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PROJECT COMPLETION REPORT

ZAMBIA: LUSAKA SQUATTER UPGRADING AND SITE AND SERVICES PROJECT
(LOAN 1057-ZA)

June 30, 1983

Eastern Africa Region
Urban Projects

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ZAMBIA

LUSAKA SQUATTER UPGRADING & SITE & SERVICES PROJECT

Abbreviations and Acronyms

AFSC	American Friends Service Committee
FNDP	First National Development Plan
GRZ	Government of the Republic of Zambia
GTZ	German Agency for Technical Cooperation
HPU	Housing Project Unit
LUDC	Lusaka Urban District Council
NHA	National Housing Authority
O&M	Operations and Management
PLGAD	Provincial and Local Government Administration Division, Office of the Prime Minister
SNDF	Second National Development Plan
TNDP	Third National Development Plan
UNICEF	United Nation's Children's Fund

Country Exchange Rates
(Averages for selected years)

Currency Unit = Kwacha (K)

1975	US\$1 = K.64
1978	US\$1 = K.77
1980	US\$1 = K.79

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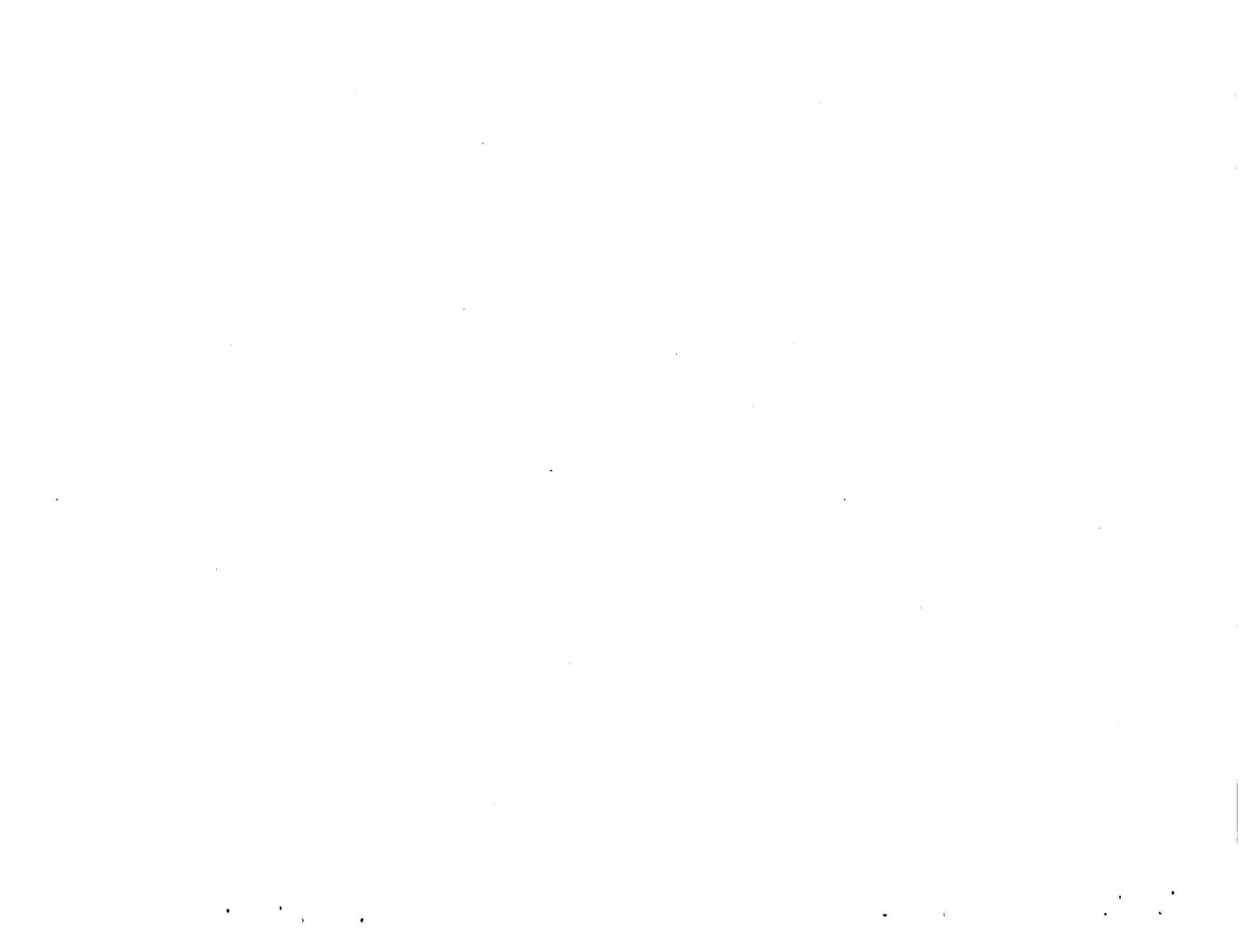
ZAMBIA: Lusaka Squatter Upgrading and Sites and Services Project
(Loan 1057-ZA)

