowest-income settlements, which are located in the areas close to rivers and channels, are exposed to the worst environmental dangers. Although the worst flooding problems have been attenuated by recent investments in dams and drainage channels, storm drainage works and environmental education to the population regarding proper maintenance of the works are badly needed to improve sanitary conditions.
- 1.6 Water supply coverage varies significantly among municipalities in the Baixada, ranging from 77% to 95% of households with water connections, in comparison with 92% in the state in general ^{2/}. Nevertheless, the quality of the service itself is very poor, with an average of 46% of residences with "inadequate or intermittent" water supply. Additionally, 42% of the population does not have an official connection. This situation of inadequate supply and clandestine access to the water distribution system often leads to contamination of the water supply.
- 1.7 Sewerage connections are minimal, covering only approximately 20% of the residences in the region, as compared to 44% in the state. Currently, the sewerage system in the entire Baixada includes only 12,562 building connections and has only one treatment station, which is currently out of service. Sewage disposal problems are

^{2/} Water and sewage services in the Baixada region are the responsibility of the State Water Company (CEDAE).

intensified by the soil characteristics which do not favor the construction of septic tanks. As a result, much of the sewage runoff flows into open ditches, which also serve as drainage channels and ultimately discharge into the region's rivers. Due to flooding, the population suffers from frequent direct contact with this raw sewage, causing serious health problems.

3. Solid waste

- 1.8 Solid waste collection is a serious problem in the Baixada. In 1996, before the new municipal administrations took charge, one third of the 1.7 thousand tons of municipal waste produced daily in the area went uncollected. This garbage ends up obstructing drainage channels, creating puddles of stagnant water in the streets, and exacerbating the risk of floods. Or it accumulates in empty lots creating an atmosphere of social neglect and degradation. Municipal governments, which are responsible for this service, have in many cases privatized collection in an effort to improve efficiency. However, poor contract enforcement and administration, limited physical access of some areas (e.g., unusable roads and steep inclines), and insufficient financing continue to compromise the service.
- 1.9 Financial problems are an important element of the problem. Several attempts to apply fee structures to solid waste collection have faced legal challenges, forcing most municipalities to include a rate for garbage collection in the real state property tax. However, given the low rates of tax compliance and the outdated property tax base this mechanism has proven inadequate to provide the necessary funding for the service.
- 1.10 The final disposal of the solid waste in the Baixada and specifically in the four municipalities included in the Program is being addressed by the Guanabara Bay Decontamination Program (PDBG) and the Rio de Janeiro Flood Reconstruction Project. These programs are financing sanitary landfills and incinerators for both municipal and hospital wastes. Some of the waste is carried to the Gramacho Landfill in Duque de Caxias, which is currently being improved. Also, these two programs include institutional strengthening for the waste management departments of each of the four municipalities and provide supplemental collection equipment, which should foster a more efficient administration of the service in the near future.

4. Health conditions

- 1.11 Indicative of the reprehensible sanitation situation and an insufficient supply of health services, the infant mortality rate

in the Baixada region is 49.8 per thousand ^{3/}. This is significantly higher than the rate of 23.9 for the city of Rio and the state average of 35.5. The high incidence of water-borne diseases, such as hepatitis, gastroenteritis and leptospirosis, is directly related to the lack of sanitation services and garbage collection. The region's health profile combines in importance infectious and reproductive illnesses with a high occurrence of chronic-degenerative diseases and injuries due to violence and accidents (homicides and intentional injuries represent almost 50% of the deaths due to external causes).

- 1.12 The quality and quantity of the services provided by the public health network in the Baixada are considered inadequate to meet the local population's health care needs. All of the municipalities operate small health centers, which are intended to provide primary health services. However the majority of these units function only part-time, lack proper maintenance and tend to be located in the center of the municipalities (to the detriment of outlying areas). These health posts often do not provide proper care in cases that could be resolved at the primary care level which generates excessive demand on the intermediate-level units and the one major public hospital in the Baixada, and on the city of Rio's hospital system. Similarly, the current service structure for emergencies is ineffective, particularly in surgical and cardiological cases, which is incompatible with the region's morbidity/mortality profile. The centralized organizational structure, lack of incentives for doctors and health unit directors to deliver better services, lack of a referral system, and shortage of qualified health professionals further compromises the quality and coverage of health services in the area.
- 1.13 Health care services in Brazil are largely financed by the federal government. However, the service delivery system is undergoing a decentralization process to the municipal level, which has resulted in increased operational and financial responsibilities for the municipalities. Municipal investments in the health sector in the Baixada averages approximately 9% of municipal expenditures, in addition to federal transfers. The basic operating norms of the national health system are also currently being revised and include financial incentives to municipalities which adopt the Community Health Agents Program (PACS) and the Family Health Program (PSF) ^{4/}. The REFORSUS program (which is being financed in part

^{3/} However, there are important differences within the region itself: the municipality of Nilópolis, which has the best health services in the Baixada, has an infant mortality rate of 33.6 per thousand, while the municipality of Nova Iguaçu has a rate of 54.2.

^{4/} The implementation of PACS and PSF is a priority of the National Health Ministry. The results of these two preventive health programs in the 17 states which have already implemented them have been significant, particularly in terms of reducing the number of babies born with low-birth weight and the rate of infant mortality.

by a US\$350 million Bank loan) is supporting the implementation of these two programs in the region, in addition to increasing the supply of primary health care posts, intermediate level emergency installations, and investments in several hospitals.

5. Early childhood care and development needs

- 1.14 The current situation of few and low quality child care and development services further compromises the health and safety of the children in the Baixada. In a region where over 40% of women work, only 2% of children under the age of six have access to public pre-schools, and many of the private and community child care centers are not of acceptable quality. An analysis of the existing community day care centers or "creches" in the target neighborhoods indicated: extremely poor physical conditions of the centers, including in some cases a lack of basic sanitation services; the existence of little pedagogical equipment and materials; and that the educators, many of whom are volunteers, generally lack training and supervision. A study prepared for the design of this Program analyzing the need for child care and development services found that: (i) approximately 16% of the population are children under the age of six; (ii) approximately 40% of women with young children, although they would prefer to do so, are not working outside of their home due to their child care responsibilities; (iii) families consider the current supply of child care options to be extremely poor both in quantity and quality; and (iv) due to the general lack of "creches" or pre-schools, the majority of young children are cared for by neighbors, relatives or siblings. For those families that are paying for child care, non-representative information indicates that the families are currently paying between US\$20-60 a month, and would be willing to pay between US\$40-60 a month.

C. Synthesis of Problems and Program Strategy

- 1.15 The large size of the low-income population, adverse hydrological conditions, which expose entire neighborhoods to periodic flooding, significant infrastructure deficits, and weak local administrations converge to create one of the worst urban environments to be found today in the periphery of a metropolitan area in Brazil. Disregard for land use and subdivision legislation has resulted in a pattern of settlement lacking minimum levels of urban infrastructure and the social services.
- 1.16 Responsibilities for providing services are shared between state and municipal governments. Municipal weakness in the management of urban and social services has compromised their quality and coverage. State investments in water and sewage are insufficient to meet current demand. Therefore, the region is in need of both physical investments and significant changes in urban management practices.

- 1.17 The proposed Program seeks to improve the living conditions of the population, concentrating its focus on sanitation and health aspects. Its strategy is to coordinate state and municipal efforts in implementing integrated neighborhood upgrading projects which include the supply of needed infrastructure, expansion in the supply of social services, and implementation of a decentralized urban administration to consolidate and maintain the upgraded services. The introduction of this urban management model, which incorporates community participation in the supervision of local services and in decisions affecting the neighborhood, maximizes the impact and increases the investments' useful life span while increasing the project's prospects for sustainability.
- 1.18 Besides its role in implementing and financing the Program, the state government will serve as a catalyzing agent for this regional urban revival and economic development initiative. It will mobilize technical and financial resources, offer organizational support, and ensure that this Program's activities are duly coordinated with other complementary programs in the Baixada under its responsibility. The state's role is also important for the future replicability of the integrated urbanization solution throughout the region, as it will continue to support them financially and through assistance in obtaining financing from national and other sources.

D. Country and Bank Programming Strategy

- 1.19 After three years of the "Real Plan", which has stabilized the economy and allowed for economic growth, the government's priorities have been directed to mitigating the effects of the "lost decade" of the eighties. Social development was particularly affected leading to an increase in social inequality, reflected in the increase in poverty indicators and unemployment. Current government priorities include maintaining the relatively high levels of social expenditures (about 14% of GDP), while improving its effectiveness and targeting. The present Program complies with these objectives, representing a poverty alleviation effort, which decentralizes expenditure responsibility to state and local levels, improves social expenditure targeting, and strengthens management capacity for social and urban services delivery.
- 1.20 The focus of the proposed Program is also compatible with the social equity and poverty reduction goals expressed in the Bank's Eighth Replenishment mandate. It agrees with the Bank's overall strategy for Brazil, by supporting the reduction of socioeconomic disparities and poverty alleviation, and by promoting a better targeting of social programs. It contributes to the stated priorities for urban development, basic sanitation and environmental investments, particularly in the periphery of metropolitan areas where poverty is concentrated.

E. Related Bank Projects and State Government Experience

- 1.21 The most recent, relevant projects that the State has undertaken are the Decontamination of the Guanabara Bay Program (PDBG) and the World Bank-financed "Rio Flood Reconstruction Project". Both of these projects finance sanitation and drainage infrastructure in the Baixada region, constituting relevant experiences and important complementary investments for the proposed Program. The Rio Flood Reconstruction project is in its final stages of implementation, after overcoming initial funding problems related mainly to the co-financing agency (Caixa Econômica Federal). Additionally, the Bank is supporting REFORSUS, a national health sector reform and services expansion program through the loan 951/OC-BR for US\$350 million, which will also support the improvement of health services in the Baixada.
- 1.22 The PDBG has a total cost of US\$793 million ^{5/} and finances sewerage networks and treatment plants, water distribution systems, macro drainage works, solid waste disposal plants, landfill improvements, digital mapping of the entire region, cadastre improvement and technical assistance to the municipalities. The cadastre component is relevant to this Program due to the potential revenue increases it will generate, contributing to municipal financial capacity to maintain the services in the Program target areas. The sewerage treatment plants and other sanitation facilities of the PDBG will complement the investments at neighborhood level in this Program, and therefore their location and timing is been closely coordinated. Initial institutional difficulties regarding the selection of the project management firm delayed the start-up of the program, which only began disbursements in 1996. These problems have been corrected and currently implementation is proceeding within schedule: around 90% of the procurement awards have been issued and nearly 30% of both loans has been disbursed.

^{5/} The Program is financed by two IDB loans: 782/OC-BR for US\$350 million and 916/SF-BR for US\$50 million. The remaining is financed by the state government and by Japanese co-financing for the equivalent of US\$294 million.

II. THE PROGRAM, ITS COST AND FINANCING

A. Objectives

- 2.1 The objective of the Program is to improve the quality of life of the population in target neighborhoods of the "Baixada Fluminense" region, in particular their sanitation and health conditions. It seeks to ameliorate the effects of urban poverty by improving living and environmental conditions of around 360,000 low-income people in approximately 12 neighborhoods in four municipalities of the region.
- 2.2 The purpose of the Program is to create a lasting impact in the urban landscape and in the quality of social services, as a result of: (i) the introduction of a decentralized urban management model with community involvement, which will improve garbage collection, urban maintenance, and other municipal services; (ii) improvements in sanitary conditions and health care services leading to the reduction in water-borne diseases, infant mortality and improvement in other health indicators; and (iii) introduction of an integrated urban development approach for the expansion of physical and social infrastructure which can be replicated throughout the region.
- 2.3 These objectives, along with performance indicators and their means of verification, are further elaborated in the matrices of the Program's logical framework and benchmarks, presented in annex II-I. The Program's Operations Manual has been agreed upon with the Bank and its formal issuance by the state government constitutes a condition for the loan's first disbursement.

