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BRAZIL - Sites & Services and Low-Cost  
Housing Project (Loan 1654-BR)

Bangladesh: Inland Water Transport



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Report No. 7581

PROJECT PERFORMANCE AUDIT REPORT

BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
(LOAN 1654-BR)

DECEMBER 30, 1988

Operations Evaluation Department

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## CURRENCY EQUIVALENTS

Appraisal Year (July 1978)	US\$1.00 =	18.0	Cruzeiros
December 1978	=	20.9	"
December 1979	=	42.5	"
December 1980	=	65.5	"
December 1981	=	127.8	"
December 1982	=	252.8	"
December 1983	=	984.0	"
December 1984	=	3,184.0	"
December 1985	=	10,490.0	"
December 1986	=	14,895.0	"

## GLOSSARY OF ABBREVIATIONS

ABC	Associacao Brasileira de COHABs (Association of Brazilian COHABs)
BNH	Banco Nacional da Habitacao (National Housing Bank)
CEF	Caixa Economica Federal (Federal Savings Bank)
COHAB	Companhia da Habitacao (Low-Income Housing Company)
COHAB-PE	Companhia da Habitacao de Pernambuco (Low-Income Housing Company of the State of Pernambuco)
COHAB-SP	Companhia da Habitacao de Sao Paulo (Low-Income Housing Company of Metropolitan Sao Paulo)
COS	Carteira de Operacoes de Natureza Social (Social Operations Directorate of BNH)
FGTS	Fundo da Garantia do Tempo de Servico (Employment Guarantee Fund)
FICAM	Financiamento de Construcao, Ampliacao e Melhoria de Habitacao Individual de Interes Social (Financing for Construction, Completion, Expansion, and Improvement of Individual Low-Cost Housing)
FIDEM	Fundacao do Desenvolvimento da Area Metropolitana (Recife Metropolitan Region Planning Agency)
MUTIRAO	Program for Self-Help Construction
PLANHAB	Plano Nacional de Habitacao Popular (National Low-Income Housing Plan)
PROFILURB	Programa de Financiamento de Lotes Urbanizados (Urbanized Lots Financing Program)
PROMORAR	Programa da Eradicacao da Sub-Habitacao (Program for Eradication of Sub-Housing)
SFH	Sistema Financeiro da Habitacao (Housing Financing System)
UPC	Unidad Padrao de Capital (Standard Capital Unit)
URBIS	Habitacao e Urbanizacao da Bahia (Low-Income Housing Company of the State of Bahia)

## FISCAL YEAR

January 1 - December 31



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Office of Director-General  
Operations Evaluation

December 30, 1988

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: Project Performance Audit Report on Brazil -  
Sites and Services and Low-Cost Housing Project  
(Loan 1654-BR)

Attached, for information, is a copy of a report entitled "Project Performance Audit Report on Brazil - Sites and Services and Low-Cost Housing Project (Loan 1654-BR)" prepared by the Operations Evaluation Department.

A handwritten signature in black ink, appearing to be 'R. Appay', is written in a cursive style.

Attachment

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MAY 25 2023

PROJECT PERFORMANCE AUDIT REPORT

BRAZIL

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PROJECT PERFORMANCE AUDIT REPORT

## BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
(LOAN 1654-BR)PREFACE

1. This Project Performance Audit Report (PPAR) represents the results of a performance audit of the Brazil Sites and Services and Low-Cost Housing Project for which Loan 1654-BR of US\$93.0 million was approved in January 1979. Although the Bank had previously participated in the financing of water supply, sewerage and transport projects in the Brazil urban sector, this project was the Bank's first involvement in the low-cost housing subsector. The loan was made to the Banco Nacional da Habitacao (BNH). Three low-income housing companies involved in executing the project, the State Governments of Bahia, Pernambuco, and Sao Paulo, and the Municipality of Sao Paulo were also parties to the Loan Agreement. The Federal Government was the Guarantor. The Loan Agreement was signed on February 8, 1979 and became effective on July 9, 1979. Several amendments were subsequently made in the Loan Agreement. On August 5, 1981, because of the doubts that project targets could be met, changes were made in the mix of project components; on December 12, 1983, because of the rapid devaluation of the Cruzeiro, and the difficulty in disbursing the loan, further changes were made under a Special Action Program; these included (i) additional subprojects to be carried out in States other than those who originally signed the Loan Agreement and (ii) an increase in the Bank's participation in the cost of subprojects from 35 to 50%. A Special Account was established for the loan on August 29, 1983, and the closing date was extended by one year, to December 31, 1984. The account was closed in July 1985 with zero balance. Finally the Loan Agreement was amended in December 1987 to take into account the abolition of BNH in November 1986 and the merger of that agency's functions with those of Caixa Economica Federal (CEF).

2. The Project Performance Audit Report consists of a Project Performance Audit Memorandum (PPAM) prepared by the Operations Evaluation Department (OED) and a Project Completion Report (PCR) dated March 31, 1987 prepared by the staff of the former Urban Projects Division of the Latin America and the Caribbean Regional Office. The Audit involved reviews of the PCR, the Appraisal and President's Reports, Bank files, and the transcripts of the Executive Directors' meeting at which the Project was approved. An OED mission made field inspections and held discussions with CEF officials in Rio de Janeiro, Sao Paulo, Recife and Brasilia, low-income housing company officials in Sao Paulo, Recife and Salvador, who had knowledge of the facts.

3. The Audit found that the PCR accurately covers many important aspects of the Project experience, however it lacks an important input from the Borrower. The PPAM supplements the discussion of that experience and adds to the implementation history with aspects that were not covered or were not clear in the PCR. Otherwise the PPAM summarizes and attempts, as far as possible, to avoid repetition of the details provided in the PCR, and in addition provides comments on the major aspects of the Project.

4. The draft Audit Report was sent to the Government and CEF, as the successor to BNH, for comments. However, none were received.



PROJECT PERFORMANCE AUDIT REPORT

## BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
(LOAN 1654-BR)BASIC DATA SHEETKEY PROJECT DATA

<u>Item</u>	<u>Appraisal Expectation</u>	<u>Actual or Current Estimate</u>	<u>%</u>
Total Project Cost (US\$ million) <u>1/</u>	265.7	368.0	39
Loan Amount (US\$ million)	93.0	93.0	100
Date Physical Components Completed	12/31/83	12/31/84 <u>2/</u>	21 <u>3/</u>
Proportion Completed by that date (%)			
- dwelling units	100	164	
- loans	100	10	
Economic Rate of Return <u>4/</u>	17-23%	9% (URBIS)	

CUMULATIVE ESTIMATED AND ACTUAL DISBURSEMENTS

<u>FY</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Appraisal Est. (US\$ mil.)	0.9	12.0	39.6	68.1	87.8	93.0	-	-
Actual (US\$ mil.)	-	-	13.0	31.8	52.1	80.5	92.8	93.0
Actual as % of Appraisal (%)	-	-	32.8	46.7	59.3	86.6	99.8	100.0
Date of Final Disbursement:	-	-	-	-	-	-	-	7/8/85

1/ Excluding Technical Assistance, which was financed entirely by BNH.

2/ Except for 1,400 dwelling units in COHAB-SP (see PPAM, para. 28).

3/ From date of signing.

4/ No economic evaluation possible for project as a whole at appraisal. Sample subprojects from COHAB-SP, SOHAB-PE, and URBIS showed ERRs of 17%, 22% and 23% respectively.

PROJECT DATES

	<u>Original Plan</u>	<u>Revisions</u>	<u>Actual</u>
First Mention in Files	01/12/73	-	-
Negotiations	11/13-27/78	-	-
Board Approval	01/23/79	-	01/23/79
Signing (Loan Agreements Date)	02/08/79	-	02/08/79
Effectiveness	05/09/79	07/09/79	17/09/79
Closing Date	12/31/83	12/31/84	12/31/84

OTHER PROJECT DATA

Borrower: Banco Nacional da Habitacao  
 Executing Agencies: COHAB-SP, COHAB-PE, URBIS, and other State and Municipal Agencies

STAFF INPUTS

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>Total</u>
Pre-Appraisal	12.0	43.7	13.6	5.2	59.4	1.2	-	-	-	-	-	-	-	-	135.1
Appraisal	-	-	-	-	36.3	40.2	-	-	-	-	-	-	-	-	76.5
Negotiations	-	-	-	-	-	3.3	-	-	-	-	-	-	-	-	3.3
Supervision	-	-	-	-	-	10.0	25.7	15.3	16.5	10.1	6.9	5.5	6.2	6.7	102.9
Other	-	-	-	-	4.1	-	-	-	-	-	-	-	-	-	4.1
Total	12.0	43.7	13.6	5.2	99.8	54.7	25.7	15.3	16.5	10.1	6.9	5.5	6.2	6.7	321.9



MISSION DATA

	<u>Date</u> <u>(Mo./Yr.)</u>	<u>No. of</u> <u>Persons</u>	<u>Specializations</u> <u>Represented</u>				<u>Performance</u> <u>Rating</u>	<u>Trend</u>
Identification/ Preparation	03/78	5	-				-	-
Appraisal	05/78	8	ECN, ARC, FNA, EGR				-	-
Supervision I	05/79	4	X	X	X		1	1
II	09/79	3	X	X	X		1	1
III	04/80	3	X	X	X		2	1
IV	10/80	2	X	X			-	-
V	12/80	3	X	X	X		3	1
VI	06/81	2	X	X			3	1
VII	02/82	4	X	X	X	X	1	1
VIII	05/82	3	X	X		X	1	1
IX	10/82	2		X		X	1	1
X	04/83	2		X		X	1	1
XI	07/83	1				X	-	-
XII	01/84	1				X	-	-
XIII	06/84	1				X	-	-
XIV	10/84	1				X	-	-
XV	03/86	1				X	-	-
Completion	06/86	1				X	-	-

SUPERVISION RATING

	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>VI</u>	<u>VII</u>	<u>VIII</u>	<u>IX</u>	<u>X</u>	<u>XI to XV</u>
Disbursement	-	x	2	x	2	2	1	1	1	2	x
Estimated Cost	-	x	1	x	1	1	1	1	1	1	x
Antic. Completion	1	x	1	x	2	3	1	1	1	1	x
Compliance (Loan Cov.)	1	x	2	x	3	2	1	1	2	2	x
Project Finances	1	x	1	x	2	2	1	1	1	1	x
Management	1	x	2	x	2	1	2	2	2	1	x
Procurement	1	x	1	x	1	1	1	1	1	1	x
Reporting	1	x	2	x	3	3	3	3	3	2	x

x - Not available in Files.

PROJECT PERFORMANCE AUDIT REPORT

## BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
(LOAN 1654-BR)EVALUATION SUMMARY

1. This loan for the Sites and Services and Low-Cost Housing Project was the first Bank Group operation in the housing subsector. The loan was made to the National Housing Bank (BNH) which, until its demise in November 1986, had the dual responsibility of administering and providing the finance for the National Low-Income Housing Program. The responsibility for executing the program was given to the Low-Income Housing Companies (COHABs) and other State and Municipal agencies in the various States (PPAM, paras. 3 and 5).
2. The National Low-Income Housing Program consisted of subprograms and lines of credit for: land acquisition, construction of finished housing, acquisition and preparation of sites (lots) and services, improvement to dwellings through material construction loans, upgrading of slum dwellings, and self-help construction (PPAM, para. 8).
3. The Bank's interest in financing a sites and services project first started in January 1973, however, although BNH wished to maintain a dialogue with the Bank on sectorial experiences, BNH was reluctant to have Bank financing for the subsector. At that time, BNH had at its disposal all the funds it required for the Low-Income Housing Program, however, as the Audit showed, BNH also had reservations about working with the Bank in the housing subsector. Eventually, with the cooperation of the Ministry of Planning, the Bank was able to prepare a lending operation with BNH; the project was appraised in May/June 1978 and a loan of US\$93 million was approved in January 1979 (PPAM, paras. 9-12).
4. The main objectives of the Bank-financed project were: (i) to promote the various subprograms for housing the urban poor -- defined as families with monthly incomes not exceeding three times the regional minimal wage, and (ii) to contribute, through a technical assistance program, to the institutional development of the COHABs by strengthening their overall management and delivery capacity. In order to maximize Bank impact, the bulk of the project, as initially conceived, was limited to three COHABs (Sao Paulo - COHAB-SP, Pernambuco - COHAB-PE, and Bahia - URBIS), with the expectation that the experience derived from the project would be applied to other BNH programs. The project was prepared from the 1979-81 construction programs of the three COHABs, and was estimated to cost US\$265.7 million, of which US\$61.5 million was foreign exchange (almost all indirect). In physical terms, the objectives were: (i) to construct 51,300 shelter solutions (19,500 dwelling units and 31,800 lots with complementary infrastructure and community facilities) and 23,900 construction material loans; (ii) to undertake an experimen-



tal squatter upgrading scheme in Recife for 7,200 families; and (iii) to support the construction of selected sites and services (up to 10,000 lots) in States, outside the three COHABs. The Bank was to finance up to 35% of expenditures for eligible subprojects; BNH was to finance the technical assistance program (PPAM, para. 13).

5. From the commencement, the implementation of the project was plagued with difficulties. BNH was an unenthusiastic borrower, whose negative attitude to the project was exacerbated by the widespread reorganization of BNH, and the introduction of new social programs, following the change of Government in 1979. These changes also had a negative impact on the project. In November 1980, previous doubts that the COHABs and BNH would be able to meet the over-optimistic targets of the project were confirmed. At the same time, because of the high demand on its resources and the deteriorating economic conditions in Brazil, BNH began to have cash flow problems. At this point, however, the Bank loan began to assume greater importance. BNH submitted proposals for changes in the project; these included, (i) substitution of finished houses for urbanized lots; (ii) reduction of the construction material loan program; (iii) increase in the amount for infrastructure; and (iv) the substitution of the Recife slum upgrading pilot project, by two other slum upgrading projects, one in Recife and the other in Salvador. The main switch of funds was away from Sao Paulo and Pernambuco, to Bahia and to COHABs other than COHAB-SP, COHAB-PE, and URBIS. The Loan Agreement was amended on August 5, 1981, and subsequently it was concluded that the changes had had a salutary effect on project execution (PPAM, paras. 14-24).

6. In October 1982, the effects of the rapid devaluation of the Cruzeiro in relation to the US dollar began to show up in the disbursement of the loan, and the short fall in the US dollar commitments made it likely that an extension of the closing date of the loan would be necessary. BNH was requested to submit additional subprojects, within the loan criteria, which might be considered for Bank financing. On August 29, 1983, a Special Account was opened with the Central Bank of Brazil. On December 12, 1983, in response to the request from BNH, and to assist Brazil, the Bank agreed, under a Special Action Program, that the undisbursed balance would be used to finance selected subprojects, consisting of works already initiated, but stopped because of Brazil's financial problems, and which could be completed by December 31, 1984. The Bank also agreed to increase the financing from 35% to 50% of subproject costs. Finally, the closing date of the loan was extended one year to December 31, 1984 (PPAM, paras. 25-26).

7. The loan was fully disbursed on July 8, 1985. The two major revisions to the project had resulted in 45% of the cost of the project being invested in areas outside the COHAB-SP, COHAB-PE, and URBIS, as compared with 8% estimated at appraisal time; with the changes the original project loan had become a sector program loan. The decision to move out of subprojects for urbanized lots in Sao Paulo, and to reduce the subprojects for construction material loans, together with the effect of the devaluation of the Cruzeiro, resulted in the Bank participating in the financing of a larger number of dwelling units than had been estimated at appraisal (PPAM, paras. 27-28).



8. Loan disbursement lagged significantly throughout the implementation period, and commitment fees on the loan totalled US\$2.6 million. Initial disbursement delays were caused by a two-month delay in effectiveness, confusion of responsibility, and the need to make a minor modification to the Loan Agreement. Later, delays were caused by the inability to meet over-optimistic targets, and by the devaluation of the Cruzeiro (PPAM, para. 29).

9. The final cost of the project, represented by the total disbursements made by BNH on subcontracts in which the Bank participated, was UPC 46.0 million. <sup>1/</sup> This was equivalent to about US\$368 million at the rate of exchange as of December 31, 1984; and compared with UPC 18.0 million (US\$265.7 million) estimated at appraisal. Random tests of 20,000 dwelling units in which Bank financing was involved, showed that about 85% of the units had been constructed at costs affordable to families with monthly incomes not exceeding three times the regional minimal wage (PPAM, para. 30).

10. The technical assistance program, because of resource constraints and changing priorities, was not fully implemented. Based on a visit to COHAB-PE and URBIS, the Audit concludes that any benefits from the program are unlikely to have been sustained (PPAM, paras. 31-32).

11. BNH showed limited commitment to the Bank-financed project. This attitude was later exacerbated by the strain on BNH staff caused by the management, organization, and program changes made in 1979 by the new Government. However, faced with the need to revise the project, BNH brought forward solutions which eventually enabled the disbursement of the loan to be completed. BNH was unable to fulfill other important aspects of the project (PPAM, paras. 33-34).

12. The extension of the project, to include subprojects from COHABs in twelve additional States, weakened the control on the project; the evaluation capability and performance of the added COHABs had not been verified. Given the conditions under which they were operating, the performance of COHAB-SP, COHAB-PE, and URBIS had generally been good. Although project reporting had been poor, COHAB staff had cooperated well and, in general, had appreciated Bank staff involvement (PPAM, para. 35).

13. All three COHABs experienced delays in their construction programs, because of lack of coordination, and the failure by the responsible agencies to promptly execute the construction of infrastructure and community services. The lack of continuity in management because of political change, has been, and continues to be a serious problem in most COHABs in Brazil. COHAB-PE and URBIS, in particular, have suffered from a lack of managerial continuity, and consequently from considerable political interference. The internal organiza-

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<sup>1/</sup> Monetary correction. From July 1964 major banking liabilities and assets were subject to monetary correction, using a Ministry of Finance index. Within the BNH-SFH system, the indexation led to the adoption of a new accounting unit, the standard capital unit (UPC), which was revalued every quarter using the index. Major BNH liabilities and assets (including the loan portfolio) were denominated in UPC.



tion in these agencies has obviously not accompanied their rapid physical growth. They have managerial, organizational, staffing and serious financial problems, and are in need of technical assistance and staff training (PPAM, paras. 36-38).

14. At appraisal time, and in the initial stages of the project, BNH's capacity to finance the housing subsector was very strong. However, the deterioration in the overall economic situation in the country and the increased demand on its resources, weakened BNH's cash flow, and in late 1980, BNH was obliged to cut back its lending program. In 1983, following a "rent strike" by COHAB borrowers, which forced the COHABs to suspend their debt service payments, BNH was obliged to reschedule COHAB debt. With the shortage of funds caused by the economic crisis, BNH's assistance to the housing subsector showed annual decline from 1982 until the agency's demise in 1986 (PPAM, paras. 39-41).

15. Although the three COHABs experienced unprecedented growth, their financial performance has generally been unsatisfactory, and the State Governments have been obliged to provide them with financial support to cover their annual deficits and to enable them to meet their obligations. COHAB-SP, due to its better initial capitalization, has shown a stronger financial position than COHAB-PE and URBIS. More recently in 1987, COHAB-SP has shown considerable improvement, both in its performance and in its financial position; however, COHAB-PE and URBIS have serious financial problems and COHAB-PE must be considered insolvent. All three COHABs have serious collection problems, which first became acute in 1983 and 1984, when, following a "rent strike" by borrowers, the COHABs were required to reschedule their debts; in the process large amounts of debt have had to be declared irrecoverable (PPAM, paras. 42-43).

16. The project, for which Bank staff time was heavy (8 man-years), was difficult to implement. The appraisal forecasts for the project had been over-estimated. The Bank was obliged to show considerable flexibility, both in adjusting the project to the needs of the subsector and to the financial circumstances existing in Brazil. Bank supervision was not fully effective (PPAM, para. 44).

17. The loan contributed to the overall objective of the Bank's lending strategy to Brazil, which was to provide part of a very large volume of capital inflows needed. The loan also enabled the Bank to make a small financial contribution towards housing the urban poor. However, as a project, it was too ambitious, and Bank staff resources were over-extended. The project failed to fully achieve the objectives set at appraisal, and the Bank was never able to make the impact on the subsector as expected (PPAM, paras. 45-56).

18. The sustainability of the benefits from the project, which mainly accrued to the householders of the dwellings, will depend in the ability of the householders to satisfactorily maintain their dwellings, or in the case of serviced lots, complete their structures, and accept the community living as provided. Any benefits from the uncompleted technical assistance component of the project are unlikely to have been sustained (PPAM, para. 46).

19. The lesson to be learned from this project is that when the Bank enters into an operation with an unwilling borrower, in a sector which is highly susceptible to political change, and with little leverage, the chances for success are very limited (PPAM, para. 48).



PROJECT PERFORMANCE AUDIT MEMORANDUM

## BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
(1654-BR)I. BACKGROUND

1. Since 1950 the growth of Brazil's urban areas has been rapid. Between 1950 and 1980 the national population doubled from 52 million to 119 million, however over the same period the urban population quadrupled from 19 million to 80 million. The current rate of growth of population is about 2.3% per year and the population is expected to exceed 150 million by 1990. Rural migration has been high, and the urban areas have absorbed, and continue to absorb large numbers from the interior. Most of the urban growth has been in the central west, and southern metropolitan regions and cities (Sao Paulo, Rio de Janeiro, Belo Horizonte and Brasilia) where the possibilities for employment are greater.

2. Poverty is prevalent in most cities, and owing to inadequate access to shelter, and proper water and sanitation facilities, the percentage of families in relative poverty is almost 80% in some cities. Large populations are living in squalid housing conditions. In the metropolitan region of Sao Paulo, it is estimated that about six million people are living in substandard housing; there are presently 1,600 "favelas" or squatter settlements in the region involving an estimated one million people, and these numbers are increasing at the rate of 6,000 per month. Ten percent of the present 4.8 million population of Salvador, Bahia, are living in similar settlements; in that city during the first five months of 1988 there have been no less than 83 illegal invasions of private and public land by sizeable population groups looking to establish shelter. The Project under review supported a subproject for the upgrading of a large slum area in Salvador where about 100,000 people were living over the water in precarious structures on stilts. The project was successfully completed in 1984, however, since that time a further 25,000 people have moved in to establish a slum over the adjacent waters. The current economic difficulties in Brazil are also aggravating the housing situation and in some cities, because of the inability to afford housing, there is movement from established dwellings into the "favelas." The housing deficit in Brazil is presently estimated at about 12 million units alone for families with up to five minimum salaries (see para. 6); this unsatisfactory situation presents a potentially explosive and politically sensitive problem for the Government.

3. The rapid growth of urban population created a huge demand for housing and urban services for which the public sector had the major responsibility. Official housing policy was initiated in 1964 with the creation of the Housing Finance System (SFH) and the National Housing Bank (BNH), the latter being the key institution in the sector until 1986, when it was dissolved, its functions being taken over by the Federal Savings Bank (Caixa Economica Federal - CEF). The basic principle of official housing policy was



to ensure the financial viability of the housing subsector while promoting home ownership, especially among the low-income population. The main tasks of BNH were twofold: (i) to administer the SFH by guiding, regulating and controlling the local housing executing agencies and the Brazilian savings and loan system, and (ii) provide substantial finance for the housing and the related urban infrastructure subsectors.

4. Under its statutes, BNH was prevented from executing and managing the operations which it financed, BNH therefore encouraged the creation of viable intermediaries at the local level, which would execute and manage housing and urban development operations. In the field of low-income housing, the intermediaries were the low-income housing companies (COHABS), mixed-economy companies owned principally by the States and Municipalities in which they operated.

5. To ensure a steady flow of funds for BNH's operations, the Government decided in 1967 that BHN would manage the Employment Guarantee Fund (FGTS). This Fund is financed by an 8% tax on all wages and salaries covered by the labor legislation, and is designed to enable workers to build up a savings reserve which, through indexation, will retain its real value in addition to earning interest. The funds are available to a worker in case of unemployment, retirement, or in an emergency, and can also be used as a down payment for BNH-financed housing. At the time of appraisal of the Project, BNH was directing the use of funds in excess of US\$26 billion; during 1977 BNH financed investments totalling US\$2.4 billion, representing 1.4% of GDP. Seventy percent of BNH's investments were made in the overall housing subsector, with the balance being made in sanitation and urban development; about 20% of total investment was for low-income housing. Under the Low-Income Housing Program, at the time of appraisal, only shelter units costing up to Crz\$10,500 (US\$7,375) were eligible for BNH financing.

6. Brazilian agencies operating in the urban sector define poverty in terms of family income and multiples of regional minimum salaries. Using these variables, the poverty group corresponded to the families with monthly incomes of up to three times the regional minimum wage. (The regional minimum wage in the Northeast is presently Crz\$10,400 or about US\$55.)

7. BNH promoted the social objectives of SFH by a complex series of cross subsidization schemes, under which the social programs were subsidized by higher income housing programs; interest rates were 0-3% for the former and 3-10% for the latter. Prosperous Southern States paid higher interest rates than the poorer Northeastern States, and within the social program, COHABS paid lower interest rates for urbanized lots than for finished housing.

8. The National Low-Income Housing Program, administered by BNH through its various directorates at headquarters and its regional counterparts, and executed by the COHABS, state and municipal agencies, was based on a series of subprograms and lines of credit. At appraisal time these were as follows:

- (i) Land acquisition;



- (ii) Construction and acquisition of finished housing, including embryo houses, detached houses, apartments or a combination of these (PLANHAP);
- (iii) Acquisition and preparation of sites (lots) and services (PROFILURB);
- (iv) Construction, completion, enlargement or improvement of individual houses through construction material loans (FICAM).

Subsequently, in May 1980, BNH introduced a subprogram (PROMORAR) for families with three times the regional minimal wage or less, which provided finance for upgrading slum dwellings, including granting security of tenure to inhabitants in squatter areas, and improving their environmental conditions through the provision of infrastructure and services. One of the aims of this subprogram was to preserve existing communities and minimize population displacement. A further subprogram (MUTIRAO) which provided finance for self-help construction of low-income shelters was introduced in 1984. The Bank loan was used to finance approved PLANHAP, PROFILURB, FICAM and eventually, also PROMORAR subprojects.

## II. THE PROJECT

9. The Project was the first Bank Group project in the housing subsector in Brazil. The files show that the Bank's interest in financing a sites and services project first started in January 1973 and a project was actually identified in September 1974. Subsequently, numerous discussions took place between the Bank and BNH, but while BNH wished to maintain a dialogue with the Bank on sectorial experiences, there was reluctance to have Bank financing for the sector, although apparently in 1976, BNH had assured Country Programs of its interest in eventually taking up Bank finance. The following quote from an internal memo dated March 18, 1976, is indicative of Bank-BNH relations at that time:

"If BNH is to be the vehicle for Bank involvement in the urban field in Brazil I believe the following changes will be required: (a) the present arms-length relationship between BNH and Urban Projects staff will have to be replaced by serious and substantive working level discussions especially in the early stages of Program and Project formation ..."

10. As the manager of the Employment Guarantee Fund (FGTS), BNH at that time had at its disposal ample funds, at low rates of interest, and did not require Bank funds. The Audit showed that BNH also had reservations about working in the housing subsector with the Bank, which it considered too rigid, slow and over-demanding. The terms of Bank loans were also considered to be too hard.

11. In January 1977 another approach was made to the President of BNH on possible Bank involvement in PROFILURB, and consistent with his previous responses he considered that time was not yet ripe for Bank involvement. At the same meeting, Bank staff asked if the President would agree to the Bank



itself developing a sites and services project at the local level in one or two States should the opportunity arise; the President's reply was firmly negative. He considered that there was adequate funding behind the PROFILURB Program at BNH, and independent initiatives to develop other sites and services projects would be counterproductive to PROFILURB.

12. A letter from the Bank to the Minister of Planning on April 6, 1977, and subsequent discussions on the development of a lending program for the urban sector, between representatives of Ministry of Planning, BNH, and the Bank, seemed to break the impasse, because thereafter a serious dialogue opened up between BNH and the Bank on a future lending operation. A project preparation mission visited Brazil in March 1978; this was followed by appraisal in May/June 1978. Negotiations took place in November 1978, and a loan of US\$93 million equivalent was approved in January 1979. The Bank had entered into a formal relationship with an unenthusiastic borrower in a politically, highly sensitive subsector.

13. The main objectives of the project were: (i) to promote the lowest cost elements of the various housing subprograms aimed at the urban poor -- defined as families with monthly incomes not exceeding three times the regional minimal wage; and (ii) to contribute, through a technical assistance program, to the institutional development of COHABs in order to strengthen their overall management and delivery capacity. In order to maximize Bank impact, the bulk of the project, as initially conceived, was limited to three COHABs (Sao Paulo-COHAB-SP, Pernambuco-COHAB-PE and Bahia-URBIS), with the expectation that the experience derived from the project would be applied to other BNH programs. The project was prepared from the 1979-1981 construction programs of the three COHABs. In physical terms, the objectives were (i) to construct in the three COHABs 51,300 shelter solutions [19,500 dwelling units (PLANHAP) and 31,800 lots (PROFILURB) with specific complementary infrastructure and community facilities], and provide 23,900 construction material loans (FICAM); (ii) to undertake an experimental squatter upgrading in Recife (Pernambuco) for about 7,200 families; and (iii) support the construction of selected PROFILURB lots (up to a total of 10,000 lots) in States outside the three COHABs. The estimated cost of the project was US\$265.7 million, of which US\$61.5 million would be foreign exchange (almost all indirect). The Bank agreed to finance up to 35% of expenditures for eligible subprojects, BNH, having refused Bank financing, would finance the entire technical assistance program. The project was expected to be completed by December 31, 1983 and this date was set as the Closing Date. COHABs were responsible for subproject preparation up to detailed engineering, tendering and direct supervision of construction. They were also responsible for complementary activities such as selection, orientation, and community development assistance, as well as administration of loans to beneficiaries. The construction of infrastructure and community facilities and related financing would be the responsibility of the States and municipalities. COHAB shelter subprojects eligible for Bank financing would be selected on the basis of the following criteria: (i) they should form part of the agreed 1979-1981 investment program; (ii) they should be affordable to the target population; (iii) they should have efficient design; and (iv) they should be economically viable. Disbursements of the Bank loan to BNH would be made on presentation of the loan contract between BNH and the COHAB, and a BNH document certifying that



BNH had disbursed to the COHAB for the expenditure of a given subproject. Community facilities and infrastructure subprojects were only eligible for Bank financing if they benefited shelter subprojects eligible under the agreed shelter criteria.

### III. PROJECT IMPLEMENTATION

14. In March 1979, following a change in Government at Federal, State, and Local levels, new Presidents and Boards of Directors were appointed to BNH, COHAB-PE (Pernambuco) and URBIS (Bahia). There was no change in the management of COHAB-SP (Sao Paulo). The changes at the Federal level brought about widespread reorganization in BNH which, contrary to the optimistic view expressed by a Bank mission of May 1979, had a negative impact on the Bank-financed project. Key (COS)<sup>1/</sup> staff, who had been made responsible for the coordination of the Bank-financed Project, were transferred to a newly created department to administer the new, widely publicized, PROMORAR upgrading program, which had been introduced by the Minister of the Interior. The remaining COS staff were overworked, and were suffering from low morale; furthermore it was generally believed that the then ongoing programs would suffer, because of the conflicting and overlapping objectives of the old and new programs.

15. The first signs that a change might be required in the project came during the initial supervision mission to COHAB-PE in May 1979. The new administration in Recife, considered that the squatter upgrading component at Jiquia-Remedios for 7,200 families was too large as a pilot scheme, and the willingness of the local population to participate had not been determined. It was proposed that the project be substituted by one or two squatter upgrading projects, of a smaller size, and with extensive community participation. The Bank agreed that this line of approach should be developed. The Jiquia-Remedios component of the project was subsequently substituted by two other components. (See para. 22.)