PREFACE

Loan 1057-ZA for the Lusaka Squatter Upgrading and Sites and Services Project was signed in July 1974. The final disbursement of the proceeds of the loan for \$20 million was made in October 1981 and the balance of \$717.41 was cancelled. During implementation, the project's content was revised and the Closing Date was postponed.

This Project Completion Report (PCR) was prepared by Urban Development Division of the Eastern Africa Projects Department. It is based on a review of files and documents, interviews with Bank and Borrower staff and a visit to Zambia in June 1981.

In accordance with the revised procedures for project performance audit reporting, this Completion Report was read by the Operations Evaluation Department but the project was not audited by OED staff. The draft Completion Report was sent to the Borrower; however, no comments were received.



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SITES AND SERVICES PROJECT
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BASIC DATA SHEET

KEY PROJECT DATA

	<u>Appraisal Estimate</u>	<u>Actual</u>	<u>Actual as % of Appraisal Estimate</u>
Project Cost (US\$ million)	41.27	41.8 1/	101
Credit Amount (US\$ million)	20	20	100
Date of Board Approval	10/15/74	07/05/74	-
Date of Effectiveness	04/07/75	04/01/75	-
Date Physical Components Completed	09/30/77	07/30/81	-
Proportion then completed (%)	-	98	-
Closing Date	12/31/79	12/31/81	-
Economic Rate of Return (%) <u>2/</u>	12-28	18	-
Financial Performance <u>3/</u>	Good	Fair	-
Institutional Performance	Good	Fair	-
Number of Direct Beneficiaries (1981)	28,850	31,355	109

1/ As of 12/31/80 converted at an average rate of US\$1=K0.78. The project was scaled down to exclude the schools component which was transferred to the Education Project. Other community facilities were also reduced as a result of anticipated cost overruns.

2/ Rates were calculated for individual sites at appraisal. The exercise was repeated, and a weighted average calculated for the reevaluation.

3/ A financial rate of return was not calculated at appraisal.



OTHER PROJECT DATA

Borrower: The Government of the Republic of Zambia
Executing Agency: Lusaka City Council (Housing Project Unit)
Fiscal Year: January 1 to December 31
Name of Currency (abbreviation) :Zambian Kwacha (K)
Currency Exchange Rates:
Appraisal Year Average (1975) US\$1.00 = K0.65
Intervening Years Average (1976) US\$1.00 = K0.79
(1977) US\$1.00 = K0.76
(1978) US\$1.00 = K0.79
(1979) US\$1.00 = K0.78
(1980) US\$1.00 = K0.81
Completion Year Average (1981) US\$1.00 = K0.88
Follow-on Project:
None. A possible second project is being discussed.

CUMULATIVE DISBURSEMENTS

	FY75	FY76	FY77	FY78	FY79	FY80	FY81	FY82
Appraisal Estimate (US\$ million)	2.25	9.68	16.14	18.74	20			
Actual (US\$ million)	.08	2.30	5.64	10.52	15.77	19.30	19.30	20
Actual as % of estimate:	4	24	35	56	79	97	97	100

Date of final disbursement:10/31/81
Principal repaid to 5/11/83 (US\$ millions equivalent): 2.0