B. Program description and components

1. Components

- 2.4 The proposed Program will finance urban upgrading and social service improvement projects in selected neighborhoods in the Baixada region. It will also finance specific complementary works and services, which are essential for the viability of the upgrading projects but which will also benefit a broader population, and institutional development activities designed to assist municipal governments finance and maintain the upgraded infrastructure and social services. For these purposes, the Program is composed of the following three components:
- (i) Neighborhood Upgrading; (ii) Complementary Infrastructure and Services; and (iii) Institutional Development.

a. Neighborhood upgrading: (US\$212 million)

- 2.5 This component will finance integrated neighborhood upgrading projects, which combine improvements in infrastructure and the provision of social and urban services. Each neighborhood project

can include, according to need: (i) basic sanitation (water, sewerage and drainage); (ii) street paving; (iii) street lighting; (iv) solid waste collection systems; (v) parks, recreation areas, and landscaping; (vi) child care centers; (vii) primary health care systems; (viii) sanitation and environmental education and community development activities; and (ix) small business promotion (see Table II-1).

2.6 Each neighborhood improvement project will be based on an urban development plan, to be prepared with community involvement through the implementation of surveys, consultation with community leaders, and community meetings. From the outset, neighborhood committees will be established to supervise project design, implementation and operation, working in close collaboration with the new decentralized municipal administration units.

2.7 The Program will finance preinvestment studies, supervision and management support to the executing agency, investment costs, and operational expenditures (financed with counterpart funds), for a limited period of time, for some of the urban and social services.

b. Complementary infrastructure and services (US\$60.2 million)

2.8 This component includes specific projects required to support or complement the implementation of the neighborhood projects. These projects, due to technical or geographical criteria, at times will be built outside the target beneficiary neighborhoods, serving those and other communities. The component includes:

- (i) Sanitation Infrastructure: (i) water supply works, such as pumping stations, water storage, and water mains; (ii) sewage lines and sewage treatment stations; and (iii) macro-drainage works.
- (ii) Community Service Centers: building of 5 and reform of 3 existing CCDCs, including computerization, training and organizational development. These CCDCs will be located to maximize their utilization by the residents of the Program's target neighborhoods.
- (iii) Health Centers: remodeling of 4 intermediate-level health units, including the implementation of a new decentralized management model.

c. Institutional development (US\$4 million)

2.9 This component will finance: (i) technical assistance to the governments of the four participating municipalities in the organization and operation of the services supported by the Program and (ii) a monitoring and evaluation system for the Program. Municipal strengthening will include: (i) technical assistance for the establishment of decentralized administrative units, involving

the reorganization of key city services; (ii) strengthening of financial administration, through the introduction of computerized integrated financial systems, covering budgeting, accounting and expenditure control activities 6/; and (iii) training in finance and in the management of social and urban services.

- 2.10 The Program's monitoring and evaluation system will involve two complementary studies: (i) the first will evaluate the impact of the Program on living standards in up to 6 of the beneficiary neighborhoods. It will document the socio-environmental conditions of the selected neighborhoods before and after the Program's interventions in order to provide feedback during execution to make

adjustments for the investments in other neighborhoods and to measure the Program's impact (including an analysis on the impact on women) and efficiency (see box 2.1); and (ii) the second study, to be done in two neighborhoods, will focus on the Program's impact on the health conditions of the population, particularly in terms of the incidence of vector borne diseases. This study to be done within the period of project execution, will complement an ongoing monitoring study of the PDBG, enabling a comparison between the two Programs in terms of their impact on health conditions.

Box II-1:

Methodology of the Monitoring and Evaluation Study

Moment 0, when the socio-economic and environmental characteristics of the selected neighborhood are assessed, defining a baseline of information based on the indicators that have been selected and currently available socio-economic and health data;

Moment 1, surveys to be made 8 months after the completion of the works will assess the impact of the projects on the quality of life of the population from a socio-economic and environmental point of view.

Moment 2, corresponds to the general characterization and summary of the socio-economic and environmental situation of all of the neighborhoods studied and global evaluation of the impact of the Program on the target population.

6/ Cadastral systems and revenue enhancement are already being financed by the PDBG project.

Table II-1: Neighborhood Upgrading and Complementary Infrastructure and Services Activities

SECTOR	DESCRIPTION
Water supply	Construction, expansion and rehabilitation of one or more system parts, including pumping stations, tanks, supply conduits, and distribution networks.
Sewerage	Construction, expansion and rehabilitation of one or more system parts, including treatment stations, collectors, distribution networks, and intrahousehold connections, including individual septic tanks when necessary to avoid contamination of receptor body.
Drainage	Construction, expansion, and rehabilitation of hydraulic works for storm water control, and flood or landslide protection.
Street systems	Construction, expansion, rehabilitation, pavement and complementary works for roadways, streets, walkways, and sidewalks. Depending on their importance to traffic flows, streets may or may not be paved. When unpaved, they will receive surface drainage, curbs and cement sidewalks.
Street lighting	Installation, expansion and rehabilitation of the street lighting system, including poles, brackets, fittings and lamps.
Solid waste collection	Design and implementation of solid waste collection (door-to-door or "condominial" system) and street-cleaning systems in the project neighborhoods, including equipment, neighborhood support stations, training and education of personnel and subsidy for operation and maintenance expenses for a period up to one year.
Parks & rec. areas	Construction, rehabilitation, and equipment supply of parks, playgrounds and multiple-use sports areas and soccer fields. Landscaping and tree planting to create barriers and protected areas.
Sanitation education & community development	Informal and formal community education activities, household visits, and training of community leaders, community health agents and local educators regarding sanitation and environmental issues. Support to community organization and development to assist the conformation of solid waste condominiums, and the correct use and maintenance of water, sewerage and drainage investments.
Child care centers	Construction, rehabilitation and expansion of buildings, supply of equipment and installations for child care facilities, training of child care workers, and operating costs.
Small business promotion	Technical assistance, training activities, and economic viability studies to assist the formation of cooperatives and microenterprises, information on access to credit, commercialization and marketing.
Resettlement	Demolition, reconstruction, construction, lot purchase, and indemnization for occupants, limited to areas of environmental risk, danger to occupants due to flooding or areas affected by works financed by the Program.
CCDC	Construction, rehabilitation, equipment supply and training for community service centers.
Health care services	Construction, remodeling and equipment of local health posts, implementation of PSF and PACS, and reform/rehabilitation of intermediate-level health units.

2. Selection of Neighborhoods

a. Eligibility

2.11 A neighborhood eligibility process was established to provide a better geographic and socioeconomic targeting for the Program and to ensure complementarity to on-going projects in the region. As a first step, the Program area was narrowed down to the Iguacú river basin, since it suffers from the greatest flooding problems and is currently the focus of other sewage treatment and macro drainage investments, which will maximize the impact of the proposed investments. This criterion reduced the number of potential municipalities to five, with 65 neighborhoods and 1.46 million beneficiaries. The other eligibility criteria were that each

neighborhood must: (i) have a population density higher than 8,000 inhabitants per km², to reduce the cost per beneficiary; (ii) have an average income of the head of household lower than three minimum wages per month, to ensure adequate targeting of investments; (iii) not be the municipal center, which already has basic services; and (iv) not present incompatibilities between the works to be implemented by PDBG and the present operation. By applying these criteria, the number of potential neighborhoods was reduced to 27, which are located in the municipalities of Belford Roxo, Duque de Caxias, Nova Iguaçu and Sao Joao de Meriti.

b. Selection criteria

- 2.12 The neighborhoods that comply with the eligibility requirements have been ranked according to the following criteria: (i) **cost-effectiveness**, measured by the cost per beneficiary required to complete the minimum infrastructure for the neighborhood; (ii) **socioeconomic level**, measured by the average income level of the head of household in each neighborhood; and (iii) level of **population density**. The neighborhood delimitations were also reviewed with the communities and municipalities in order to focus the investments in those areas with the greatest needs. Based on this ranking exercise, technical consultation with the municipalities and communities, and the estimated costs of the works which they will require, it is expected that the Program will be able to provide an integrated infrastructure solution to 12 of the pre-selected neighborhoods in the above mentioned municipalities 7/. In the case that the funds for this component are sufficient to cover the cost of additional neighborhoods, their selection will follow this established system.

3. Special project and component characteristics

a. Local administration and community committees

- 2.13 Municipalities participating in the program will be required to establish special decentralized administrations in the neighborhoods upgraded by the Program. These administrative units will have their own budgets, dedicated personnel and maintenance equipment, which will be drawn from the centralized city departments (public works, waste collection, health and others). The goal of the local administrations is to improve the response time and quality of municipal services. A critical element is the establishment of local Neighborhood Committees whose function it is to supervise the provision of local services, by both helping the city in these tasks and pressing municipal authorities to maintain quality standards.

7/ Several neighborhoods which have a density of slightly less than 8,000 inhabitants per km² were included in the final list due to technical considerations of the municipalities and communities.

b. Solid waste collection

- 2.14 In an attempt to drastically improve the solid waste sector's poor performance in the Baixada, a three-pronged approach to the component was developed involving: (i) provision of environmental and sanitation education and securing community participation in project design, implementation and execution (including recourse to municipal personnel when garbage is not collected); (ii) development of a cost-effective technical design offering a solution-mix appropriate to areas differing in degree of physical access -- from conventional door-to-door collection to non vehicular access which will rely on community garbage collection condominiums and community street cleaners; and (iii) assurance of the municipal governments' financial commitment and supervision capacity for their oversight of the solid waste collection service contracts. Paving of the main streets in the neighborhood and those with a severe incline will further enhance the feasibility of this component. Incremental cost of the community street cleaners will be financed with state counterpart funds for a period of up to twelve months.
- 2.15 The component complements solid waste activities included in the Rio Flood Reconstruction Program and the PDBG. These two programs have and/or are currently providing equipment, preparing final disposal sites, and institutionally strengthening the municipal governments in this area. The solid waste component of the present Program was designed to maximize its prospects for sustainability by addressing the critical financial, managerial and educational aspects of the service.

c. Health care services

- 2.16 For the design of this component a "Guiding Plan for the Health Sector" was developed in conjunction with the state and municipal secretariats of health, and with the involvement of civil society representatives. It creates a systematic strategy to improve the quality and efficiency of health care services in the Baixada region, which the Program will support in the following areas: (i) rehabilitation, equipment supply and improved performance-based management of four intermediate-level health units/emergency facilities. These units will provide needed reference services by attending cases that surpass the capacity of the neighborhood based primary health care teams and will ease the demand on the region's only public hospital; and (ii) implementation of the Family Health Program (PSF) with approximately 50% coverage and the Community Health Agents Program (PACS) with 100% coverage at the neighborhood level, along with the rehabilitation, or construction if necessary, and equipment supply of local health posts. The Program will cover the operating, training and supervision costs of these two programs for the first six months. Subsequently they will be financed by targeted federal government transfers.