16. The confusion in BNH's organization continued to be reported by successive Bank supervision missions. However, an April 1980 mission reported that inadequate attention was being given to the project by BNH, the Project working group was not functioning, a flow of projects for Bank financing was not being assured, no disbursements had been made, quarterly reports were not being produced, progress on the provision of shelter units in States, other than the three principal COHABs, was negligible, and the technical assistance program was not being carried out satisfactorily. There was a lack of definition of responsibility for the Project. BNH headquarters and BNH's regional offices reportedly were adopting a laissez-faire attitude which was resulting in (a) failure to emphasize to the COHABs the importance of the Bank project, and (b) any systematic form of follow-up or project control. At the same time it was considered that the COHABs were performing reasonably well on their overall housing programs, and since they were relatively isolated from the

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<sup>1/</sup> Social Operations Directorate (COS).



Bank project, the successful completion and the meeting of targets, was likely to be the result more of an overall improvement in performance, rather than an explicit commitment to execute the Bank project.

17. The audit was given an explanation of BNH's views at that time. BNH was committed to a very large country-wide housing program towards which the Bank's contribution, being very small, was judged to be of little importance; the Bank loan was probably about 1-2% of the overall program. At the time the loan was made, BNH staff considered that they were managing the program well and that the Bank was not needed -- the Bank loan was regarded as an imposition from outside -- and to change established routines to meet Bank requirements for such a small contribution was not justified. While personal relations with Bank staff were generally good, Bank missions were regarded as "a nuisance" and "sighs of relief" were expressed when they departed the country. This already unsatisfactory attitude, was later exacerbated by poor morale arising from the widespread changes after March 1979; some of the new measures were regarded unfavorably by BNH staff, since they were considered as having political overtones. The establishing of units to deal with the new social programs had caused serious staffing problems. Staff remaining in the old units were overworked and new recruited staff did not understand the Bank loan. Internal and external reporting relating to the Bank loan increased the work load. The Department of the Ministry of the Interior, which controlled external loans, would not accept the reports sent to the Bank in the form presented, and also required information on the Bank loan which varied from that sent to the Bank. Reports sent to the Bank also involved several BNH departments, and delays were incurred because of the existing excess of work and the difficulty in preparing and coordinating the information.

18. In November 1980 a supervision mission confirmed doubts, previously feared, that the COHABs and BNH would not be able to meet the targets expected from the Project. The target of 61,300 shelter units was expected to be only 50% met. Only 1% of the FICAM housing construction loans had been approved and the program was currently inactive and not likely to be reactivated. The following reasons were reported for this situation:

- (i) There was a growing feeling in the COHABs and BNH that the serviced site was not the appropriate solution in most urban situations.
- (ii) Poor families needed an embryo starter unit so that they could move on to a serviced site and begin construction.
- (iii) Consolidation of lots required extensive transport costs, and the families had to pay for their current accommodation and also for the lot while they built the house.
- (iv) The cost of an embryo unit was very similar to the cost of a serviced lot plus a FICAM construction loan.
- (v) The new PROMORAR program, the basic philosophy of which was to grant security of tenure to inhabitants of squatter areas, and to improve their environmental conditions through the provision of



infrastructure and services, competed with the urbanized lot program (PROFILURB). PROMORAR gave greater emphasis to the preservation of existing communities and minimized population displacement; it also had slightly better financial conditions.

- (vi) BNH's new administration had done little to promote the concepts of PROFILURB and FICAM.

19. The original forecasts were over-optimistic. The Audit found that in Sao Paulo, because of the high cost of lots, both the sites and services (PROFILURB), and the construction material (FICAM) programs had not been accepted by the public. In Pernambuco, PROFILURB had not been a success and, administratively, was considered costly; FICAM had, however, been accepted and 2,300 loans had been financed by the Bank and BNH; numerous dwellings which had been successfully improved were visited during the Audit. In Bahia, PROFILURB had been unsuccessful in the municipality of Salvador, but had been reasonably well received outside. There was a general preference for a lot with an embryo in Bahia; and although about 2,400 FICAM loans had been made, none of which had been financed by the Bank, the view was expressed that the FICAM program had not been well directed. Reportedly, BNH had received instructions from the new Minister of the Interior to concentrate investment on finished dwellings, and consequently the PROFILURB and FICAM programs had been brought to a halt. A claim that BNH's new administration had done little to promote the PROFILURB and FICAM programs would therefore seem to be correct. BNH had unofficially revoked those programs. This was a clear demonstration of the susceptibility of the housing subsector (and the Bank Project) to political change.

20. The November 1980 mission also reported that, because of the overall deteriorating economic conditions in Brazil, and the heavy demands for finance, BNH was having cash flow problems and commented:

"... the financial situation in BNH has resulted in greater awareness of Bank projects. For the first time, the mission detected a willingness both to admit that problems exist with this project and also to discuss possible solutions. The Director of the Social Operations Directorate (DINAS) has instructed his staff to develop proposals for meeting Bank targets. These proposals were discussed with the mission ..."

21. Four basic options for correcting the situation had been discussed with that mission:

- (i) Continue under the existing rules and cancel that part of the loan that could not be absorbed (estimated at US\$40 million).
- (ii) Continue under existing rules but extend the project scope beyond COHAB-SP, COHAB-PE and URBIS.



- (iii) Change the rules to admit that houses up to 300 UPC 2/ were affordable to the same population. Stay with COHAB-SP, COHAB-PE and URBIS and cancel that part of the loan that could not be absorbed;
- (iv) Change the rules as in (iii) and make the project available to the whole country. This would absorb the loan and enable quick disbursement.

Since it was deemed not to be in the interest of either BNH or the Bank, to cancel the loan, BNH was asked to submit proposals for restructuring the loan on the basis that: (a) the basic objectives of the loan would be maintained; (b) any changes in the criteria for project selection would have to be strongly justified; and (c) adequate systems would have to be developed for sub-project review, selection, supervision and for reporting in project progress.

22. BNH submitted proposals on June 23, 1981, following which the under-mentioned changes were made in the Project:

- (i) Finished houses were substituted for urbanized lots.
- (ii) The materials loans program (FICAM) was reduced.
- (iii) The amount for infrastructure was increased.
- (iv) The upgrading component at Jiquia-Remedios in Recife for 7,200 families was substituted by slum upgrading projects at Brasilia-Teimosa in Recife, and at the Camarugibe River basin in Salvador. (After the change in Government, COHAB-PE and the Metropolitan Planning Agency FIDEM had proved unable to develop the original project.)

The Bank had already accepted that PROMORAR projects would be eligible under the Project, since they were an alternative method of providing urban and housing services to the population earning less than three minimum salaries, and a large number of these projects were included in the BNH proposal.

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2/ Monetary Correction. From July 1964 major banking liabilities and assets were subject to monetary correction, using a Ministry of Finance index. Within the BNH-SFH system, the indexation led to the adoption of a new accounting unit, the standard capital unit (UPC), which was revalued every quarter using the index. Major BNH liabilities and assets (including the loan portfolio) were denominated in UPC.



23. A comparison of the targets of the amended project with those of the original project is as follows:

	<u>PROJECT</u>	
	<u>ORIGINAL</u>	<u>AMENDED</u>
Dwelling Units	61,300	62,812
Material Loans	23,800	3,000
Slum Upgrading (Families)	7,200	22,273

In dollar terms the revised estimated cost of the project (US\$265.9 million) showed little change from the estimated cost of the original project (US\$265.7 million). The main switch of funds was away from Sao Paulo (23% as compared with 38% of the total project cost) and Pernambuco (37% as compared with 44%) to Bahia (23% as compared with 10%) and to other COHABs (14% as compared with 8%). Increasing the participation of COHABs outside Sao Paulo, Pernambuco, and Bahia, resulted in further fragmentation of the project and away from the original concept of the project, which was to maximize the Bank's impact in the three COHABs (Issues Paper, July 13, 1978). The Loan Agreement was amended on August 5, 1981 to take into account the changes.

24. Supervision missions in February and May/June 1982 reported improvement in commitments; and the latter mission reported that with the exception of the Salvador slum clearance component the entire loan had been committed, and all projects would be completed to meet the December 31, 1983 disbursement deadline. It was concluded that the changes introduced in the project had had a salutary effect on project execution, and the execution phase was expected to proceed more smoothly than the initial commitment phase.

25. In October 1982, the effects of the rapid devaluation of the Cruzeiro in relation to the US dollar began to show up in the disbursements of the Bank loan; it was estimated that 20-30% of the value of commitments was lost during the 60-90 day period that lapsed between the date BNH disbursed to the COHABs and the date it received reimbursement from the Bank. Although disbursements had improved, and were in line with the schedule for the revised project, the short-fall in US dollar commitments made it likely that an extension of the closing date of the loan would be necessary. Accordingly, BNH was requested to submit additional subprojects, within the loan criteria, which might be considered for financing by the Bank.

26. To facilitate and accelerate disbursement, a Special Account for the project was opened with the Central Bank of Brazil in December 1983. At that time the undisbursed balance of the loan was US\$22 million, and in response to the request from BNH, and to assist Brazil, the Bank agreed, under a Special Action Program, that the undisbursed balance would be used to finance selected subprojects, compatible with the goals of the original project (low cost, upgrading, finished, and semi-finished dwellings), consisting of works already initiated, but stopped because of Brazil's financial problems, and which could be completed by December 31, 1984; retroactive financing would be limited to



costs incurred after July 1, 1983. The Bank also agreed to increase the financing from 35% to 50% of subproject costs (BNH had requested 80%), however, it would not refinance works for which payments had already been made. Subprojects which could not be completed within the specified time would be excluded. Finally, the closing date of the loan was extended one year to December 31, 1984.

27. The loan was fully disbursed on July 8, 1985. The revision of the Project resulted in the number of States participating in the project being increased to 15; and 45% of the estimated final cost of the project being invested in subprojects outside the COHAB-SP, COHAB-PE, and URBIS, as compared with 8% estimated at appraisal time; with the changes the original Project Loan had become a Sector Program Loan.

28. A comparison of the completed project with that originally appraised is difficult because of the changes made in the mix of programs in which the Bank participated, and the influence which the devaluation of the Cruzeiro had on the number of subprojects in which the Bank could participate, which in turn determined the final size of the Project. The decision to move out of sites and services (PROFILURB) subprojects in Sao Paulo and reduce construction material loans (FICAM) subprojects, together with the effect of the devaluation of the Cruzeiro resulted in the Bank participating in the financing of a larger number of dwelling units than had been estimated at appraisal (see PCR, Annex 1, Table 1). The Audit, however, makes special mention of the following:

- (i) The decision to substitute the original squatter upgrading project for 7,200 families in Recife, by other upgrading projects in Recife, and Salvador, was a very successful move. More than 100,000 inhabitants in those cities benefited from the change.
- (ii) In Sao Paulo, owing to the bankruptcy of the contractor, 1,400 of 5,040 dwelling units of the Itapavi subproject have still to be completed. Measures are being taken to resolve the problem (the amount disbursed by the Bank on this subproject was US\$7.5 million).
- (iii) In Recife, because of poor location, the Jardim Monte Verde subproject, although inhabited, has been plagued with land erosion (the amount disbursed by the Bank on this subproject was US\$0.5 million).
- (iv) In Salvador, the Bank-financed sites and services (lots) subprogram was unsuccessful and numerous serviced lots were observed to be undeveloped because of lack of funds.



#### IV. DISBURSEMENTS

29. Loan disbursement lagged significantly throughout the implementation period, so much so that the commitment fees on the loan totalled US\$2.6 million. Initial disbursement delays were caused by a two-month delay in effectiveness, confusion of responsibility, the need to modify the loan agreement to enable the intended percentage of costs to be disbursed and to correct a misunderstanding on the eligibility for disbursement. Subsequently, disbursement was delayed by the inability of the COHABs to meet over-optimistic appraisal targets, and by the devaluation of the Cruzeiro.

#### V. PROJECT COSTS AND FINANCING

30. Annex 1, Table 1 of the PCR, which was compiled from the disbursement schedules of BNH, indicates the final total cost of the project to be UPC 46.0 million, equivalent to about US\$368.0 million at the rate of exchange as of December 31, 1984. The estimated cost of the project at appraisal was UPC 18.0 (US\$265.7) million. The increase in total costs can be attributed to the greater number of projects in which the Bank was able to participate because of the devaluation of the Cruzeiro. An inspection of the disbursement schedules during the Audit showed numerous variations in the ratios of Bank disbursement to BNH disbursement. The Audit was informed that BNH had made late disbursements on subprojects which could not be submitted for Bank financing; this was particularly noticeable in the schedules for COHAB-PE and COHAB-SP. During the Audit random tests covering about 20,000 dwelling units in Sao Paulo, Recife and Salvador in which Bank financing was involved, showed that about 85% of the units had been constructed at costs affordable to families with monthly incomes not exceeding the Bank's target of three monthly salaries. Two projects, Jardim Sao Paulo (600 units) and Jardim Sapopemba (2,280 units), both in Sao Paulo, required 3.49 and 4.51 minimum salaries, respectively. To be conclusive, a more detailed analysis covering all sub-projects would be necessary.

#### VI. TECHNICAL ASSISTANCE

31. The project included a comprehensive technical assistance program which was intended to support and complement the ongoing programs of BNH's Research Department and Technical Assistance Division. The proposed program, which was financed entirely by BNH, was to have been executed by BNH staff, national firms and experts, and universities. It was hoped that through technical assistance, BNH would provide leadership for the COHABs, and initiate programs for (i) improving COHAB management; (ii) financial management; (iii) promoting lower costs solutions for the PLANHAP program; (iv) lowering design standards and costs of infrastructure and community facilities; (v) designing operating manuals to assist COHABs and final beneficiaries in the implementation of PROFILURB and FICAM programs; (vi) squatter upgrading; (vii) monitoring and evaluation; and (viii) training of COHAB personnel.



32. As early as June 1980 Bank staff reported that, although a new training program had been designed, the COHABs were not receiving the technical assistance support and leadership from BNH which was intended under the Loan Agreement. Key staff who were capable of carrying out the program had been transferred to other duties under the BNH reorganization. With the need to give close attention to the physical aspects of operations, the technical assistance program does not appear to have been given the attention which was warranted. A revised accounting manual was issued to the COHABs, and some short-term training in management, accounting, and engineering was given under the auspices of the Association of Brazilian COHABs (ABC); however, because of resource constraints and changing priorities, specific studies which were outlined in the Loan Agreement, and particularly those relating to the strengthening of financial management, were not carried out. On the basis of the visit to COHAB-PE and URBIS, the Audit can only conclude that any benefits that may have been derived from the program, are unlikely to have been sustained.

#### VII. INSTITUTIONAL PERFORMANCE

33. BNH. For reasons which have been explained in this report, BNH showed limited commitment to the Bank-financed Project. This attitude, which was exacerbated by strain on the staff by the management, organizational, and program changes which were made at BNH in 1979, following the change in Government, also had a negative impact on the implementation of the Bank-financed Project. The disbursement delays which occurred proved costly in commitment fees. However, the lag in disbursements was not entirely due to the administrative process; the files indicate that there may have been over-estimation in the project components at the time of appraisal by both Bank and BNH staff.

34. Faced with the need to revise the project in its early stages, and then later, to find a solution for lagging disbursements, BNH, in cooperation with Bank staff, came forward with solutions which eventually enabled the disbursement of the loan to be completed, and the Bank to participate in the financing of a larger number of dwelling units than had been forecast at appraisal time. However, there were other aspects of the Project which BNH was unable to fulfill. The technical assistance program as originally conceived was only partially implemented. Bank style economic analysis was never accepted. Reporting throughout the implementation, despite Bank staff efforts to provide guidance, never fully met the requirements of the Bank, and only in April 1983 was there any significant improvement in reporting. Finally, BNH failed to contribute to the preparation of the PCR. BNH had agreed with the Bank in March 1986 that the Project Completion Report would be jointly prepared by BNH and the Bank, and a draft outline of the work assignments was sent to BNH on April 3, 1986. However, despite a mission to Brazil in June 1986 to discuss a draft PCR, the report eventually had to be prepared by Bank staff with assistance from a consultant. This is to be regretted because the lack of input by BNH staff depreciates the value of the PCR, particularly



since the Audit found that some of the views expressed in the PCR were not entirely shared by officials in Brazil.

#### COHABs

35. The anxiety of BNH and the Bank to disburse the loan resulted in a sudden extension of the Project by means of the aforementioned amendment of December 12, 1983, and housing agencies located in an additional 12 States, became involved in the Project. This final change considerably weakened the control of the Project. There is no evidence in the files of any evaluation being made of the capability of the added agencies to analyze contracts submitted to BNH for financing, and the Audit was unable to obtain confirmation that the subprojects had been sufficiently analyzed before being financed. Since the agencies had not been supervised, there is also no record of their performance.

36. Given the large size of their development programs and the circumstances and conditions under which they were operating (political change, deteriorating economic conditions, and financial difficulties), the performances of COHAB-SP, COHAB-PE and URBIS had, in general, been good. Although project reporting had been poor, COHAB staff had cooperated well with Bank staff. The Audit showed that, in general, they had appreciated Bank staff involvement, particularly at the appraisal phase, and had wished there had been closer involvement afterwards. A view was expressed in COHAB-SP that the Bank should have accompanied the physical implementation of the project more closely.

37. All three COHABs had suffered delays in their construction programs because of the lack of coordination, and failure by the responsible agencies to promptly execute the construction of infrastructure and community services; those failures show non-compliance with Section 6.07 of the Loan Agreement. As the PCR explains, the quality of subproject construction varied. The two COHABs and the municipalities involved, benefited from the innovative methods used in the slum upgrading in the Brasilia-Teimosa and Camarugibe River Basin components, and this experience should be invaluable in the next phase of development of the latter component. The Audit found that all three COHABs were acutely aware of the need for innovation to reduce costs, and to help solve the huge problems with which they are confronted; however, because of regional differences the approach in each agency is different. COHAB-SP, in cooperation with the National Construction Industry, is presently undertaking a large scale experiment in apartment dwelling design and construction, through the use of industrial systems employing prefabricated metal, and reinforced concrete components (See Annex 1). COHAB-PE and URBIS are equally committed to innovation but on a less grandiose scale; COHAB-PE is presently studying three new dwelling prototypes and is setting up a large "Materials Bank" for an ambitious self-help program. The Audit showed the existence of a communication gap between COHABs on innovation, and it was suggested to the Housing Director of CEF that this might be remedied through the medium of the Association of Brazilian COHABs (ABC).

38. The lack of continuity in management, because of political change, has been, and continues to be, a serious problem in most COHABs in Brazil.



Experience has shown that where there has been continuity of good management, COHABs have been in better condition to meet their sectoral obligations; this was clearly seen in COHAB-SP, where the organization had benefited from a reasonable period of stability in senior management. COHAB-PE and URBIS in particular, have suffered from a lack of managerial continuity, and consequently from considerable political interference. The internal organization in these agencies has obviously not accompanied their rapid physical growth, and they have managerial, organizational, staffing and serious financial problems. Internal control is weak and there is no internal audit. Accounting, financial management, and financial planning, particularly need improvement; COHAB-PE does not have an accurate record of the amounts owing to it by its borrowers, and financial accounts are unreliable. The benefits of any technical assistance which may have been given under the Project in the fields of general management, financial management, and training, have not been sustained. The Audit found COHAB-PE and URBIS to be in need of an extensive program of technical assistance and staff training.

#### VIII. FINANCIAL PERFORMANCE

39. BNH. In the initial stages of the Project BNH had a very sound financial position; and the National Employment Guarantee Fund (FGTS), the Savings and Loans Banks, and loan repayments provided all the funds required to meet the needs of BNH's various programs.

40. The changes in housing policy in 1979, which included new programs for housing the low-income population and financial incentives for the construction of low-cost housing, caused a large increase in the demand on BNH's resources. The high demand for housing loans, and the deterioration in Brazil's overall economic position, began to be reflected in BNH's cash flow, and in September 1980, after a temporary suspension of approvals for housing loans, BNH was obliged to cut back its lending program. At the same time BNH adopted a stricter disbursement policy which caused a deterioration in the working capital of the COHABs. Meanwhile, the continuous inflation, which increased from 45% per year in 1979 to 100% in 1982, was causing serious erosion in family incomes, so much so, that in 1983, thousands of COHAB borrowers staged a "rent strike" and stopped paying their "indexed" installments to the COHABs. In this chaotic situation, the COHABs were obliged to suspend their debt service payments to BNH, and eventually the latter had to reschedule COHAB debt. Since BNH's loans to the COHABs were guaranteed by the State Governments, BNH did not suffer any loss; however, some losses on low-income housing had to be passed on to the States. In line with the continued deterioration of the country's economic situation, BNH's assistance to the housing subsector showed serious annual decline after 1981 until the



Agency's demise in 1986. This is demonstrated by the following table which shows BNH's loans to COHAB-SP over the period 1981-1986:

<u>YEAR</u>	<u>UPC (millions)</u>
1981	11.0
1982	9.4
1983	7.1
1984	2.7
1985	1.7
1986	0.3

41. BNH ceased to exist in November 1986 and its responsibilities were taken over by CEF. Bank missions evaluated the financial, institutional, technical and administrative capabilities of CEF and concluded that CEF would be able to assume the responsibilities transferred from BNH, provided that certain actions were taken related to avoiding potential losses to CEF from the BNH merger. A Loan Assumption Agreement and Supplementary Guarantee Agreement became effective on December 11, 1987. CEF reported to the Audit that, except for a few delays, COHABs are currently meeting their debt service commitments.

#### COHABs

42. Although the three COHABs experienced unprecedented physical growth during the implementation period of the Project, their financial performance has generally been unsatisfactory, and considerable financial support had to be provided by the State Governments to the COHABs to cover their annual deficits and enable them to meet their obligations. Financial performance, though poor, varied among the COHABs. Operating solely in a metropolitan area, COHAB-SP had the advantage of economies of scale (subprojects from COHAB-SP sometimes contained triple the units included in subprojects from COHAB-PE and URBIS); the larger projects in Sao Paulo required relatively fewer personnel for planning and supervision, and the shorter communications resulted in lower administration costs. COHAB-PE and URBIS on the other hand, had statewide responsibilities and were required to undertake small projects in the interior. This factor significantly increased overheads in all phases of operations. The insufficient margins allowed to all COHABs in terms of interest differential, and planning and supervision fees, also had a negative influence on operating results.

43. Due to its better initial capitalization, the financial position of COHAB-SP has been stronger than that of COHAB-PE and URBIS. Nevertheless, all balance sheets have shown the strain of rapid growth, which has required heavy borrowing to finance development. All three COHABs have had inadequate working capital; a situation which was not helped in 1980 by BNH's decision to disburse against invoices, rather than against contracts, which was formerly the case. More recently, a preliminary review of the 1987 balance sheets indicates considerable improvement in COHAB-SP's financial position, however, COHAB-PE and URBIS have serious problems, with COHAB-PE being in an insolvency situation. Each COHAB has had, and still has, serious collection problems; these first became acute in 1983, and 1984, when thousands of householders



withheld settlement of their dues to the COHABs, because of the effect of inflation on their family incomes. Arising out of this situation, COHABs were required to reschedule the debts of their borrowers and large amounts have had to be declared irrecoverable.

#### IX. PERFORMANCE OF THE BANK

44. BNH's initial negative attitude towards the Bank, and the subsequent project changes which followed the changing political scene and deteriorating economic situation in Brazil, made the implementation of this project extremely difficult; the files and reports show the project to have been a continuous struggle for Bank staff from project preparation to the PCR. Overall staff time on the project at eight man-years has been high. The under-mentioned are general comments on Bank performance during the project experience:

- (i) The urban lot (PROFILURB) and construction materials loans (FICAM) forecasts were over-estimated at appraisal; this would seem to have been due in part to insufficient research being carried out on the acceptability by the public of the PROFILURB/FICAM combination.
- (ii) The housing subsector programs in Brazil are politically, highly sensitive. Although difficult to assess at the time, the risks of changes in the project from political influences do not appear to have been considered during appraisal.
- (iii) The Bank showed considerable flexibility in adjusting the project to the needs of the subsector as the operation progressed. This was shown by the substitution of the Jiquia-Teimosa slum upgrading component, by the Brasilia-Teimosa and Camarugibe River Basin components; the move out of the PROFILURB/FICAM subprograms, the acceptance of PROMORAR projects; and finally the extension of the project to the uncompleted works of COHABs, outside COHAB-SP, COHAB-PE, and URBIS.
- (iv) Bank supervision suffered in effectiveness because of the great amount of staff time which had to be devoted to changing the components of the project, and in ensuring an adequate pipeline for disbursing the loan. Poor reporting by BNH and the COHABs, both on technical and financial aspects also rendered supervision less effective. Financial supervision was particularly weak in the later stages of the project and serious financial supervision seems to have stopped after February 1982.
- (v) The widening of the project in 1983 weakened control, and the capability of the "added" COHABs to analyze the projects submitted for financing was never evaluated, neither was there any supervision of their performance.



- (vi) Bank staff were never able to have BNH fully implement the agreed technical assistance program. The failure to implement the program is regrettable given the extensive technical assistance needs of the COHABs.

## X. CONCLUSIONS

### Overall Assessment

45. The overall objective of the Bank's lending strategy to Brazil was to provide part of a very large volume of medium- and long-term capital inflows that Brazil needed to sustain its rapid growth and achieve its employment creation and regional development. The US\$93 million loan which financed the project contributed to that objective, and also enabled the Bank to make a financial contribution, albeit small, to the development of the large low-income housing subsector; in this respect the last US\$22 million of the loan to be disbursed proved to be an important contribution towards financing the completion of dwelling units, the construction of which had been halted because of Brazil's financial problems.

46. However the Bank was never able to make the impact on the sector as was expected at appraisal; although there were some positive aspects to the project, (e.g., the Recife and Salvador slum upgrading components) this operation, which proved to be difficult, was not entirely satisfactory for the following reasons:

- (a) Due to over-estimation at appraisal, influences from political changes and from the deterioration of the economic situation in Brazil, the physical components of the project, as originally conceived, could not be implemented. BNH also failed to fully implement the important technical assistance component.
- (b) BNH was never totally committed to the project, although as Brazil's economic and financial situation deteriorated, BNH gave greater importance to the loan. The difficulties which the Bank experienced in this operation, because of the lack of commitment on the part of the Borrower, should be a lesson.
- (c) As a first project in a very large subsector the project was too ambitious. The Bank sought to maximize its impact on the sector by limiting the operation to three COHABs (COHAB-SP, COHAB-PE and URBIS), however, as the reports and files show, Bank staff resources, even on the basis of the original project, were seen to have been over-extended; a smaller project, limited to one COHAB, probably COHAB-PE, may therefore have produced a better experience.

### Sustainability

47. The main benefits from the project are those which accrued to the beneficiaries of the dwelling units in the form of safer, and better living and health conditions. The sustainability of these benefits will depend on



the ability of the householders to satisfactorily maintain or, in the case of serviced lots, complete the structures, and to maintain pride in their dwellings and accept the community living, as provided. Without adequate care and maintenance of the dwelling units, the areas on which they have been constructed could become future "favelas." Any benefits from the uncompleted technical assistance component of the project are unlikely to have been sustained.

#### Lessons Learned

48. The lesson to be learned from this project, is that when the Bank enters into an operation with an unwilling Borrower, in a sector which is highly susceptible to political change, and with little leverage, the chances for success are limited.