ZAMBIA

LUSAKA SQUATTER UPGRADING AND SITE AND SERVICES PROJECT

Mission Data

<u>Mission</u>	<u>Month/Year</u>	<u>No. of Persons</u>	<u>Person- days in field</u>	<u>Specializations^{1/} Represented</u>	<u>Performance^{2/} Rating</u>	<u>Trend^{3/}</u>	<u>Problems^{4/}</u>
Identification	11/72	1	2	1	-	-	-
Preparation	3/73	3	42	1,1,2	-	-	-
Appraisal	8/73	7	147	1,1,5,3,2,4,4	-	-	-
Post-Appraisal	10/73	1	2	4	-	-	-
TOTAL			193				
Supervision I	9/74	4	32	1,5,2,1	2	2	-
Supervision II	11/74	3	12	1,2,6	2	2	T
Supervision III	3/75	4	51	1,5,2,1	1	2	T
Supervision IV	9/75	3	30	1,5,2	2	2	0 ^{4/}
Supervision V	2/76	2	26	1,2	2	1	P
Supervision VI	7/76	2	40	1,2	2	1	0 ^{4/}
Supervision VII	2/77	1	10	2	3	1	F,P,0 ^{5/}
Supervision VIII	7/77	2	20	2,1	2	1	P,0 ^{4/}
Supervision IX	6/78	3	27	n.a.	2	1	P,0 ^{4/}
Supervision X	2/79	2	18	2,4	2	2	P,M,0,0 ^{6/}
Supervision XI	7/79	2	20	2,4	3	2	F,P,M,T
Supervision XII	11/79	2	18	2,4	3	3	F,P,M,T
Supervision XIII	3/80	1	7	4	3	1	F,M,P
Supervision XIV	10/80	2	20	4,7	3	1	F,M,P
Supervision XV	2/81	3	31	4,7,7	3	1	F,P
Supervision XVI/PCR	6/81	5	120	4,8,7,7,2	2	1	F,P,M
TOTAL			482				

^{1/} 1 = Economist; 2 = Engineer; 3 = Land Economist; 4 = Financial Analyst; 5 = Urban Affairs Specialist; 6 = Procurement Specialist; 7 = Urban Planner; 8 = Architect/Architect Planner.

^{2/} 1 = Improving; 2 = Stationary; 3 = Deteriorating.

^{3/} F = Financial; M = Managerial; T = Technical; P = Political; O = Other.

^{4/} Problems due to unavailability of foreign exchange.

^{5/} Problems due to unavailability of foreign exchange, inadequate budgetary allocation and delays in land acquisition.

^{6/} Unavailability of foreign exchange, delays in land acquisition, poor organization of contractors and abnormal rains.

The Education Component was supervised by the Education Division along with their 1st, 2nd and 3rd projects (Loans 592-ZA, 645-ZA and 900-ZA).

This project completion report is based on information in Appraisal Report No. 420a-ZA, as well as Supervision, Quarterly and Consultants reports, official project correspondence files, discussions with former and present Bank staff and Government officials and field mission findings.



PROJECT COMPLETION REPORT
ZAMBIA: Lusaka Squatter Upgrading and Site and Services Project
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HIGHLIGHTS

The Lusaka Squatter Upgrading and Sites and Services Project was one of the Bank's first urban projects in Africa. It was also the first externally-financed low-cost shelter project to be undertaken in Zambia. The project was undertaken in Lusaka mainly because it was the largest and fastest growing city in Zambia and had the most pressing shelter problems. In addition to physical targets, designed to address the needs of the city, the project was to influence national shelter policies by demonstrating the feasibility of designing low-cost shelter and infrastructure programs affordable to low income households. It was also to have strengthened the City Council's planning and execution capability for similar projects in the future.

In order to achieve the abovementioned objectives the project included provision of infrastructure for squatter upgrading, as well as the development of sites and services plots for residential as well as commercial or industrial use; building material loans for housing improvement and construction; community facilities; and, technical assistance for project unit operations, construction supervision, community development training, further project preparation and undertaking studies. A special project unit was created within the City Council to implement the project. The American Friends Service Committee (AFSC) and the United Nations Children's Fund (UNICEF) assisted in the financing and implementation of the project.

While the project was underway the Zambian Government experienced an acute financial crisis which led to delays, cost overruns and, eventually, cutbacks in the original plan. Nevertheless, much was accomplished; over 31,000 plots--accommodating approximately 30 percent of Lusaka's population--were provided with basic infrastructure; half the sites and services units were allocated to low-income households--the poorest 40 percent of the population; upgrading reached over 90 percent of the households in the targeted area; plots and loans were allocated according to a point system which favored the poorest residents; and houses built under the project cost approximately one tenth of the amount required under conventional schemes.

Once the project was completed, the special project unit created for its implementation was disbanded. A new unit, which is a more integral part of the council structure has been created to take its place. This unit continues to use the approaches and techniques which were developed by its predecessor in new areas of the city. The sites and services approach has also been endorsed in the Third National Development Plan (1979 to 1983).