- 2.17 The community health agents are community members, hired and trained to provide basic information about public health, vaccination, and hygiene, among other issues, and to promote the use of preventive health care. The family doctors attend patients both at the health post and in home visits. The basis of the PSF is the reorganization of the local health care system, creating teams that consist of 8 community health agents, one doctor, one nurse and one nurse's aide, which are responsible for a specific geographic area consisting of approximately 1,500 families. One of the first activities of the Program is a comprehensive health situation diagnostic study, in order to identify the highest risk families. The PACS teams, under the supervision of a nurse, are made up of 15 health agents, each one responsible for assisting 200 families. The PACS is a simplified form of the PSF, and the expectation is that after starting with a 100% coverage of PACS and a 40-50% coverage of PSF, the municipality will gradually reach a 100% coverage of PSF.

d. Child care centers

- 2.18 The two child care centers to be financed in each neighborhood seek to improve the development and care of young children in the community at the same time as the service improves women's economic possibilities. However, the greatest impact of the Program's involvement in this sector is expected to be in the improvement of the management structure, which will involve a municipal partnership with civil society and the private sector, which could support future gradual increase in coverage.
- 2.19 After building and equipping the centers the municipalities, which are responsible for their financing, will contract out their management with civil society or private sector organizations (NGOs, local social service foundations, etc.). Since in these municipalities there is a general excess of primary school teachers on the municipal rosters, the Program will also accept the assignment of qualified existing teachers to the centers. Parents, who will pay tuition for the use of the centers, and local community leaders will be actively involved in their administration, through the formation of parents/workers/community councils. These councils will propose criteria for the admission of the children; define standards regarding the quality of the service provided in the center; accompany and evaluate the center's services based on these criteria; and promote the adequate use and conservation of the center's assets. The centers will also benefit from the supervision of existing municipal multi-disciplinary teams which work in the education and health sector, and from Program financed initial training of the educators.

e. Sanitation, environmental education and community development

- 2.20 This activity supports and creates the basis for the success of all of the Program's action in social terms. It will involve the

target population through educational and community organization activities related to issues of sanitation, environment and health. The aim of the activities is to: (i) modify the behavior of the community members in their relationship to their physical environment; (ii) facilitate the implementation of the solid waste collection activities, by assisting the formation of the local solid waste disposal condominiums; (iii) support the implementation and maintenance of the sanitation, drainage and urban infrastructure investments; and (iv) contribute to the formation of the community health workers regarding sanitation and urban environment information which affects the population's health. The community education and mobilization strategy will be based on household visits, community meetings, workshops to train community leaders, street cleaners and condominium leaders. It will also include training for local educators and community health care workers, as a strategy to mainstream the information, thereby providing a means of continuity to these activities.

f. Community services centers

- 2.21 The "Centros Comunitarios de Defesa da Cidadania" (CCDC) will provide, among others, the following public services: provision of identity cards, birth and other certificates; social assistance services; services from the Public Defender's office; and labor mediation and employment assistance services. This will constitute an expansion of the existing network of 15 CCDCs in the state (3 of which are in the Baixada). A recent evaluation indicated the need to make several changes in their current structure and management practices, including granting more autonomy and full responsibility for the provision of the services to the center's coordinators; increase in the level of service computerization (with access to judicial and employment databases available on-line); and an expansion of the services offered, including municipal, banking and mail services.

g. Small business promotion

- 2.22 This service is intended to support the development of small economic activities in the targeted neighborhoods by providing technical and managerial support to small entrepreneurs and assisting the formation of cooperatives and microenterprises. It will be implemented by NGOs with previous experience in small enterprise promotion and training. One key aspect of the activity is its emphasis on tailoring the services to the specific needs of each neighborhood, by identifying potential clientele for technical assistance and adjusting the services to be provided (such as training, economic viability studies, information on access to credit, commercialization and marketing) to the profile of the clientele. This component is considered a pilot project for the redirection of government efforts in income and employment generation in low income neighborhoods.

C. Program cost and financing

**Table II-2: Estimated Total Cost by Component and Source of Financing
(in US\$ 000)**

COMPONENT	SOURCE OF FINANCING			
	IDB	LOCAL	TOTAL	% TOTAL
1. Engineering and administration		12,200	12,200	4.06%
1.1 Project Preparation		8,000	8,000	2.67%
1.2 Management Support		4,200	4,200	1.40%
2. Direct Costs	178,200	105,800	284,000	94.67%
2.1 Neighborhood Upgrading	136,200	75,800	212,000	70.60%
2.2 Complementary Infrastructure	40,000	20,200	60,200	20.00%
2.3 Institutional Development	2,000	2,000	4,000	1.33%
2.4 Supervision of Works	2,000	5,800	7,800	2.60%
3. Financial Costs	1,800	2,000	3,800	1.27%
3.2 Credit Commission		2,000	2,000	0.67%
3.3 Inspection and Supervision	1,800		1,800	0.60%
TOTAL	180,000	120,000	300,000	100.0%
Percentage of Total	60%	40%	100.0%	

III. PROGRAM EXECUTION

A. Execution Structure

- 3.1 The State of Rio de Janeiro will be the borrower for the Program. Planning, execution, coordination and financial control responsibilities have been assigned to the State Planning Secretariat (SECPLAN). SECPLAN will act as the Executing Unit for the Program, through its Undersecretariat for External Resources (SCR), which will conduct the necessary consultations and intermediation with the Bank during program implementation. The contractors responsible for the execution of works and for the technical assistance components will all respond to this Undersecretariat. The Technical Review Committee 8/ created by a state decree (Number 22.790, on December 9, 1996) will be the mechanism for coordinating the Program's activities with the other state secretariats and agencies. This Committee is in charge of approving technical designs, defining/approving technical requirements included in bidding documents, and supervising the compliance with standards and norms.
- 3.2 For the execution of the Program, the SCR will act through three deputy Undersecretariats, which will fulfill the following functions:
- a. **Planning and General Coordination:** the senior deputy undersecretary will be responsible for planning and general coordination of the Program, for the integration of its components, preparation of the projects and the implementation of the social components;
 - b. **Public Works:** this undersecretary will be responsible for the bidding, execution and physical supervision of the works; and
 - c. **Finances:** budget and financial control of the Program will be assigned to the finance undersecretary.
- 3.3 Despite this sectoral division, the Program will adopt a matrix format by which project managers will be designated among the professionals of either the undersecretariat of planning or of public works to supervise and follow up the specific neighborhood upgrading projects and maintain contact with the municipal authorities and neighborhood committees involved.

8/ Members of the Committee are: Planning Secretariat (SECPLAN); Public Works Secretariat (SOSP); State Water Company (CEDAE); Roads Department (DER); Environmental Secretariat (SEMA); Environmental Engineering Foundation (FEEMA); Guanabara Bay Decontamination Program (PDBG); State Public Works Enterprise (EMOP); "Baixada Fluminense" Development Secretariat (SEBAMA).

- 3.4 The state government will be responsible for direct execution of the program's infrastructure investments. The municipal governments will participate in the planning and receive, operate and maintain the facilities built for the social components (health, child care centers), and urban services (solid waste collection). Neighborhood Committees made up of community members will be involved in the design, implementation and supervision of the Program, and local NGOs will provide technical assistance in a variety of the activities, such as child care centers and environmental education.

B. Municipal eligibility and agreements

- 3.5 In order to be eligible for the Program's investments, each of the municipalities where the selected neighborhoods are located must adhere to the Program by signing a Letter of Intent, indicating their agreement with the Program's norms. The signing of this document by at least three municipalities is a prior condition to the first disbursement of the contract between the Bank and the State. The protocol will include the following commitments from the municipalities:
- a. To establish a special district with a decentralized city administration in each of the neighborhoods to be upgraded by the Program. These districts shall have their own administrators, personnel, and equipment. The administrators will have authority over the municipal services rendered in their jurisdictions;
 - b. To allocate funds their annual budgets for maintaining the urban and social services upgraded or introduced by the Program, specified;
 - c. To reassess the property values in the upgraded areas once the projects are completed. The proceeds of these taxes will be used to finance municipal services in the same neighborhoods where they are collected;
 - d. To adopt a new management model for the intermediate-level health units remodeled by the Program, including the assignment of a maintenance budget for these units and the health posts under the responsibility of the respective director.
- 3.6 The initial step in implementing the neighborhood upgrading projects is the signing of an operating agreement ("convenio") between the state government and each of the municipalities where the neighborhoods are located. These agreements will define the specific conditions for implementing the different project components, particularly the municipal obligations regarding maintenance and the adoption of service management models.

C. Project cycle

1. Community organization and preparation of urbanization plans

- 3.7 The technical selection of the neighborhoods to be included in the Program was done by the State, in conjunction with the pertinent municipalities. It followed the Program's eligibility and selection criteria (see 2.12) agreed upon with the Bank, which sought to combine cost-efficiency of investments with equity considerations. Once this process was completed, municipal governments and SECPLAN established contacts with local community leaders, consulting with them on neighborhood boundaries and forms of collaboration for project development. This process of consultations has also sought to initiate the process of forming Neighborhood Committees.
- 3.8 A consulting firm was then hired to prepare the urbanization plans, which defined the project design guidelines. This process included: (i) a diagnostic study, including interviews and surveys, to identify the prevailing socio-economic and infrastructure conditions and local priorities and concerns; (ii) preparation of an urbanization plan proposal and discussion with the community; (iii) presentation to SECPLAN of the initial plan, including all of the investment components, for technical review; and (iv) presentation to the community of the final plan, in order to include any necessary adjustments. All of the urbanization plans for the 14 pre-selected neighborhoods are expected to be finished before the loan's first disbursement.

2. Neighborhood upgrading component

- 3.9 Once the municipality has signed the "convenio" and the integrated urbanization plan has been completed, the process of implementing a neighborhood upgrading project will involve the following steps:

a. Development of basic designs and technical evaluation

- 3.10 On the basis of the urban development plans for three to four neighborhoods, an engineering consulting firm will be hired to develop the basic designs ("projetos básicos"), the more detailed "executive" projects ("projetos executivos") and, once they have been contracted, to supervise the works construction for this group of neighborhoods. The basic designs will include the environmental analysis and mitigation plan. When required, SECPLAN will prepare the resettlement plan for the group of neighborhoods and will send the respective summary for the Bank's approval. The project designs will then be presented to the Program's Technical Review Committee for technical analysis and final approval, following the technical eligibility criteria established in the operations manual.

b. Environmental and sanitation education and community development

- 3.11 The initiation of the procurement process for the works in each neighborhood is accompanied by the contracting of a consulting firm to perform environmental and sanitation education and community development activities. The implementation of these activities in each neighborhood shall coincide with the beginning of the water and sewerage works.

c. Project implementation

- 3.12 This phase includes: (i) preparation by SECPLAN of procurement documents for contracting the construction firms; (ii) presentation of bidding announcements and technical designs for Bank approval; (iii) bidding of the works by SECPLAN (informing the Bank about the decision regarding the awarding of the contracts to be financed with Bank funds); (iv) development of the detailed "executive" projects by the project supervision firm; (v) execution of works by contractors, monitored by SECPLAN managers and the supervision firm; and (vi) approval of finished works by SECPLAN and formal transfer to the relevant state or municipal agencies.

d. Municipal services (solid waste, health and child care centers)

- 3.13 Implementation of these services involves: (i) contracting technical assistance for the implementation and operation of the services and the training of the municipal and community personnel; and (ii) purchasing specialized equipment for the facilities and services. The municipalities will receive institutional strengthening with respect to the management of solid waste services and operation of health and child care facilities. SECPLAN will monitor the delivery of these services during the execution of the Program.

3. Complementary infrastructure and services component

- 3.14 The complementary infrastructure projects will be developed and implemented in parallel with the neighborhood upgrading projects. Project designs will be bidded separately or in packages, according to the implementation schedule of the neighborhood works they complement. The supervision firm selected will develop the basic designs and the "executive" projects, including the environmental analysis, and supervise the works construction. The Technical Review Committee will have the responsibility for reviewing and approving the basic project designs. The cycle for implementing the project is the same as for the neighborhood upgrading projects.