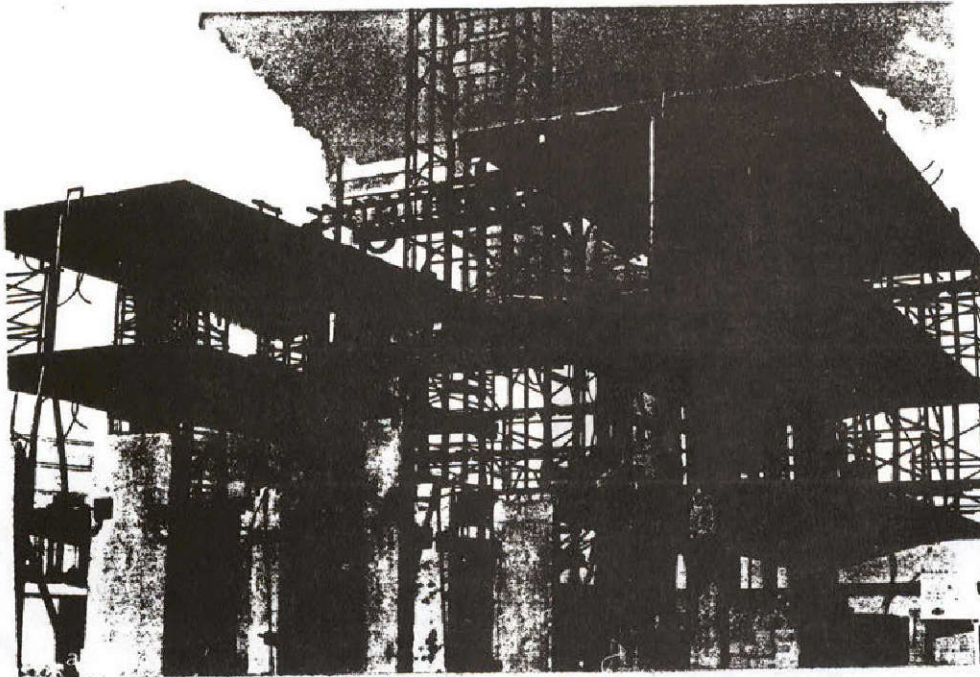
PROJECT PERFORMANCE AUDIT MEMORANDUM

BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
LOAN 1654-BR)

COHAB-SP: INNOVATIVE HOUSING CONSTRUCTION

EXPERIMENT PROJECT - HELIOPOLIS





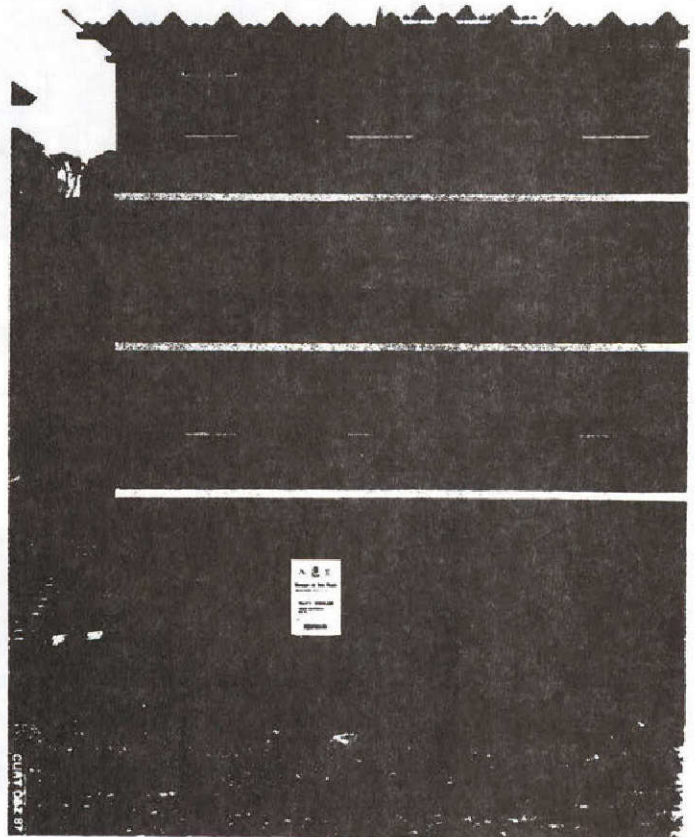
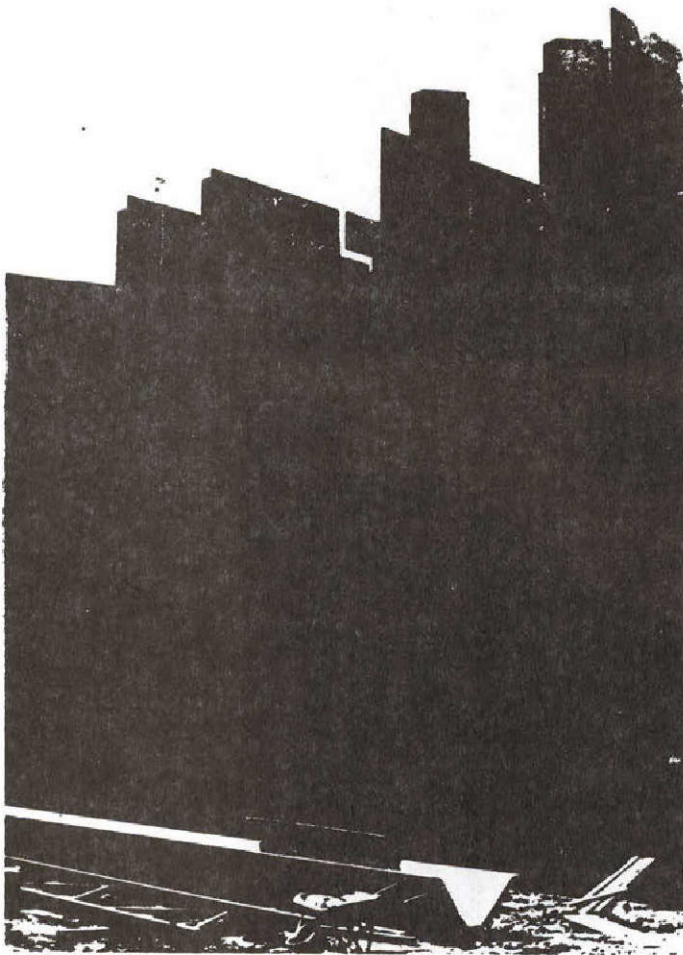
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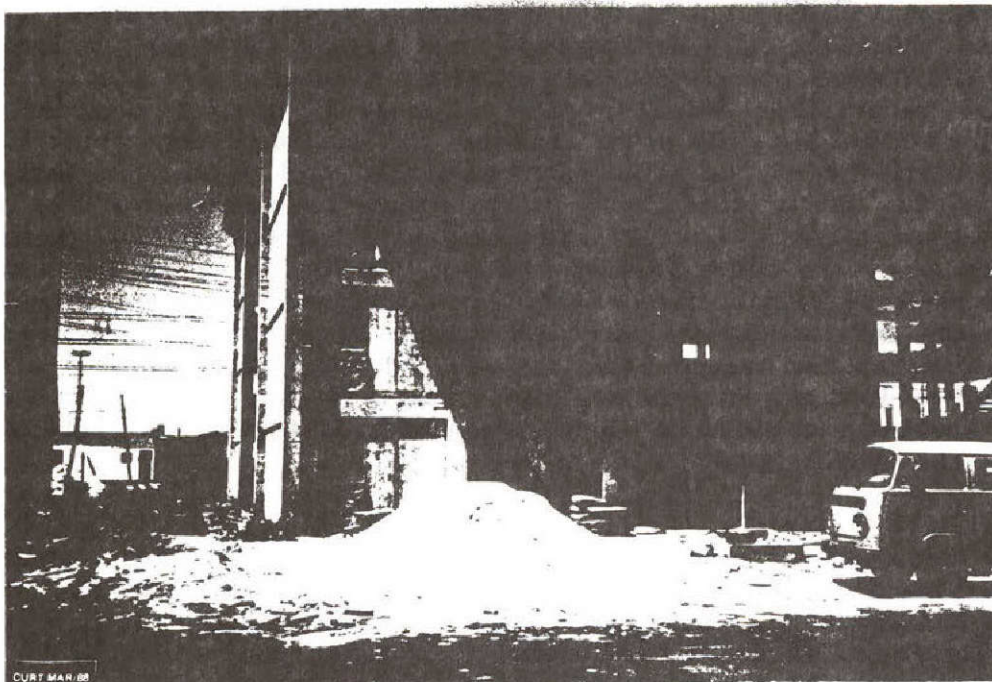
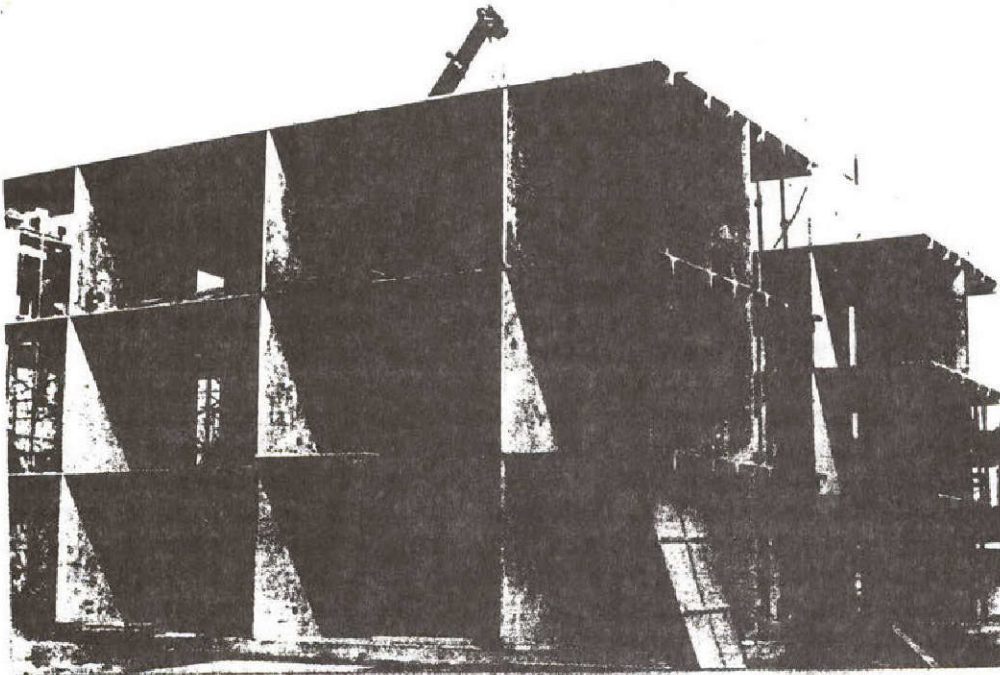
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PROJECT COMPLETION REPORTBRAZILSITES AND SERVICES AND LOW-COST HOUSING PROJECTLoan 1654-BRI. INTRODUCTIONI. Background

1.01 Brazil's urbanization over the last 30 years has been characterized by rapid growth, large absolute size of urban population and geographical imbalance. Between 1950-70, the urban population grew at an annual rate of 5.5% compared to a total population growth rate of 2.9%. The urban population, by the standard international definition of 20,000 or more inhabitants, almost tripled. While the national population more than doubled, from 52 million in 1950 to 119 million in 1980, the urban population more than quadrupled, from 19 million to 80 million. The urban population is concentrated mainly along the coastal areas particularly in the southeast (Rio de Janeiro and Sao Paulo Metropolitan areas) where almost 40% of the urban population live.<sup>1/</sup> The current rate of growth is estimated at 4.5% per annum and by 1990, is expected to slow down to 4%.

1.02 The official housing policy had been initiated in 1964 with the creation of the Housing Finance System (SFH) and the National Housing Bank (Banco Nacional da Habitacao-BNH). By the time the National Commission on Urban Policy (CNDU) and the National Fund for Urban Development were created in 1975, BNH and related agencies had already established strong policy guidelines and working procedures and controlled about 70% of the public investment resources in the urban sector. The financial resources of BNH were provided by government transfers mainly from the Fundo de Garantia do Tempo de Servico (FGTS) - a salary tax. By December 31, 1984, BNH assets totalled about US\$12.0 billion with a staff of 6,500. In addition to BNH, since 1964, the Brazilian Savings and Loan System (Sistema Brasileiro de Poupanca and Emprestimo - SBPE) has provided financing for about 1.8 million units benefitting mainly groups of above 10 minimum salaries. The combination of BNH and SBPE were estimated to have benefitted about 22 million people or 23% of the 1984 urban population, of which BNH contributed about 60%. The BNH program attempted to ensure financial viability of the housing sector through mortgage financing while promoting home ownership, especially among the low-income population. Local entities, the State and Municipal Housing Corporations (COHABs), were created with the capacity to plan, design and execute large-scale housing operations. To ensure the flow of funds to low-income families, BNH and the COHABs created a system of cross-subsidies and incentives. An effort was made, as well, to devise low-cost shelter solutions to expand the number of low-income families with access to the housing market.

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<sup>1/</sup> Nine metropolitan areas were designated in Brazil: Porto Alegre and Curitiba in the south; Belo Horizonte in the Center, Rio de Janeiro and Sao Paulo in the south; Salvador, Recife and Fortaleza in the Northeast and Belem in the North.



1.03 This Project Completion Report is based on information contained in the SAR 2197-BR, dated January 3, 1979, and the review of the Bank files which included supervision and progress reports of the project. A supervision mission visited Brazil in July 1986, to obtain additional information. The report was prepared by Edward Echeverria with assistance from Gerson Simoes Monteiro (Consultant).

## II. PROJECT IDENTIFICATION, PREPARATION AND APPRAISAL

### Identification and Preparation

2.01 During the first decade of operations (1964-1974) BNH, under the Ministry of Interior, financed over 1 million dwelling units of which 25% were low-income subsidized dwellings. As they approached the second decade, BNH was studying several new enlarged programs to reduce the housing deficit as well as to meet the new housing demand. The identification mission to BNH, in late 1974, reported an advanced stage of preparation of a new National Program of Sites and Services and slum improvement (PROFILURB) for which they wanted the Bank to consider supporting through sector lending. The Bank expressed interest in participating; however, the preparation mission of June 1975 reported that BNH no longer wanted financial assistance. They were only interested in technical assistance through occasional visits and exchanged information. Because of the risks inherent in implementing a new program nationwide, BNH preferred to finance the trial stage with its own funds. In July 1977, BNH requested possible assistance for project financing within the National Plan for Low-Cost Housing (PLANHAP) which the Bank agreed to consider based on further study of the detailed program. On receipt of the detailed PLANHAP program in January 1978, the Bank agreed to participate in a program that would be geographically specific in scope with an adequate housing mix.

2.02 The institutional focus of the project would have specific goals and strategies for BNH and the State COHABs. In addition, the financial issues such as on-lending and cost recovery were to be resolved. Based on the analysis of their management and implementation capacities, the COHABs of Metropolitan Sao Paulo, Bahia, and Pernambuco were selected for a slice of the PLANHAP and PROFILURB programs. In addition, funds for selected PROFILURB subprojects outside of the three states would be included along with technical assistance.

### Project Appraisal

2.03 In May 1978, the Bank sent the Appraisal mission with the primary objective of promoting elements of the PLANHAP program aimed at the urban poor, in particular the PROFILURB sites and services and house improvement and material loans (FICAM) programs. Specific segments of the 1979-1981 PLANHAP programs were selected in the three COHABs under the CONSO Low-cost Housing and the PROFILURB sites and services as well as upgrading mortgage portfolios. Special attention was given to the institutional development of the COHABs in order to strengthen their overall management



and delivery capacities. Considerable time was spent in adjusting the project mix of housing types for different income levels, squatter upgrading, provision of infrastructure, and technical assistance funds. Initially, the BNH program was limited to final beneficiaries who were already employed. (This rule was relaxed later on for the PROFILURB Sites and Services and Squatter Upgrading programs.) The construction methods were to be labor intensive. Based on the above, the Board approved on January 23, 1979, the US\$93 million loan with a total project cost of US\$265.7 million.

2.04 Efficient final project designs were expedited. All subprojects were analyzed for land utilization, pedestrian and vehicular circulation, and efficient infrastructure, with maximum possible percentage of land devoted to public use. Site selections were analyzed for travel distance to employment opportunities for the final beneficiaries. Proven prototype designs were scrutinized for efficient space utilization, simplified structures for labor intensive construction, and future expansions. In a few of the low-cost walk-up apartment sub-projects, precast reinforced concrete (RCC) panels were designed to shorten construction time. Similar analysis was made on the designs of the community facilities - schools, health posts and markets.

2.05 The technical assistance (TA) program within the BNH Research Department of the Planning and Technical Assistance Directorate improved their operational manuals of the COHABs to reflect new reporting requirements and to make them more useful tools for management control. Improvements in the overall management of the COHABs, raising the qualifications of the staff, and strengthening management continuity all formed part of the project. Through TA, the project sought to lower design standards and infrastructure costs with a program of incentives to the COHABs.

### III. PROJECT IMPLEMENTATION

#### Effectiveness

3.01 Loan effectiveness was delayed due to the changes in Government at the Federal, State and Municipal levels. While this caused temporary delays, the changes resulted in greatly improved management teams at the State COHAB and municipal levels which in turn accelerate project implementation. In May 1979, a new Department was created on a national scale for the Program of Substandard Housing Eradication and Social Emergencies (CESHE), with the PROMORAR (Eradication for Substandard Dwellings), to urbanize squatter colonies and upgrade slums. Since eligibility was limited to families earning less than 3 minimum salaries, these Programs were of great interest to the Bank. The basic concept was to provide security of land tenure and improve their environment through provision of infrastructure and services. PROMORAR emphasized the preservation of existing communities with the minimum of population displacement. This process implied extensive community participation in the planning, design and implementation. Changes in the project were made at a later date (para. 3.02) to include this program.



### Sites and Services Problems

3.02 By the end of 1980, the BNH and the COHABs were having great difficulties in promoting the sites and services program (PROFILURB). Many of the completed projects, not financed by the Bank, were unoccupied for several reasons. The sites, especially in the metropolitan areas, were poorly located - remote from existing employment centers, social services, and adequate transportation. The cost of an urbanized lot was relatively high so the families that could afford it chose other alternatives. It was unrealistic to think that a head of household could find time after work to organize the delivery of construction materials and work on his new house located many kms. away with no public transportation easily available. Furthermore, he ran the risk of having his material stolen. Only where the sites were close at hand was there an incentive to build. In the final analysis, the self-help shelter solutions cost the beneficiary more than a finished "embryo" unit of 24 m<sup>2</sup> on an urbanized lot built by contractor. The individual, in most cases, had to make a second loan for the construction materials. In 1981 a high government official, during his inspection of the COHAB-PE projects in Paulista (outskirts of Recife), remarked that "I don't want to see any more cemeteries" on looking over 2,000 "wet walls" of the Sites and Services project with not a single dwelling. Over time, almost all of the sites and services sub-projects were supplemented with "embryo" units of 18 to 24 m<sup>2</sup>. On August 5, 1981, the Bank agreed to amend the loan to reflect: (i) substitution of finished houses (embryo) for urbanized lots; (ii) reduction in material loans program (FICAM); (iii) increase in infrastructure components; (iv) modification of upgrading to include specific projects - Brasilia Temosa Recife (Pernambuco) and Salvador (Bahia); and (v) re-allocation of proceeds of the loan.

3.03 The combination of delays in implementation, inflation and erosion of the value of the CR\$ to the US\$ dollar in 1982-83 (lack of counterpart funds) resulted in BNH's request to extend the closing date, by one year, until December 31, 1984. In 1984, the closing date was extended and the number of beneficiaries were increased along with the number of projects which were approved by the Bank. In addition, the SAR implementation schedule was over optimistic in resolving the management and organizational changes that occurred with the change in Government, but, as noted above, this resulted in a stronger management team.

### Innovations

3.04 Several innovative construction techniques were financed. In the Camarugibe River Basin slum upgrading, Salvador-Bahia, URBIS had started construction of integrated stairway and walkways with manageable RCC pre-cast components, formed by channels set in compacted earth with a slab on top, making an integral step and walkway and storm drainage channel. With horizontal as well as vertical flexibility, these elements warped through the barrios without displacing dwellings, no matter how provisional. This was a cost effective solution especially for hillsides and gullies. Innovative building construction systems were used in Recife and Salvador Metropolitan areas; contractors bid successfully on construction of four-story walk-up apartments using pre-cast RCC panel. One used tilt-up panels, poured on a slab, while the other built a factory. Unfortunately,

2/ There were several unoccupied sites in Salvador, which were reportedly part of the Bank Financed project.



the better quality of factory-built panels were more costly and the contractor eventually closed the factory. If he could have expanded his market, he was confident of becoming competitive by increasing production.

### Completed Project

3.05 For Part A - Shelter Solutions, the three Housing Corporations, COHAB-SP, COHAB-PE and URBIS-Bahia, built 59,586 shelter solutions through their CONSO, CESHE and PROFILURB portfolios - 16% more than the SAR estimates but of a different mix. The COHAB-SP SAR programmed 7,000 solutions of CONSO/CESHE and 15,500 sites and services while 14,430 solutions of CONSO/CESHE and only 259 sites and services were produced. The COHAB-PE SAR programmed 10,000 solutions of CONSO/CESHE and 11,800 sites and services solutions while 19,210 and 14,281 respectively were produced. However, all the sites and services were subsequently supplemented with embryo units (Annex 1, Table 1). The URBIS-Bahia SAR called for 2,500 CONSO/CESHE and 4,500 sites and services solutions while 4,286 and 7,120 respectively were produced. Again, all of the sites and services were supplemented by embryo units. For Part B - Infrastructure and Community Facilities, COHAB-SP did not build any since their most urgent needs were completed shelters for a waiting list of over 100,000 certified low-income families. COHAB-PE and URBIS-BAHIA exceeded their targets by 10 times and other State COHABs built 8 times the volume of infrastructure as the two original COHABs. The largest increase came in Part C - Squatter Upgrading, Embryo and Infrastructure, when other State COHABs responded to their urgent housing shortage by providing low-cost 35,707 shelter solutions. <sup>3/</sup>

### Quality of Work Completed

3.06 The quality of work completed varied between the State COHABs. Many of the pre-cast exterior panels had to be re-caulked to control the dampness during the rainy season. Site plans were very spartan and lacked landscaping. The large scale "conjuntos" of 4,000 to 5,000 apartments constructed of 4-story blocks in monotonous parallel rows (in the three metropolitan areas) produced poor living environments. Due, in part, to severe topographic conditions, they were rarely arranged into social groupings. In addition, such large monolithic assemblages of a single income group had little social stratification. Fortunately, BNH has now recognized the environmental and social deficiencies and has vowed to build no more. Future projects should be limited to a maximum of 400 to 500 apartments of any one type, designed with social grouping of 80 to 100 apartments with net- (site) densities of a maximum of 350 person per ha. to allow for open space and community facilities. Nevertheless, the shelter solutions provided an improved living environment at the least cost.

### Costs, Disbursement and Procurement

3.07 The final cost of the project was US\$460.5 million compared to the SAR estimate of US\$265.7 million. The increase in cost is in direct proportion to the increase in beneficiaries of direct shelter solutions and upgraded low-income areas (Annex 1, Table 1). The average unit cost of the CONSO (standard low-cost apartments) and CESHE (low-cost shelter) ranged

<sup>3/</sup> The original slum upgrading component for 7,200 families in Jiquia-Remedios was substituted by the upgrading projects at Brasilia-Temosa in Recife and at the Camaragibe River Basin in Salvador-benefiting about 9,000 families.



from US\$3,410 to 6,120. The highest costs were in COHAB-SP<sup>2/</sup> and the lowest costs were in COHAB-PE. The lowest cost was due to a greater proportion of CESHE shelter solutions. The sites and services average unit cost ranged from US\$402 to US\$2,314 in COHAB-SP and URBIS-BAHIA respectively. The high cost of URBIS was due to the high cost of land. All costs are calculated by BNH in UPCs (Standard Capital Units) which is also expressed in CR\$. With the erosion of the value of the CR\$ in relation to the US\$ due to inflation, the value of the UPC to US\$ fell dramatically from US\$14 per UPC to US\$11.00 in the first semester 1980, with a 2nd fall from US\$10.5 to US\$7.6 in the second semester 1983 (see Annex 1, Graph 1). In US\$ value, there was no cost increase due to inflation - in fact, the project cost was deflated in the US\$ equivalent by about 8%.

3.08 Disbursements were made against civil works as well as construction materials and some equipment. By the end of 1982, disbursements lagged by 15 months, (see Annex 1, Graph 2). Due to the financial crisis of 1983/84, the Bank's Structural Adjustment Program (SAP) was introduced, and, in early 1984, the disbursement percentage was increased from 35% to 50%. In addition, a Special Account of US\$6.0 million was established. As a result, disbursements increased sharply, and the loan was fully disbursed by July 1985.

3.09 Procurement. Procurement was in accordance with the provisions of the Loan Agreement and Bank guidelines. The components were sensibly packaged in bidding documents to achieve economies of scale. Most of the contracts were between US\$1.0 to US\$1.5 million so that local firms could participate in local competitive bidding procedures. The bid evaluations were consistently thorough involving over 120 contractors.

#### IV. INSTITUTIONAL PERFORMANCE AND DEVELOPMENT

##### Performance of BNH and the COHABS

4.01 Since its creation in 1964 BNH has undergone many institutional changes to expand the size and scope of its programs. During 1979/83, several new housing programs were established. The National Program of Housing for Union Workers (PROSINDI), the Housing Program for Public Servants (PROHASP), the Housing Program for Public and Private Corporation Employees (PROHEMP), and Cooperatives (INOCOOP) were organized at the State COHAB levels with earmarked funds. All of these programs have provided substantial benefits to employees down to 2.5 minimum salaries. To improve the land assemblage, the Land Mobilization Directorate was created to acquire land, sufficiently served by infrastructure, that would increase in value when developed for the benefit of the public. The most significant change occurred in May 1980 with the creation of the Program for the Eradication of Substandard Dwelling (PROMORAR). As a pioneer program the main objective was to urbanize squatter colonies and to upgrade slums. A completely new Department in BNH was created to manage this program. Families in favelas, slums and stilt housing over tidal flats with 3 minimum salaries or less were eligible under the portfolio of Sub-standard Housing Eradication and Social Emergencies (CESHE). Monthly payments were 10% of a minimum salary (US\$40) with a 30-year amortization period. While PROMORAR

<sup>2/</sup> The standard 50 m<sup>2</sup> low-cost apartment in 4-story blocks cost US\$6,800.



successfully completed many projects, the total number of shelter improvements fell short of the target.

4.02 In April 1984, to complement PROMORAR, BNH launched a national program of aided self-help construction (MUTIRAO) in response to: (i) the SFH crisis of scarce financial resources; (ii) an increase in demand for shelter for families with less than 2 minimum salaries which, by then, represented the majority of urban population; and (iii) a desire on the part of low-income families to build their own dwellings. Traditionally, the poor of Brazil, like other developing nations, have built their own dwelling (no matter how precarious) in spontaneous squatter colonies. It remained for BNH to give direction to their goals and energies. With SFH vastly reduced resources, housing repayment difficulties, and inflation of 200% per annum, the program was stimulated at the national, regional, and local municipal levels. Incentives and alternative technologies were adopted to minimize costs of shelter as well as infrastructure. Improved TA and training programs were launched so that the poor could have qualified skills to construct not only the housing but infrastructure as well. Through these changes and through substantially lowering of standards, BNH has been able to enlarge its programs so that families of one minimum salary benefitted, with successful cost recovery through cross subsidies.

4.03 In the 20-year period from 1964-1984 BNH financed 4,273,000 dwelling units of which 35% were low-cost subsidized dwellings. During the previous 26 years (1938-1964) only 138,000 low-cost dwellings were financed. To accommodate these additional programs, BNH went through additional reorganizations during which regional offices of BNH were established in the capital cities of the major states. The shelter benefits had the greatest impact in the states of the Northeast where proportionally, sub-standard housing is the greatest.<sup>3/</sup> Initially, this caused delays in preparation of quarterly reports and low disbursement. Training programs were set up which continue to orient the State COHAB executing agencies.

#### Bank Group Performance

4.04 The Bank responded favorably to the adoption of the PROMORAR upgrading program which was designed to preserve the existing social structure. Bank funds were adjusted to enlarge the CESHE program and adjustments were also made in the sites and services targets to provide embryo shelter solutions. Considerable Bank staff time was required to formalize these changes. Increased supervision was necessary in 1982 to improve quality of construction, set up a special account mechanism and assist in achieving the full commitment of loan funds.

### V. FINANCIAL AND ECONOMIC RE-EVALUATION

#### Sao Paulo, SP Financial Re-Evaluation

5.01 Due to time and budget constraints the re-evaluation was limited to the COHAB-SP and URBIS-Bahia. COHAB-SP received its principle funds from BNH through diverse lines of financing for construction and sale of

<sup>3/</sup> Urban Development in the Northeast Region - Special Sector Report - 1/14/87.



housing at interest rates varying between 1% and 6% per year with monetary correction based on the changing value of the UPC. The amortization period established by BNH varies up to 30 years with a grace period of one year. The summary of the financial status of COHAB SP is presented in Annex 2, Tables 1, 2, 3 and 4. COHAB-SP expanded its operations during 1979-84 with lower interest rates, compared to previous years, and longer amortization periods. The changes, introduced by BNH after 1979, provided greater access to financing ownership housing for the lower-income families down to the 3rd and part of the 2nd deciles. In respect to the total assets, the number of housing loans increased during the period by 14.5%.

5.02 Total assets, in US dollars, increased over 100% during 1979-84 while the operational receipts, in dollar terms, increased by 152% against an increase in operational expenses of 456% as shown in Annex 2, Table 2. These findings were verified in accordance with the regulations of the Federal Accounting Service 084-12/1979 which required the COHABs to undertake annual internal audits of their assets and real profits with partial deferment of the detailed examination of gross profits from the mortgage sales until the amortization periods and residual loan amounts contracted were regularized. A more realistic financial position would have been obtained from an analysis of gross profits from the mortgage portfolio. In view of the above, in 1980, the COHAB-SP adopted procedures to defer results of future exercises, gross profits from sales, and amortization period for residual units until new regulations were approved. They limited their analysis to the portions of the cash received from the monthly mortgage payments. The criteria used in the 1979 audit related profits for sales from residential units to their amortization period. The change in criteria in 1980 brought a reduction in profit, liquid assets and consequent increase in the financial potential for future years.

5.03 The differences between the COHAB mortgage receipts and the COHAB repayments to BNH between 1979 and 1985 are presented in Annex 2, Table 4. From 1979 to 1982, repayments to BNH varied from 52% to 32% while in 1983 repayments increased to 89.7%. This was due mainly to the efficient collection of mortgage payments. However, in 1984, mortgage receipts dropped which required a large retention by the COHAB. In 1985, receipts increased slightly permitting a larger repayment to BNH. During that period, BNH quickly created a mechanism for re-negotiating the indebtedness by re-adjusting the inflation index for the terms of the loans to make them more compatible with the incomes of the mortgagors. The Federal Government policy of limiting official salary increases resulted in a lower index than the System of Housing Finance (SFH) adopted for the periodic upward adjustments in their mortgage payments. Their monthly payments had escalated so high that they were amortization amounts in excess of the value of the housing. The tens of thousands of families who stopped their mortgage payments for a year or more had their payments eventually readjusted downward.

5.04 The total assets of the COHAB-SP, as of December 31, 1984, were CR\$ 964.6 billion cruzeiros. The mortgage loans totalled CR\$ 720.0 billion or 75% of the total assets for the same period (Annex 2, Table 1). The loans are guaranteed by the real estate mortgages based on market values. Further, the municipality of Sao Paulo agreed to repay BNH up to CR\$ 676.0 billion in case of default in the COHAB repayments. Further, the COHAB-SP



has titles to properties that represent 15% of their assets - composed of disposable real estate properties valued at CR\$ 18.2 billion, land CR\$ 25.4 billion, and projects in the development phase of CR\$ 107.2 billion. Outstanding loans in arrears of CR\$ 22.3 million as of end of December, 1984 (contained in current assets) represent 3% of the mortgage portfolio which is a satisfactory operating index. The COHAB-SP in December 31, 1986 participated with their own funds to approximately 22% of the loans. By the end of December 1984, the financing and refinancing reached CR\$ 881.0 billion or 84% of the obligations of COHAB-SP achieving a positive cash patrimony (capital and reserves) of CR\$ 162.0 billion in excess of the assets mentioned in para. 5.02 and ultimately affecting gross profits. This, of course, would increase the liability to CR\$ 1,055.7 billion from CR\$ 964.6 billion (Annex 2, Table 1). Other costs, consisting of 1% of COHAB-SP liabilities, were from suppliers and services.

5.05 The financial position of the COHAB is relatively well protected against inflation as the mortgages are expressed in UPCs and the excess cash reserves are invested in real estate "titles" indexed to inflation and guaranteed by the Government (ORTN). However, adjustments in the UPC, in 1979 and 52% in 1980, remained considerably lower than the inflation rate of 77% and 91% respectively. For 1982, 1983 and 1984, the Federal Government maintained a policy of adjusting the UPC in accordance with inflation. It is important to note that BNH did not update its real estate portfolio and as a consequence the liquid assets were valued well below their market value of December 31, 1984. On the other hand, the COHAB-SP made a provision, in its internal audit of their real property inventory, for a grant from EMURB (the Urban Development Corporation of the Prefeitura of Sao Paulo) of 26 areas of about 2,200 hectares located along the limits of the metro. It is estimated that these areas have a value of CR\$ 44.0 trillions using a low market value of CR\$ 2.0 million (US\$142.00 per square meter). (Many of these locations should be developed as multi-purpose commercial, service and residential centers, not as single-use housing.)

5.06 Conclusions. From analysis of 1979-84 and prospects for 1986, the COHAB-SP has a satisfactory financial position as seen in the analytical tables. For 1986, it generated internal cash assets of US\$8.2 million and a solid financial situation in terms of the magnitude, assurances and satisfactory return on its assets.

#### URBIS - Bahia Financial Re-Evaluation

5.07 For the URBIS-BAHIA, the principle source of funds is BNH through their various lines of financing for construction and sale of housing on the same terms as COHAB-SP (para. 5.01). The summary of the financial status of URBIS is presented in Annex 2, Tables 5, 6, and 7. During 1979-84, URBIS expanded its operations (with lower rates of interest and longer amortization periods compared to previous years) in line with the changes introduced by BNH during 1979 to facilitate access to home ownership for the lower-income population (para. 5.01). In respect to the total assets, the number of loans increased during the period by 11%.

5.08 The total assets, in US\$ value, increased 9% during 1979-84 (Annex 2, Table 5). The operational receipts, in US\$, for the same period



increased 336% and operational expenses increased 395% (Annex 2, Table 6). Gross profits during this period were positive; however, when the general management and administrative expenses were deducted the results were negative for the period 1980-84. These expenses vary with the magnitude of the annual investment program, but BNH regulations limit the percentage that they can charge - 4% to 8% of the construction contracts. This is not sufficient to cover the costs of land assemblage, site planning, engineering, unit designs, supervision and sales. Thus, the deficit is covered annually by subsidies and grants from the State Government of Bahia (Fundo Perdido) after deducting the negative monetary corrections in accordance with the legal criteria of the difference between monetary correction of the liquid asset and the monetary correction of the permanent assets. In this manner, URBIS had a positive cash flow for 1980-84 with a low rate of return (Annex 2, Table 7). This low level of profitability did not permit URBIS to maintain sufficient working capital during 1979-84; liquid assets were 3.2% of their liability in 1979 and 2.2% in 1984.