Aspects of the project implementation experience that may be of special interest are:

- the difficulty in arriving at a suitable project size--while the need to demonstrate new approaches may suggest a modest-sized project in terms of physical outputs, the complementary administrative systems need to be tested and demonstrated at a much larger scale. (PCR, paras. 2.04, 2.09, 3.12, 4.02, 6.01-6.14, 9.01)
- the system of participation which permeated all aspects of the project, which is widely acknowledged as having contributed to its success. (PCR, paras. 2.13, 2.14, 3.31-3.33, 9.01)
- the persistence of the traditional problems of land acquisition despite government-ownership of all land. (PCR, paras. 2.08, 3.09, 3.21-3.30, 9.01)
- the complexity of the cost recovery issue, which has not yet been resolved. (PCR, paras. 1.10, 2.06, 5.03, 5.04 and 9.01).



I. INTRODUCTION

A. Sector Background

1.01 At the time of Independence (1964) Zambia was the second most urbanized country in Africa south of the Sahara with approximately 20% of its population of 3.5 million living in urban areas, as opposed to 12% in the rest of the continent. Following Independence the rate of urban growth increased significantly as new jobs were created and restrictions on movement lifted and by 1971 over 30% of its population was urban. The system under which employers were responsible for housing their employees also proved to be unable to cope with overall growth and the development of the informal sector. Embryonic illegal settlements established on the periphery of the colonial centers mushroomed. Initially the Government of the Republic of Zambia (GRZ) hoped that these areas could be removed and their residents resettled elsewhere so urban services and utilities were not provided. When the cost of this alternative was explored and found to be unaffordable, new approaches to the provision of urban shelter had to be sought.

1.02 By 1966 GRZ had adopted the site and services approach. Whereas the First Development Plan (FNDP)(1966-1970) allocated only 30% of all housing funds to this mode of development, the Second National Development Plan (SNDP) (1972-1976) presented this approach and that of squatter development as the exclusive vehicle for public sector involvement in housing development. Against an estimated need for 85,000 new urban dwellings during the SNDP period however, the target set was to provide only 70,000 serviced plots. At the time of project identification in 1973 very little had been achieved as a result of: (i) Financial constraints. Scarce financial resources which had dictated the modest targets had become even more constrained because of falling copper prices and a slowing down of overall economic activity; (ii) Implementation capacity. Zambia had very little experience in this area and lacked the personnel and general know-how for designing, preparing and delivering services of this nature; (iii) Inappropriate standards. Under the SNDP the GRZ indicated its intention to abandon the use of "basic" plots and to develop only "normal"^{1/} sites, following its experience with both under the FNDP. This meant that plot costs were inevitably high and affordable to few Zambians. Existing land legislation also required a large number of highly qualified personnel who were not available in Zambia at the time. GRZ approached the Bank for assistance.

B. Lusaka

1.03 Founded as a railway siding in 1905, Lusaka had become the capital of Zambia (then Northern Rhodesia) in 1931. By 1973 Lusaka had a population of some 381,000 and was growing at an annual rate of over 13%.

^{1/} Basic plots utilized pit latrines and communal water services and were generally smaller than normal plots which had water-borne sewer facilities and individual water taps.

It was chosen for implementation of the first project mainly because it was the largest and fastest growing city in Zambia and had the most pressing problems of urban shelter. Work had already been undertaken on a Master Plan for Lusaka and so there was also a significant amount of information, including aerial photography and socio-economic and physical surveys, which was not available for other centers. Furthermore, although the City Council was very inadequately staffed, technical and community development personnel were available in other public agencies in Lusaka to augment City Council resources.

C. The Project

1.04 The project, which was prepared by the GRZ and the Lusaka City Council, now Lusaka Urban District Council (LUDC), was appraised in August and September 1973. The Bank loan (1057 ZA) was approved by the Bank in July 1974 and became effective in April 1975. The project, as appraised consisted of:

- (a) upgrading and servicing of 1,700 dwellings in four major settlements;
- (b) preparing of 12,000 residential plots (7,600 in three overspill areas adjacent to upgraded settlements and 4,400 in six sites). All were designated for site and services development, with the provision of primary infrastructure such as water, sewerage and roads;
- (c) provision of building material loans for housing improvement and construction;
- (d) construction of related community facilities including schools, health clinics, multipurpose community centers markets and demonstration houses; and
- (e) provision of technical assistance for project unit operations, construction supervision, community development training, further project preparation and undertaking of studies.

1.05 In addition to the physical targets outlined above, the project was to demonstrate the feasibility of designing low-cost shelter and infrastructure programs affordable to low-income households and to thus influence national shelter policies.