4. Institutional development component

- 3.15 The institutional development projects will also be developed in parallel with the neighborhood upgrading projects. For municipal

strengthening activities, a firm specialized in municipal financial systems will be hired to implement these already existing systems in each municipality and train the personnel in its operation. Monitoring activities will be contracted to a consulting firm that will develop and implement the program's general monitoring and evaluation system. Another firm, specialized in the area of health, will be hired to evaluate the impact on health conditions in two neighborhoods.

D. Technical eligibility criteria

1. General technical eligibility criteria

3.16 The general technical eligibility criteria that must be met by the projects to be financed by the Program are:

- a. The average per household cost of each neighborhood upgrading project should not exceed US\$3,600. Investments that surpass this value would need the prior approval of the Bank to be eligible for Program financing;
- b. The projects to be implemented should represent the minimum cost technical solution and present a cost benefit ratio of one or greater;
- c. The projects must follow the norms established by the relevant specialized agency and/or such agency's project-specific recommendations and include the necessary measures to ensure the adequate operation and maintenance of the works and services financed by the Program; and
- d. Land tenure in the locales where works will be undertaken must be secured before the initiation of works in the specific project.

2. Technical criteria by sectors

3.17 The works and services included in each urban upgrading project must also comply with the following sectoral technical eligibility criteria:

Table III-1: Sectoral Criteria for Project Analysis

SECTOR	TECHNICAL CRITERIA
Water supply	Guarantee a constant supply of quality water, through household connections; Comply with the norms and specifications of CEDAE; Be compatible with the Master Plan for Water Supply for the Rio de Janeiro Metropolitan Area. Any changes in relation to the Plan must be discussed and approved by CEDAE.
Sewerage	Guarantee household and intrahousehold connections during project implementation; Must completely separate the sewerage and storm drainage systems. The final destination of the sewage must include treatment; Comply with the norms and specifications of CEDAE; Be compatible with the Baixada Fluminense Master Plan for Sewerage. Any changes in relation to the Plan must be discussed and approved by CEDAE; Complement, whenever possible, other sectoral interventions in the Baixada.
Drainage	Storm drainage systems must be completely separate from the sewerage system. Provide a complete micro-drainage solution. Comply with the norms and specifications of SERLA; Be compatible with the Iguaçu-Sarapuí Hydrographic Basin Master Plan for Flood Control. Any changes in relation to the Plan must be discussed with SERLA and have prior approval from SECPLAN.
Street systems	Provide pavement and complementary works for roadways, streets, walkways, and sidewalks whenever pertinent; Project designs must comply with the norms and specifications of DER; The pavement solution must have a life span of at least 10 years; Paving may not be done before the water supply, sewerage and microdrainage works are completed. Areas eligible for paving are limited to the main roadways and areas with a severe incline.
Solid waste collection	The garbage collection system must comply with the norms and specifications of SOSP. Be compatible with the Solid Waste Master Plan developed by PDBG and the Reconstruction Rio Project. Any changes in relation to the Plan must be discussed and approved by SOSP.
Parks & landscaping	Must include a minimum of two recreation or park areas for every neighborhood; The recreational and street equipment (benches, bus stops) must be of minimum cost and easy maintenance.
Child care centers	Demonstrate an effective demand for at least 100 children between the ages of 2 and 6 in the area of influence of the proposed site; Guarantee the availability of funds for the operation and maintenance of the centers; Each center must include support of a parents/workers/community council; Comply with the norms and specifications defined by the Program.
Local health care services	Comply with the norms of the Health Ministry, for the PACS and PSF; Have a minimum coverage of 40% with the PSF, and 100% coverage with PACS; Implement (reform or build) one health post for every 15,000 inhabitants, in each neighborhood. New units will be built only in the case when reform or expansion of an existing post is not possible; New constructions must comply with the norms and specifications of the Program.

3. Environmental requirements

- 3.18 The projects must comply with the requirements contained in the Program's Environmental Analysis document, the basic principles of which are: (i) to not worsen the existing environmental situation; (ii) encourage environmental recovery; (iii) prohibit incorrect land use; (iv) mitigate possible negative environmental impacts during both construction and operation of the project works; and (v) respect the pertinent environmental legislation.

4. Resettlement guidelines

- 3.19 As a consequence of drainage works, street construction, and other urbanization works, some individual homes will have to be partially

or totally demolished. To comply with the Bank's policy and minimize inconveniences, social or other negative impacts over the occupants, SECPLAN prepared a Resettlement Plan which contains the guidelines for the process. Because of their social and economic cost, extensive efforts have been and will continue to be made during the preparation of the urbanization plans and the basic designs to minimize the number of relocations. It is estimated that only 255 of the 90,000 families benefiting from the projects will be affected. Affected families will be consulted and involved in the process in a timely manner; their socio-economic level will not be reduced, with efforts made to improve it; four individual solutions are foreseen: (i) relocation within the same lot with monetary compensation or rebuilding, (ii) resettlement to nearby areas, (iii) indemnization and (iv) purchase or provision of existing homes; the costs of resettlement are fully included in the project design; relocated families will move into model homes of 44 m² in nearby areas or within the same neighborhood.

E. Management and technical support

- 3.20 Two types of management assistance will be contracted out to consulting firms: (i) **management support**, intended to assist in the development of financial and physical control systems and provide administrative and logistical support in general to the Executing Unit; and (ii) **supervision of works** which will include, both preparation of basic designs ("proyectos básicos") and their detailed specification ("proyectos ejecutivos") and supervision of their implementation. Terms of reference for these contracts have been reviewed and approved by the Bank.

F. Procurement procedures and limits

- 3.21 Program implementation will require consulting services for project design, supervision, and technical assistance, execution of civil works, and equipment purchasing. For each neighborhood there will be at least one service contract and two or more construction contracts issued. Models of procurement terms of reference and conditions for construction works and for services have been agreed upon with the Bank. The SECPLAN executing unit will be in charge of all of the program's contracting.
- 3.22 Following standard Bank procedures, procurement of works in excess of US\$5,000,000 and of goods and related services in excess of US\$350,000 will be undertaken through international competitive bidding, according to Bank procedures. Procurement of goods and works in lesser amounts will follow national bidding procedures without restriction to the participation of bidders from the Bank's member countries (see Annex III-1 for procurement related to the sample projects). The procurement of consulting services greater than US\$200,000 will be publicized internationally and will be financed with counterpart funds.

G. Bank's review of projects

- 3.23 The Program's operations manual establishes in detail the project review and disbursement procedures. The principle to be adopted is the requirement of ex-ante approval by the Bank of all procurement documents and contracts in excess of the international procurement thresholds for works, goods and services. The Bank has reviewed and approved the standard models for works, goods and services and consulting contracts. The analysis mission has reviewed and approved the sample 4 neighborhood upgrading projects, 5 of the complementary infrastructure works and most of the terms of reference related to the institutional development component. During program execution, the Borrower and the Representation will agree on procedures to expedite project approval, whereby the Borrower can proceed with contracting of projects below the international procurement thresholds, retaining full documentation for ex-post review as required by the Bank.

H. Monitoring, impact assessment and mid-term review

- 3.24 The program will be monitored throughout its implementation and evaluated upon completion of the projects through a monitoring and evaluation system (see 2.09). The system will include information from special monitoring and evaluation studies, information on the execution of the works; and on-going monitoring information from existent information and supervision systems established within the health care and child care centers services. Monitoring and program execution reports shall be submitted to the Bank for analysis on an annual basis, based upon the performance indicators presented in the logical framework and benchmarks matrices (see annex II-1). By the end of the second year after the effective date of the loan contract, a mid-term review will be conducted to assess progress achieved and identify measures to expedite or adjust Program implementation. In addition to the performance indicators, the mid-term review will also examine project staffing needs, progress in the institutional development component, and the overall impact of the program in municipal urban management practices.
- 3.25 Program evaluation will be done by an independent firm, based on the terms of reference which have already been agreed upon with the Bank. The evaluation will be carried out in two neighborhoods of each participating municipality. One neighborhood of each municipality to be evaluated should be from the first group of neighborhoods and one from the third, if possible. Additionally, the Collective Health Studies Nucleus of the Federal University of Rio de Janeiro (NESC/UFRJ) will conduct an evaluation study of the impact of the Program on health conditions in two neighborhoods.

I. External auditing and ex-post evaluation

- 3.26 During the four years of execution, the financial statements of the Program should be presented annually during the first four months

after the close of the fiscal year, with the opinion of an independent external auditor, which should include a review of the management of the Program in all of its aspects.

- 3.27 As a means of ex-post evaluation, the final report provided by the monitoring and evaluation system will summarize and analyze the results of the Program in the ten neighborhoods studied. This report will be prepared eight months after works completion of the last project and presented to the Bank for its approval.

J. Recognition of prior expenditures

- 3.28 The State of Rio de Janeiro has incurred costs for the value of US\$4,000,000 in expenditures for feasibility studies and other activities required for the preparation of the Program's sample projects. These costs will be presented to the Bank for recognition as part of local counterpart funds.

K. Disbursement Plan

Table III-2: Disbursement Plan (US\$ 000)

SOURCE	1997	1998	1999	2000	TOTAL
Bank	35,151	56,456	41,186	47,207	180,000
Counterpart	24,897	31,200	24,891	39,012	120,000
Total	60,048	87,656	66,077	86,219	300,000
% of Total	20.0	29.2	22.0	28.7	100

L. Status of preparation

- 3.29 During project preparation, neighborhood upgrading plans have been prepared and approved for 4 neighborhoods to be included in the Program. Additionally, the plans for the remaining pre-selected neighborhoods have nearly been completed. The State has completed the basic designs and bidding documents for the four pilot neighborhoods. These projects have been approved by the relevant state agencies, and the initial contracts have been prepared for completion of the works. The execution of these initial projects will ensure timely disbursements during the first year of execution.

IV. PROGRAM FEASIBILITY

A. Technical feasibility

1. Project preparation and approval

- 4.1 The Program's technical feasibility was determined through the analysis of four pilot neighborhood upgrading projects and eleven complementary works projects. The sequence of steps followed in the process of project preparation helped ensure their adequate technical analysis and included: (i) preparation of urban development plans, whose key function was to determine project components and general design guidelines in each neighborhood, following the Program's goal of providing full access to water and sewerage for all families and resolving the drainage problems in each neighborhood, among other activities; (ii) once these plans were agreed upon with the community, basic project designs were contracted to consulting firms; (iii) this design work was supervised by the Program's technical unit and by representatives of state agencies in charge of water and sewerage services, drainage, roads and street building works, and others; (iv) once the designs were completed, they were formally submitted for the approval of the respective agencies, in the context of the Program's Technical Review Committee ^{9/}; and (v) sample projects were reviewed and approved by the Bank.
- 4.2 Project designs for these pilot projects have followed the guidelines set in the Program's operations manual, namely: (i) the technical solutions are of minimum cost; (ii) they are compatible with the PDBG implementation schedule and technical solutions; (iii) parameters and design criteria comply with those utilized by the appropriate state regulatory agencies; and (iv) unit costs used in the project budgets follow those established by EMOP (the state official construction agency) and CEDAE.
- 4.3 The technical review process is considered adequate and all projects reviewed were considered technically viable and the preparation process technically adequate. The consulting firms that prepared them have vast experience in their respective fields of expertise and the selection process followed Bank procedures.