5.09 For December 31, 1984, the total assets of URBIS were CR\$ 238.0 billion cruzeiros and mortgage loans were CR\$ 136.0 billion representing 57% of the total asset (Annex 2, Table 5). The loans were guaranteed by the real estate mortgages based on market values of the properties. In addition, 32% of the assets were composed of projects in phases of development estimated at CR\$ 74.6 billion, and land at CR\$ 2.2 billion, and 6% of assets covered cash, deposits and bonds of CR\$ 14.5 billion. The loans in arrears for December 31, 1984 represent 0.7% (CR\$ 1.062 billion) which is unusually low. URBIS participated with their own resources of 3.8% of the loans by the end of December 1984. Financing and refinancing of BNH came to CR\$ 225.0 billion or 95% of the liabilities of URBIS through December 1984. When the credit of CR\$ 82 billion, due to adjustments to contracts, is deducted the percentage dropped to 91%. There are other liabilities that represent demands on URBIS through 1984 of slightly more than 3% of their obligations.

5.10 The financial position of URBIS is relatively protected against inflation as all mortgage loans are expressed in UPCs and the excess cash reserves are invested in real estate properties indexed to inflation and guaranteed by the Government (ORTN), (para. 5.05). However, the financial performance of URBIS in 1985 has declined and the prospects for 1986 are poor given the general economic conditions of the country, scarcity of new financial resources and recent increase in delayed mortgage payments. In addition, the State Water Company has not adequately serviced the new housing groups causing considerable stress to the occupants. They don't want to pay for poor service.

5.11 Conclusion. The financial position of URBIS during 1979-84 and the prospects for 1987 are unstable requiring both short-term and medium-term assistance. They must increase their operating revenues, (through improved collection services), curtail administrative costs (and recover their full costs), increase state transfers (earmarked for subsidies to the lower-income families) and increase financial assistance from BNH.



### Problems of Budgeting and Financial Planning of the two COHABs

5.12 It is important to note that during 1979-1984, accelerated increase in the cost of construction due to inflation was not followed by corresponding indexing and adjustment in the UPC value. This resulted in a large reduction in the number of contracting firms which reflected negatively on the planning and development of the COHABs programs. On the other hand, the accelerated increase in cost of construction also created problems with the remaining contracting firms due to inflated cost increases over their original bids. This in turn affected the level of affordability to low-income families.

5.13 From the beginning of the decade of 1970, the Municipal governments have been unable to cope with the increased problems of squatters in urban areas and the existing legal instruments for orderly urban development were ineffective in dealing with increased land speculation. As a result, the exaggerated land prices in the higher-income areas provoked a general increase in land prices over the remaining urban areas of a city. This in turn increased the cost of urban development - infrastructure, transport, etc. In addition, there were no viable alternative locations for low-income housing than the outlying areas with high transport costs.

5.14 The construction materials industry was not structured or organized to cope with the large fluctuation in demand. This in turn caused periodic crises in the availability of some construction materials.

5.15 Over time, a series of housing proposals and programs evolved into an ad hoc BNH housing policy with a combination of social objectives. In response to these policy changes, the COHABs were constantly forced to restructure their operations. In the absence of long-term planning, BNH was forced to invest in loans and programs that did not meet the basic social needs of shelter. A rational planning system in BNH is now emerging within the framework of State and regional programs aimed at integrating investments to optimize the three lines of credits: housing, urban infrastructure and basic sanitation. It should be noted that without the cross subsidies of the State Water Company, BNH as housing agency only would not be financially viable.

5.16 The increase in arrears of monthly mortgage payments, as a result of Federal Government actions in 1983, (restricting salary increases to a correction index below the SFH adopted) continues as a serious financial problem requiring additional loan adjustments.

### Project Affordability and Cost Recovery

5.17 The BNH comparative study of rent to mortgage payments under the housing finance system (SFH) during 1979-82 revealed that in the State of Bahia, the ratio was relatively high (5-7) for COHAB type housing of the 4-story blocks of apartments. It was clearly more beneficial to purchase than rent. However, in the case of cooperatives housing and those financed under the Brazilian system of savings and loans, the ratio was 1.7 to 0.75 (Annex 2, Table 8). The study concluded that the COHAB housing program, with its policy of cross subsidies (offered under SFH system for low-income



families along with selected locations for the sites and services projects) have produced viable shelter solutions for many low-income families of less than 3 minimum salaries. Cost recovery has been hampered by the high inflation rates. Salaries of employees were not indexed to the extremely high inflation causing a severe erosion in purchasing power. This resulted in large rent strikes and massive mortgage refinancing schemes (para. 5.03). While the data is not complete, the general impression is that less than 80% of the loans are fully recovered.

## VI. CONCLUSIONS AND RECOMMENDATIONS

6.01 The principal objectives were achieved: (i) to promote the lowest cost elements of PLANHAP--PROFILURB and FICAM programs, squatter upgrading, and lower design standards for housing and infrastructure; and (ii) to contribute to the institutional development of the COHABs and strengthen their overall delivery capacity. While the FICAM program (part of the project), of financing individual construction material loans was cut back due to lack of promotion, other states and municipalities took good advantage of this line of credit in non-Bank financed projects. It would appear that BNH was more interested in using Bank financing for production of new shelter solutions more than promoting self-help construction of minimum shelter solutions. During the period of high inflation, BNH had opted for the more formal program of CONSO, but then found that the cost recovery was thwarted by arrears in mortgage payments while squatter upgrading, which was more difficult, had a higher cost recovery because it was affordable. While the financial problems are serious, they represent fixed costs that the Bank can do little to change. (In fact, they have to be scaled up to improve cost recovery.) There is still ample room to improve the planning, design and engineering. In fact, the project successfully lowered standards and costs over the four operating years.

### 6.02 Recommendations

- (i) Urban upgrading with shelter improvements and/or new embryo shelters is a cost-effective program for low-income families (less than 2 minimum salaries) at 1/4 of the cost of new standard solutions - i.e., walk-up apartments. Even though the developed densities are half those of new 4-story apartments, the Bank should give the greater emphasis to urban upgrading rather than new standard solutions. Low-income squatter families in the established urban sprawl are part of an informal economy which is also improved with the urban upgrading programs.
- (ii) Large conjuntos of 4-story apartment blocks of 4,000 to 5,000 dwellings (for family incomes of 2.5 to 5 minimum salaries) should not be planned or built. They produce an anti-social environment of monolithic structures composed of a standard single-type unit; they are too large to be integrated into existing, or to be formed, neighborhoods; and they become more of a social problem than a solution - difficult to administer. In contrast,



- (iii) Community planning, site planning and dwelling unit designs need to be coordinated to achieve a better living environment.
- (iv) Innovative solutions such as pre-cast RCC components of steps/walkways and drainage channels were successful in squatter upgrading, especially on steep slopes, and should be adopted for similar projects in the future. In contrast, pre-cast RCC building components for standard housing solutions, on the scale of this project in the three metropolitan areas, is not recommended. 4/
- (v) Land banking of the COHABs should be based on smaller parcels of 8 to 10 ha., that can be integrated physically and socially and avoid the larger outlying remote sites lacking public services; and 5/
- (vi) the COHABs service charges for the cost of land assemblage, site planning, engineering unit designs, supervision, and sales, general management and administration must be increased to eliminate the large annual state subsidies.

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4/ The innovative solutions were well received by the beneficiaries and municipal officials of Salvador and Recife.

5/ Land banking of smaller parcels of 8 to 10 ha. was based on the adopted policy at the time of reduced project sizes of 400 to 500 dwellings.

## BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
Loan 1654-BR

	SAR ESTIMATES 1979-1981				ACTUAL PROJECT 1979-84			
	No. of D.U.	No. of Constr. Matl.Lns.	Costs <sup>a/</sup>		No. of D.U.	No. of Constr. Matl.Lns.	Costs <sup>b/</sup>	
			1,000 UPC	'000,000 US\$			1,000 UPC	'000,000 US\$
<b>PART A - Housing</b>	<b>51,300</b>	<b>23,800</b>	<b>11,493</b>	<b>169.6</b>	<b>59,586</b>		<b>21,977.7</b>	<b>219.7</b>
<b>COHAB - Sao Paulo</b>	(22,500)	-	(5,260)	(77.7)	(14,689)		(8,841.7)	(88.4)
- Dwelling units (CONSO & CESHE)	7,000	-	2,045	30.2	14,430		8,831.3	88.3
- Lots - S & S (PROFILURB)	15,500	-	1,550	22.9	259 <sup>c/</sup>		10.4	0.1
- Construct. matl. loans (FICAM)	-	11,100	1,665	24.6	-	-	-	-
<b>COHAB-PER</b>	(21,800)	-	(4,869)	(71.8)	(33,491)	-	(9,212.1)	(92.1)
- Dwelling units (CONSO & CESHE)	10,000	-	3,000	44.2	19,210	-	6,565.5	65.7
- Lots - S & S (PROFILURB)	11,800	-	1,239	18.3	14,281 <sup>c/</sup>	-	1,872.9	18.7
- Construct. matl. loans (FICAM)	-	8,400	630	9.3	-	2,295	773.7	7.7
<b>URBIS - BAHIA</b>	(7,000)	-	(1,364)	(20.1)	(11,406)	-	(3,923.9)	(39.2)
- Dwelling units (CONSO & CESHE)	2,500	-	750	11.0	4,286	-	2,276.4	22.7
- Lots - S & S (PROFILURB)	4,500	-	270	4.0	7,120 <sup>c/</sup>	-	1,647.5	16.5
- Construct. matl. loans (FICAM)	-	4,300	344	5.1	-	-	-	-
<b>PART B - Infra and Com. Facilities</b>	-	-	2,504	36.9	7,148	-	12,103.4	121.1
- Sao Paulo COHAB	-	-	526	7.7	-	-	-	-
COHAB-PER	-	-	487	7.2	905	-	1,157.5	11.6
. Squatter upgrad.	-	-	1,356	20.0	-	-	-	-
- BAHIA-URBIS	-	-	136	2.0	436	-	2,273.5	22.7
- Other COHABS	-	-	-	-	5,807	-	8,672.4	86.8
<b>PART C - Squatter Upgrading, EMBRYO Units &amp; Infrst.</b>								
Other States	-	-	-	-	35,707	-	11,966.3	119.7
<b>PART D</b>								
Others - S & S (PROFILURB)	10,000	-	1,200	17.7	-	-	-	-
Contingencies	-	-	2,813	41.5	-	-	-	-
<b>TOTAL</b>	<b>61,300</b>	<b>23,800</b>	<b>18,011</b>	<b>265.7</b>	<b>102,441</b>	<b>2,295</b>	<b>46,047.4</b>	<b>460.5</b>

a/ January 1979

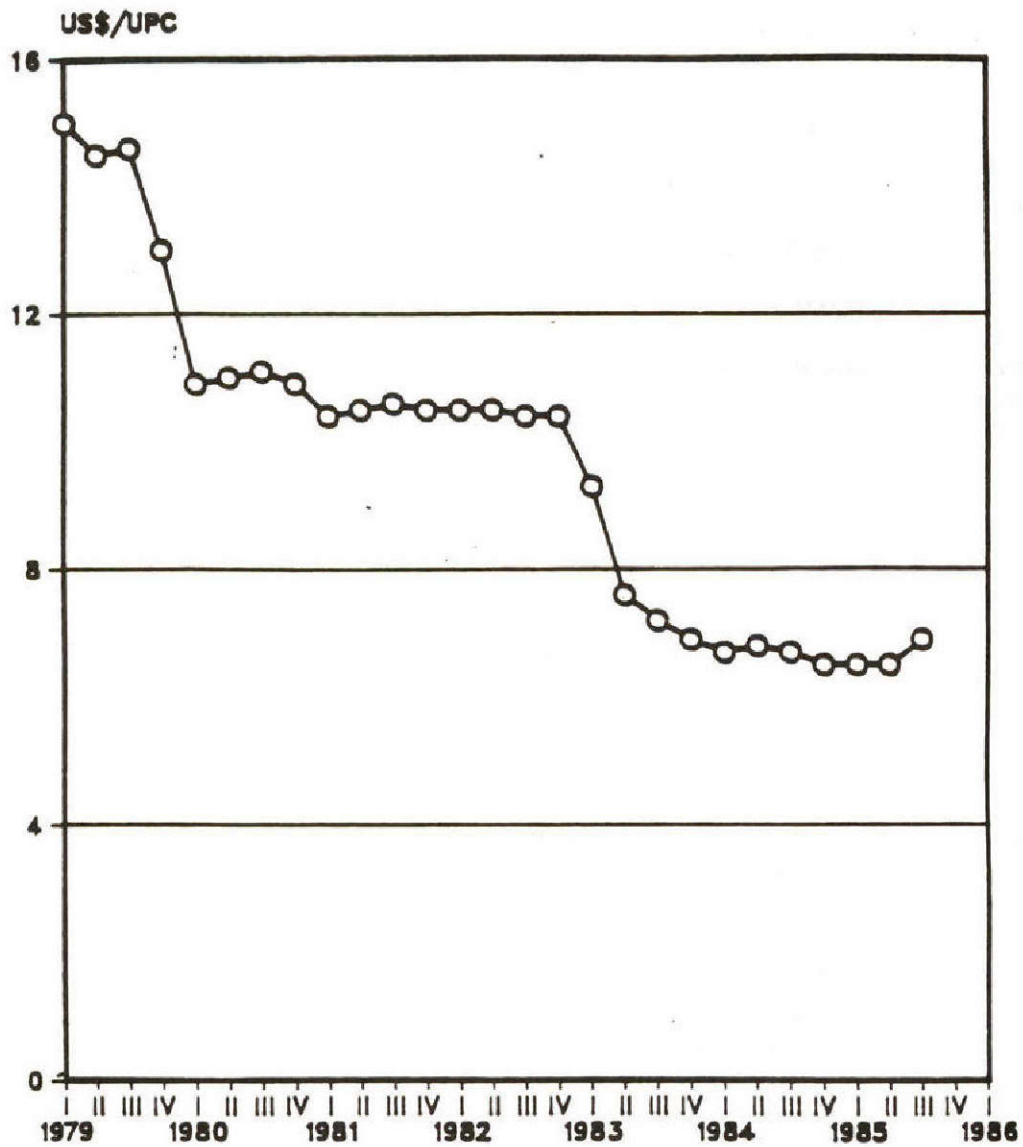
b/ December 1984

c/ Supplemented later with EMBRYO



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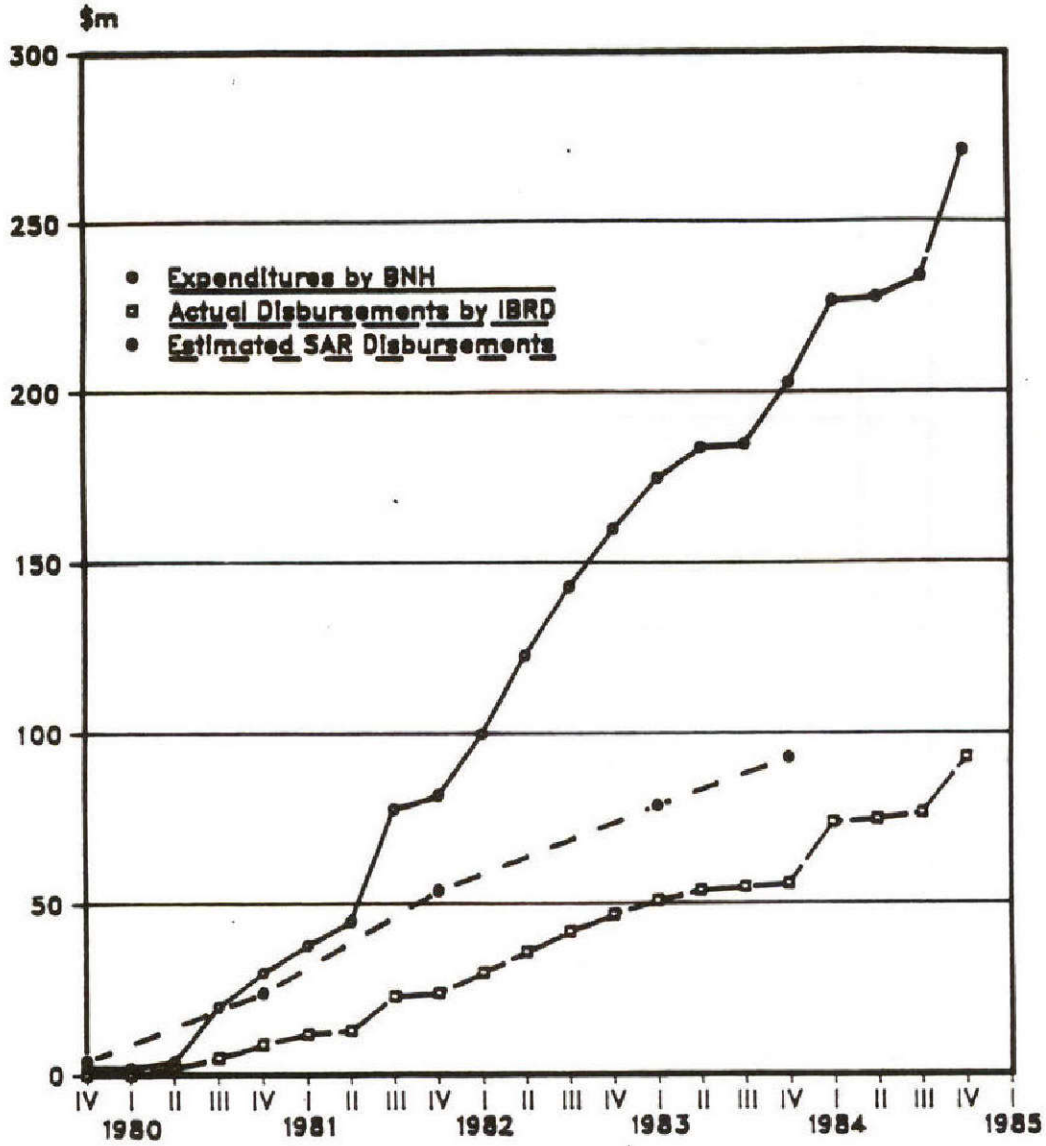
Changing Value of UPC\* in US\$ by Trimester  
Jan 79-July 85



\* Unidao Padrao de Capital (Standard Capital Unit)

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Expenditures and Disbursements





BRAZIL  
SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
Loan 1654-BR

COHAB - SAO PAULO  
BALANCE SHEETS AS OF DECEMBER 31,  
('000.000 Cr\$ and 000 US\$)

	1979		1980		1981		1982		1983		1984	
	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$
<b>ASSETS</b>												
<b>CURRENT ASSETS</b>												
CASH AND BANKS	154	8.324	618	9.741	2.342	18.326	6.605	26.141	12.972	13.183	2.892	908
TREASURY BOND-SHORT TERM	-	-	-	-	-	-	-	-	-	-	19.767	6.208
LOANS RECEIVABLE-SHORT TERM	9	212	33	503	172	1.346	785	3.107	2.987	3.036	22.347	7.019
OTHER CURRENT ASSETS	177	4.161	110	1.985	858	6.716	1.940	7.678	10.896	11.073	42.765	13.431
SUBTOTAL	540	12.697	801	12.229	3.372	26.386	9.330	36.926	26.855	27.292	87.771	27.566
<b>LONG-TERM ASSETS</b>												
LOANS RECEIVABLE-LONG TERM	4.947	116.318	12.978	198.137	34.726	271.721	89.868	355.673	251.512	255.602	871.019	273.561
OTHER LONG-TERM	673	15.824	1.374	20.978	1.337	10.462	2.393	9.471	5.687	5.779	9	3
SUBTOTAL	5.620	132.142	14.352	219.115	36.063	282.183	92.261	365.144	257.199	261.381	871.028	273.564
<b>FIXED ASSETS</b>	116	2.727	174	2.656	328	2.566	617	2.442	1.676	1.703	5.890	1.850
<b>TOTAL ASSETS</b>	6.276	147.566	15.327	234.000	39.763	311.135	102.208	404.512	285.730	290.376	964.689	302.980
<b>LIABILITIES</b>												
<b>CURRENT LIABILITIES</b>												
ACCOUNTS PAYABLE	117	2.751	242	3.695	560	4.382	1.308	5.177	1.199	1.218	8.276	2.599
DEPOSITS	10	235	28	428	66	516	180	712	322	327	856	269
LOANS CURRENT	99	2.328	540	8.244	259	2.027	502	1.987	1.985	2.018	5.331	1.674
OTHER CURRENT LIABILITIES	22	517	23	351	404	3.161	231	914	197	200	1.239	389
SUBTOTAL	248	5.831	833	12.718	1.289	10.086	2.221	8.790	3.703	3.763	15.702	4.931
<b>LONG-TERM LIABILITIES</b>												
LOANS-LONG TERM	5.541	130.285	13.421	204.901	39.013	305.266	98.875	391.321	284.408	289.032	878.105	275.787
OTHER	-	-	168	2.565	289	2.262	863	3.416	1.027	1.044	-	-
SUBTOTAL	5.541	130.285	13.589	207.466	39.302	307.528	99.738	394.737	285.435	290.076	878.105	275.787
<b>CAPITAL</b>												
CAPITAL	315	7.406	463	7.069	698	5.462	1.366	5.406	4.852	4.931	11.555	3.629
RESERVES/OTHER	172	4.044	442	4.321	(7.217)	(56.471)	(25.303)	(800.135)	(105.561)	(107.277)	(805.118)	(127.235)
RENTAL EXPENSES PAID	-	-	-	2.426	5.691	44.530	24.184	95.714	97.301	98.883	464.445	145.868
SUBTOTAL	487	11.450	905	13.816	(1.828)	(16.479)	249	985	(3.408)	(3.463)	70.882	22.262
<b>TOTAL LIABILITIES</b>	6.276	147.566	15.327	234.000	39.763	311.135	102.208	404.512	285.730	290.376	964.689	302.980
	US\$1-	42,51		65,50		127,80		252,67		984,00		3.184,00

BRAZIL  
SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
Loan 1634-BR

SUMMARY CASH FLOW

COHAB - SAO PAULO

('000.000 Cr\$ and 000 US\$)

	1979		1980		1981		1982		1983		1984	
	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$
I - Receitas de Atividades Operacionais (OPERATIONAL REVENUES)	1.698	39.925	3.917	59.802	8.588	66.807	24.677	97.665	81.012	82.329	320.660	100.709
II - Despesas de Atividades Operacionais (OPERATIONAL EXPENSES)	1.419	33.365	3.559	54.336	15.478	121.111	41.496	164.230	57.225	159.781	590.292	185.393
III - Resultado Bruto (GROSS PROFIT)	279	6.560	358	5.466	(6.940)	(54.304)	(16.819)	(66.565)	(76.213)	(77.452)	(69.632)	(84.684)
IV - Despesas Gerais e Administrativas (GEN. & ADMIN. EXPENSES)	125	2.939	225	3.435	486	3.803	956	3.784	2.795	2.840	11.001	3.454
V - Resultado Operacional Líquido (OPERATIONAL PROFIT)	154	3.621	133	2.031	(7.426)	(58.107)	(17.775)	(70.349)	(79.008)	(80.292)	(80.633)	(88.138)
VI - Resultado Não Operacional (NONOPERAT. EXPEND.)	(116)	3.198	(188)	- 2.870	(435)	(3.403)	6.685	26.457	38.565	39.192	257.438	80.853
VII - Resultado Líquido do Exercício (CASH BALANCE)	18	421	(55)	( 839)	(7.861)	(61.510)	(11.090)	(43.892)	(40.443)	(41.100)	(23.195)	(7.285)
	US\$ 1=	42,53		65,50		127,80		252,67		984,00		3.184,00

GSM/

ANEX 2  
Tabela 2



## BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
Loan 1654-BR

CONAS - SÃO PAULO

INCOME AND CASH FLOW STATEMENTS

ANNEX 2  
Table 3

('000.000 Cr\$ and 000 US\$)

I T E M S	I T E M S	H I S T O R I C A L				E S T I M A T E	
		1 9 8 4		1 9 8 5		1 9 8 6	
		Cr\$	US\$	Cr\$	US\$	Cr\$	US\$
<b>REVENUES FROM</b>	<b>RECEITA OPERACIONAL</b>						
Service Income	Receita de Serviços	1.270	399.1	7.632	774.5	212.971	15.388.0
Loan Income	Empréstimos Concedidos	1	0.3	6	0.6	-	-
Revenues Treasuries Bonds	Juros de Valores Mobiliários e depósitos	29.586	9.291.9	24.678	2.504.3	334.966	24.202.8
Other	Outras	83	26.0	649	45.9	19.496	1.119.7
<b>TOTAL INCOME</b>	<b>RECEITA TOTAL</b>	<b>30.940</b>	<b>9.717.3</b>	<b>32.965</b>	<b>3.345.0</b>	<b>563.433</b>	<b>40.710.5</b>
<b>OPERATING EXPENSES</b>	<b>DESPESA OPERACIONAL</b>						
Administrative Expenses	Despesas Administrativas	9.848	3.092.9	48.299	4.901.0	127.899	9.241.3
Financial Expenses	Despesas Financeiras	10	3.3	34	3.5	271.057	19.585.0
Other Expenses	Outras Despesas	191	59.9	780	79.1	91.333	3.709.1
<b>TOTAL EXPENSES</b>	<b>DESPESA TOTAL</b>	<b>10.049</b>	<b>3.156.1</b>	<b>49.113</b>	<b>4.983.6</b>	<b>490.291</b>	<b>32.535.4</b>
<b>INTERNAL CASH GENERATION</b>	<b>GERAÇÃO INTERNA DE CAIXA</b>	<b>20.891</b>	<b>6.561.2</b>	<b>(16.148)</b>	<b>(1.638.6)</b>	<b>113.142</b>	<b>8.175.1</b>
<b>SOURCES</b>	<b>FONTES (ORIGENS)</b>						
Internal Cash Generation	Geração Interna de Caixa	20.891	6.561.2	(16.148)	(1.638.6)	113.142	8.175.1
Loan Principal Amortization	Amortização dos Mutuários	26.515(a)	8.327.5	87.997	8.929.2	47.996	3.467.9
Loans BNN	Empréstimos do BNN	34.157	10.727.6	57.049	5.789.8	-	-
Deposits-Net of Withdrawals	Depósitos-Valores Líquidos de depósitos e saques	37.670	11.831.0	195.190	19.806.1	-	-
Other	Outras Fontes	999	314.2	25.023	2.546.5	23.456	1.839.2
<b>TOTAL SOURCES</b>	<b>TOTAL DAS FONTES</b>	<b>120.232</b>	<b>37.761.5</b>	<b>349.183</b>	<b>35.433.0</b>	<b>186.594</b>	<b>13.482.2</b>
<b>APPLICATIONS</b>	<b>USOS</b>						
New Loans	Novos Empréstimos (aplicações)	42.697	13.409.8	144.730	14.686.0	-	-
Debt Service-Amortization BNN	Serviço da Dívida-Amortização BNN	12.481(b)	3.919.8	52.633	5.340.7	5791	(11.8)
	Empréstimos	42.933	13.483.9	88.167	8.946.4	-	-
Other	Outras Aplicações	16.603	6.586.8	54.711	5.551.8	167.374	12.271.3
<b>TOTAL APPLICATIONS</b>	<b>TOTAL DE USOS</b>	<b>112.714</b>	<b>35.400.3</b>	<b>340.241</b>	<b>34.524.7</b>	<b>168.495</b>	<b>12,272.2</b>
Net Change in Cash	Variação Líquida de Caixa	9.531	2.261.2	8.942	309.3	20.299	1.452.2
	US\$ 1 =	1,184.00	3,134.00	4,855.00	9,951.00	228	11.34

(1) These mortgage payments are gross value for interest and amortization (1984-85)

(2) DITTO inclusion to payments to BNN (1984-85)

(3) INTRODUCTION OF CRUZADO

BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
Loan 1654-BR

COHAB - SAO PAULO  
PRESTACOES RECEBIDAS DOS MUTUARIOS - RETORNO DO BNN  
(Mortgage Receipts and Repayment to BNN)

A N O	COHAB-MORTGAGE RECEIPTS (A)	COHAB REPAYMENTS TO BNN (B)	RETAINED IN COHAB (A-B)-(C)	% RETENTION IN COHAB C/A x 100 (D)
1 9 7 9	444.870	231.065	213.805	48,06
1 9 8 0	665.218	324.184	341.034	51,27
1 9 8 1	1.008.674	454.729	553.945	54,92
1 9 8 2	1.619.718	520.264	1.099.454	67,88
1 9 8 3	2.093.351	1.878.552	214.799	10,26
1 9 8 4	1.835.293	1.029.400	805.893	43,91
1 9 8 5	1.909.128	1.425.797	483.331	25,32
T O T A L	9.576.252	5.863.991	3.712.261	38,77



BRASIL  
SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
Loan 1650-BR

ANNEX 2  
Table 5

BALANCE SHEETS AS OF DECEMBER, 31  
('000.000 Cr\$ and '000 US\$)

I T E M S	1 9 7 9		1 9 8 0		1 9 8 1		1 9 8 2		1 9 8 3		1 9 8 4	
	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$
<b>ASSETS</b>												
Cash and Banks	194	4.562	37	868	107	840	353	1.396	795	808	7.344	2.307
Treasure Bonds-Short Term	76	1.781	73	1.113	45	351	251	995	614	623	7.255	2.278
Loans Receivable-Short Term	96	2.258	76	1.174	114	893	205	812	1.016	1.033	1.351	424
Other Current Assets	4	87	16	242	85	663	133	528	29	30	178	57
<b>CURRENT ASSETS</b>	<b>370</b>	<b>8.688</b>	<b>232</b>	<b>3.397</b>	<b>351</b>	<b>2.749</b>	<b>940</b>	<b>3.723</b>	<b>2.454</b>	<b>2.494</b>	<b>16.128</b>	<b>5.066</b>
Loans Receivable-Long Term	2.525	59.364	5.134	78.380	12.407	97.085	34.317	135.817	115.178	117.051	218.554	68.641
Other Long Term	13	310	26	404	49	382	451	1.784	1.368	1.390	2.156	677
<b>LONG TERM ASSETS</b>	<b>2.538</b>	<b>59.674</b>	<b>5.160</b>	<b>78.784</b>	<b>12.456</b>	<b>97.467</b>	<b>34.768</b>	<b>137.601</b>	<b>116.546</b>	<b>118.441</b>	<b>220.710</b>	<b>69.318</b>
Fixed Assets	13	317	20	300	45	355	115	456	270	274	1.182	374
<b>TOTAL ASSETS</b>	<b>2.921</b>	<b>68.681</b>	<b>5.402</b>	<b>82.481</b>	<b>12.852</b>	<b>100.571</b>	<b>35.823</b>	<b>141.780</b>	<b>119.270</b>	<b>121.209</b>	<b>238.030</b>	<b>74.758</b>
<b>LIABILITIES</b>												
Accounts Payable	47	1.118	121	1.846	79	615	46	181	85	87	83	26
Deposits	10	236	27	419	52	407	127	503	198	199	1.100	346
Loans-Current Portion	59	1.401	83	1.264	180	1.409	599	2.373	1.069	1.086	5.897	1.852
Other Current Liabilities	2	205	41	938	76	598	133	527	108	313	536	169
<b>CURRENT LIABILITIES</b>	<b>125</b>	<b>2.960</b>	<b>232</b>	<b>4.467</b>	<b>387</b>	<b>3.029</b>	<b>905</b>	<b>3.583</b>	<b>1.458</b>	<b>1.655</b>	<b>7.618</b>	<b>2.393</b>
Loans-Long Term Portion	2.701	63.484	4.967	75.820	12.184	95.338	34.351	135.953	116.133	118.021	225.231	70.738
Other-Long Term	2	10	2	6	2	3	2	2	0	0	0	0
<b>TOTAL LIABILITIES</b>	<b>2.701</b>	<b>63.496</b>	<b>4.967</b>	<b>75.826</b>	<b>12.186</b>	<b>95.341</b>	<b>34.351</b>	<b>135.955</b>	<b>116.133</b>	<b>118.021</b>	<b>225.231</b>	<b>70.738</b>
<b>CAPITAL</b>	<b>62</b>	<b>1.438</b>	<b>86</b>	<b>1.311</b>	<b>129</b>	<b>1.313</b>	<b>254</b>	<b>1.004</b>	<b>502</b>	<b>510</b>	<b>1.288</b>	<b>405</b>
Reserves	33	787	37	977	52	1.188	113	1.238	277	323	1.493	1.222
Capital and Reserves	35	2.223	49	2.488	77	2.221	141	2.242	1.479	1.503	5.181	1.627
<b>TOTAL LIABILITIES AND CAPITAL</b>	<b>2.921</b>	<b>68.681</b>	<b>5.402</b>	<b>82.481</b>	<b>12.852</b>	<b>100.571</b>	<b>35.823</b>	<b>141.780</b>	<b>119.270</b>	<b>121.209</b>	<b>238.030</b>	<b>74.758</b>
US\$ 1 =		42.53		65.50		127.80		252.67		384.20		1.184.00

BRAZIL  
SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
Loan 1654-88

URBIS S.A.