1.06 It was estimated at appraisal that the total cost would be approximately K26.5 (US\$41.2 million). The Bank loan of US\$20.00 million was to finance the foreign exchange costs, which were then estimated to be 33% of total costs, and about 23% of local costs. The United Nations Children's Fund (UNICEF) and the American Friends Service Committee (AFSC) were to make a contribution amounting to less than 5% of the total project costs. The funds were to be onlent to LUDC along with GRZ's own contribution under a subsidiary Loan Agreement.

1.07 Because of the innovative nature of the project a systematic evaluation of its effects was funded by the International Development Research Center of Canada and the World Bank. An Evaluation Team was attached to the PLGAD for this purpose. The findings and analysis of these efforts are set out in detail in a separate report.^{2/} A sector survey was also conducted in parallel with the upgrading and site and services project and evaluation exercise, to evaluate the need for and potential of projects in other urban centers to complement the government's priority objective of rural development.^{3/}

D. Project Achievements and Conclusions

1.08 The project implementation period proved to be one of the most difficult periods in Zambian economic history. A 40% drop in copper prices^{4/} followed by significant reductions in copper output at a time when the effects of the international oil crisis were also being felt led to six consecutive years of financial hardship beginning 1975. Political and military strife in Angola, Zaire and Zimbabwe were also costly and increased Zambia's need for defense expenditures and disrupted access routes to the sea and the pattern and cost of importing and exporting. Total formal sector employment stagnated throughout most of the period and inflation was rapid, reaching a high of 20 percent in 1978. The Kwacha was also devalued twice during the period.

1.09 Despite the difficulties outlined above, the project was substantially implemented as planned (Table 1) and was physically one of the most successful first generation urban projects that the Bank has financed. Due to the ongoing evaluation exercise and monitoring conducted by the project unit itself, all project modifications necessitated by cost overruns and shortages of local counterpart funds were based on earlier actual project experience and therefore did not jeopardize achievement of project goals.

1.10 The project has also contributed significantly to the eventual elimination of the constraints identified above in the following ways:

Financial Constraints: Although cost recovery under the project has been very poor to date, the importance of financial replicability and of levying and collecting of user-charges have been acknowledged by the Government. As a result of the project experience studies of the status of

^{2/} Sanyal, B. et al. "Final Report on the Evaluation of the First Lusaka Upgrading and Site and Services Project" World Bank 1981.

^{3/} "Urban Sector Survey: Republic of Zambia" World Bank 1976 Report No. 490-ZA.

^{4/} Copper has historically provided over 95% of Zambia's export earnings.

ZAMBIA
LUSAKA SQUATTER UPGRADING AND SITE AND SERVICES PROJECT
Table 1: Appraisal Targets and Project Achievements

	Appraisal Target	Achievement (as of 6/81)	Achievement as % of Target
A. Physical Implementation			
1. Residential units serviced (dwellings or plots) ^{a/}			
a. Squatter Upgrading	16924	19916	118
b. Overspill areas	7588	7775	102
c. Phased normal (basic) sites	1197	974	81
d. Normal low-cost sites	1204	1188	99
e. Normal medium cost sites	1938	1503	77
TOTAL	28851	31355	109
2. Community Facilities (Number completed)			
a. Schools ^{b/}	20	8	40
b. Health Centers	3	3	100
c. Markets ^{c/}	17	6	35
d. Community Centers ^{d/}	17	7	41
B. Socio-Economic Improvement			
1. Residential Units allocated (dwellings or plots) ^{a/}			
a. squatter upgrading	16924	19916	118
b. Overspill Areas	7588	5550	73
c. Phased normal (basic sites	1197	888	74
d. Normal low-cost sites	1204	1188	99
e. Normal medium-cost sites ^{e/}	1938	587	30
2. Allocation of Site and Service <u>Plot to target Group</u> (No. of plots v % of total developed plots) ^{g/}			
a. % of plots allocated to households earning less than K70 per month	30%	20	
b. No. of plots allocated to households earning less than K300 per month	na	2240	
c. No. of plots allocated to households earning more than K300 per month	na	174	
3. Core Units Erected ^{h/} (No. of Units)			
a. Overspill areas-	7588	4277	56
b. Site and services areas.	4339	1823	42
4. Building Material Loans ^{i/}			
Total value of materials issued ^{j/}	K5,609,000	4,474,000	79

^{a/} Number of residential units serviced in squatter upgrading areas increased by 2,992 because of population growth in all four sites and also because of boundary adjustments on one site. Net change of 187 plots in overspill areas due to boundary adjustment (+325) and adverse soil conditions (-138). 223 phased normal sites were not developed because by the time development was to take place 12 plots had been occupied by commercial premises; 48 were encroached upon by high tension wires and 163 had been utilized for a housing estate. 16 normal low cost sites were used for construction of a site office and building material store. There was a net loss of 433 normal medium cost plots because of the presence of a high water table on site 6 (-530) and utilization of a portion of the site for a school and church (-5). Site 7 was substituted for site 8, resulting in an initial gain of 262 plots and a loss of 162 plots due to revisions in the layout necessitated by the presence of squatters.