2. Characteristics of the sample

- 4.4 The four sample projects analyzed contain all of the components to be financed under the neighborhood upgrading component, and the

^{9/} The role of this Committee is to centralize the project approval process, thus expediting it and making sure they follow the guidelines of the water, sewage, drainage, waste management and other sectoral plans already existing for the region.

complementary infrastructure and services projects analyzed are also representative of the projects to be financed under that component. The technical aspects, such as effective demand, technical designs and specifications, costs, and institutional capacity to prepare, analyze and supervise the projects were reviewed and found to be satisfactory.

- 4.5 The sample projects analyzed for the Program included the 20 sub-projects that make up the four pilot neighborhood upgrading projects, with a total cost of US\$97 million or nearly 45% of the projected investment in the neighborhood upgrading component. Additionally, 11 projects classified as complementary investments were also reviewed, for a total cost of about US\$19 million or 33% of that component's budget. Table IV-1 and IV-2 contain a breakdown of those costs by project.

Table IV-1: Sample Projects - Neighborhood Upgrading

MUNICIPALITY	NEIGHBORHOOD (Population)/PROJECT TYPE	INVESTMENT		BENEFICIA- RY FAMILIES	COST Per FAMILY (US\$)
		Cost (US\$)	%		
NOVA IGUAÇU	CHATUBA (35,000)	18,110,511	18.7	9,044	2,002
- Infrastructure	. Water System	1,073,078	6.0		119
	. Sewage System	4,859,960	26.8		537
- Services	. Drainage	4,879,550	26.9		540
	. Street Paving & Public Spaces	5,616,584	31.0		621
	. Social	1,029,719	5.7		
	. Urban	636,620	3.5		
	. Resettlement	15,000	0.1		
S.J. DE MERITI	JARDIM METRÓPOLE (29,600)	27,546,356	28.5	7,649	3,600
- Infrastructure	. Water System	1,803,675	6.6		236
	. Sewage System	5,711,752	20.8		747
- Services	. Drainage	9,953,557	36.1		1,301
	. Street Paving & Public Spaces	8,411,033	30.5		1,100
	. Social	1,029,719	3.7		
	. Urban	636,620	2.3		
	. Resettlement				
BELFORD ROXO	Lote XV (34,174)	26,220,480	27.1	8,830	2,969
- Infrastructure	. Sewage System	5,520,525	21.1		625
	. Drainage	11,369,248	43.4		1,288
- Services	. Street Paving & Public Spaces	7,514,368	28.7		851
	. Social	1,029,719	3.9		
	. Urban	636,620	2.4		
	. Resettlement	150,000	0.5		
DUQUE CAXIAS	Olavo Bilac (30,578)	24,833,598	25.7	7,901	3,143
- Infrastructure	. Sewage System	4,967,479	20.0		629
	. Drainage	10,731,978	43.2		1,358
- Services	. Street Paving & Public Spaces	7,134,302	28.8		903
	. Social	1,020,719	4.1		
	. Urban	529,120	2.1		
	. Resettlement	450,000	1.8		
TOTAL		96,710,946	100		2,869

Table IV-2: Sample Projects - Complementary Infrastructure

Projects (location)	Cost (US\$)
1. Water Storage Tank (Juscelino Kubitschek)	1,212,926
2. Sewage Main Line (Chatuba)	3,092,239
3. Sewage Pumping Station (Edson Passos)	721,796
4. Expansion of Water Storage Tank (Jardim Meriti)	606,311
5. Water Main Line (Jardim Meriti)	2,130,404
6. Sewage Pumping Station (Olavo Bilac)	1,523,322
7. Sewage Treatment Plant (Joinville)	2,191,082
8. Sewage Main to the Joinville Sewage Treatment Plant	3,200,000
9. River Channeling	1,638,000
10. CCDCs (8 projects)	1,385,841
11. Intermediate-level Health Units (4 Projects)	2,290,000
TOTAL	19,991,821

3. Operation and Maintenance

- 4.6 Adequate operation and maintenance of water and sewerage systems (including complementary sanitation works) to be built by the Program is assured by their transfer to the state water company, CEDAE. This company is currently working with the Bank in the PDBG project and meets the Bank's operational and financial standards. The transfer of those systems is the object of an official agreement ("convenio") between SECPLAN and CEDAE and constitutes a condition for first disbursement of the loan. With respect to drainage and street paving, municipal responsibilities regarding operational commitments are clearly established in the state-municipal agreements. One of the conditions for the participation of the municipalities in the Program is their commitment to establish "administrative regions", which will receive a special budgetary allocation and a new management structure (see 2.13 and 3.5). This will involve a commitment to assign in their annual budgets resources for street and drainage maintenance, garbage collection services, health care services, and child care centers to be provided in each neighborhood. The amount of these allocations will be jointly agreed upon annually by SECPLAN and each municipality, and communicated to the Bank.
- 4.7 A technical assistance program has been developed to strengthen municipal technical capacity for performing satisfactorily these activities. The services that are to be contracted out, such as garbage collection, will require municipal capacity regarding service planning, contract supervision, and organizational support. All of the participating municipalities will receive technical assistance in these areas, funded either by the present Program or by the PDBG. Implementation of health services will be supported by the State Secretariat of Health, through training and supervision. In the case of the child care centers, the educators and support personnel will receive training through the Program, they will be supervised by existing pedagogical teams in the municipalities, and to the extent possible the centers will be

managed on a contract basis with NGOs or by local social service foundations.

B. Institutional and financial feasibility

- 4.8 The Program's institutional and financial feasibility has been assessed on the basis of: (i) the state government's capacity to provide adequate and timely counterpart financing and to service the loan; and (ii) the participating municipalities' capacity to finance the operation and maintenance of the municipal services included in the Program.

1. State financial capacity

- 4.9 Since the nation's capital was transferred from the city of Rio de Janeiro, the State of Rio de Janeiro (RJ) has lost its relative position among Brazilian states, with its GDP dropping from 13.2% of the country's GDP in 1980 to 9.4% in 1994. The growth of the state government administrative structure and the deterioration of its fiscal base seriously compromised its investment capacity. In order to reverse this situation, the state government has been implementing an ambitious State Reform Program (PRE) addressing economic, administrative and financial problems.
- 4.10 Through the PRE, the State will sell most of its enterprises (electricity generation, natural gas, banking etc.); will concede the right to provide certain services to the private sector (mainly water distribution, roads, mass transportation); and will close deficient government institutions. These actions are expected to bring in approximately US\$1,300 million in privatization revenues, and US\$50 million annually in concession rights. Additionally, the annual amount of state subsidies to these firms should be reduced by US\$30 million in 1998, US\$120 million in 1999, and more in the years ahead. The closing of state institutions will save the treasury almost US\$36 million annually as of 1997.
- 4.11 The administrative reform component in PRE seeks to reduce personnel expenditures by almost US\$200 million annually beginning in 1998. The state government is planning to reform its pension fund, which currently provides a full pension wholly financed by the State, by increasing employee contributions. To increase revenues the State also has been developing a program, with Bank funding, to streamline its tax administration and improve tax collection.
- 4.12 In January, 1997, the State reached an agreement with the federal government regarding the renegotiation of the state's debt, including its debt in treasury bonds, which is equivalent to US\$11 billion, or approximately twice its annual net current income. This agreement will permit the State to repay this debt in 30 years at an annual interest rate of 7.5%. Annual disbursements to service the debt will be limited to 13% of the net current income.

Table IV-3: State of Rio de Janeiro Finances: Selected Categories and Years
(In US\$ millions)

CATEGORIES	1996	1997	1998	1999	2000	2005	2008
1. Current Revenues	7.055	7.570	9.352	9.761	10.445	14.576	17.773
1.1 Transfers to Municipalities	1.594	1.690	2.702	2.978	3.190	4.495	5.522
2. Net Current Revenues (1-1.1)	5.401	5.880	6.650	6.783	7.255	10.081	12.251
3. Current Expenditures	5.893	5.493	5.860	5.956	6.071	7.937	9.336
4. Current Savings (3-4)	-492	387	790	827	1.184	2.144	2.915
5. Capital Revenues	296	1.015	79	79	49	49	49
6. Capital Expenditures	367	771	882	170	4	1.157	1.896
7. Overall Balance (4+5-6)	-563	631	-13	736	1.229	1.036	1.068
8. FINANCING							
8.1 Credit Operations (+) (1)	1.209	11.010	618	85	-	-	-
8.2 Amortization (-)	1.070	11.106	850	1.031	1.229	1.036	1.068
8.3 Other financing (NET)(+)	424	96	245	210	-	-	-
Curr. Savings/Net Curr. Revenues (%)	-9,1	6,6	11,9	12,2	16,3	21,3	23,8

(1) Includes revenues from the renegotiation of state debt with federal government, corresponding to an equivalent payment in capital expenditures (1997).

4.13 Projections of future financial streams (see annex IV-1), including disbursements for projects in execution with the Bank and the World Bank, indicate that the State will not only have the financial capacity to execute them, but it will also generate a surplus for investments after 1999. Additionally, proceeds from the privatization of state enterprises must be legally assigned to the State Social Mobilization Fund to finance investments in social sectors and infrastructure. Counterpart funds for the present Program will be set aside from this fund, through a state decree.

4.14 In conclusion, it is clear from this analysis that: (i) counterpart funding for the present Program will not constitute a problem since sufficient resources have been set aside from the revenues derived from the State's privatization program in the Social Mobilization Fund; and (ii) the impact of adjustment measures and reforms on state finances lead to the conclusion that over the course of the loan repayment period, the state government will be able to adequately service its debt with the Bank.

2. Municipal financial situation

4.15 The program's municipalities show financial indicators typical of those of mid-sized cities in Brazil. Neither the revenue sharing system of federal taxes (FPM), which has a redistribution aim, nor the state value added tax (ICMS) includes incentives for fiscal efforts on the part of the municipalities. This partly explains why almost 70% of current income of the participating municipalities comes from state and federal transfers. Indicatively, those municipalities with greater per capita transfers also have a higher ratio of personnel per capita, and pay higher salaries (see Table IV-3). At the same time, the

relationship between transfers and level of investment in infrastructure is not positively correlated, since the municipality of Duque de Caxias has the lowest level of investment and highest level of transfers.

Table IV-4: Municipal Finances Indicators (US\$)

Indicators	Duque de Caxias	Belford Roxo	Nova Iguaçu	S. João de Meriti
Transfers/Current Income	76%	72%	74%	72%
ICMS Transfer Per capita	\$122	\$44	\$29	\$25
Property tax (IPTU)/Family/month	\$5	\$4	\$3	\$3
Employees/1000 pop.	13	12	8	8
Personnel expend./pop.	\$108	\$61	\$60	\$52
Investments/pop.	\$5	\$27	\$9	\$5
Sup.(def.) per capita	\$4	(\$41)	(\$24)	(\$15)

- 4.16 Municipal own revenues represent less than 30% of their total revenues. Collection of the main municipal tax, the property tax (IPTU), ranges from US\$60 to US\$36 per family annually. That is undoubtedly a low percentage of family income, which averages US\$6,000 a year. The lack of proper incentives added to the technical difficulties in collecting and managing property taxes have led to the current dire fiscal situation of the municipalities. This condition is being addressed through the Bank financed PDBG program, which is supporting the design and implementation of a regional cadastre system, and complemented by the present Program, which will introduce integrated financial management and control systems in each of the targeted municipalities. These two initiatives will have the effect of both enhancing tax revenues and helping control and reduce expenditures.
- 4.17 Additionally the Program's requires that the municipalities reassess the property values in the upgraded neighborhoods, which will generate significant revenues for their urban maintenance. In view of impact of these measures it is estimated that the municipalities will generate enough resources for adequate operation and maintenance of their services in the Program's neighborhoods 10/, and still generate resources for investing in additional neighborhood upgrading projects in the future.