('000.000 Cr\$ and 000 US\$)

I T E M S	1 9 7 9		1 9 8 0		1 9 8 1		1 9 8 2		1 9 8 3		1 9 8 4	
	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$
I - RECEITAS DE ATIVIDADES OPERACIONAIS	456,8	10.741	1.271,1	18.582	3.754,4	29.377,0	8.512	33.688	41.267	41.938	149.057	46.814
II - DESPESAS DE ATIVIDADES OPERACIONAIS	383,9	9.027	1.044,9	15.953	3.468,0	27.136,0	7.610	30.118	39.465	40.107	142.397	44.723
III - RESULTADO BRUTO	72,9	1.714	172,2	2.629	286,4	2.241	902	3.570	1.802	1.831	6.660	2.091
IV - DESPESAS GERAIS E ADMINISTRATIVAS	70,6	1.660	192,3	2.936	421,0	3.294	1.111	4.397	2.507	2.548	7.663	2.407
V - RESULTADO OPERACIONAL LIQUIDO	2,3	54	(20,1)	( 307)	(134,6)	(1.053)	(209)	(827)	(705)	(717)	(1.003)	(316)
VI - RESULTADO NÃO OPERACIONAL	1,7	40	20,9	319	135,7	1.062	224	886	744	756	1.799	565
VII - RESULTADO LIQUIDO DO EXERCÍCIO	4,0	94	0,8	12	1,1	9	15	59	39	39	796	249
	US\$ 1 -	42,53		65,50		127,80		252,67		984,00		3.184,00



BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT

Loan 1654-BR

INDICES FINANCEIROS/ECONOMICO  
(Financial and Economic Indicators)

URBIS S.A.

<u>INDICES</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
I - LIQUIDEZ SECA (QUICK RATIO)	2,143	2,443	2,393	2,667	2,849	1,916	0,182
II - LIQUIDEZ CORRENTE (CURRENT RATIO)	2,935	2,760	0,907	1,039	1,479	2,117	0,397
III- LIQUIDEZ GERAL (GENERAL LIQUIDITY)	1,029	1,023	1,019	1,012	1,010	1,017	1,013
IV - GARANTIA CAPITAL DE TERCEIROS	0,033	0,027	0,022	0,016	0,012	0,022	0,017
V - RENTABILIDADE (YIELD)	0,0037	0,0035	0,0026	0,0186	0,0170	0,0997	0,0887

**BRAZIL**  
**SITES AND SERVICES AND LOW-COST HOUSING PROJECT**  
**Loan 1654-BR**

**RELACAO ALUGUEL/PRESTACAO DO S F H**  
**(Relationship of Rent to Mortgage Payments)**

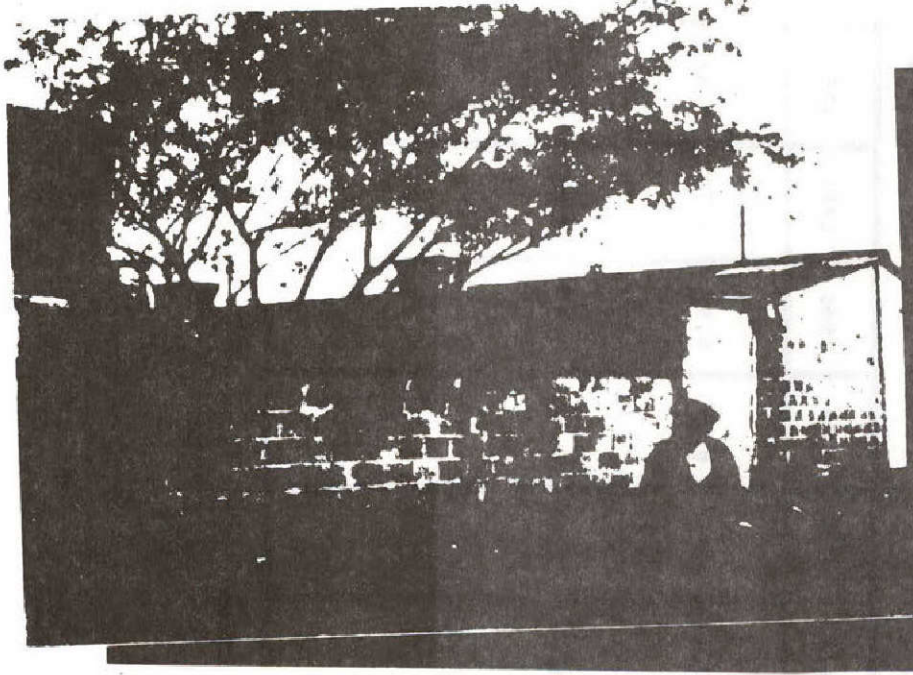
**SALVADOR**

FAIXAS DE ATENDIMENTO	SALA + 1 QUARTO				SALA + 2 QUARTOS				SALA + 3 QUARTOS			
	1979	1980	1981	1982	1979	1980	1981	1982	1979	1980	1981	1982
FAIXA COHAB	6,59	6,92	6,73	7,49	5,52	5,58	7,27	6,03	8,09	6,98	6,70	6,84
FAIXA COOPERATIVAS HABITACIONAIS	1,16	1,16	1,16	1,52	1,13	1,20	1,68	1,40	1,37	1,37	1,03	0,89
FAIXA SBPE	1,01	0,97	0,96	1,09	0,75	0,75	0,76	1,03	0,84	0,83	0,83	1,13

OBS.: RECIFE - Não foi possível realizar a pesquisa para habitações "faixa COHAB" por não existirem informações sobre locações nesta faixa.

SÃO PAULO - Ausência de informações da Agência do BNH.





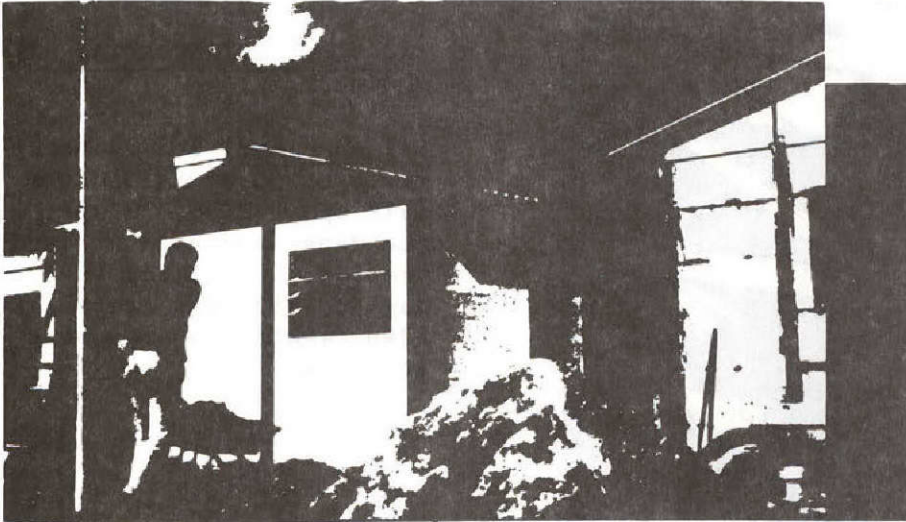
SAO PAULO METROPOLITAN AREA  
(COHAB-SB)

Vila Maria - Slum upgrading.  
Lot size: 5 m x 15 m with  
18 m<sup>2</sup> embryo built in back  
of lot with initial cost per  
dwelling US\$2,900.  
Completed December 1980.

MARIA EXPANSION. With strong support of the Homeowner's Association over  
of the families have expanded their dwellings with 2 stories in front in  
y successful variety of solutions.



September 1986



SAO PAULO METROPOLITAN AREA  
(COHAB-SP)

CASA MODULAR - Based on 1 m modules, 2 types - 18 m<sup>2</sup> and 24 m<sup>2</sup> floor area with pre-cast wall panels, columns, door frames and lintels. First stage construction US\$1,125 per solution on 5 m x 15 m lots. This solution is appropriate for outlying suburban locations.



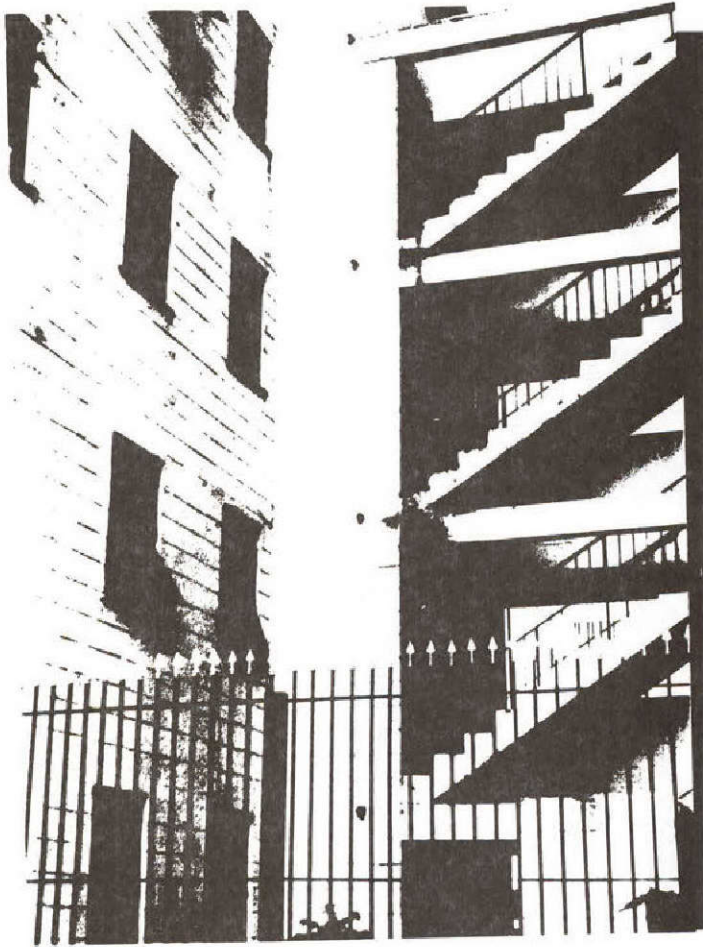
Light steel frame with small concrete panels on edge

18 m<sup>2</sup> - 1st stage:  
US\$1,400.



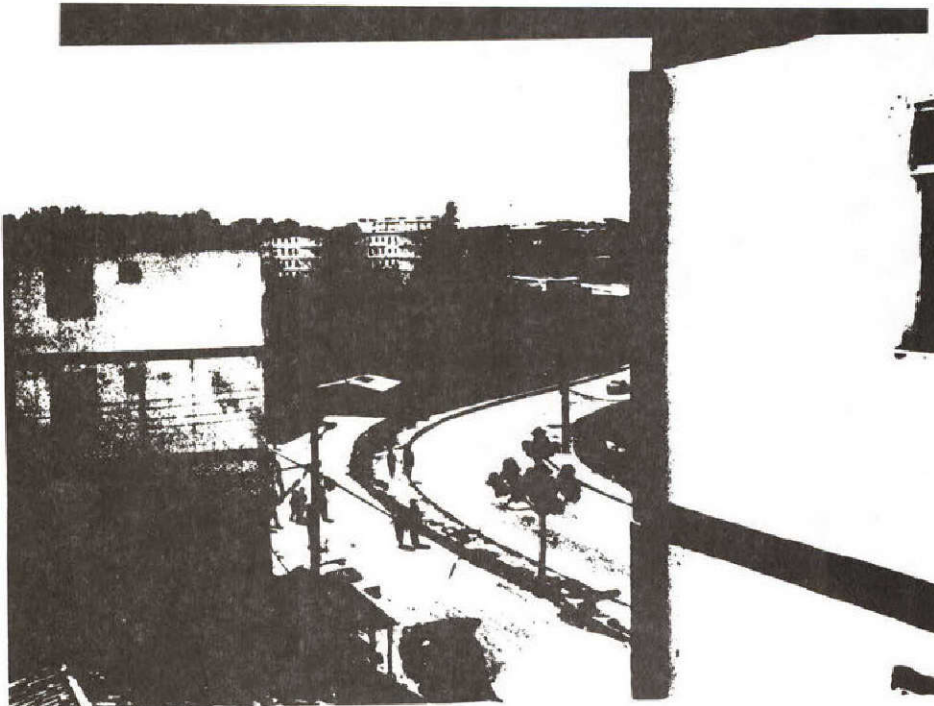
Integral bearing wall panels  
- 18 m<sup>2</sup> - 1st stage:  
US\$1,250.





SAO PAULO METROPOLITAN AREA  
COHAB-SP

Fernao-Dias: 1,060 apartments of 50 m<sup>2</sup> in 5 story walk ups - US\$6,800/apt. - too dense and void of landscaping. Completed in August 1983, the project is also lacking in community services.



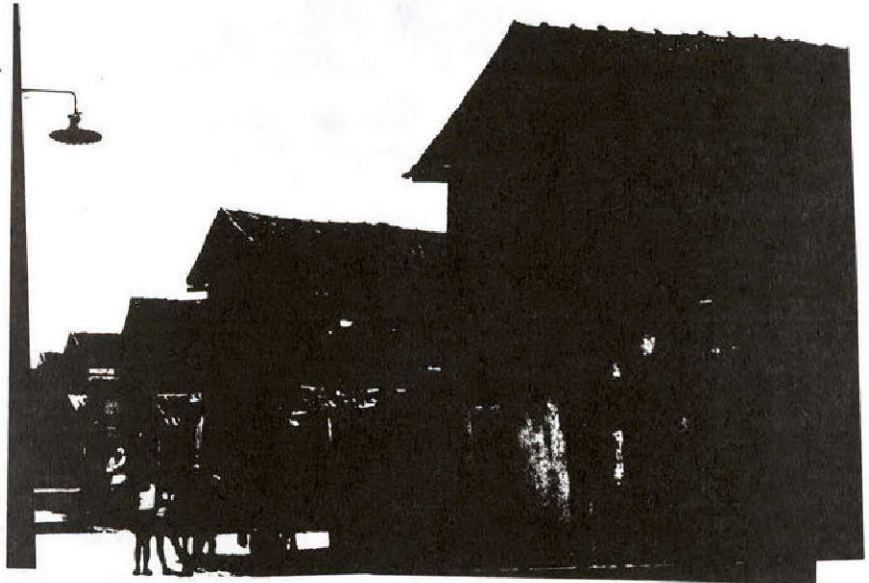
SALVADOR, BAHIA, URBIS,  
BAHIA - MUSSURUNGA: 3,983  
apts. in 3 stages 48m<sup>2</sup> in 4  
story walk-ups -  
US\$3,880/apt. - smaller  
clusters, using pre-cast RCC  
tilt-up panel construction.  
Completed in December 1982



SALVADOR, BAHIA, URBIS,  
BAHIA

MUSSURUNGA - 3,983 apts. -  
Individual court yard  
entrance to each block.

RIO DE JANEIRO  
Earlier attempt in 1940s  
to re-house slum dwellers-  
now a social problem



September 1986



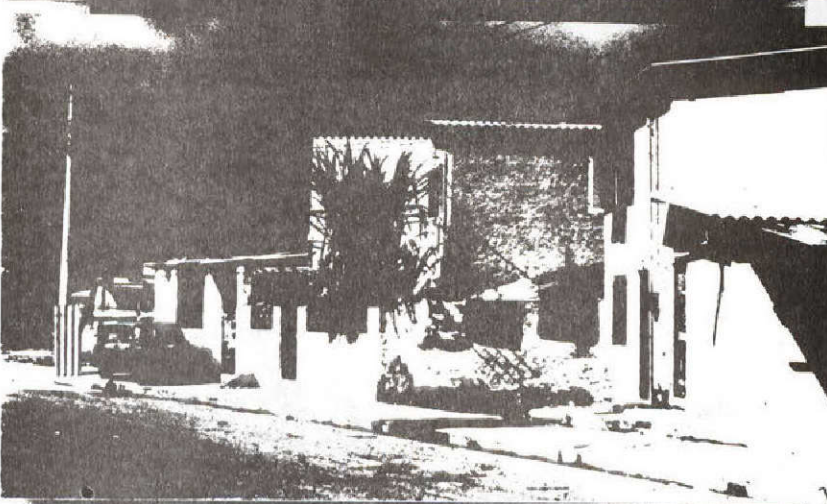


RIO DE JANEIRO

BNH-RIO

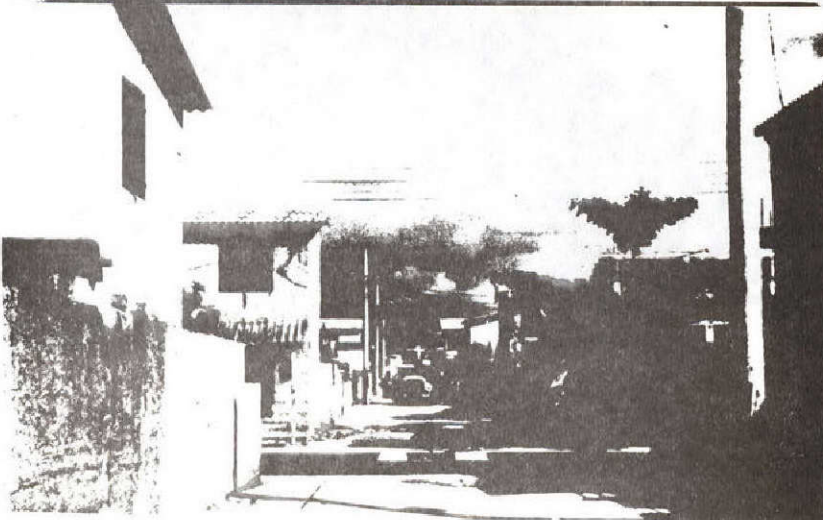
PROYECTO RIO VILA PINHEIRO -

Slum Clearance with 3,000 relocation dwellings in the first stage - 40 m<sup>2</sup> construction per apartment in one and two stories on 5 x 15 m lots with 4-story walk-up apartments to the rear of the site. Completed June 1985. Total project resettlement is 17,000 families.



VILA PINHEIRO - 1st Stage

Diagonal row housing with commercial on the corner. Cost of 40 m<sup>2</sup> 1st stage was US\$5,900, including hydraulic landfill.

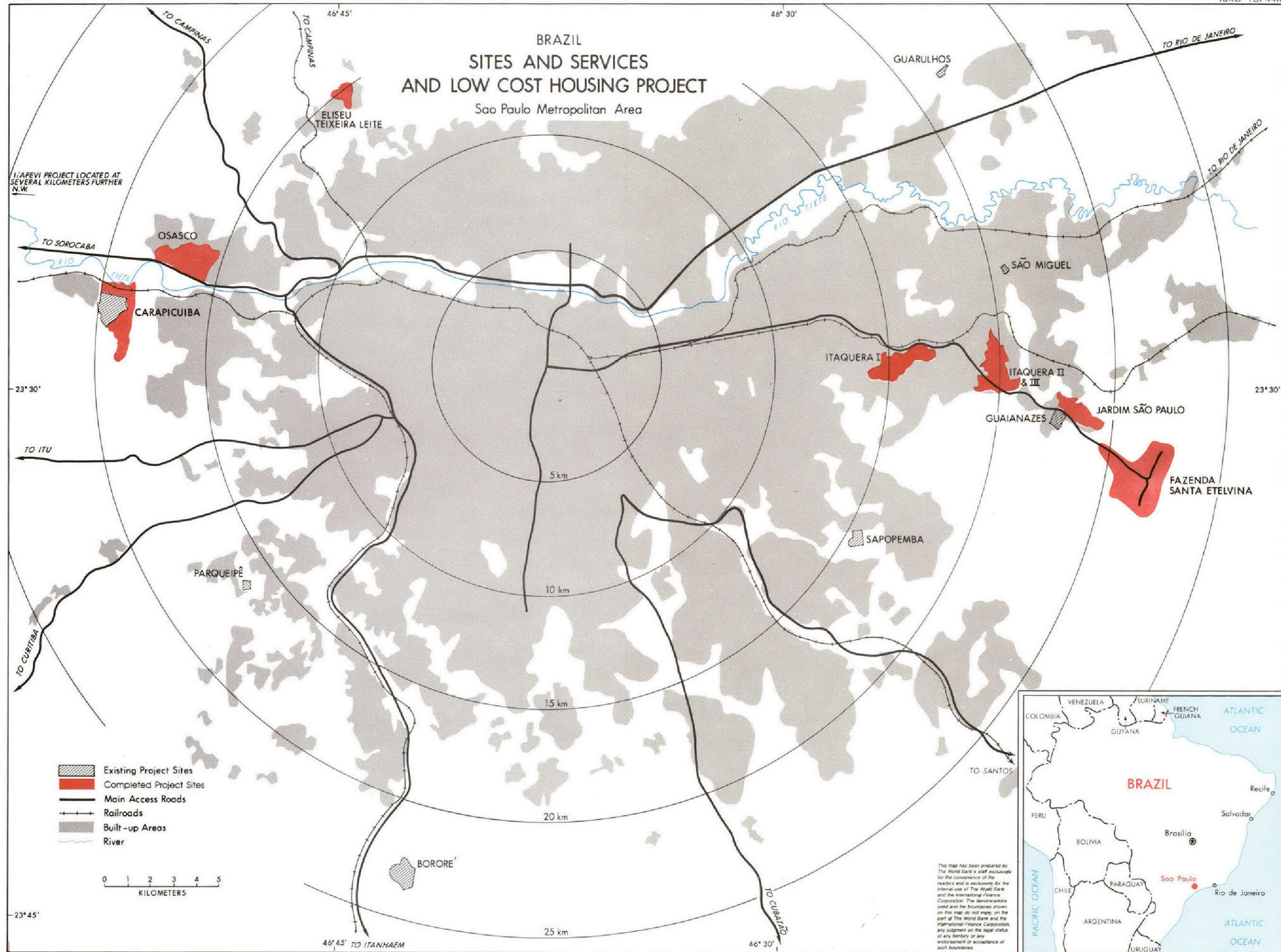


VILA PINHEIRO - 1st Stage

Pedestrian and service lane.

September 1986





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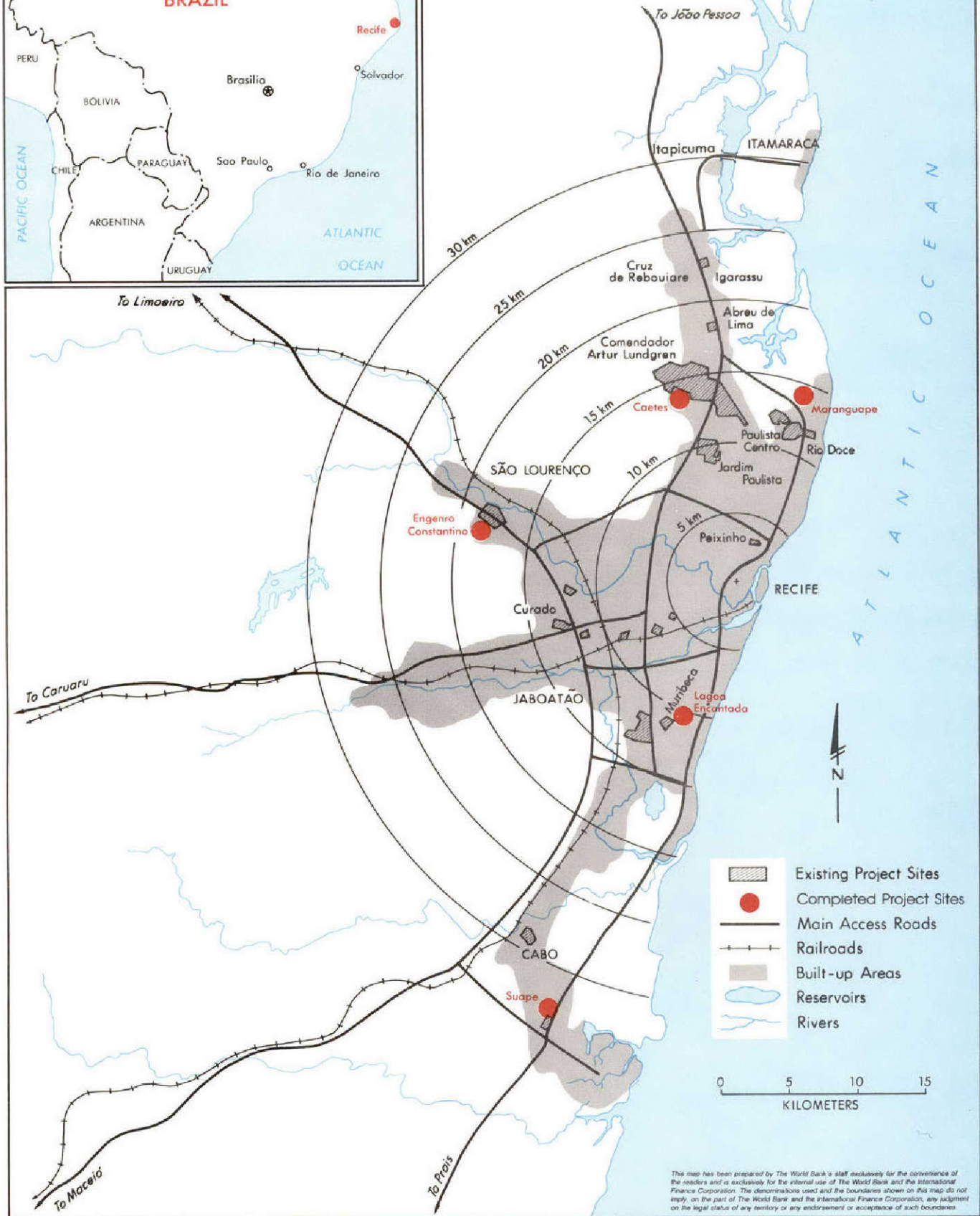




# BRAZIL

## SITES AND SERVICES AND LOW COST HOUSING PROJECT

### Recife Metropolitan Area





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WORLDBANK MSS

ZCZC OERC0139 OERS0394

WDIAL

REF : OEDDR

OINFO

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-SUBJECT: AUDIT OF BRAZIL SITES AND SERVICES

-FILENAME: \

-DRAFTED BY: J. BUKY/TNR EXT: 32919

-AUTHORIZED BY: RENE RIBI

-CC: \

---

-2123578 CEF BR =

-MR. PETER JOSE SCHWEIZER

-INTERNATIONAL COOPERATION UNIT

-BRAZIL

BT

WASHINGTON, DC - 27-MAY-88

REUR TELEX 26 MAY. MR. DAVIS WILL ARRIVE RIO MONDAY, JUNE 6 AT 0850 AM PAN AM FLIGHT 201, AND WILL VISIT YOUR OFFICE SAME DAY 1400 PM. WE AGREE VISITS TO STATES TO BE PROGRAMMED AFTER YOUR DISCUSSIONS. MAIN ISSUES TO BE DISCUSSED WILL BE PROJECT IMPLEMENTATION EXPERIENCE; PROJECT PREPARATION AND REVISIONS; PHYSICAL ACCOMPLISHMENTS; PROJECT COSTS AND FINANCING; PERFORMANCE OF CONTRACTORS; INSTITUTIONAL PERFORMANCE AND DEVELOPMENT, FINANCIAL PERFORMANCE; ECONOMIC PERFORMANCE; TECHNICAL ASSISTANCE; PERFORMANCE OF WORLD BANK - TIMING, APPRAISAL, SUPERVISION, ADAPTATION AND FLEXIBILITY; POINTS OF SPECIAL INTEREST INCLUDING ENVIRONMENTAL AND SOCIAL ISSUES, LAND ACQUISITION; AND LESSONS TO BE LEARNT. REGARDS, RIBI, ACTING DIVISION CHIEF OEDD2. INTBAFRAD

=05271552

WDIAL  
.OEDDR  
OINFO

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-SUBJECT: AUDIT OF BRAZIL SITES AND SERVICES  
-FILENAME: \ *[initials]*  
-DICTATED BY: J. BUKY/TNR EXT: 32919  
-AUTHORIZED BY: RENE RIBI *[signature]*  
-CC: \

-----  
-2123578 CEF BR =  
-MR. PETER JOSE SCHWEIZER  
-INTERNATIONAL COOPERATION UNIT  
-BRAZIL

BT  
WASHINGTON, DC - 27-MAY-88  
REUR TELEX 26 MAY. MR. DAVIS WILL ARRIVE RIO MONDAY, JUNE 6 AT 0850  
AM PAN AM FLIGHT 201, AND WILL VISIT YOUR OFFICE SAME DAY 1400 PM.  
WE AGREE VISITS TO STATES TO BE PROGRAMMED AFTER YOUR DISCUSSIONS.  
MAIN ISSUES TO BE DISCUSSED WILL BE PROJECT IMPLEMENTATION  
EXPERIENCE; PROJECT PREPARATION AND REVISIONS; PHYSICAL  
ACCOMPLISHMENTS; PROJECT COSTS AND FINANCING; PERFORMANCE OF  
CONTRACTORS; INSTITUTIONAL PERFORMANCE AND DEVELOPMENT, FINANCIAL  
PERFORMANCE; ECONOMIC PERFORMANCE; TECHNICAL ASSISTANCE; PERFORMANCE  
OF WORLD BANK - TIMING, APPRAISAL, SUPERVISION, ADAPTATION AND  
FLEXIBILITY; POINTS OF SPECIAL INTEREST INCLUDING ENVIRONMENTAL AND  
SOCIAL ISSUES, LAND ACQUISITION; AND LESSONS TO BE LEARNED. REGARDS,  
RIBI, ACTING DIVISION CHIEF OEDD2. INTBAFRAD



*Ma Bekey*  
*John!*  
*YBB*

ZCZC DERP0164 IWB0010

OEDD2

REF : TCP FCA

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\* OEDD2 \*

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IWB010

ON INSWBK

.FTCCMAC 26-01206.01

MSG NR 2073/88

MR. ALEXANDER NOWICKI  
CHIEF-OPERATIONS EVALUATION DEPT.  
WORLD BANK

REYOUR TELEX DATED 17 MAY WE AGREE WITH PROPOSED MISSION OF MR. JOHN DAVIS AND SUGGEST MEETING IN RIO ON THE DAY OF HIS ARRIVAL AT 14:00 PM WITH CEF'S INTERNACIONAL COOPERATION UNIT AND HOUSING DEPARTMENT OFFICIALS. VISITS TO STATES SHOULD BE PROGRAMMED THEN. MEETING WILL BE HELD AT CEF'S CENTRAL OFFICE AVENIDA RIO BRANCO 174, 28 TH FLOOR, ROOM 69, PHONE 217-2440, TELEX NR 2134382 CEF BR (CONTACT: MR. AUGUSTO CRAMER). AWAIT CONFIRMATION AND INFORMATION ON MAIN ISSUES TO BE DISCUSSED. REGARDS PETER JOSE SCHWEIZER, INTERNATIONAL COOPERATION UNIT/CEF/BRASIL. CEF/FILIAL/RJ

2123578CEFE BR

WORLD BANK MSG

ZCZC OERC0126 OERS0353

MDIAL

REF : DEDDR

OINFO

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-SUBJECT: MISSION TO BRAZIL (SITES & SERV. & LOW-COST HOUSING)  
-FILENAME: (LOAN 1454-BR)  
-DRAFTED BY: JREUKY:ABS EXT: 36010  
-AUTHORIZED BY: ALEXANDER NOWICKI, CHIEF, OEDD2  
-CC: MESSRS. MUNASINGHE, MENEZES (LAHIE); MR. PAPADOPOULOS, RES.  
-REP., BRAZIL

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391 0611365 =

-DIRECTOR GENERAL  
-CAIXA ECONOMICA FEDERAL  
-BRASILIA, D.F., BRAZIL  
IBRIBRA  
-INTBAFRAD  
-MR. GEORGE PAPADOPOULOS  
-RESIDENT REPRESENTATIVE  
-RIO DE JANEIRO, R.J, BRAZIL

BT

WASHINGTON, DC -- 20-MAY-88

ATTN. DIRECTOR GENERAL, CAIXA ECONOMICA FEDERAL, BRASILIA, D.F., BRAZIL.