^{b/} Twelve schools were transferred to Education III (the World Bank funded Education Project) because of cost overruns.

^{c/} Additional markets are being built by the communities themselves. The modification is based on project experience which indicates that communities can and will build markets for themselves.

^{d/} Centers built to date have not been fully utilized. GRZ believes that communities should build these facilities by self-help and has therefore accorded them a low priority in terms of provision of funds. Evaluation studies have also shown that the communities accord them a low priority as well. The project modification is therefore based on experience.

^{e/} Total number of plots developed which are to be allocated for residential use have been reduced by 1,055 because of adverse soil conditions (875 overspill plots), utilization of the area serviced for community facilities (125 overspill plots, 3 normal medium cost site and services plots) and designation as business plots (50 overspill plots). 1,175 overspill, 96 phased normal and 911 normal medium cost plots remain to be allocated by the Peri-Urban Areas Unit.

^{f/} Income ceiling criteria dropped for remaining plots which are located on the most distant site and for which demand is limited.

^{g/} Income limits periodically increased with Bank concurrence to reflect increases in costs and, to some degree, incomes.

^{h/} This indicator refers to the basic habitable two-room cores only. Many have been extended.

^{i/} Some K2 million worth of building materials purchased remain to be loaned out to plot allottees.

municipal finances^{5/} and the incidence and magnitude of subsidies in the housing sector^{6/} have been conducted and are being utilized for planning purposes. The difficulties in the collection of charges levied have also been highlighted and steps are being taken to mechanize the system to make it more effective.

Implementation Capacity: The capacity of the LUDC to implement similar programs has been enhanced through the creation of a new unit, the peri-urban areas unit, which is currently responsible for continuing the HPU's work in project areas while undertaking the upgrading of a new area, Kalingalinga, utilizing methods similar to those developed under the project, with funds from the German Government. A number of former senior HPU staff members have also joined the NHA, thus enhancing its capability in its capacity as consultant to local authorities, especially in its on-going European Development Fund financed secondary towns project. AFSC personnel, who are still working with the LUDC, have also indicated that they have improved their appreciation of major issues such as affordability through their involvement with the project.

Inappropriate standards: The project has demonstrated the feasibility of designing truly low cost shelter and infrastructure programs affordable to low income households. The findings of the evaluation study also indicate that project beneficiaries are satisfied with the shelter thus provided. The Third National Development Plan (TNDP) reflects a renewed commitment to the progressive upgrading model and speaks of the development of "settlement plots" rather than "low-cost" housing.

^{5/} Lynch, E.J..F. "Zambian Local Government Finance" World Bank 1980.

^{6/} Dinh Hinh and Sanyal B. "Housing Subsidies in the Public Sector in Zambia" World Bank 1980.

II. PROJECT IDENTIFICATION, PREPARATION AND APPRAISAL

A. Identification

2.01 When representatives of the Transportation and Urban Projects Department visited Zambia in 1972 as part of a mission to review and evaluate the international experience with site and services development GRZ had already defined a housing program in its SNDP and more detailed work had been done in Lusaka by consultants appointed by the Government. Although implementation was considerably behind schedule the Bank felt that the program was soundly-based, reasonably well managed and deserved Bank support. The government's official request for assistance, which was received shortly thereafter was therefore favorably considered and the formal process of definition of a project suitable for Bank participation got underway.

B. Preparation and Appraisal

2.02 During subsequent identification missions the Bank reviewed the SNDP program, the Lusaka Master Plan and related development proposals. They also reviewed the prior experience with similar projects especially in Ndola where a significant number of basic plots had been developed, in Chawama and Kafue where the AFSC had an ongoing experimental community self-help scheme and a small upgrading scheme in Livingstone.