10/ Urban maintenance and garbage collection will demand more organization but possibly fewer expenditures than currently; the health care system is subsidized by the national health system; and the child care centers will involve limited increases in personnel costs and will receive community support.

C. Socioeconomic feasibility

1. Program characteristics

- 4.18 The design of this Program is based on the proven cost-effectiveness of a model of integrated urban and social services investments. Its benefits will contribute to human resources development in the region, by reducing the incidence of illness and improving the educational and labor capabilities of the population. Furthermore, these investments, which also aim to improve social cohesiveness and community involvement, should significantly contribute to improving the overall quality of life in these neighborhoods, leading to a reduction in the crime rate and added economic investment in the region.
- 4.19 The direct benefits of the operation have been calculated in reference to the beneficiaries' valuation of these services. However, the impact of the Program, whose integrated solution generates significant externalities, may be undercalculated by this reliance on the estimation of the beneficiaries. Furthermore, due to limitations in the available information, the economic analysis has been limited to the individual analysis of each type of investment activity, although it is expected that the Program's overall impact will far exceed each activities' individual contribution. In an attempt to improve the thoroughness of the analysis for the future, the impact evaluation system will include a comparison of the value of housing in these neighborhoods before and after the upgrading solution, in an effort to measure the impact on the overall quality of life in the neighborhoods and will closely track the impact on the population's health conditions.
- 4.20 The Program's targeting system supports the cost-effectiveness of the operation, by prioritizing densely populated areas and neighborhoods that are receiving complementary investments, thereby reducing the cost of the complete urban upgrading solution.

2. Methodology

- 4.21 The economic analysis of the program's water, sewerage and drainage infrastructure investments was based on a comparison between minimum cost solutions and the estimated benefits to be generated. In order for the infrastructure investments to provide the expected benefits, both the neighborhood level, or micro, and complementary infrastructure, or macro, works are necessary. For this reason, these works were grouped into appropriate "systems" of both micro and macro sectoral investments, which in some cases also included anticipated future micro works in nearby neighborhoods. To calculate the net present value, the analysis used a discount rate of 12%, a planning horizon of 30 years, a population growth rate of 1.6% per annum, and 2 to 5% of the investment cost as the estimate of the operation and maintenance costs. For the social service investments, per beneficiary efficiency cost indicators were

established. The analysis also established maximum levels of investment per family for each neighborhood.

- 4.22 For the sanitation works, the calculation of the benefits was assessed on the basis of the beneficiaries' willingness-to-pay (WTP) for the expected benefits, calculated as US\$228/household/year, or US\$4.90/person/month. This WTP estimation was derived from calculations for other recent Bank projects in Brazil (Fortaleza Basic Sanitation, BR-0186, 6/92, US\$134/HH/year; and Sao Paulo Tiete River Decontamination, BR-0173, 3/91, US\$322/HH/year), and by taking into consideration the income level of the respective areas, which in the case of the Baixada is approximately an average of the levels in these two cities.
- 4.23 For the water system investments, both existing and new users of the system were considered as beneficiaries, since the existing ones currently receive a very low quality service and intermittent water supply. The value of the WTP for the new users was estimated as the minimum water tariff that is currently charged, of US\$15.00 per family, or US\$3.88 per person. Since the WTP for water is expected to be above this tariff, the use of this value leads to a conservative estimation of the benefits 11/. For existing users, 20% of this value was used to measure the benefit of improved service, or US\$0.78 per person.
- 4.24 For the investments in drainage, both direct and indirect beneficiaries were considered. Direct beneficiaries are those that no longer have their houses flooded. In this case the benefits were calculated based on the value of avoided damage. A recent study on the drainage needs in the region (Iguaçu Project, UNDP, 1996) estimated this value as US\$10/person/month. Indirect beneficiaries are those that live in the proximity of the flood prone areas. Although their houses are not flooded, they suffer from a variety of inconveniences, such as greater risks of water-borne diseases, transportation difficulties, etc. Surveys undertaken by this study indicated that the WTP to avoid these problems was US\$0.55/person/month.
- 4.25 For the CCDC, the benefit was calculated in terms of time saved due to the nearby availability of necessary services. The estimation was made based on the savings of one day of work, for a person who earns 2.5 minimum wages, with a coverage of 3,090 persons/month.

3. Results

- 4.26 The cost-benefit analysis of the infrastructure investments yielded an economic rate of return of over 12% for each investment sector, which is the minimum return required by the Bank. The following

11/ Due to limitations in information and doubts about its reliability for the calculation of price elasticities, the Program did not employ the Bank's SIMOP model.

table shows the rates of return by investment sector and the cost-benefit ratios for these sectors and the CCDC:

Table IV-5: Cost-Benefit Analysis: Infrastructure and CCDC
(present value, in millions US\$)

Investment Sector	Total Cost	Benefit		IRR (%)	Cost-Benefit Ratio (Range)	Cost-Benefit Ratio (Avg.)
		Total	Net			
Sewerage	241.4	366.3	124.9	20.8	0.96 - 3.34	1.79
Water Supply	50.6	153.4	102.8	45.7	1.01 - 4.78	2.59
Drainage	33.0	60.4	27.4	25.4	1.16 - 3.29	1.97
CCDC						2.95

4.27 Based on the cost estimates (which will be finalized with the preparation of the "executive" projects), only one sewerage project does not have a cost-benefit ratio greater than one. The SCR will present this project to the Bank for its approval, recalculating the ratio with the final cost estimates and/or reformulating the project if necessary. In order to ensure that the estimated benefits from the investments in the sewerage systems are realized, measures have been taken to avert problems encountered in the past in the Baixada associated with a limited rate of service connections. These measures include the incorporation of intrahousehold connections into the works, concurrent execution of sanitation and environmental education activities, and community involvement throughout the planning and execution of the projects.

4.28 For the child care centers, a per child cost indicator was established to facilitate a comparison with other similar programs and to monitor costs during execution. The resulting US\$105/child/month is similar to the cost of a comparable service financed within the Bank's Rio de Janeiro Urban Upgrading Program (Loan 890/OC-BR). The per person annual cost for the local preventive health programs are on average US\$42.05, and follow the national and state cost guidelines for the PACS and PSF.

4.29 On the basis of the cost-benefit analysis information for the proposed works, and the final cost information for the first four neighborhoods, a maximum limit of US\$3,600 was established per family for the neighborhood upgrading plans. This parameter will be used to ensure cost-efficient levels of investment across neighborhoods, and as a benchmark for the final design of the projects and their evaluation.

4. Sustainability of investments

4.30 Municipal capacity to maintain the infrastructure and operate the social services financed by the Program has been a key consideration in the design of Program's components. As a result, the social components such as the health care system and child care centres have been designed to take advantage of existing federal

supported programs, such as the Family Doctors and Community Health Agents. Cost effective alternatives for the delivery of child care services were analyzed for each municipality, based on local conditions and availability of private sector service providers. The state has been negotiating with the Social Security Ministry assistance to cover a per capita operation cost of the child care centers for two years, and to include those centers in the Federal Community-Solidarity's school lunch and milk program.

- 4.31 Increases in property taxes and garbage collection fees (mandated by the state-municipal agreements) would allow municipalities to cover increases in operation and maintenance of municipal services. The decentralization of city service provision and control, resulting from the creation of local administrative units in the affected neighborhoods, is a strong element in the sustainability strategy, since it will create a higher technical standard of urban management, new community-based service supervision practices and a more solid resource management approach.
- 4.32 Social sustainability of the projects will ultimately result from the involvement of community members. Their active participation is sought in project definition and design, development of resettlement plans, selection and location of community facilities, implementation of social and urban services and monitoring and evaluation. The environmental education component will promote house to house visits providing training and information on maintenance of sanitation infrastructure and garbage collection services. Permanent citizen committees will be involved in the regional administrations to be established in the neighborhoods to be upgraded by the Program. Overall, an explicit effort has been made to encourage community ownership of the projects, as the best strategy for sustainability.

D. Impact on poverty and gender issues

1. Poverty

- 4.33 The conceptual framework of this Program is based on providing support to the integrated social and physical development of poor neighborhoods in the municipalities bordering the city of Rio de Janeiro. The Program's components, which include slum upgrading, primary health services, and community child care centers, among others, lead this operation to be considered poverty targeted (PTI), as defined by the Bank in the document GN-1964-2. Additionally, the neighborhood eligibility and ranking system which was used to select the beneficiary areas within the Baixada Fluminense was geared to selecting the poorest neighborhoods, balanced with concerns for cost-effectiveness. The eligibility criteria excluded neighborhoods in which the average head of household received more than three minimum wages. As a result of this targeting mechanism, the average income of the head of household in the selected neighborhoods is 2.02 minimum wages, equivalent to a family living at the Bank's poverty line, and

approximately 60% of the beneficiary households fall below the poverty line. This further qualifies the Program to be considered a PTI operation, and following the procedures established in the document AB-1704, the Program has opted to use the financing matrix of 40% counterpart and 60% Bank loan.

2. Gender Issues

- 4.34 This Program actively promotes the involvement of women both in the design of the neighborhood upgrading projects and their implementation. The high level of community involvement in the design of the neighborhood projects, consultations with community leaders, who in Brazil are often women, and conformation of Neighborhood Committees create a space for local women to participate in decision making and express their priorities. This participation has led the Program to include activities such as child care services and playgrounds among the recreation facilities. The type of investments involved in the Program will also significantly lessen women's household work load, by improving access to potable water, by reducing the occurrence of illness and by reducing the frequency and severity of floods, thereby promoting their income earning opportunities. The child care services provided through the Program will not be sufficient to meet the demand, however it will contribute to the solution, both directly through the creation of new, quality centers, and also through working with the municipality to strengthen its activities in this area, particularly by promoting greater partnership with the private sector. The improved local preventive health services will also improve women's situation by improving their level of health, in particular maternal, and that of other family members. Finally, the Program also expects to provide employment for local women, through the implementation of Community Health Agents, employment at the community child care centers, and by assuring that the small business promotion activities financed by the Program also reach women.

E. Environmental Feasibility

- 4.35 The Program is expected to create many positive benefits in a very poor region, by environmental and social standards, through the implementation of sanitation, drainage, solid waste collection and environmental education activities. Conversely, the negative impacts would be small, local, and temporary, occurring mostly during the construction phase. The Program is considered environmentally and socially feasible given that the temporary impacts attributed to civil works and the potential impacts after project implementation have all been mitigated, and the necessary steps to address the needs of the very small number of families to be relocated have been adequately incorporated into the project cycle. The Program's Executing Unit will also give the necessary attention to coordination with other programs in execution in the State, such as the PDBG, since the present Program is dependent on

the civil works included in those programs for full mitigation of its environmental impacts.

- 4.36 The preventive and mitigatory measures have been incorporated into the design and cost of the Program and are specified in the EIA and in the Resettlement Plan. The Program's management firm will make available to the Executing Unit an environmental specialist for the duration of the Program. The state environmental control agency, FEEMA, will have a technical representative in the Program's Technical Review Committee. In accordance with the Bank's guidelines and state legislation, the Program actively promotes public consultation, participation, and supervision.
- 4.37 Each project at the basic design stage and its corresponding environmental impact study will be revised by the management firm's environmental specialist and sent to FEEMA for analysis. The inclusion of the environmental protection measures listed in the Program's EIA will be verified and new measures added if necessary. In the preparation of the bidding documents, the environmentalist will verify the inclusion of the items for which the construction firm is responsible. FEEMA will also verify that the complementary infrastructure works, such as a sewage treatment plant, mitigate impacts on the directly affected communities, and must grant an Operating License prior to its entering operation.