REF. SITES AND SERVICES AND LOW-COST HOUSING PROJECT (LOAN 1454-BR). THE OPERATIONS EVALUATION DEPARTMENT REVIEWS COMPLETED PROJECTS TO LEARN FROM EXPERIENCE AND TO CONTRIBUTE TO THE BANK'S CONTINUING EFFORTS TO IMPROVE THE QUALITY OF ITS LENDING AND TECHNICAL ASSISTANCE ACTIVITIES. AN IMPORTANT PART OF THIS PROCESS IS TO HAVE THE VIEWS OF THE BORROWER AND ITS AGENCIES ON THESE MATTERS. WE THEREFORE PROPOSE THAT MR. JOHN DAVIS, CONSULTANT TO THE BANK, VISIT BRAZIL AROUND THE 31ST OF MAY, 1988, FOR APPROXIMATELY TWO OR THREE WEEKS FOR DISCUSSIONS ON THE ABOVE-MENTIONED PROJECT WITH APPROPRIATE OFFICIALS. IN ORDER TO COVER ALL OR MOST PROJECT COMPONENTS, MR. DAVIS WOULD PROPOSE TO VISIT RIO, SAO PAULO, BAHIA, PERNAMBUCO AND RECIFE, INCLUDING APPROPRIATE FIELD/SITE VISITS, IF CONVENIENT. FINAL DETAILS OF THESE VISITS COULD BE ARRANGED ON ARRIVAL AND WE WILL ADVISE YOU SHORTLY OF THE MAIN ISSUES TO BE DISCUSSED AND INFORMATION TO BE OBTAINED. WE ARE AWARE, OF COURSE, OF THE CHANGES THAT HAVE TAKEN PLACE IN THE SECTOR ORGANIZATION IN BRAZIL (SNM NO LONGER EXISTS) AND THAT THERE MAY BE SOME DIFFICULTIES IN OBTAINING THE NECESSARY INFORMATION. NEVERTHELESS, SINCE THE BORROWER'S CONTRIBUTION TO OUR EVALUATION WORK IS VITALLY IMPORTANT, WE SHOULD BE GRATEFUL FOR YOUR ASSISTANCE IN DIRECTING THIS EFFORT. KINDLY INFORM ME BY CABLE WHETHER PROPOSED TIMING OF THE MISSION IS CONVENIENT. REGARDS, ALEXANDER NOWICKI, CHIEF, POLICY-BASED LENDING, ENERGY, INDUSTRY AND URBAN SECTORS DIVISION, OPERATIONS EVALUATION DEPARTMENT, INTBAFRAD.

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-SUBJECT: MISSION TO BRAZIL (SITES & SERV. & LOW-COST HOUSING)  
-FILENAME: (LOAN 1654-BR)  
-DRAFTED BY: JBBUKY:ABS *YBB* EXT: 36010  
-AUTHORIZED BY: ALEXANDER NOWICKI, CHIEF, OEDD2  
-CC: MESSRS. MUNASINGHE, MENEZES (LA1IE); MR. PAPADOPOULOS, RES.  
-REP., BRAZIL  
-----

391 0611365 =  
-DIRECTOR GENERAL  
-CAIXA ECONOMICA FEDERAL  
-BRASILIA, D.F., BRAZIL  
IBRDBRA  
-INTBAFRAD  
-MR. GEORGE PAPADOPOULOS  
-RESIDENT REPRESENTATIVE  
-RIO DE JANEIRO, RJ, BRAZIL

BT

WASHINGTON, DC - 20-MAY-88

N. DIRECTOR GENERAL, CAIXA ECONOMICA FEDERAL, BRASILIA, D.F.,  
BRAZIL.

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ENERGY, INDUSTRY AND URBAN SECTORS DIVISION, OPERATIONS EVALUATION  
DEPARTMENT, INTBAFRAD.

ZCZC

BIRD 39/88

BRASILIA, MAY 20, 1988.

PAGE 1 OF 1

ATTN MR. ALEXANDER NOWICKI, CHIEF, POLICY-BASED LENDING, ENERGY,  
INDUSTRY AND URBAN SECTORS DIVISION, OPERATIONS EVALUATION  
DEPARTMENT, WORLD BANK.

CONCERNING YOUR TELEX DATED MAY 17, 1988, RE. EVALUATION MISSION OF  
LOAN 1454-BR, PLEASE NOTE THAT BANCO NACIONAL DE HABITA AD HAS  
BEEN ABOLISHED TWO YEARS AGO. PLEASE CHECK WITH INFRASTRUCTURE  
DIVISION, BRAZIL DEPARTMENT, WHICH INSTITUTION IS NOW IN CHARGE OF  
THIS PROJECT.

REGARDS, GEORGE PAPADOPOULOS, RESIDENT REPRESENTATIVE, BRASILIA  
FIELD OFFICE, WORLD BANK, BRAZIL.

=05200B35

NNNN

WORLDBANK MBS



BRAZ

MENEZES → 69324

CEF<sup>②</sup> 0613864

Telex # 0611365

Sector Bancario Sul

Brasilia, DF, B

Quadra 4, Lote 34

CEP. 70070

Director General

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Munasinghe, Menezes.  
(LA/IE) ~~##~~

DIR. GEN.

Caixa Economica Federal

ZC2C DERCO117 DER80341

WDIAL

REF : DEDDR

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-FILENAME: (LOAN 1654-BR)  
-DRAFTED BY: JBBUKY:ABS EXT: 36010  
-AUTHORIZED BY: ALEXANDER NOWICKI, CHIEF, DEDD2  
-CC: MR. MUNASINGHE, CHIEF, LA11E; MR. PAPADOPOULOS, RES. REP.,  
-BRAZIL

---

-IBRD/IDA  
-INTBAFRAD  
-MR. GEORGE PAPADOPOULOS  
-RESIDENT REPRESENTATIVE  
-RIO DE JANEIRO, R.J., BRAZIL  
391 611340 =  
-PRESIDENTE  
-BANCO NACIONAL DA HABITACAO  
-BRASILIA, D.F., BRAZIL  
391 1124214 =  
-DIRETOR  
-BANCO NACIONAL DA HABITACAO  
-SAO PAULO, SP, BRAZIL  
391 2122062 =  
-DIRETOR  
-BANCO NACIONAL DA HABITACAO  
-RIO DE JANEIRO, R.J., BRAZIL  
BT

WASHINGTON, DC - 17-MAY-88

ATTN PRESIDENTE AND DIRECTORES DO BANCO NACIONAL DA HABITACAO IN  
BRASILIA, SAO PAULO AND RIO DE JANEIRO.

REF. SITES AND SERVICES AND LOW-COST HOUSING PROJECT (LOAN 1654-BR).  
THE OPERATIONS EVALUATION DEPARTMENT REVIEWS COMPLETED PROJECTS TO  
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NOWICKI, CHIEF, POLICY-BASED LENDING, ENERGY, INDUSTRY AND URBAN  
SECTORS DIVISION, OPERATIONS EVALUATION DEPARTMENT, INTBAFRAD.

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-FILENAME: (LOAN 1654-BR)  
-DRAFTED BY: JBBUKY:ABS *100* EXT: 36010  
-AUTHORIZED BY: ALEXANDER NOWICKI, *he* CHIEF, OEDD2  
-CC: MR. MUNASINGHE, CHIEF, LALIE; MR. PAPADOPOULOS, RES. REP.,  
-BRAZIL  
-----

-IBRDBRA  
-INTBAFRAD  
-MR. GEORGE PAPADOPOULOS  
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-DIRETOR  
-BANCO NACIONAL DA HABITACAO  
-RIO DE JANEIRO, RJ, BRAZIL  
BT

WASHINGTON, DC - 18-MAY-88  
ATTN PRESIDENTE AND DIRECTORES DO BANCO NACIONAL DA HABITACAO IN  
BRASILIA, SAO PAULO AND RIO DE JANEIRO.  
REF. SITES AND SERVICES AND LOW-COST HOUSING PROJECT (LOAN 1654-BR).  
THE OPERATIONS EVALUATION DEPARTMENT REVIEWS COMPLETED PROJECTS TO  
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NOWICKI, CHIEF, POLICY-BASED LENDING, ENERGY, INDUSTRY AND URBAN  
SECTORS DIVISION, OPERATIONS EVALUATION DEPARTMENT, INTBAFRAD.

*We are aware, of course, the changes that have taken place in  
the sector organization in Brazil (BNH no longer exists)  
and that there may be some difficulties in obtaining the  
necessary information. Nevertheless, since the borrower's  
contribution to our evaluation would be vitally important,  
we should be grateful for your assistance in directing  
this effort.*

H-6092

# OFFICE MEMORANDUM

Code: 1687.012

original sent → Mr. Chopra

**DATE:** March 31, 1987

**TO:** Mr. Ram Kumar Chopra, Director, OEDOD

**FROM:** Kin Maung Thint, Chief, LCPUR

**EXTENSION:** 72445

**SUBJECT:** BRAZIL: Sites & Services and Low-Cost Housing Project  
Loan 1654-BR  
Project Completion Project

---

1. I am pleased to send you the final version of the Project Completion Report for the above-mentioned project.
2. In transmitting the report, I would like to state the following:
  - (i) The report has been cleared by the responsible Assistant Director of the LAC Projects Department and by the relevant Programs Division;
  - (ii) Before finalizing the report, it was submitted for comments to OPS and their comments were taken into account to the extent deemed appropriate;
  - (iii) Comments in the report concerning consultants have been cleared with the Legal Department and would have no legal implications for the Bank.

EEcheve ~~LS~~ /af

cc: Messrs./Mmes.: Picciotto, Finzi, LCPDR; Steckhan, Crabbe, LCI; Joss, LCPUR; Abbott, LEG; Vogel, LOA; Kopp, CPS; Costa, WUD; Swahn, EDC, Reyes, OED, Tveskov, LCI

APR 6 - 1987

Date Rec'd in OED: 04/03/87



FOR DETAILED INSTRUCTIONS ON COMPLETION OF THIS FORM,  
PLEASE SEE ANNEX C OF OMS 3.50

( ) THE INITIAL SUMMARY  
THIS SUMMARY IS ( ) PART OF A MISSION REPORT  
( ) AN ANNUAL UPDATE

REGIONAL OFFICE: | PROJECT NAME: | PROJECT CODE: | LOAN (X) CREDIT ( ) NO | L.C. AMT (%XX.XM/SDR):  
LATIN AMERICA | LOW-COST HSG. S & SE | 6BRAPA087 | L16540 | 93.0/1.0

COUNTRY: | BORROWER/BENEFICIARY: | BOARD DATE/FY: | SIGNING DATE: | EFFECTIVE DATE:  
BRAZIL | NATIONAL HOUSING BANK (BNH) | 01/23/79 - 79 | 02/08/79 | 07/09/79

MANAGING DEPT./DIV. NAME: | ORG CODE NO.: | PROJECTS OFFICER: | LOAN OFFICER: | MISSION END DATE:  
URBAN DIVISION | 16660 | E. ECHEVERRIA | C. CRABBE | 07/21/86

SECTION 1: PROJECT DATE AND PERFORMANCE RATINGS	CLOSING DATE		PROJ. COSTS	DISBURSEMENT (12/86)		RATINGS	THIS SUM	LAST SUM
	(MO/YR)	COMPL. DATE (MO/YR)		(\$/LOCAL) (XX.XM)	MO/YR (12/86)			
SAR/PR:	12/31/84	04/30/84	265.7/1.0	SAR/PR :\$	93.0 (100.0)	AVAIL. FUNDS	1	1
REVISED:		12/31/84	0/1.0	ACTUAL :\$	93.0 (100.0)	PROJECT MGMT.	1	1
LAST IS:	12/31/84	12/31/84	265.7/1.0	PROFILE:\$	89.7 (96.5)	DEV. IMPACT	1	1
EXPECTED:	12/31/84	12/31/84	265.7/1.0	COMMT. :\$	93.0 (100.0)	OVERALL STAT.	1	1
		COMPL. DELAYS	COST OVERRUN	DISB. LAG				
RATINGS - THIS SUMMARY		(13.9 %)	(.0 % .0 %)	( .0 %)				
RATINGS - LAST SUMMARY: (08/27/86)		(13.9 %)	(.0 % .0 %)	( .0 %)				

SECTION 2: SUMMARY PROJECT DESCRIPTION: TYPE OF LENDING INSTRUMENT: SIL  
Provision of about 31,800 sites and services; 19,500 low-income housing units, and 23,800 home improvement and construction loans in the metropolitan area of Sao Paulo and the states of Recife and Salvador, plus about 10,000 sites and services in other urban areas of Brazil. Strengthen the overall delivery capacity and institutional development of the COHABs through improved financial and project planning.

SECTION 3: PROJECT STATUS. SUMMARIZE CURRENT STATUS OF IMPLEMENTATION, IDENTIFY MAJOR PROBLEMS  
The project was fully disbursed as of July 8, 1985. The actual expenditures by the State COHABS-URBIS (BAHIA), COHAB (PERNAMBUCO) and COHAB (Sao Paulo) (Part A and C of the Project) were 29% higher than the SAR estimate; however, the number of beneficiaries increased proportionally. The same is true for squatter upgrading (Part D). Greater emphasis was placed on the provision of community facilities and infrastructure (Part B); this resulted in a 22% increase in expenditures and a 35% increase in beneficiaries of Part B. A total of 102,441 families benefitted from the projects - an increase of 67% over the SAR estimate. The total cost was US\$460.5 compared to the SAR estimate of US\$265.7 million. The cost increase was in direct proportion to the increase in beneficiaries.

SECTION 4: ACTION TAKEN. CURRENT ACTIONS TAKEN OR AGREED TO BE TAKEN WITH BORROWER TO ADDRESS MAJOR PROBLEMS.  
Prepared the draft PCR in the field.

SECTION 5: ACTION PROPOSED, SUMMARIZE FURTHER ACTIONS REQUIRED, INCLUDE AGENDA FOR NEXT MISSION (MO/YR) (05/86).  
Sending the PCR to MDU and CAIXA Economica for comments.

NAME OF PREPARING OFFICER: Edward Echeverria	DATE 3/31/87	REVIEWED BY: (Divisional Manager) Robert Panfil, Deputy Chief, LCPUR	PIR REVIEW: (Asst. Dir) Ugo Firzi
---	-----------------	---	--------------------------------------

PROJECT COMPLETION REPORT

BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
(Loan 1654-BR)

March 31, 1987

Urban Projects Division  
Latin America and the Caribbean Regional Office



BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
(Loan 1654-BR)

PROJECT COMPLETION REPORT

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ANNEX 1: Cost Tables and Graphic

ANNEX 2: Financial and Economic Re-Evaluation

ANNEX 3: Photographs

ANNEX 4: Maps



### HIGHLIGHTS

The Sites and Services and Low-Cost Housing Project achieved the principal objectives of promoting the lowest-cost shelter solutions and contributing to the institutional development of the COHABs. The portion of the 1979-81 National Housing Plan (PLANHAP) investment program for the three State Housing Corporations of 59,600 shelter solutions exceeded the SAR estimate by 16%, distributed as follows: (i) COHAB (SP) Sao Paulo, 14,700; (ii) URBIS Bahia, 33,500; and (iii) COHAB (PE) Pernambuco, 11,400. In addition, infrastructure of community facilities for low-income housing areas was provided in the original three states plus four others and the number of beneficiary families increased 10 times over the SAR estimates. On an experimental basis, the upgrading including improved shelter solutions for 7,000 families in Recife, was successful; 21,600 sites and services solutions exceeded the SAR targets by 38%. For all of the 16 sites and services sub-projects the COHABs eventually enhanced the sites by the construction of embryo units of 18 to 24m<sup>2</sup>, since the cost to the beneficiary to build his own shelter was higher than the completed embryo by the COHABs. Other states in Part C added 35,700 embryo units so that a total of 102,441 shelter solutions was achieved by the project - exceeding the SAR target by 67% at unit shelter costs slightly less than the SAR estimate. This was accomplished through lowering design standards for the shelter and infrastructure.

The program of construction material loans (FICAM) was not successful due, in part, to the lack of promotion by BNH and the COHABs. BNH prepared operating manuals for the Sites and Services program (PROFILURB) which was of great help in the planning and execution by the COHABs and municipalities. The technical assistance to the COHABs and the Substandard Housing Eradication and Social Emergencies program (CESHE) was provided by BNH internally rather than through external formal training courses with satisfactory results. The adoption in May 1980 of the PROMORAR program for squatter and slum upgrading and in April 1984 of the MUTIROA aided self-help program changed the orientation of BNH and improved their institution structure. While the project was scheduled for completion in December 31, 1983, it was virtually completed in December 31, 1984.

CURRENCY EQUIVALENTS

Currency Unit	=	Cruzeiro (CR\$)
US\$1	=	CR\$ 18.0 (at appraisal)
US\$1	=	CR\$ 13,700 (at PCR - 7/15/86)
CR\$1	=	US\$0.056
CR\$1 million	=	US\$55,600

WEIGHTS AND MEASURES

1 meter (m)	=	3.28 feet
1 square meter (m <sup>2</sup> )	=	10.76 square feet
1 kilogram (kg)	=	2.205 pounds
1 hectare (ha)	=	2.47 acres
1 kilometer (km)	=	0.62 miles

GOVERNMENT OF MEXICO FISCAL YEAR

January to December 31



BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
(Loan 1654-BR)

PROJECT COMPLETION REPORT

BASIC DATA SHEET

Key Project Data

<u>Item</u>	<u>Appraisal Estimate</u>	<u>Actual</u>
Total project cost (US\$ m)	265.7	460.5
Underrun or Overrun (%)	-	+73 <sup>a/</sup>
Loan amount (US\$ m)	93.0	-
Disbursed	-	93.0
Cancelled	-	-
Date physical components complete	12/31/83	12/31/84
Proportion completed by above date	-	167% dwellings 10% material loans
Time overrun (%)	-	20%
Economic rate of return (%)	17 (Sao Paulo)	N.A. (Sao Paulo)
	22 (Recife)	N.A. (Recife)
	23 (Salvador)	9% (Salvador)

a/ Increase is in direct proportion to the increase in the number of beneficiaries.

OTHER PROJECT DATA

<u>Item</u>	<u>Original Plan</u>	<u>Actual</u>
First mentioned in files or timetable	09/09/74	09/09/74
Government application	07/15/77	07/15/77
Negotiations	11/13-27/78	11/13-27/78
Board approval	01/23/79	01/23/79
Loan agreement date	02/08/79	02/08/79
Effectiveness date	07/09/79	07/09/79
Closing date	12/31/83	12/31/84
Borrower	Banco Nacional da Habitacao	Banco Nacional da Habitacao
Executing agencies	COHAB-SP, COHAB-PE, URBIS	COHAB-SP, COHAB-PE, URBIS

Cumulative Estimated and Actual Disbursement (Bank Fiscal Year)

	<u>6/79</u>	<u>6/80</u>	<u>6/81</u>	<u>6/82</u>	<u>6/83</u>	<u>12/83</u>	<u>6/84</u>	<u>7/85</u>
Estimated (US\$ m)	.9	12.0	39.6	68.1	87.8	93.0		
Actual (US\$ m)	0	0	13.0	31.8	52.1	65.7	80.5	93.0
Actual as % of estimated	0	0	33	47	59	71	87	100

MISSION DATA

	<u>MO.YR.</u>	<u>NO. OF WEEKS</u>	<u>NO. OF PERSONS</u>	<u>MANWEEKS</u>	<u>DATE OF REPORT</u>	<u>PERFORMANCE RATING</u>
Ident.	08/74	1.0	3	3.0	09/09/74	
Prep.	06/75	1.5	2	3.0	06/13/75	
	04/78	3.0	5	15.0	04/06/78	1
Apr.	05/78	3.0	8	24.0	07/13/78	1
SPN	05/79	2.5	4	10.0	07/25/79	1
	09/79	2.0	3	6.0	10/24/79	1
	04/80	1.5	3	4.5	06/30/80	1
	12/80	1.0	3	3.0	01/16/81	1
	05/81	2.0	2	4.0	07/08/81	-
	02/82	1.0	4	4.0	05/04/82	1
	05/82	0.5	3	1.5	06/18/82	1
	10/82	1.0	2	2.0	10/28/82	1
	04/83	1.0	2	2.0	04/13/83	1
	07/83	1.0	1	1.0	07/20/83	-
	01/84	0.5	1	0.5	01/27/84	1
	06/84	0.5	1	0.5	08/20/84	1
	10/84	0.5	1	0.5	11/08/84	1
	03/86	0.5	1	0.5	04/11/86	1
PCR	06/86	1.0	1	1.0		



## BRAZIL

### SITES AND SERVICES AND LOW-COST HOUSING PROJECT

Loan 1654-BR

#### I. INTRODUCTION

##### I. Background

1.01 Brazil's urbanization over the last 30 years has been characterized by rapid growth, large absolute size of urban population and geographical imbalance. Between 1950-70, the urban population grew at an annual rate of 5.5% compared to a total population growth rate of 2.9%. The urban population, by the standard international definition of 20,000 or more inhabitants, almost tripled. While the national population more than doubled, from 52 million in 1950 to 119 million in 1980, the urban population more than quadrupled, from 19 million to 80 million. The urban population is concentrated mainly along the coastal areas particularly in the southeast (Rio de Janeiro and Sao Paulo Metropolitan areas) where almost 40% of the urban population live.<sup>1/</sup> The current rate of growth is estimated at 4.5% per annum and by 1990, is expected to slow down to 4%.

1.02 The official housing policy had been initiated in 1964 with the creation of the Housing Finance System (SFH) and the National Housing Bank (Banco Nacional da Habitacao-BNH). By the time the National Commission on Urban Policy (CNDU) and the National Fund for Urban Development were created in 1975, BNH and related agencies had already established strong policy guidelines and working procedures and controlled about 70% of the public investment resources in the urban sector. The financial resources of BNH were provided by government transfers mainly from the Fundo de Garantia do Tempo de Servico (FGTS) - a salary tax. By December 31, 1984, BNH assets totalled about US\$12.0 billion with a staff of 6,500. In addition to BNH, since 1964, the Brazilian Savings and Loan System (Sistema Brasileiro de Poupanca and Emprestimo - SBPE) has provided financing for about 1.8 million units benefitting mainly groups of above 10 minimum salaries. The combination of BNH and SBPE were estimated to have benefitted about 22 million people or 23% of the 1984 urban population, of which BNH contributed about 60%. The BNH program attempted to ensure financial viability of the housing sector through mortgage financing while promoting home ownership, especially among the low-income population. Local entities, the State and Municipal Housing Corporations (COHABs), were created with the capacity to plan, design and execute large-scale housing operations. To ensure the flow of funds to low-income families, BNH and the COHABs created a system of cross-subsidies and incentives. An effort was made, as well, to devise low-cost shelter solutions to expand the number of low-income families with access to the housing market.

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<sup>1/</sup> Nine metropolitan areas were designated in Brazil: Porto Alegre and Curitiba in the south; Belo Horizonte in the Center, Rio de Janeiro and Sao Paulo in the south; Salvador, Recife and Fortaleza in the Northeast and Belem in the North.



1.03 This Project Completion Report is based on information contained in the SAR 2197-BR, dated January 3, 1979, and the review of the Bank files which included supervision and progress reports of the project. A supervision mission visited Brazil in July 1986, to obtain additional information. The report was prepared by Edward Echeverria with assistance from Gerson Simoes Monteiro (Consultant).

## II. PROJECT IDENTIFICATION, PREPARATION AND APPRAISAL

### Identification and Preparation

2.01 During the first decade of operations (1964-1974) BNH, under the Ministry of Interior, financed over 1 million dwelling units of which 25% were low-income subsidized dwellings. As they approached the second decade, BNH was studying several new enlarged programs to reduce the housing deficit as well as to meet the new housing demand. The identification mission to BNH, in late 1974, reported an advanced stage of preparation of a new National Program of Sites and Services and slum improvement (PROFILURB) for which they wanted the Bank to consider supporting through sector lending. The Bank expressed interest in participating; however, the preparation mission of June 1975 reported that BNH no longer wanted financial assistance. They were only interested in technical assistance through occasional visits and exchanged information. Because of the risks inherent in implementing a new program nationwide, BNH preferred to finance the trial stage with its own funds. In July 1977, BNH requested possible assistance for project financing within the National Plan for Low-Cost Housing (PLANHAP) which the Bank agreed to consider based on further study of the detailed program. On receipt of the detailed PLANHAP program in January 1978, the Bank agreed to participate in a program that would be geographically specific in scope with an adequate housing mix.

2.02 The institutional focus of the project would have specific goals and strategies for BNH and the State COHABs. In addition, the financial issues such as on-lending and cost recovery were to be resolved. Based on the analysis of their management and implementation capacities, the COHABs of Metropolitan Sao Paulo, Bahia, and Pernambuco were selected for a slice of the PLANHAP and PROFILURB programs. In addition, funds for selected PROFILURB subprojects outside of the three states would be included along with technical assistance.

### Project Appraisal

2.03 In May 1978, the Bank sent the Appraisal mission with the primary objective of promoting elements of the PLANHAP program aimed at the urban poor, in particular the PROFILURB sites and services and house improvement and material loans (FICAM) programs. Specific segments of the 1979-1981 PLANHAP programs were selected in the three COHABs under the CONSO Low-cost Housing and the PROFILURB sites and services as well as upgrading mortgage portfolios. Special attention was given to the institutional development of the COHABs in order to strengthen their overall management



and delivery capacities. Considerable time was spent in adjusting the project mix of housing types for different income levels, squatter upgrading, provision of infrastructure, and technical assistance funds. Initially, the BNH program was limited to final beneficiaries who were already employed. (This rule was relaxed later on for the PROFILURB Sites and Services and Squatter Upgrading programs.) The construction methods were to be labor intensive. Based on the above, the Board approved on January 23, 1979, the US\$93 million loan with a total project cost of US\$265.7 million.

2.04 Efficient final project designs were expedited. All subprojects were analyzed for land utilization, pedestrian and vehicular circulation, and efficient infrastructure, with maximum possible percentage of land devoted to public use. Site selections were analyzed for travel distance to employment opportunities for the final beneficiaries. Proven prototype designs were scrutinized for efficient space utilization, simplified structures for labor intensive construction, and future expansions. In a few of the low-cost walk-up apartment sub-projects, precast reinforced concrete (RCC) panels were designed to shorten construction time. Similar analysis was made on the designs of the community facilities - schools, health posts and markets.

2.05 The technical assistance (TA) program within the BNH Research Department of the Planning and Technical Assistance Directorate improved their operational manuals of the COHABs to reflect new reporting requirements and to make them more useful tools for management control. Improvements in the overall management of the COHABs, raising the qualifications of the staff, and strengthening management continuity all formed part of the project. Through TA, the project sought to lower design standards and infrastructure costs with a program of incentives to the COHABs.

### III. PROJECT IMPLEMENTATION

#### Effectiveness

3.01 Loan effectiveness was delayed due to the changes in Government at the Federal, State and Municipal levels. While this caused temporary delays, the changes resulted in greatly improved management teams at the State COHAB and municipal levels which in turn accelerate project implementation. In May 1979, a new Department was created on a national scale for the Program of Substandard Housing Eradication and Social Emergencies (CESHE), with the PROMORAR (Eradication for Substandard Dwellings), to urbanize squatter colonies and upgrade slums. Since eligibility was limited to families earning less than 3 minimum salaries, these Programs were of great interest to the Bank. The basic concept was to provide security of land tenure and improve their environment through provision of infrastructure and services. PROMORAR emphasized the preservation of existing communities with the minimum of population displacement. This process implied extensive community participation in the planning, design and implementation. Changes in the project were made at a later date (para. 3.02) to include this program.



### Sites and Services Problems

3.02 By the end of 1980, the BNH and the COHABs were having great difficulties in promoting the sites and services program (PROFILURB). Many of the completed projects, not financed by the Bank, were unoccupied for several reasons. The sites, especially in the metropolitan areas, were poorly located - remote from existing employment centers, social services, and adequate transportation. The cost of an urbanized lot was relatively high so the families that could afford it chose other alternatives. It was unrealistic to think that a head of household could find time after work to organize the delivery of construction materials and work on his new house located many kms. away with no public transportation easily available. Furthermore, he ran the risk of having his material stolen. Only where the sites were close at hand was there an incentive to build. In the final analysis, the self-help shelter solutions cost the beneficiary more than a finished "embryo" unit of 24 m<sup>2</sup> on an urbanized lot built by contractor. The individual, in most cases, had to make a second loan for the construction materials. In 1981 a high government official, during his inspection of the COHAB-PE projects in Paulista (outskirts of Recife), remarked that "I don't want to see any more cemeteries" on looking over 2,000 "wet walls" of the Sites and Services project with not a single dwelling. Over time, almost all of the sites and services sub-projects were supplemented with "embryo" units of 18 to 24 m<sup>2</sup>. On August 5, 1981, the Bank agreed to amend the loan to reflect: (i) substitution of finished houses (embryo) for urbanized lots; (ii) reduction in material loans program (FICAM); (iii) increase in infrastructure components; (iv) modification of upgrading to include specific projects - Brasilia Temosa Recife (Pernambuco) and Salvador (Bahia); and (v) re-allocation of proceeds of the loan.

3.03 The combination of delays in implementation, inflation and erosion of the value of the CR\$ to the US\$ dollar in 1982-83 (lack of counterpart funds) resulted in BNH's request to extend the closing date, by one year, until December 31, 1984. In 1984, the closing date was extended and the number of beneficiaries were increased along with the number of projects which were approved by the Bank. In addition, the SAR implementation schedule was over optimistic in resolving the management and organizational changes that occurred with the change in Government, but, as noted above, this resulted in a stronger management team.