2.03 The project proposal was prepared primarily by the National Housing Authority (NHA) which already had considerable experience in the preparation of site and services schemes and a well-staffed Improvement Division which was assisting local authorities throughout the country in the development of upgrading proposals. The Community Development components of the proposal were prepared by the United Nations Children's Fund (UNICEF) and the American Friends Service Committee (AFSC). UNICEF was particularly interested in the welfare of children in squatter communities in Zambia and the AFSC was already involved in a self-help project in Kafue. Both agencies had expressed an early interest in participating in the project and brought their intimate knowledge, based on their previous experience, to bear on the proposal.

2.04 The report which was submitted to the Bank in August 1973 was a very detailed and well-prepared five-volumed report. It presented proposals for improving the housing standards for over 35,000 households (48% of Lusaka's population) through the provision of: (i) serviced plots with water supply and sewerage connections to be taken a short distance inside each plot for subsequent individual connections, security lighting and a combination of tarred and gravelled roads. Capital cost per plot was estimated at K450 implying a monthly charge of K8.14; (ii) upgrading was proposed for "Urban" and "Rural" settlements. In the urban settlements, pipe water was to be provided at a standard of one standpipe per 25 dwelling units with densities reduced through relocation to Overspill areas adjacent to existing settlements. Standards in these overspill areas were to have been the same as those in the upgraded areas. Proposed capital costs were estimated at an average of K195 and K37 per house for urban and rural settlement respectively and monthly charges were estimated at K3.45 and K1

(iii) proposals for infrastructure included a new main from the central reservoir, construction of a new sewage treatment plant in the northern section of the city, expansion of the capacity of the treatment plant in the western section of the city and various lengths of roads and other works; (iv) building material loans of K200 for house improvement in squatter areas and K300 to K1,000 in site and services areas were proposed. Monthly repayments were estimated at K1.85 for a K200 loan, K2.75 for K300 and K7.36 for a K1,000 loan. A community development component was included to assure the cooperation of residents and to teach participants the skills needed for self-help. A small support communications unit was also proposed to facilitate the flow of information between the various actors involved and with the rest of society.

2.05 The Bank was concerned about the issues of (i) cost recovery; (ii) inappropriate standards; (iii) the inadequacy of the existing framework for delivery of tenure; (iv) the size of the building material loans proposed; (v) the status of the finances of the LUDC which would bear the brunt of the financial burden of the project; (vi) the use of community self-help in the upgrading process; and (vii) inclusion of the support communications unit. These issues were the subject of often-heated but generally productive debate as the Bank felt that their resolution was essential for successful project implementation and the achievement of established goals.

2.06 Cost Recovery. Prior to the Bank's involvement, site and services development was funded through a system of grants to local authorities, who in turn lent with little incentive for the borrower to repay. Collections were also poor and the situation in relation to housing rental had been aggravated by the passage of the Rent Act in 1972 which made it difficult for councils to evict tenants who were not paying their rents. This system was contrary to national priorities which favored development of the agricultural sector, and, in itself did not provide the basis for a replicable program for housing development. The Bank advocated the substitution of loans for grants and improvements in collections from beneficiaries through the use of various incentives and disincentives and systems such as deductions at source by employers. Substantial agreement was arrived at on the principle and a covenant was subsequently included in the legal documents requiring the LUDC to make appropriate provisions for the recovery of plot servicing charges.

2.07 Standards. The issue of standards was mainly focussed on the definition of an appropriate plot size and building by-laws. The Bank, concerned that a large plot size would lead to increased servicing costs and eventual urban sprawl, considered a standard plot of 324m² as contained in the project proposal, to be larger than optimal. Building by-laws also rigidly defined construction standards which were unaffordable to the majority of Lusaka's residents. The Bank pointed out that the standards implied that the project would effectively exclude those earning less than K23 per month who then made up 16% of the population, they stressed the technical feasibility of progressive upgrading of basic sites and constantly spelt out the implications of alternative standards on affordability of the project to the poor. Basic plots were eventually included on an experimental basis in the overspill areas and one site and services area only

and the GRZ agreed to review the experience with an eye to revising its standards if the smaller size plots proved inadequate. Some of the more stringent building by-laws were also waived to allow the use of traditional building materials.