F. Benefits and risks

1. Benefits

- 4.38 The Program's most important benefit would be the improvement of living conditions for approximately 360,000 residents of the Baixada region, who are currently exposed to a high incidence of vector borne diseases and deficiencies in sanitation and other urban services. Significant increases in the coverage of water and sewerage services, improvement in urban services such as garbage collection and disposal, increased access to health care services and other benefits to the population will be derived from the Program's infrastructure and social investments. Altogether, they represent a contribution to the building of social capital in these communities, and significantly improve the quality of life of the residents. Results of the Program will be measured in the improvement of health indicators and through community satisfaction surveys.
- 4.39 The Program consolidates a new model in terms of integrated urban/social planning with characteristics such as: (i) transparent selection criteria to better target beneficiary communities; (ii) design of local integrated urban development plans prepared and implemented in consultation with the community; (iii) definition and financing of a minimum package of urban and social services in each community; (iv) support for improvements in municipal services, including a new organization of local health services, a more reliable garbage collection system, and more

sustainable child care services; (v) introduction of a specific urban management model, through the creation of regional administrations; and (vi) systematic monitoring and evaluation procedures. This methodology constitutes a replicable model for municipalities in the region and elsewhere to address problems of urban poverty in an organized, sustainable and participatory manner.

2. Risks

- 4.40 Technical and financial capacity of the municipalities involved in the Program represents a considerable risk, which can affect the maintenance of part of the infrastructure and operation of urban and social services financed by the Program. To minimize these risks, the municipalities will be required to sign formal agreements providing for firm financial commitments in regards to the continued financing of these services, which will be monitored by the State and the Bank. The continued operation of the preventive health care activities implemented by the Program will be financed by federal funds earmarked for this purpose. An existing program to improve municipal cadastres and the technical assistance in the organization of key services provided by the Program will contribute to strengthening municipal finances and technical capacity.
- 4.41 Although the state government's financial situation is undergoing considerable changes and its prospects for improvement are reasonably optimistic, there is always a chance of a reversal due to unexpected factors. Although counterpart funds for this Program are assured, a financial crisis could pose a risk to the project's implementation schedule.
- 4.42 The program involves a relatively large number of complex interventions, both in engineering and in social terms. Program implementation involves issuing and supervising a large number of contracts, and the management of about 12 integrated neighborhood upgrading projects. To help the State perform these activities, the Program includes the contracting of a management support firm that will organize the information system, and provide financial, procurement and technical support to the Executing Unit.

LOGICAL FRAMEWORK - "BAIXADA VIVA" PROGRAM 1/

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	RISKS/ASSUMPTIONS
OBJECTIVE			
Improve the quality of life of the population in target neighborhoods of the "Baixada Fluminense" region, in particular their sanitation and health conditions.	High level of the population's satisfaction in terms of the physical, social and environmental changes due to the Program. Reduction in the incidence of water-borne diseases (from high to low) and the infant mortality rate (from 50/1,000 to 25/1,000). Increase in housing values.	Opinion survey, PACS/PSF health information system, Monitoring and Evaluation System (MES).	Sustained economic development. Acceptance of the Program's conceptualization by the target communities.
PROPOSAL			
Create a lasting impact in urban landscape and in the quality of social services, as a result of: (i) the introduction of a decentralized urban management model with community involvement, which will improve garbage collection, urban maintenance, and other municipal services; (ii) improvements in sanitary conditions and health care services; and (iii) introduction of an integrated urban development approach for the expansion of physical and social infrastructure which can be replicated throughout the region.	100% of families in the target neighborhoods served by water and sewerage systems (currently 86% and 30%). 100% of families served by the solid waste collection system (currently 30%). 100% of families served by preventive health services. Decentralized "Administrative Regions" installed in each neighborhood and Neighborhood Committees functioning with a high level of community participation.	Management reports, Monitoring and Evaluation System (MES), Neighborhood Committee minutes	Adequate execution of the complementary PDBG and Reconstruction Rio Project works within the expected timeframe. Political willingness of the municipalities to formulate and assimilate the new management structures. Financial capacity of the municipalities maintained and/or improved.
COMPONENTS			
1. Neighborhood Upgrading: Implement integrated projects with the following components: 1. Sanitation (water, sewerage, drainage) 2. Street paving and lighting 3. Solid waste collection 4. Health services(PSF, PACS) 5. Child care centers 6. Recreation areas and landscaping 7. Sanitation & environmental education and community development 8. Small business promotion	1. 12 integrated urbanization plans implemented, with 100% of families with connections to water (receiving adequate supply) and sewerage (including intra-household connection), and 50% of sewerage treated. 2. No raw sewerage nor garbage dumps in public areas, and no flood prone areas. 3. High public opinion of solid waste collection services, the environmental conditions, roads, and recreation areas. 4. 100% of families attended by PACS and 50% by PSF workers; decrease in the number of hospital stays, increase in pre-natal care, reduction in incidence of endemic illnesses, all children with full vaccinations. 5. Improved integral development of children in child care centers; high level of parental satisfaction with the centers; adequate functioning of Community-Creche Councils.	Management reports, PACS/PSF health information system, SEM, opinion surveys	Financial stability of the State guarantees timely availability of counterpart resources of the Program. Effective participation of the municipalities in the implementation of the Program activities. Adequate community mobilization and effective participation in the implementation of the Program's activities and in the preservation of the investments.

1/ The definition of the indicators, goals and baseline information will be finalized during the initial design and implementation of the Monitoring and Evaluation System (MES).

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	RISKS/ASSUMPTIONS
<p>6. 100% of families visited by environmental education services and adhering to solid waste collection system; high level of involvement of schools in activities.</p> <p>7. No. of small businesses assisted.</p> <p>2. Complementary infrastructure and services:</p> <p>1. Sanitation infrastructure (pumping stations, water storage, and water mains; sewage lines and sewage treatment stations; and macro-drainage works)</p> <p>2. Community Service Centers (CCDCs)</p> <p>3. Reform of intermediate-level health centers.</p> <p>3. Institutional development</p> <p>A - Municipal strengthening in:</p> <p>1. Organization of decentralized units responsible for operating and maintaining municipal services in the neighborhoods;</p> <p>2. Financial and physical management of the municipalities.</p> <p>3. Training of public servants.</p> <p>B - Monitoring and Evaluation System</p>	<p>1. Complementary infrastructure projects implemented.</p> <p>2. Increase in the availability of emergency and medium complexity health services; well maintained health units.</p> <p>3. CCDCs functioning adequately, serving 4,000 persons a month, with high level of satisfaction.</p> <p>1. 12 administrative regions implemented and functioning satisfactorily.</p> <p>2. Improved quality and functioning of municipal urban and health services.</p> <p>3. 4 financial management system implemented and functioning.</p> <p>4. 80 municipal workers trained.</p> <p>5. Surveys and monitoring reports prepared in an adequate and timely fashion.</p>	<p>Management reports</p> <p>Management reports, SEM</p>	<p>Willingness of the municipalities to adopt organization reform measures identified in the institutional strengthening activities.</p>

EXECUTION BENCHMARKS

COMPONENTS	ACTIVITIES	TOTAL	Year 1	Year 2	Year 3	Year 4
1. Neighborhood Improvement	Implement integrated urbanization projects	12	4	4	2	2
1.1 Water systems	Install water distribution networks	70 km	25	25	10	10
	Rehabilitate water distribution networks	10 km	2	4	2	2
	Install household connections	10,000	2,000	3,000	3,000	2,000
1.2 Sewerage systems	Install sewage collection networks	380 km	120	120	100	40
	Rehabilitate sewage collection networks	15 km	5	5	3	2
	Build sewage pumping stations	12	4	4	2	2
	Install household/intrahousehold connections	30,000	10,000	10,000	6,000	4,000
1.3 Drainage	Install microdrainage networks	280 km	100	80	70	30
	Rehabilitate microdrainage networks	70 km	25	25	10	10
	Build containment works					
1.4 Street paving	Pave, illuminate and landscape streets	260 km	70	80	80	30
1.5 Solid waste collection	Install solid waste collection systems	12	4	4	2	2
1.6 Health care services	Install, reform and provide equipment to health posts	24	8	8	4	4
	Attend families	90,000	30,000	60,000	75,000	90,000
1.7 Community Health Agents Program (PACS)	Select and train community health workers	2,500	750	750	500	500
Family Health Program (PSF)	Selection and train family health teams	250	75	75	50	50
1.8 Child care centers	Install child care centers (2 per neighborhood)	24	8	8	4	4
	Train educators and other workers	500	164	164	86	86
	Provide services for children from 2 to 6 years of age	2,400	800	1,600	2,000	2,400
1.9 Small business promotion	Identify and train small business entrepreneurs	700	150	250	150	150
1.10 Sanitation & environmental education and community development	Visit families (twice)	90,000	30,000	30,000	15,000	15,000
	Training workshops for community health workers	24	8	8	4	4
	Training workshops for solid waste condominium leaders and community street cleaners	24	8	8	4	4
	Training workshops for other environmental educators	24	8	8	4	4
	Training workshops for community leaders	24	8	8	4	4
2. Complementary infrastructure and services						
2.1 Sewage main lines	Install sewage main lines	50 km	20	15	10	5
2.2 Sewage treatment stations	Build sewage treatment stations	3	1	1	1	
2.3 Sewage secondary collection lines	Install sewage secondary collection lines	12 km	8	2	2	

COMPONENTS	ACTIVITIES	TOTAL	Year 1	Year 2	Year 3	Year 4
2.4 Water storage stations	Build water storage stations	4	2	1	1	
2.5 Macro-drainage works	Install macro-drainage works	40 km	15	10	10	5
2.6 Community service centers - CCDCs	Reform CCDCs	3	2	1		
	Build and equip new CCDCs	5	3	1	1	
2.7 Intermediate-level health units	Reform and equip intermediate-level health units	4	2	2		
3. Institutional Development						
3.1 Municipal Strengthening	Administrative regions implemented	12	4	4	2	2
	Financial management systems implemented	4	4			
	Municipal workers trained (8 courses)	80	40	40		
3.2 Monitoring and Evaluation System	Surveys conducted and monitoring reports prepared	8		2	2	4
	Health indicators survey prepared	2		1	1	