### Innovations

3.04 Several innovative construction techniques were financed. In the Camarugibe River Basin slum upgrading, Salvador-Bahia, URBIS had started construction of integrated stairway and walkways with manageable RCC pre-cast components, formed by channels set in compacted earth with a slab on top, making an integral step and walkway and storm drainage channel. With horizontal as well as vertical flexibility, these elements warped through the barrios without displacing dwellings, no matter how provisional. This was a cost effective solution especially for hillsides and gullies. Innovative building construction systems were used in Recife and Salvador Metropolitan areas; contractors bid successfully on construction of four-story walk-up apartments using pre-cast RCC panel. One used tilt-up panels, poured on a slab, while the other built a factory. Unfortunately,



the better quality of factory-built panels were more costly and the contractor eventually closed the factory. If he could have expanded his market, he was confident of becoming competitive by increasing production.

### Completed Project

3.05 For Part A - Shelter Solutions, the three Housing Corporations, COHAB-SP, COHAB-PE and URBIS-Bahia, built 59,586 shelter solutions through their CONSO, CESHE and PROFILURB portfolios - 16% more than the SAR estimates but of a different mix. The COHAB-SP SAR programmed 7,000 solutions of CONSO/CESHE and 15,500 sites and services while 14,430 solutions of CONSO/CESHE and only 259 sites and services were produced. The COHAB-PE SAR programmed 10,000 solutions of CONSO/CESHE and 11,800 sites and services solutions while 19,210 and 14,281 respectively were produced. However, all the sites and services were subsequently supplemented with embryo units (Annex 1, Table 1). The URBIS-Bahia SAR called for 2,500 CONSO/CESHE and 4,500 sites and services solutions while 4,286 and 7,120 respectively were produced. Again, all of the sites and services were supplemented by embryo units. For Part B - Infrastructure and Community Facilities, COHAB-SP did not build any since their most urgent needs were completed shelters for a waiting list of over 100,000 certified low-income families. COHAB-PE and URBIS-BAHIA exceeded their targets by 10 times and other State COHABs built 8 times the volume of infrastructure as the two original COHABs. The largest increase came in Part C - Squatter Upgrading, Embryo and Infrastructure, when other State COHABs responded to their urgent housing shortage by providing low-cost 35,707 shelter solutions.

### Quality of Work Completed

3.06 The quality of work completed varied between the State COHABs. Many of the pre-cast exterior panels had to be re-caulked to control the dampness during the rainy season. Site plans were very spartan and lacked landscaping. The large scale "conjuntos" of 4,000 to 5,000 apartments constructed of 4-story blocks in monotonous parallel rows (in the three metropolitan areas) produced poor living environments. Due, in part, to severe topographic conditions, they were rarely arranged into social groupings. In addition, such large monolithic assemblages of a single income group had little social stratification. Fortunately, BNH has now recognized the environmental and social deficiencies and has vowed to build no more. Future projects should be limited to a maximum of 400 to 500 apartments of any one type, designed with social grouping of 80 to 100 apartments with net- (site) densities of a maximum of 350 person per ha. to allow for open space and community facilities. Nevertheless, the shelter solutions provided an improved living environment at the least cost.

### Costs, Disbursement and Procurement

3.07 The final cost of the project was US\$460.5 million compared to the SAR estimate of US\$265.7 million. The increase in cost is in direct proportion to the increase in beneficiaries of direct shelter solutions and upgraded low-income areas (Annex 1, Table 1). The average unit cost of the CONSO (standard low-cost apartments) and CESHE (low-cost shelter) ranged



from US\$3,410 to 6,120. The highest costs were in COHAB-SP<sup>2/</sup> and the lowest costs were in COHAB-PE. The lowest cost was due to a greater proportion of CESHE shelter solutions. The sites and services average unit cost ranged from US\$402 to US\$2,314 in COHAB-SP and URBIS-BAHIA respectively. The high cost of URBIS was due to the high cost of land. All costs are calculated by BNH in UPCs (Standard Capital Units) which is also expressed in CR\$. With the erosion of the value of the CR\$ in relation to the US\$ due to inflation, the value of the UPC to US\$ fell dramatically from US\$14 per UPC to US\$11.00 in the first semester 1980, with a 2nd fall from US\$10.5 to US\$7.6 in the second semester 1983 (see Annex 1, Graph 1). In US\$ value, there was no cost increase due to inflation - in fact, the project cost was deflated in the US\$ equivalent by about 8%.

3.08 Disbursements were made against civil works as well as construction materials and some equipment. By the end of 1982, disbursements lagged by 15 months, (see Annex 1, Graph 2). Due to the financial crisis of 1983/84, the Bank's Structural Adjustment Program (SAP) was introduced, and, in early 1984, the disbursement percentage was increased from 35% to 50%. In addition, a Special Account of US\$6.0 million was established. As a result, disbursements increased sharply, and the loan was fully disbursed by July 1985.

3.09 Procurement. Procurement was in accordance with the provisions of the Loan Agreement and Bank guidelines. The components were sensibly packaged in bidding documents to achieve economies of scale. Most of the contracts were between US\$1.0 to US\$1.5 million so that local firms could participate in local competitive bidding procedures. The bid evaluations were consistently thorough involving over 120 contractors.

#### IV. INSTITUTIONAL PERFORMANCE AND DEVELOPMENT

##### Performance of BNH and the COHABs

4.01 Since its creation in 1964 BNH has undergone many institutional changes to expand the size and scope of its programs. During 1979/83, several new housing programs were established. The National Program of Housing for Union Workers (PROSINDI), the Housing Program for Public Servants (PROHASP), the Housing Program for Public and Private Corporation Employees (PROHEMP), and Cooperatives (INOCOOP) were organized at the State COHAB levels with earmarked funds. All of these programs have provided substantial benefits to employees down to 2.5 minimum salaries. To improve the land assemblage, the Land Mobilization Directorate was created to acquire land, sufficiently served by infrastructure, that would increase in value when developed for the benefit of the public. The most significant change occurred in May 1980 with the creation of the Program for the Eradication of Substandard Dwelling (PROMORAR). As a pioneer program the main objective was to urbanize squatter colonies and to upgrade slums. A completely new Department in BNH was created to manage this program. Families in favelas, slums and stilt housing over tidal flats with 3 minimum salaries or less were eligible under the portfolio of Sub-standard Housing Eradication and Social Emergencies (CESHE). Monthly payments were 10% of a minimum salary (US\$40) with a 30-year amortization period. While PROMORAR

<sup>2/</sup> The standard 50 m<sup>2</sup> low-cost apartment in 4-story blocks cost US\$6,800.



successfully completed many projects, the total number of shelter improvements fell short of the target.

4.02 In April 1984, to complement PROMORAR, BNH launched a national program of aided self-help construction (MUTIRAO) in response to: (i) the SFH crisis of scarce financial resources; (ii) an increase in demand for shelter for families with less than 2 minimum salaries which, by then, represented the majority of urban population; and (iii) a desire on the part of low-income families to build their own dwellings. Traditionally, the poor of Brazil, like other developing nations, have built their own dwelling (no matter how precarious) in spontaneous squatter colonies. It remained for BNH to give direction to their goals and energies. With SFH vastly reduced resources, housing repayment difficulties, and inflation of 200% per annum, the program was stimulated at the national, regional, and local municipal levels. Incentives and alternative technologies were adopted to minimize costs of shelter as well as infrastructure. Improved TA and training programs were launched so that the poor could have qualified skills to construct not only the housing but infrastructure as well. Through these changes and through substantially lowering of standards, BNH has been able to enlarge its programs so that families of one minimum salary benefitted, with successful cost recovery through cross subsidies.

4.03 In the 20-year period from 1964-1984 BNH financed 4,273,000 dwelling units of which 35% were low-cost subsidized dwellings. During the previous 26 years (1938-1964) only 138,000 low-cost dwellings were financed. To accommodate these additional programs, BNH went through additional reorganizations during which regional offices of BNH were established in the capital cities of the major states. The shelter benefits had the greatest impact in the states of the Northeast where proportionally, substandard housing is the greatest.<sup>3/</sup> Initially, this caused delays in preparation of quarterly reports and low disbursement. Training programs were set up which continue to orient the State COHAB executing agencies.

#### Bank Group Performance

4.04 The Bank responded favorably to the adoption of the PROMORAR upgrading program which was designed to preserve the existing social structure. Bank funds were adjusted to enlarge the CESHE program and adjustments were also made in the sites and services targets to provide embryo shelter solutions. Considerable Bank staff time was required to formalize these changes. Increased supervision was necessary in 1982 to improve quality of construction, set up a special account mechanism and assist in achieving the full commitment of loan funds.

### V. FINANCIAL AND ECONOMIC RE-EVALUATION

#### Sao Paulo, SP Financial Re-Evaluation

5.01 Due to time and budget constraints the re-evaluation was limited to the COHAB-SP and URBIS-Bahia. COHAB-SP received its principle funds from BNH through diverse lines of financing for construction and sale of

<sup>3/</sup> Urban Development in the Northeast Region - Special Sector Report - 1/14/87.



housing at interest rates varying between 1% and 6% per year with monetary correction based on the changing value of the UPC. The amortization period established by BNH varies up to 30 years with a grace period of one year. The summary of the financial status of COHAB SP is presented in Annex 2, Tables 1, 2, 3 and 4. COHAB-SP expanded its operations during 1979-84 with lower interest rates, compared to previous years, and longer amortization periods. The changes, introduced by BNH after 1979, provided greater access to financing ownership housing for the lower-income families down to the 3rd and part of the 2nd deciles. In respect to the total assets, the number of housing loans increased during the period by 14.5%.

5.02 Total assets, in US dollars, increased over 100% during 1979-84 while the operational receipts, in dollar terms, increased by 152% against an increase in operational expenses of 456% as shown in Annex 2, Table 2. These findings were verified in accordance with the regulations of the Federal Accounting Service 084-12/1979 which required the COHABs to undertake annual internal audits of their assets and real profits with partial deferment of the detailed examination of gross profits from the mortgage sales until the amortization periods and residual loan amounts contracted were regularized. A more realistic financial position would have been obtained from an analysis of gross profits from the mortgage portfolio. In view of the above, in 1980, the COHAB-SP adopted procedures to defer results of future exercises, gross profits from sales, and amortization period for residual units until new regulations were approved. They limited their analysis to the portions of the cash received from the monthly mortgage payments. The criteria used in the 1979 audit related profits for sales from residential units to their amortization period. The change in criteria in 1980 brought a reduction in profit, liquid assets and consequent increase in the financial potential for future years.

5.03 The differences between the COHAB mortgage receipts and the COHAB repayments to BNH between 1979 and 1985 are presented in Annex 2, Table 4. From 1979 to 1982, repayments to BNH varied from 52% to 32% while in 1983 repayments increased to 89.7%. This was due mainly to the efficient collection of mortgage payments. However, in 1984, mortgage receipts dropped which required a large retention by the COHAB. In 1985, receipts increased slightly permitting a larger repayment to BNH. During that period, BNH quickly created a mechanism for re-negotiating the indebtedness by re-adjusting the inflation index for the terms of the loans to make them more compatible with the incomes of the mortgagors. The Federal Government policy of limiting official salary increases resulted in a lower index than the System of Housing Finance (SFH) adopted for the periodic upward adjustments in their mortgage payments. Their monthly payments had escalated so high that they were amortization amounts in excess of the value of the housing. The tens of thousands of families who stopped their mortgage payments for a year or more had their payments eventually readjusted downward.

5.04 The total assets of the COHAB-SP, as of December 31, 1984, were CR\$ 964.6 billion cruzeiros. The mortgage loans totalled CR\$ 720.0 billion or 75% of the total assets for the same period (Annex 2, Table 1). The loans are guaranteed by the real estate mortgages based on market values. Further, the municipality of Sao Paulo agreed to repay BNH up to CR\$ 676.0 billion in case of default in the COHAB repayments. Further, the COHAB-SP



has titles to properties that represent 15% of their assets - composed of disposable real estate properties valued at CR\$ 18.2 billion, land CR\$ 25.4 billion, and projects in the development phase of CR\$ 107.2 billion. Outstanding loans in arrears of CR\$ 22.3 million as of end of December, 1984 (contained in current assets) represent 3% of the mortgage portfolio which is a satisfactory operating index. The COHAB-SP in December 31, 1986 participated with their own funds to approximately 22% of the loans. By the end of December 1984, the financing and refinancing reached CR\$ 881.0 billion or 84% of the obligations of COHAB-SP achieving a positive cash patrimony (capital and reserves) of CR\$ 162.0 billion in excess of the assets mentioned in para. 5.02 and ultimately affecting gross profits. This, of course, would increase the liability to CR\$ 1,055.7 billion from CR\$ 964.6 billion (Annex 2, Table 1). Other costs, consisting of 1% of COHAB-SP liabilities, were from suppliers and services.

5.05 The financial position of the COHAB is relatively well protected against inflation as the mortgages are expressed in UPCs and the excess cash reserves are invested in real estate "titles" indexed to inflation and guaranteed by the Government (ORTN). However, adjustments in the UPC, in 1979 and 52% in 1980, remained considerably lower than the inflation rate of 77% and 91% respectively. For 1982, 1983 and 1984, the Federal Government maintained a policy of adjusting the UPC in accordance with inflation. It is important to note that BNH did not update its real estate portfolio and as a consequence the liquid assets were valued well below their market value of December 31, 1984. On the other hand, the COHAB-SP made a provision, in its internal audit of their real property inventory, for a grant from EMURB (the Urban Development Corporation of the Prefectura of Sao Paulo) of 26 areas of about 2,200 hectares located along the limits of the metro. It is estimated that these areas have a value of CR\$ 44.0 trillions using a low market value of CR\$ 2.0 million (US\$142.00 per square meter). (Many of these locations should be developed as multi-purpose commercial, service and residential centers, not as single-use housing.)

5.06 Conclusions. From analysis of 1979-84 and prospects for 1986, the COHAB-SP has a satisfactory financial position as seen in the analytical tables. For 1986, it generated internal cash assets of US\$8.2 million and a solid financial situation in terms of the magnitude, assurances and satisfactory return on its assets.

#### URBIS - Bahia Financial Re-Evaluation

5.07 For the URBIS-BAHIA, the principle source of funds is BNH through their various lines of financing for construction and sale of housing on the same terms as COHAB-SP (para. 5.01). The summary of the financial status of URBIS is presented in Annex 2, Tables 5, 6, and 7. During 1979-84, URBIS expanded its operations (with lower rates of interest and longer amortization periods compared to previous years) in line with the changes introduced by BNH during 1979 to facilitate access to home ownership for the lower-income population (para. 5.01). In respect to the total assets, the number of loans increased during the period by 11%.

5.08 The total assets, in US\$ value, increased 9% during 1979-84 (Annex 2, Table 5). The operational receipts, in US\$, for the same period



increased 336% and operational expenses increased 395% (Annex 2, Table 6). Gross profits during this period were positive; however, when the general management and administrative expenses were deducted the results were negative for the period 1980-84. These expenses vary with the magnitude of the annual investment program, but BNH regulations limit the percentage that they can charge - 4% to 8% of the construction contracts. This is not sufficient to cover the costs of land assemblage, site planning, engineering, unit designs, supervision and sales. Thus, the deficit is covered annually by subsidies and grants from the State Government of Bahia (Fundo Perdido) after deducting the negative monetary corrections in accordance with the legal criteria of the difference between monetary correction of the liquid asset and the monetary correction of the permanent assets. In this manner, URBIS had a positive cash flow for 1980-84 with a low rate of return (Annex 2, Table 7). This low level of profitability did not permit URBIS to maintain sufficient working capital during 1979-84; liquid assets were 3.2% of their liability in 1979 and 2.2% in 1984.

5.09 For December 31, 1984, the total assets of URBIS were CR\$ 238.0 billion cruzeiros and mortgage loans were CR\$ 136.0 billion representing 57% of the total asset (Annex 2, Table 5). The loans were guaranteed by the real estate mortgages based on market values of the properties. In addition, 32% of the assets were composed of projects in phases of development estimated at CR\$ 74.6 billion, and land at CR\$ 2.2 billion, and 6% of assets covered cash, deposits and bonds of CR\$ 14.5 billion. The loans in arrears for December 31, 1984 represent 0.7% (CR\$ 1.062 billion) which is unusually low. URBIS participated with their own resources of 3.8% of the loans by the end of December 1984. Financing and refinancing of BNH came to CR\$ 225.0 billion or 95% of the liabilities of URBIS through December 1984. When the credit of CR\$ 82 billion, due to adjustments to contracts, is deducted the percentage dropped to 91%. There are other liabilities that represent demands on URBIS through 1984 of slightly more than 3% of their obligations.

5.10 The financial position of URBIS is relatively protected against inflation as all mortgage loans are expressed in UPCs and the excess cash reserves are invested in real estate properties indexed to inflation and guaranteed by the Government (ORTN), (para. 5.05). However, the financial performance of URBIS in 1985 has declined and the prospects for 1986 are poor given the general economic conditions of the country, scarcity of new financial resources and recent increase in delayed mortgage payments. In addition, the State Water Company has not adequately serviced the new housing groups causing considerable stress to the occupants. They don't want to pay for poor service.

5.11 Conclusion. The financial position of URBIS during 1979-84 and the prospects for 1987 are unstable requiring both short-term and medium-term assistance. They must increase their operating revenues, (through improved collection services), curtail administrative costs (and recover their full costs), increase state transfers (earmarked for subsidies to the lower-income families) and increase financial assistance from BNH.



### Problems of Budgeting and Financial Planning of the two COHABs

5.12 It is important to note that during 1979-1984, accelerated increase in the cost of construction due to inflation was not followed by corresponding indexing and adjustment in the UPC value. This resulted in a large reduction in the number of contracting firms which reflected negatively on the planning and development of the COHABs programs. On the other hand, the accelerated increase in cost of construction also created problems with the remaining contracting firms due to inflated cost increases over their original bids. This in turn affected the level of affordability to low-income families.

5.13 From the beginning of the decade of 1970, the Municipal governments have been unable to cope with the increased problems of squatters in urban areas and the existing legal instruments for orderly urban development were ineffective in dealing with increased land speculation. As a result, the exaggerated land prices in the higher-income areas provoked a general increase in land prices over the remaining urban areas of a city. This in turn increased the cost of urban development - infrastructure, transport, etc. In addition, there were no viable alternative locations for low-income housing than the outlying areas with high transport costs.

5.14 The construction materials industry was not structured or organized to cope with the large fluctuation in demand. This in turn caused periodic crises in the availability of some construction materials.

5.15 Over time, a series of housing proposals and programs evolved into an ad hoc BNH housing policy with a combination of social objectives. In response to these policy changes, the COHABs were constantly forced to restructure their operations. In the absence of long-term planning, BNH was forced to invest in loans and programs that did not meet the basic social needs of shelter. A rational planning system in BNH is now emerging within the framework of State and regional programs aimed at integrating investments to optimize the three lines of credits: housing, urban infrastructure and basic sanitation. It should be noted that without the cross subsidies of the State Water Company, BNH as housing agency only would not be financially viable.

5.16 The increase in arrears of monthly mortgage payments, as a result of Federal Government actions in 1983, (restricting salary increases to a correction index below the SFH adopted) continues as a serious financial problem requiring additional loan adjustments.

### Project Affordability and Cost Recovery

5.17 The BNH comparative study of rent to mortgage payments under the housing finance system (SFH) during 1979-82 revealed that in the State of Bahia, the ratio was relatively high (5-7) for COHAB type housing of the 4-story blocks of apartments. It was clearly more beneficial to purchase than rent. However, in the case of cooperatives housing and those financed under the Brazilian system of savings and loans, the ratio was 1.7 to 0.75 (Annex 2, Table 8). The study concluded that the COHAB housing program, with its policy of cross subsidies (offered under SFH system for low-income



families along with selected locations for the sites and services projects) have produced viable shelter solutions for many low-income families of less than 3 minimum salaries. Cost recovery has been hampered by the high inflation rates. Salaries of employees were not indexed to the extremely high inflation causing a severe erosion in purchasing power. This resulted in large rent strikes and massive mortgage refinancing schemes (para. 5.03). While the data is not complete, the general impression is that less than 80% of the loans are fully recovered.

## VI. CONCLUSIONS AND RECOMMENDATIONS

6.01 The principal objectives were achieved: (i) to promote the lowest cost elements of PLANHAP--PROFILURB and FICAM programs, squatter upgrading, and lower design standards for housing and infrastructure; and (ii) to contribute to the institutional development of the COHABs and strengthen their overall delivery capacity. While the FICAM program (part of the project), of financing individual construction material loans was cut back due to lack of promotion, other states and municipalities took good advantage of this line of credit in non-Bank financed projects. It would appear that BNH was more interested in using Bank financing for production of new shelter solutions more than promoting self-help construction of minimum shelter solutions. During the period of high inflation, BNH had opted for the more formal program of CONSO, but then found that the cost recovery was thwarted by arrears in mortgage payments while squatter upgrading, which was more difficult, had a higher cost recovery because it was affordable. While the financial problems are serious, they represent fixed costs that the Bank can do little to change. (In fact, they have to be scaled up to improve cost recovery.) There is still ample room to improve the planning, design and engineering. In fact, the project successfully lowered standards and costs over the four operating years.

### 6.02 Recommendations

- (i) Urban upgrading with shelter improvements and/or new embryo shelters is a cost-effective program for low-income families (less than 2 minimum salaries) at 1/4 of the cost of new standard solutions - i.e., walk-up apartments. Even though the developed densities are half those of new 4-story apartments, the Bank should give the greater emphasis to urban upgrading rather than new standard solutions. Low-income squatter families in the established urban sprawl are part of an informal economy which is also improved with the urban upgrading programs.
- (ii) Large conjuntos of 4-story apartment blocks of 4,000 to 5,000 dwellings (for family incomes of 2.5 to 5 minimum salaries) should not be planned or built. They produce an anti-social environment of monolithic structures composed of a standard single-type unit; they are too large to be integrated into existing, or to be formed, neighborhoods; and they become more of a social problem than a solution - difficult to administer. In contrast,



- (iii) Community planning, site planning and dwelling unit designs need to be coordinated to achieve a better living environment.
- (iv) Innovative solutions such as pre-cast RCC components of steps/walkways and drainage channels were successful in squatter upgrading, especially on steep slopes, and should be adopted for similar projects in the future. In contrast, pre-cast RCC building components for standard housing solutions, on the scale of this project in the three metropolitan areas, is not recommended.
- (v) Land banking of the COHABs should be based on smaller parcels of 8 to 10 ha., that can be integrated physically and socially and avoid the larger outlying remote sites lacking public services; and
- (vi) the COHABs service charges for the cost of land assemblage, site planning, engineering unit designs, supervision, and sales, general management and administration must be increased to eliminate the large annual state subsidies.

## BRAZIL

## SITES AND SERVICES AND LOW-COST HOUSING PROJECT

Loan 1654-BR

	SAR ESTIMATES 1979-1981				ACTUAL PROJECT 1979-84			
	No. of D.U.	No. of Constr. Matl.Ins.	Costs <sup>a/</sup>		No. of D.U.	Costs <sup>b/</sup>		
			1,000 UPC	'000,000 US\$		1,000 UPC	'000,000 US\$	
<u>PART A - Housing</u>	<u>51,300</u>	<u>23,800</u>	<u>11,493</u>	<u>169.6</u>	<u>59,586</u>		<u>21,977.7</u>	<u>219.7</u>
<u>COHAB - Sao Paulo</u>	(22,500)	-	(5,260)	(77.7)	(14,689)		(8,841.7)	(88.4)
- Dwelling units (CONSO & CESHE)	7,000	-	2,045	30.2	14,430		8,831.3	88.3
- Lots - S & S (PROFILURB)	15,500	-	1,550	22.9	259 <sup>c/</sup>		10.4	0.1
- Construct. matl. loans (FICAM)	-	11,100	1,665	24.6	-	-	-	-
<u>COHAB-PER</u>	(21,800)	-	(4,869)	(71.8)	(33,491)	-	(9,212.1)	(92.1)
- Dwelling units (CONSO & CESHE)	10,000	-	3,000	44.2	19,210	-	6,565.5	65.7
- Lots - S & S (PROFILURB)	11,800	-	1,239	18.3	14,281 <sup>c/</sup>	-	1,872.9	18.7
- Construct. matl. loans (FICAM)	-	8,400	630	9.3	-	2,295	773.7	7.7
<u>URBIS - BAHIA</u>	(7,000)	-	(1,364)	(20.1)	(11,406)	-	(3,923.9)	(39.2)
- Dwelling units (CONSO & CESHE)	2,500	-	750	11.0	4,286	-	2,276.4	22.7
- Lots - S & S (PROFILURB)	4,500	-	270	4.0	7,120 <sup>c/</sup>	-	1,647.5	16.5
- Construct. matl. loans (FICAM)	-	4,300	344	5.1	-	-	-	-
<u>PART B - Infra and</u>								
<u>Com. Facilities</u>	-	-	2,504	36.9	7,148	-	12,103.4	121.1
- Sao Paulo COHAB	-	-	526	7.7	-	-	-	-
COHAB-PER	-	-	487	7.2	905	-	1,157.5	11.6
- Squatter upgrad.	-	-	1,356	20.0	-	-	-	-
- BAHIA-URBIS	-	-	136	2.0	436	-	2,273.5	22.7
- Other COHABs	-	-	-	-	5,807	-	8,672.4	86.8
<u>PART C - Squatter</u>								
<u>Upgrading, EMBRYO</u>								
<u>Units &amp; Infrst.</u>								
Other States	-	-	-	-	35,707	-	11,966.3	119.7
<u>PART D</u>								
Others - S & S (PROFILURB)	10,000	-	1,200	17.7	-	-	-	-
Contingencies	-	-	2,813	41.5	-	-	-	-
<u>TOTAL</u>	<u>61,300</u>	<u>23,800</u>	<u>18,011</u>	<u>265.7</u>	<u>102,441</u>	<u>-</u>	<u>46,047.4</u>	<u>460.5</u>

a/ January 1979

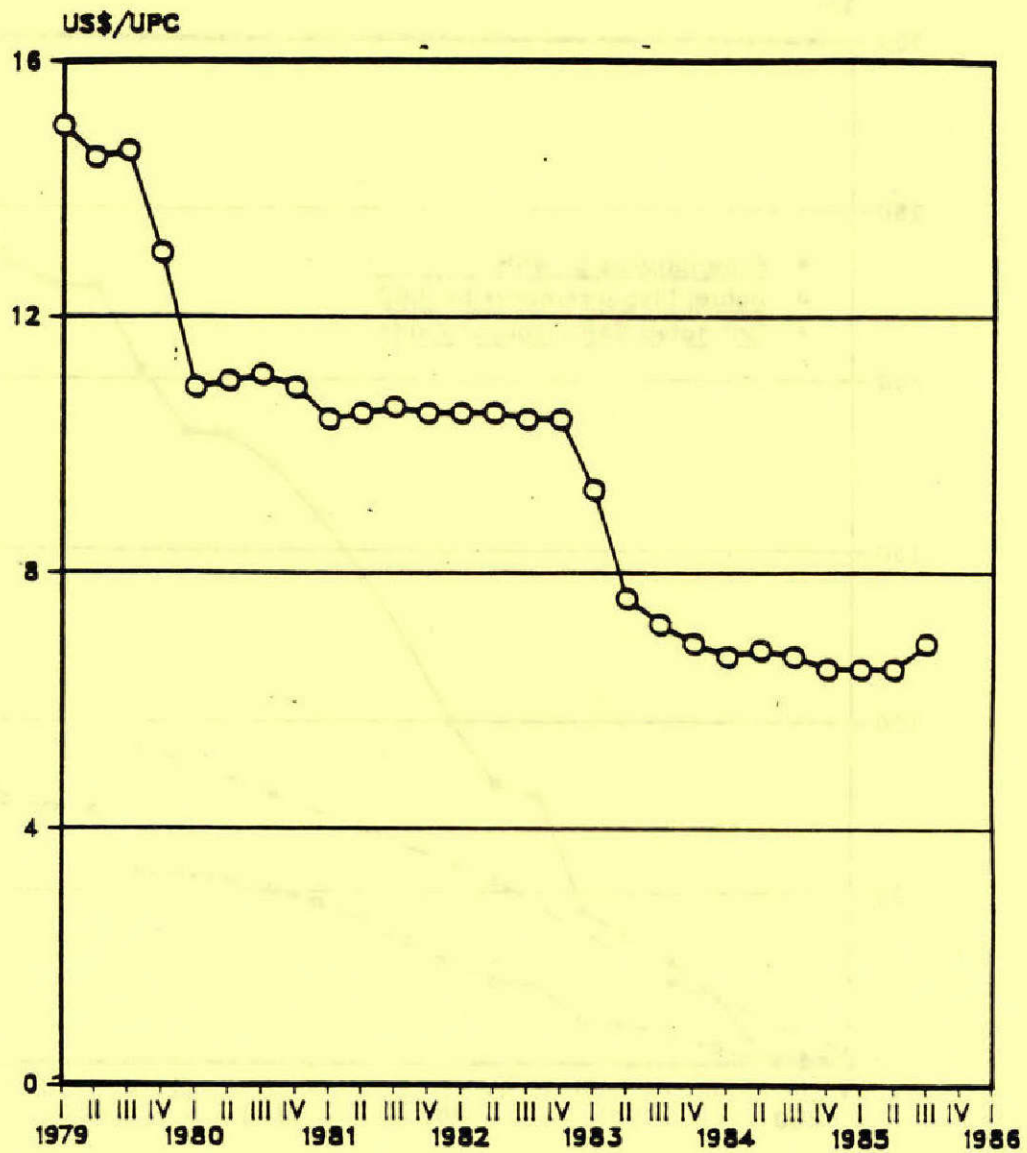
b/ December 1984

c/ Supplemented later with EMBRYO



Brazil  
Sites & Services & Low-Cost Housing Project  
Loan 1654-BR Project Completion Report

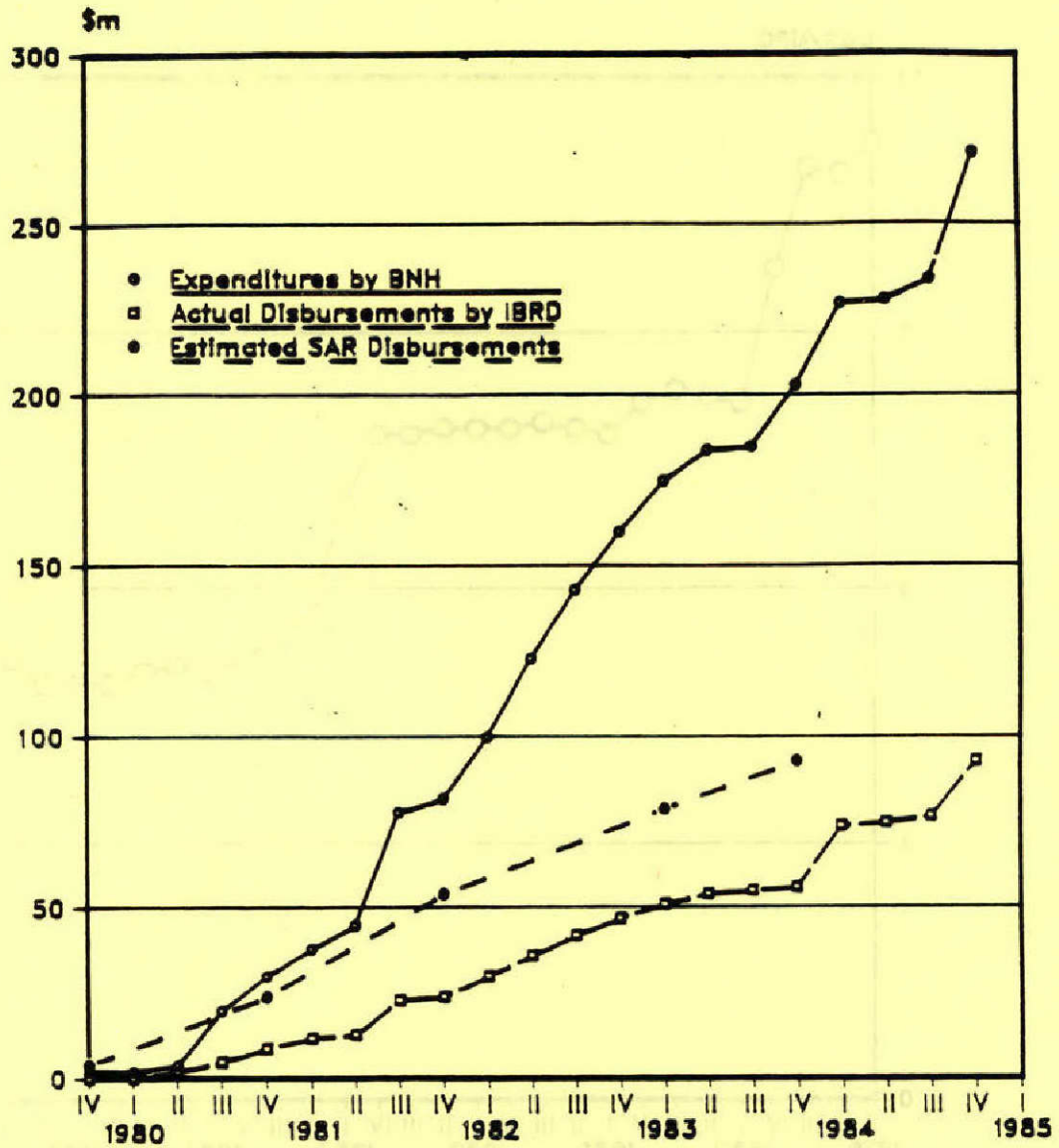
Changing Value of UPC\* in US\$ by Trimester  
Jan 79-July 85



\* Unidad Padrao de Capital (Standard Capital Unit)

Brazil  
Sites & Services & Low-Cost Housing Project  
Loan 1654-BR Project Completion Report

Expenditures and Disbursements





BR  
SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
Loan 1654-BR

COHAB - SAO PAULO  
BALANCE SHEETS AS OF DECEMBER 31,  
('000.000 Cr\$ and '000 US\$)

	1979		1980		1981		1982		1983		1984	
	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$
<b>ASSETS</b>												
<b>CURRENT ASSETS</b>												
CASH AND BANKS	354	8.324	638	9.741	2.142	18.326	6.605	26.141	12.972	13.183	2.892	908
TREASURY BILLS-SHORT TERM	-	-	-	-	-	-	-	-	-	-	19.767	6.208
LOANS RECEIVABLE-SHORT TERM	9	212	33	503	172	1.346	785	3.107	2.987	3.036	22.347	7.019
OTHER CURRENT ASSETS	177	4.161	130	1.985	858	6.712	1.940	7.678	10.896	11.073	42.765	13.431
SUBTOTAL	540	12.697	801	12.229	3.372	26.386	9.330	36.926	26.855	27.292	87.771	27.566
<b>LONG-TERM ASSETS</b>												
LOANS RECEIVABLE-LONG TERM	4.947	116.318	12.978	198.137	34.726	271.721	89.868	355.673	251.512	255.602	871.019	273.561
OTHER LONG-TERM	673	15.824	1.374	20.978	1.337	10.462	2.393	9.471	5.687	5.779	9	3
SUBTOTAL	5.620	132.142	14.352	219.115	36.063	282.183	92.261	365.144	257.199	261.381	871.028	273.564
<b>FIXED ASSETS</b>	116	2.727	174	2.656	328	2.566	617	2.442	1.676	1.703	5.890	1.850
<b>TOTAL ASSETS</b>	6.276	147.566	15.327	234.000	39.763	311.135	102.208	404.512	285.730	290.376	964.689	302.980
<b>LIABILITIES</b>												
<b>CURRENT LIABILITIES</b>												
ACCOUNTS PAYABLE	117	2.751	242	3.695	560	4.382	1.308	5.177	1.199	1.218	8.276	2.599
DEPOSITS	10	235	28	428	66	516	180	712	322	327	856	269
LOANS CURRENT	99	2.328	540	8.244	259	2.027	502	1.987	1.985	2.018	5.331	1.674
OTHER CURRENT LIABILITIES	22	517	23	351	404	3.161	231	914	197	200	1.239	389
SUBTOTAL	248	5.831	833	12.718	1.289	10.086	2.221	8.790	3.703	3.763	15.702	4.931
<b>LONG-TERM LIABILITIES</b>												
LOANS-LONG TERM	5.541	130.285	13.421	204.901	39.013	305.266	98.875	391.321	284.408	289.032	878.105	275.787
OTHER	-	-	168	2.565	289	2.262	863	3.416	1.027	1.044	-	-
SUBTOTAL	5.541	130.285	13.589	207.466	39.302	307.528	99.738	394.737	285.435	290.076	878.105	275.787
<b>CAPITAL</b>												
CAPITAL	315	7.406	463	7.069	698	5.462	1.366	5.406	4.852	4.931	11.555	3.629
RESERVES/OTHER	172	4.044	442	4.321	(7.217)	(56.471)	(25.300)	(800.135)	(105.561)	(107.277)	(105.118)	(127.235)
RESERVA DO EXERCÍCIO FINANÇAS	-	-	-	2.426	5.691	44.530	24.184	95.714	97.301	98.883	464.445	145.868
SUBTOTAL	487	11.450	905	13.816	(1.828)	(6.479)	249	985	(3.408)	(3.463)	70.882	22.262
<b>TOTAL LIABILITIES</b>	6.276	147.566	15.327	234.000	39.763	311.135	102.208	404.512	285.730	290.376	964.689	302.980
	US\$1-	42,51		65,50		127,80		252,67		984,00		3.184,00

ANEXOS  
Tabela 1

BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT

Loan 1654-RR

SUMMARY CASH FLOW

COHAB - SAO PAULO

('000.000 Cr\$ and 000 US\$)

	1979		1980		1981		1982		1983		1984	
	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$
I - Receitas de Atividades Operacionais (OPERATIONAL REVENUES)	1.698	39.925	3.917	59.802	8.588	66.807	24.677	97.665	81.012	82.329	320.660	100.709
II - Despesas de Atividades Operacionais (OPERATIONAL EXPENSES)	1.419	33.365	3.559	54.336	15.478	121.111	41.496	164.230	57.225	159.781	590.292	185.393
III - Resultado Bruto (GROSS PROFIT)	279	6.560	358	5.466	(6.940)	(54.304)	(6.819)	(66.565)	(6.213)	(77.452)	(69.632)	(84.684)
IV - Despesas Gerais e Administrativas (GEN. & ADMIN. EXPENSES)	125	2.939	225	3.435	486	3.801	956	3.784	2.795	2.840	11.001	3.454
V - Resultado Operacional Líquido (OPERATIONAL PROFIT)	154	3.621	133	2.031	(7.426)	(58.107)	(17.775)	(70.349)	(79.008)	(80.292)	(80.633)	(88.138)
VI - Resultado Não Operacional (NONOPERAT. EXPEND.)	(106)	3.198	(188)	2.870	(435)	(3.403)	6.685	26.457	18.565	39.192	257.438	80.853
VII - Resultado Líquido do Exercício (CASH BALANCE)	18	423	(55)	(839)	(7.861)	(61.510)	(11.090)	(43.892)	(40.443)	(41.100)	(23.195)	(7.285)
	US\$ 1=	42,53		65,50		127,80		252,67		984,00		3.184,00

ANEX 2  
TABLE 2

GSM/



BRAZIL  
SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
Loan 1634-BL

COHAB - SÃO PAULO  
INCOME AND CASH FLOW STATEMENTS

ANNEX 2  
Table 1

('000,000 Cr\$ and 000 US\$)

I T E M S	I T E M S	H I S T O R I C A L				E S T I M A T E	
		1 9 8 4		1 9 8 5		1 9 8 6	
		Cr\$	US\$	Cr\$	US\$	Cr\$	US\$
<b>REVENUES FROM</b>	<b>RECEITA OPERACIONAL</b>						
Service Income	Receita de Serviços	1.270	399.1	7.632	774.5	212.971	15.388.0
Loan Income	Empréstimos Concedidos	1	0.3	6	0.6	-	-
Revenues Treasures Bonds	Juros de Valores Mobiliários e depósitos	29.586	9.291.9	24.678	2.504.0	334.366	24.202.8
Other	Outras	83	26.0	649	65.9	15.496	1.119.7
<b>TOTAL INCOME</b>	<b>RECEITA TOTAL</b>	<b>30.940</b>	<b>9.717.3</b>	<b>32.965</b>	<b>3.345.0</b>	<b>563.433</b>	<b>40.710.5</b>
<b>OPERATING EXPENSES</b>	<b>DESPESA OPERACIONAL</b>						
Administrative Expenses	Despesas Administrativas	9.848	3.092.9	48.299	4.901.0	127.899	9.241.3
Financial Expenses	Despesas Financeiras	10	3.3	34	3.5	271.057	19.585.0
Other Expenses	Outras Despesas	191	59.9	780	79.1	51.335	3.709.1
<b>TOTAL EXPENSES</b>	<b>DESPESA TOTAL</b>	<b>10.049</b>	<b>3.156.1</b>	<b>49.113</b>	<b>4.983.6</b>	<b>450.291</b>	<b>32.535.4</b>
<b>INTERNAL CASH GENERATION</b>	<b>GERAÇÃO INTERNA DE CAIXA</b>	<b>20.891</b>	<b>6.561.2</b>	<b>(16.148)</b>	<b>(1.638.6)</b>	<b>113.142</b>	<b>8.175.1</b>
<b>SOURCES</b>	<b>FONTES (ORIGENS)</b>						
Internal Cash Generation	Geração Interna de Caixa	20.891	6.561.2	(16.148)	(1.638.6)	113.142	8.175.1
Loan Principal Amortization	Amortização dos Mutuários	26.515(a)	8.327.5	87.997	8.929.2	47.996	3.467.9
Loans BNM	Empréstimos do BNM	34.157	10.727.6	57.049	5.789.8	-	-
Deposits-Net of Withdrawals	Depósitos-Valores Líquidos de depósitos e saques	37.670	11.831.0	195.190	19.806.1	-	-
Other	Outras Fontes	999	314.2	25.095	2.546.5	25.456	1.839.2
<b>TOTAL SOURCES</b>	<b>TOTAL DAS FONTES</b>	<b>120.232</b>	<b>37.761.5</b>	<b>349.183</b>	<b>35.433.0</b>	<b>186.594</b>	<b>13.482.2</b>
<b>APPLICATIONS</b>	<b>USOS</b>						
New Loans	Novos Empréstimos (aplicações)	42.697	13.409.8	144.730	14.686.0	-	-
Debt Service-Amortization BNM	Serviço da Dívida-Amortização BNM	12.481(b)	3.919.8	52.633	5.340.7	5791	41.3)
	Empréstimos	42.933	13.483.9	88.167	8.946.4	-	-
Other	Outras Aplicações	14.601	4.586.8	54.711	5.451.6	267.074	20.001.5
<b>TOTAL APPLICATIONS</b>	<b>TOTAL DE USOS</b>	<b>112.714</b>	<b>35.400.3</b>	<b>340.241</b>	<b>34.324.7</b>	<b>266.495</b>	<b>20.001.5</b>
Net Change in Cash	Varição Líquida de Caixa	<b>7.538</b>	<b>2.351.2</b>	<b>2.342</b>	<b>208.2</b>	<b>30.099</b>	<b>1.452.2</b>
	US\$ L x	3,184.00	3,134.00	8,955.00	3,455.00	208.13.34	

- (1) These mortgage payments are gross values for interest and amortization (1984-85)  
(2) DITTO (relation to payments to BNM (1984-85)  
(3) INTRODUCTION OF CRUZADO

BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
Loan 1654-BR

COHAB - SAO PAULO  
PRESTACOES RECEBIDAS DOS MUTUARIOS - RETORNO DO BNH  
(Mortgage Receipts and Repayment to BNH)

A N O	COHAB-MORTGAGE RECEIPTS (A)	COHAB REPAYMENTS TO BNH (B)	RETAINED IN COHAB (A-B) (C)	% RETENTION IN COHAB C/A x 100 (D)
1 9 7 9	444.870	231.065	213.805	48,06
1 9 8 0	665.218	324.184	341.034	51,27
1 9 8 1	1.008.674	454.729	553.945	54,92
1 9 8 2	1.619.718	520.264	1.099.454	67,88
1 9 8 3	2.093.351	1.878.552	214.799	10,26
1 9 8 4	1.835.293	1.029.400	805.893	43,91
1 9 8 5	1.909.128	1.425.797	483.331	25,32
T O T A L	9.576.252	5.863.991	3.712.261	38,77



**BRASIL**  
**SITES AND SERVICES AND LOW-COST HOUSING PROJECT**  
**Loan 1034-B**

ANNEX 2  
Table 3

BALANCE SHEETS AS OF DECEMBER, 31  
('000.000 Cr\$ and '000 US\$)

ITEMS	1979		1980		1981		1982		1983		1984	
	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$
<b>ASSETS</b>												
Cash and Banks	194	4.562	57	848	107	840	353	1.396	795	808	7.344	2.307
Treasure Bonds-Short Term	76	1.781	73	1.113	45	351	251	995	614	623	7.255	2.278
Loans Receivable-Short Term	96	2.258	76	1.174	114	893	205	812	1.016	1.033	1.351	424
Other Current Assets	4	87	16	242	83	645	131	520	22	30	178	57
<b>CURRENT ASSETS</b>	<b>370</b>	<b>8.688</b>	<b>222</b>	<b>3.397</b>	<b>351</b>	<b>2.749</b>	<b>940</b>	<b>3.723</b>	<b>2.454</b>	<b>2.494</b>	<b>16.128</b>	<b>5.066</b>
Loans Receivable-Long Term	2.525	59.366	5.134	78.380	12.407	97.089	34.317	135.817	115.178	117.051	218.554	68.641
Other Long Term	13	310	26	404	42	382	451	1.788	1.368	1.390	3.156	627
<b>LONG TERM ASSETS</b>	<b>2.538</b>	<b>59.676</b>	<b>5.160</b>	<b>78.784</b>	<b>12.456</b>	<b>97.467</b>	<b>34.768</b>	<b>137.601</b>	<b>116.546</b>	<b>118.441</b>	<b>220.710</b>	<b>69.318</b>
Fixed Assets	13	317	20	300	45	355	112	438	270	274	1.192	374
<b>TOTAL ASSETS</b>	<b>2.921</b>	<b>68.681</b>	<b>5.402</b>	<b>82.481</b>	<b>12.852</b>	<b>100.571</b>	<b>35.823</b>	<b>141.780</b>	<b>119.270</b>	<b>121.209</b>	<b>238.030</b>	<b>74.758</b>
<b>LIABILITIES</b>												
Accounts Payable	47	1.118	121	1.846	79	615	46	181	85	87	83	26
Deposits	10	236	27	419	52	407	127	502	196	199	1.100	346
Loans-Current Portion	59	1.401	83	1.264	180	1.409	599	2.373	1.069	1.086	5.897	1.852
Other Current Liabilities	9	203	41	938	76	598	131	527	308	313	536	169
<b>CURRENT LIABILITIES</b>	<b>125</b>	<b>2.960</b>	<b>292</b>	<b>4.467</b>	<b>387</b>	<b>3.029</b>	<b>905</b>	<b>3.583</b>	<b>1.658</b>	<b>1.685</b>	<b>7.618</b>	<b>2.393</b>
Loans-Long Term Portion	2.701	63.486	4.967	75.820	12.184	95.308	34.351	135.953	114.133	118.021	225.231	70.738
Other-Long Term	9	10	9	6	9	9	9	2	0	0	0	0
<b>TOTAL LIABILITIES</b>	<b>2.701</b>	<b>63.496</b>	<b>4.967</b>	<b>75.826</b>	<b>12.184</b>	<b>95.311</b>	<b>34.351</b>	<b>135.955</b>	<b>114.133</b>	<b>118.021</b>	<b>225.231</b>	<b>70.738</b>
<b>CAPITAL</b>	<b>62</b>	<b>1.439</b>	<b>86</b>	<b>1.311</b>	<b>129</b>	<b>1.013</b>	<b>254</b>	<b>1.004</b>	<b>502</b>	<b>510</b>	<b>1.288</b>	<b>405</b>
Reserves	32	797	37	977	52	488	113	438	977	303	333	1.223
Capital and Reserves	35	2.225	43	2.288	77	2.201	141	2.242	405	407	1.621	628
<b>TOTAL LIABILITIES AND CAPITAL</b>	<b>2.921</b>	<b>68.681</b>	<b>5.402</b>	<b>82.481</b>	<b>12.852</b>	<b>100.571</b>	<b>35.823</b>	<b>141.780</b>	<b>119.270</b>	<b>121.209</b>	<b>238.030</b>	<b>74.758</b>
US\$ 1 =		42.53		65.50		127.30		252.57		984.20		1.184.50

BRAZIL  
SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
Loan 1654-88

URBIS S.A.

(\*000.000 Cr\$ and 000 US\$)

I T E M S	1 9 7 9		1 9 8 0		1 9 8 1		1 9 8 2		1 9 8 3		1 9 8 4	
	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$	Cr\$	US\$
I - RECEITAS DE ATIVIDADES OPERACIONAIS	456,8	10.741	1.271,1	18.582	3.754,4	29.377,0	8.512	33.688	41.267	41.938	149.057	46.814
II - DESPESAS DE ATIVIDADES OPERACIONAIS	383,9	9.027	1.044,9	15.953	3.468,0	27.136,0	7.610	30.118	39.465	40.107	142.397	44.723
III - RESULTADO BRUTO	72,9	1.714	172,2	2.629	286,4	2.241	902	3.570	1.802	1.831	6.660	2.091
IV - DESPESAS GERAIS E ADMINISTRATIVAS	70,6	1.660	192,3	2.936	421,0	3.294	1.111	4.397	2.507	2.548	7.663	2.407
V - RESULTADO OPERACIONAL LÍQUIDO	2,1	54	(20,1)	( 307)	(134,6)	(1.053)	(209)	(827)	(705)	(717)	(1.003)	(316)
VI - RESULTADO NÃO OPERACIONAL	1,7	40	20,9	319	135,7	1.062	224	886	744	756	1.799	565
VII - RESULTADO LÍQUIDO DO EXERCÍCIO	4,0	94	0,8	12	1,1	9	15	59	39	39	796	249
	US\$ 1 -	42,53		65,50		127,80		252,67		984,00		3.184,00



BRAZIL

SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
Loan 1654-BR

INDICES FINANCEIROS/ECONOMICO  
(Financial and Economic Indicators)

URBIS S.A.

<u>I N D I C E S</u>	<u>1 9 7 9</u>	<u>1 9 8 0</u>	<u>1 9 8 1</u>	<u>1 9 8 2</u>	<u>1 9 8 3</u>	<u>1 9 8 4</u>	<u>1 9 8 5</u>
<u>I - LIQUIDEZ SECA</u> <u>(QUICK RATIO)</u>	2,143	2,443	2,393	2,667	2,849	1,916	0,182
<u>II - LIQUIDEZ CORRENTE</u> <u>(CURRENT RATIO)</u>	2,935	2,760	0,907	1,039	1,479	2,117	0,397
<u>III- LIQUIDEZ GERAL</u> <u>(GENERAL LIQUIDITY)</u>	1,029	1,023	1,019	1,012	1,010	1,017	1,013
<u>IV - GARANTIA CAPITAL DE</u> <u>TERCEIROS</u>	0,033	0,027	0,022	0,016	0,012	0,022	0,017
<u>V - RENTABILIDADE</u> <u>(YIELD)</u>	0,0037	0,0035	0,0026	0,0186	0,0170	0,0997	0,0887

BRAZIL  
SITES AND SERVICES AND LOW-COST HOUSING PROJECT  
Loan 1654-BR

RELACAO ALUGUEL/PRESTACAO DO S F H  
 (Relationship of Rent to Mortgage Payments)

S A L V A D O R

FAIXAS DE ATENDIMENTO	SALA + 1 QUARTO				SALA + 2 QUARTOS				SALA + 3 QUARTOS			
	1979	1980	1981	1982	1979	1980	1981	1982	1979	1980	1981	1982
FAIXA COHAB	6,59	6,92	6,73	7,49	5,52	5,58	7,27	6,03	8,09	6,98	6,70	6,84
FAIXA COOPERATIVAS HABITACIONAIS	1,16	1,16	1,16	1,52	1,13	1,20	1,68	1,40	1,37	1,37	1,03	0,89
FAIXA S B P E	1,01	0,97	0,96	1,09	0,75	0,75	0,76	1,03	0,84	0,83	0,83	1,13

OBS.: RECIFE - Não foi possível realizar a pesquisa para habitações "faixa COHAB" por não existirem informações sobre locações nesta faixa.

SÃO PAULO - Ausência de informações da Agência do BNH.





SAO PAULO METROPOLITAN AREA  
(COHAB-SB)

Vila Maria - Slum upgrading.  
Lot size: 5 m x 15 m with  
18 m<sup>2</sup> embryo built in back  
of lot with initial cost per  
dwelling US\$2,900.  
Completed December 1980.

VIA MARIA EXPANSION. With strong support of the Homeowner's Association over 80% of the families have expanded their dwellings with 2 stories in front in very successful variety of solutions.



September 1986



SAO PAULO METROPOLITAN AREA  
(COHAB-SP)

CASA MODULAR - Based on 1 m modules, 2 types - 18 m<sup>2</sup> and 24 m<sup>2</sup> floor area with pre-cast wall panels, columns, door frames and lintels. First stage construction US\$1,125 per solution on 5 m x 15 m lots. This solution is appropriate for outlying suburban locations.

Light steel frame with small concrete panels on edge

18 m<sup>2</sup> - 1st stage:  
US\$1,400.

Integral bearing wall panels  
- 18 m<sup>2</sup> - 1st stage:  
US\$1,250.





SAO PAULO METROPOLITAN AREA  
COHAB-SP

Fernao-Dias: 1,060 apartments of 50 m<sup>2</sup> in 5 story walk ups - US\$6,800/apt. - too dense and void of landscaping. Completed in August 1983, the project is also lacking in community services.



SALVADOR, BAHIA, URBIS,  
BAHIA - MUSSURUNGA: 3,983  
apts. in 3 stages 48m<sup>2</sup> in 4  
story walk-ups -  
US\$3,880/apt. - smaller  
clusters, using pre-cast RCC  
tilt-up panel construction.  
Completed in December 1982



SALVADOR, BAHIA, URBIS,  
BAHIA

MUSSURUNGA - 3,983 apts. -  
Individual court yard  
entrance to each block.

RIO DE JANEIRO  
Earlier attempt in 1940s  
to re-house slum dwellers-  
now a social problem







RIO DE JANEIRO

BNH-RIO

PROYECTO RIO VILA PINHEIRO -  
Slum Clearance with 3,000  
relocation dwellings in the  
first stage - 40 m<sup>2</sup> con-  
struction per apartment in  
one and two stories on 5 x  
15 m lots with 4-story walk-  
up apartments to the rear of  
the site. Completed June  
1985. Total project re-  
settlement is 17,000  
families.

VILA PINHEIRO - 1st Stage  
Diagonal row housing with  
commercial on the corner.  
Cost of 40 m<sup>2</sup> 1st stage was  
US\$5,900, including hydrau-  
lic landfill.



VILA PINHEIRO - 1st Stage  
Pedestrian and service lane.





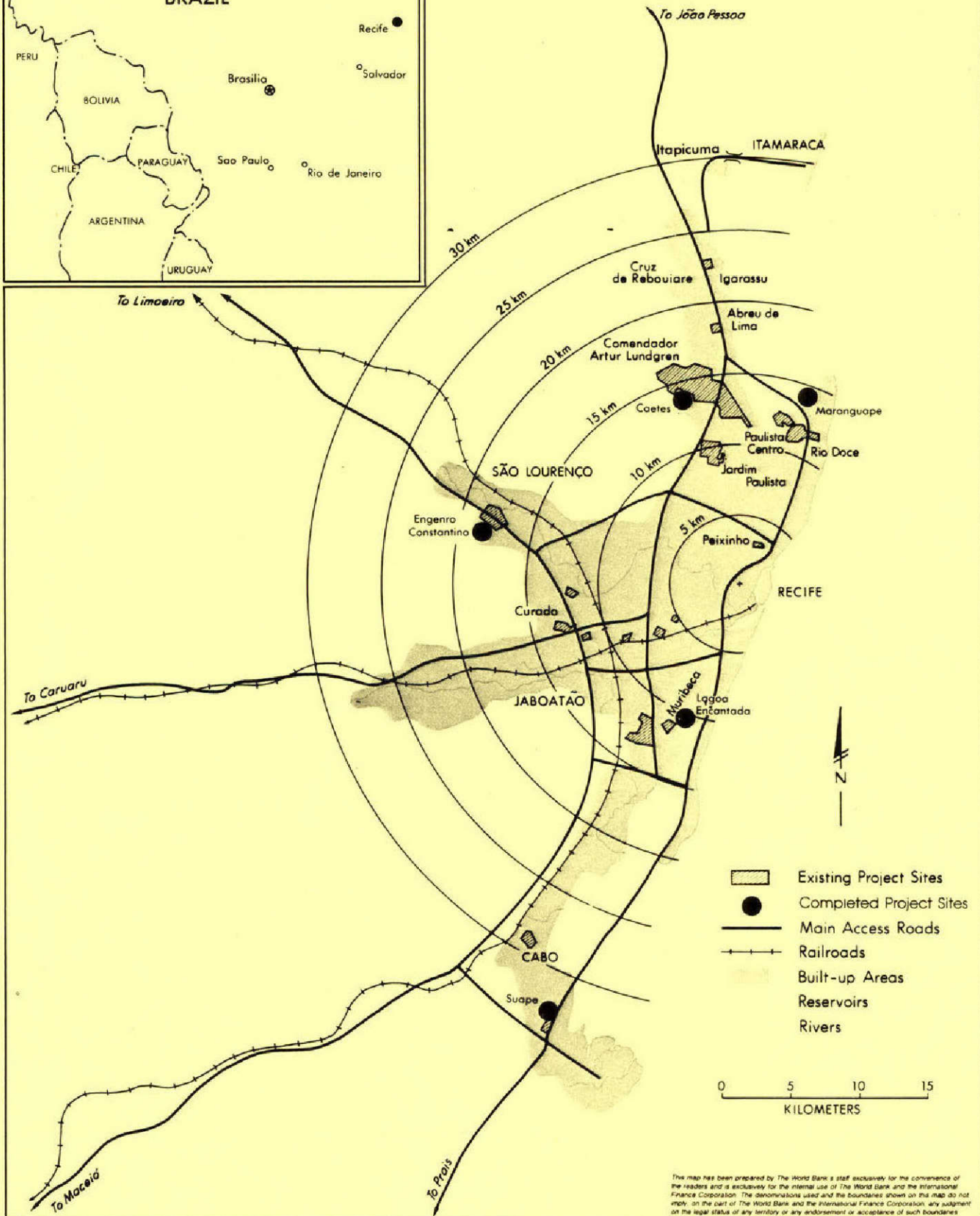




# BRAZIL

## SITES AND SERVICES AND LOW COST HOUSING PROJECT

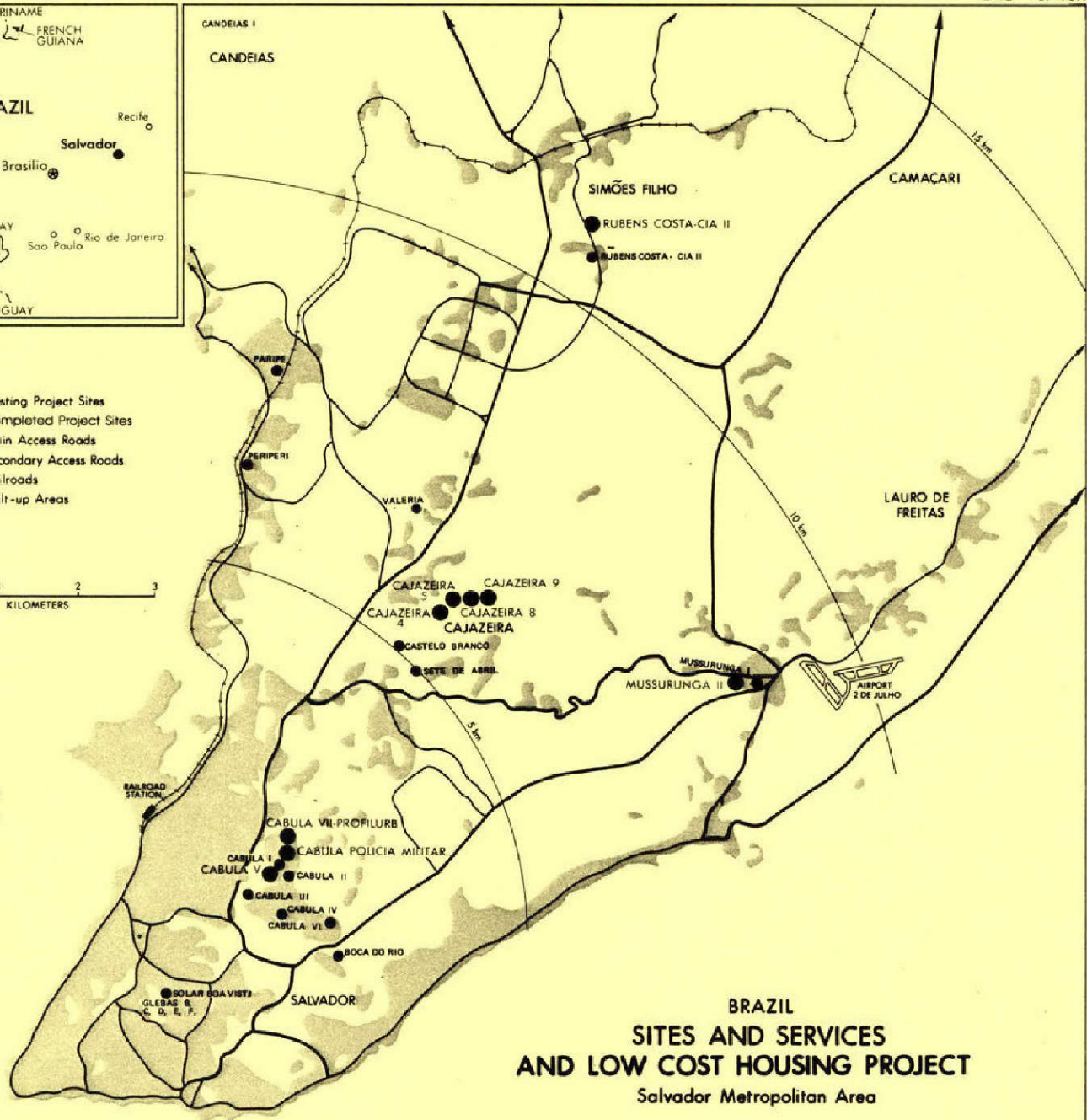
### Recife Metropolitan Area



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- Existing Project Sites
- Completed Project Sites
- Main Access Roads
- Secondary Access Roads
- Railroads
- Built-up Areas



**BRAZIL**  
**SITES AND SERVICES**  
**AND LOW COST HOUSING PROJECT**  
 Salvador Metropolitan Area

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