SELECTED NEIGHBORHOODS AND PROJECT COSTS

MUNICI- PALITY	NEIGHBOR- HOOD	POPULA- TION	COSTS (R\$)								COST P/ FAMILY	ACCUMULATED COST
			WATER	SEWAGE	DRAINAGE	PAVING	PARKS & Pub. Spaces	SUB-TOTAL URBANIZATION	SUB-TOTAL SOCIAL SERV.	TOTAL P/ NEIGHBORHOOD		
N.Iguaçu	Chatuba	35,000	1,073,078	4,859,960	4,879,550	4,016,584	1,600,000	18,429,172	1,681,339	18,110,511	2,003	18,110,511
S.J.Meriti	Jd. Metrópole	29,600	1,803,675	5,711,753	9,953,557	6,526,033	1,885,000	25,880,018	1,666,339	27,546,357	3,602	45,656,868
B. Roxo	Lote XV	34,174	0	5,520,525	11,369,248	6,048,368	1,448,000	24,384,141	1,816,339	26,200,480	2,967	71,857,348
D. Caxias	Olevo Blac	30,578	0	4,967,479	10,731,978	6,229,302	1,905,000	22,833,759	1,998,929	24,833,688	3,143	96,691,036
S.J.Meriti	C.da Rocha	44,039	0	0	5,540,520	2,201,950	1,465,600	9,208,070	2,377,429	11,585,499	1,018	108,276,535
S.J.Meriti	Eden 2	23,547	1,872,320	5,099,777	3,198,635	1,177,350	1,268,799	12,616,880	2,227,429	14,844,309	2,440	123,120,844
D. Caxias	Pq. Flumin.	29,184	0	6,568,868	4,155,390	1,459,200	1,349,200	13,532,658	2,119,929	15,652,587	2,076	138,773,431
Caxias	Cent/J. Leal	35,345	1,755,446	4,490,027	2,365,802	1,024,800	1,198,811	10,834,886	1,594,929	12,429,815	1,361	151,203,246
Caxias	Gram/Sarapui	37,729	2,591,928	1,389,422	4,183,093	1,812,000	1,351,528	11,327,970	2,119,929	13,447,899	1,379	164,651,145
S.J.Meriti	VTeles/J.Meriti	29,832	621,865	0	3,361,711	1,456,200	1,282,503	6,722,278	2,227,429	8,949,707	1,161	173,600,852
N.Iguaçu	Mesq/P.Juscel	29,159	1,483,066	5,328,737	3,657,667	1,457,950	1,307,374	13,234,793	1,777,429	15,012,222	1,992	188,613,075
N.Iguaçu	Carma/NAmer	31,967	3,297,817	9,191,332	6,087,646	1,598,350	1,511,578	21,686,723	2,227,429	23,914,152	2,895	212,527,227
B. Roxo	Heliop/Itaipu	22,849	574,083	6,387,141	4,210,795	1,142,450	1,353,856	13,668,325	2,227,429	15,895,754	2,692	228,422,980
B. Roxo	Xavante	15,012	1,104,968	4,405,856	2,927,703	750,600	1,246,031	10,435,158	2,227,429	12,662,587	3,264	241,085,567

BAIXADA VIVA PROGRAM PROCUREMENT TABLE - Four Neighborhood Projects								
ITEMS	FINANCING		TYPE	PRE-QUALIFICATION	PUBLICATION	PROCUREMENT LOT		
	BID	LOCAL				Nº	WORKS OR SERVICES	AMOUNT (R\$ 1000)(*)
SERVICES								
1. Management Support		100 %	I.C.B.	Yes	12.16.96	-	Baixada Viva Program	4,500
2. Supervision of Works		100 %	I.C.B.	Yes	12.16.96	-	4 Neighborhoods	2,700
3. Environmental Education		100 %	I.C.B.		01.16.97	-	4 Neighborhoods	2,900
WORKS								
URBAN INFRASTRUCTURE								
1. Chatuba	60 %	40 %	I.C.B.	No	05.31.97	1	Urbanization and Sanitation	21,340
						2	Sewage Pump Station & Water Storage	2,200
2. Lote XV	60 %	40 %	I.C.B.	No	05.31.97	1	Sewage Treatment Plant	2,530
						2	Urbanization & Sanitation Works	28,545
3. Jardim Metrópole	60 %	40 %	I.C.B.	No	05.31.97	1	Urbanization & Sanitation Works	31,460
						2	Sewage Pump Station & Storage Tank	260
4. Olavo Bilac	60 %	40 %	I.C.B.	No	05.31.97	1	Urbanization & Sanitation Works	24,750
						2	Sewage Pumping Station	1,705
SOCIAL INFRASTRUCTURE WORKS								
1. Chatuba	60 %	40 %	I.C.B.	No	n.a.	-	Health posts, child care centers, etc.	1,425
2. Lote XV	60 %	40 %	I.C.B.	No	n.a.	-	Health posts, child care centers, etc.	1,527
3. Jardim Metrópole	60 %	40 %	I.C.B.	No	n.a.	-	Health posts, child care centers, etc.	1,800
4. Olavo Bilac	60 %	40 %	I.C.B.	No	n.a.	-	Health posts, child care centers, etc.	1,485
EQUIPMENT								
1. Chatuba	60 %	40 %	L.P.	No	n.a.	-	Health posts, child care centers, etc.	146
2. Lote XV	60 %	40 %	L.P.	No	n.a.	-	Health posts, child care centers, etc.	320
3. Jardim Metrópole	60 %	40 %	L.P.	No	n.a.	-	Health posts, child care centers, etc.	260
4. Olavo Bilac	60 %	40 %	L.P.	No	n.a.	-	Health posts, child care centers, etc.	280

I.C.B.: International Competitive Bidding

L.P.: Local Procurement

(*) Values Still Subject to Adjustments

State of Rio de Janeiro: Income and Expenditures Projection Model 1996-2010

Constant Values December 1996														In US\$ Millions	
CATEGORIES	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1 - Total Revenues	8,560	19,595	10,049	9,925	10,494	11,254	12,014	12,826	13,695	14,625	15,620	16,684	17,822	19,040	20,343
1.1 - Current Revenues	7,055	7,570	9,352	9,761	10,445	11,205	11,965	12,777	13,646	14,576	15,571	16,635	17,773	18,991	20,294
1.1.1 - Net Own Revenues	6,311	6,760	7,453	8,216	8,800	9,425	10,094	10,810	11,578	12,400	13,280	14,223	15,233	16,315	17,473
1.1.2 - Constitutional Transfers	744	774	820	861	904	949	997	1,047	1,099	1,154	1,212	1,272	1,336	1,403	1,473
1.1.3 - Education Fund	0	0	478	527	565	605	648	694	743	796	853	913	978	1,047	1,122
1.1.4 - Subsidies Reduction	0	36	66	156	176	226	226	226	226	226	226	226	226	226	226
1.1.5 - Previous Year Balance	0	(0)	535	0	(0)	(0)	0	(0)	(0)	0	0	0	(0)	0	0
1.2 - Capital Revenues	1,505	12,025	697	164	49	49	49	49	49	49	49	49	49	49	49
1.2.1 - Credit Operations (incl. renegotiation)	491	11,010	618	85	0	0	0	0	0	0	0	0	0	0	0
1.2.2 - Bonds (Roll-Over)	718	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.2.3 - Privatization	296	1,015	79	79	49	49	49	49	49	49	49	49	49	49	49
1.3 - Short-Term debt	365	0	245	211	0	0	0	0	0	0	0	0	0	0	0
2 - Constitutional Transfers	1,594	1,690	2,702	2,978	3,190	3,416	3,659	3,919	4,197	4,495	4,814	5,156	5,522	5,914	6,334
3 - Net Recurrent Revenue (1.1 - 2)	5,461	5,880	6,651	6,783	7,255	7,789	8,306	8,858	9,449	10,081	10,757	11,479	12,251	13,077	13,960
4 - Total Expenditures	6,859	16,866	6,774	6,287	6,381	6,952	7,475	8,051	8,668	9,327	10,034	10,787	11,592	12,455	13,379
4.1 - Recurrent Expenditures	5,422	4,990	5,042	5,086	5,147	5,542	5,902	6,287	6,697	7,134	7,600	8,098	8,628	9,194	9,798
4.1.1 - Personnel	4,635	4,172	4,174	4,175	4,191	4,538	4,848	5,179	5,534	5,913	6,318	6,752	7,215	7,711	8,240
4.1.2 - Other Recurrent	787	818	868	911	957	1,004	1,055	1,107	1,163	1,221	1,282	1,346	1,413	1,484	1,558
4.2 - Capital Expenditures	1,437	11,876	1,732	1,201	1,233	1,410	1,572	1,764	1,971	2,194	2,434	2,689	2,964	3,261	3,581
4.2.1 - Capital Investments	367	771	882	170	4	295	559	744	943	1,157	1,388	1,633	1,896	2,180	2,485
4.2.2 - Debt Repayment (Res. 69/95) after 97	273	500	798	848	933	933	933	933	933	933	933	933	933	933	933
4.2.3 - Spread on bonds and other debt issue	140	5,516	0	0	0	0	0	0	0	0	0	0	0	0	0
4.2.4 - Amortization - contracts not included R	657	5,090	52	183	296	182	80	87	95	103	113	123	135	148	163
5 - PRIMARY BALANCE (3 - 4 + 1.2.2 + 1.2.3)	471	1,038	818	870	924	886	881	857	831	803	772	741	708	671	630
6 - Interest & Debt Service	471	503	818	870	924	886	881	857	831	803	772	741	708	671	630
7 - OPERATIONAL RESULTS (5 - 6)	(0)	535	0	(0)	(0)	0	(0)	(0)	0	0	0	(0)	0	0	0
8 - INDICATORS															
Chg. net revenues	8%	8%	13%	2%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Chg. net own revenues	7%	7%	10%	10%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Personnel Exp./Net Own Revenues	85%	71%	63%	62%	58%	58%	58%	58%	59%	59%	59%	59%	59%	59%	59%
Interest & Debt Service/Total Revenues	6%	3%	8%	9%	9%	8%	7%	7%	6%	5%	5%	4%	4%	4%	3%
Capital Expenditures/ Total Revenues	17%	61%	17%	12%	12%	13%	13%	14%	14%	15%	16%	16%	17%	17%	18%
Primary Balance/Total revenues	6%	5%	8%	9%	9%	8%	7%	7%	6%	5%	5%	4%	4%	4%	3%
Primary Balance / Net Recurrent Revenues	9%	18%	12%	13%	13%	11%	11%	10%	9%	8%	7%	6%	6%	5%	5%
Total Debt/Net Recurrent Revenues	1.46	2.24	2.13	2.10	1.94	1.77	1.62	1.48	1.35	1.23	1.11	1.01	0.91	0.82	0.73
9 - OUTSTANDING DEBT - 31 /12/96															
Previous Internal Debt	1,971	1,916	1,858	1,792	1,721	1,645	1,562	1,436	1,380	1,246	1,170	1,120	1,064	1,000	422
New External Operations (IDB/IBRD) *	107	585	1,065	1,116	1,077	1,035	992	946	898	848	795	739	681	619	555
Renegotiated Internal Debt	5,516	5,516	5,446	5,372	5,294	5,211	5,123	5,029	4,930	4,825	4,714	4,596	4,471	4,339	4,199
Long Term Interna - Renegotiated (Vote 162)	250	4,948	4,885	4,819	4,749	4,674	4,595	4,511	4,423	4,329	4,229	4,123	4,011	3,892	3,766
New Long Term Internal - (CEF/BNDES)	134	134	391	505	497	487	475	462	448	432	414	394	371	346	318
Balance on Eligible Debt Ceiling (Res.69/95)	0	101	555	694	784	784	784	784	784	784	784	784	784	784	784
TOTAL	7,978	13,196	14,189	14,277	14,089	13,789	13,464	13,122	12,755	12,363	11,942	11,559	11,145	10,698	10,214

OBS.: Indexed by the IGP-DI/FGV index

PROPOSED RESOLUTION

BRAZIL. LOAN /OC-BR. TO THE STATE OF RIO DE JANEIRO OF THE
 FEDERATIVE REPUBLIC OF BRAZIL
 (Rio de Janeiro State Neighborhood Upgrading
 Program - "Baixada Viva")

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the State of Rio de Janeiro of the Federative Republic of Brazil, as Borrower, for the purpose of granting a financing to cooperate in the execution of a program for the upgrading of target neighborhoods in the "Baixada Fluminense" region. Such financing will be for the amount of up to one hundred and eighty million dollars of the United States of America (US\$180,000,000) from the Single Currency Facility of the Ordinary Capital resources of the Bank and it will be subject to the "Terms and Financial Conditions" and the "Special Contractual Conditions" of the Executive Summary of the Loan Proposal.