2.08 Land Tenure. The Land Survey and Registration system in effect at the time of project preparation required a degree of accuracy which only highly qualified surveyors could accomplish. Only four expatriates and no local professionals in Zambia were suitably qualified, whereas achievement of the housing goals under the SNDP, required a rapid output of secure tenure arrangements and the simplification of registry techniques. New legislation was already being written, but the process had become bogged down. The Bank was also concerned that the length of tenure being considered in the provisions of this legislation might not be adequate for implementation of the proposed project and felt that its expeditious passage as well as its content were critical for project implementation. The Bank therefore suggested the use of a tenure period long enough to cover the loan repayment periods and urged the Borrower to expedite passage of the legislation. Slow progress led to its passage and effectiveness being made conditions of loan effectiveness. The Bank's understanding also that (i) tenure under the new Housing Act would be for at least 25 years in upgraded areas and at least 30 years in Site and Services areas, and (ii) registration procedures would be simplified were recorded in side letters.

2.09 Project Size and Implementation Capacity. Limited implementation capacity in Local Authorities was seen as a major constraint to implementation of the SNDP housing program. Both the PLGAP and the Bank felt that a major thrust was needed to get the project going and that a special unit would have to be established for this and that the agency most likely to be able to undertake the responsibility was the NHA. However, the LUDC made it clear from the outset that they felt the provision of housing in Lusaka was their statutory responsibility and that their cooperation would not be readily forthcoming should the unit not be attached to them. The Bank agreed to this but required that steps be taken to strengthen LUDC operations. The legal covenants therefore required the Council to carry out (i) an Operations and Management Study with a view to improving its operations in general, and (ii) a Water Management and Tariff Study to improve the operations of its water and sewerage department. Loan effectiveness was also conditioned on the appointment of the Project Director and the Heads of the three departments of the Project Unit.

2.10 In addition, arrangements made during appraisal for implementation of the project were: (i) the project director was to be given senior officer status within the LUDC; (ii) the council's decision making process was to be shortened for the project, and the director would report to the Finance and General Purposes Committee only; (iii) extra salaries and perquisites were attached to key posts to attract qualified and experienced personnel on contract; (iv) an interagency committee was established to ensure coordination of the inputs of the various agencies involved.

2.11 Building Material Loans. The size of building material loans was scaled down on the basis of the Bank's suggestion that the possible use of alternative technologies and materials should be considered and that the additional monthly payments that beneficiaries would have to pay in addition to their service charges should also be borne in mind.

2.12 Financial Status of the LUDC. The LUDC, accustomed to receiving grants from the GRZ had no experience with economic pricing and was delivering much of its services at a highly subsidized rate. GRZ grants had however been declining in relation to the city's needs as the price for copper was falling. The Bank foresaw a financial crisis in the Council, unless appropriate steps were taken to remedy the situation. Covenants included in the legal documents therefore required (i) a revaluation of property within LUDC's jurisdiction and effectiveness of the revised rates by January 1, 1977; (ii) on the basis of the Water Management and Tariff studies, the institution of a water management program including metering and training which was to be prepared in consultation with the Bank, and (iii) consultation with the Bank before construction of the third stage of the Kafue water supply scheme.

2.13 Community self-help. The project proposal included provision for the communities to participate physically in the upgrading process but the Bank was concerned that this could jeopardize the timely implementation of the project. The compromise, recorded in a side letter during negotiations, was that communities would be allowed to participate in excavation for water pipes and in the non-structural elements of the schools but that if this interfered with the progress and timely execution of the project, contractors would be used to execute the tasks.

2.14 Support Communications. The Bank accepted the communications support component, to be funded by UNICEF, with reluctance as they were not fully convinced of the utility of the then novel idea.

2.15 Appraisal was completed in October 1973 and negotiations took place in June 1974.

2.16 The identification, preparation and appraisal process was characterized by vigorous debate, the productivity of which was enhanced by the availability of previous experience and well-developed plans and proposals on which it could be based. The resulting project, although very ambitious and comprehensive was well thought out. Furthermore, several professionals who had played a primary role in its definition assumed responsibility for implementation by joining the HPU or by remaining on the staff of AFSC, UNICEF, NHA and the consulting firm retained by the GRZ.

III. IMPLEMENTATION

A. Effectiveness and Start-Up

3.01 The Housing Project Unit formally commenced operations in July 1974. By September 1, with the appointment of the Project Director, all senior posts, namely the Deputy Director and all Heads of Divisions were filled. The Project was launched officially by the Minister of Local Government and Housing on October 29, 1974 and field operations in the first upgrading area began immediately afterwards.

3.02 The Loan, however, did not become effective until April 1975 because of delays which were largely due to the appointment of a new Minister of Finance who questioned some of the standards being used and found it necessary to review the project as a whole, but also because of delays in obtaining and forwarding the legal opinions concerning the Housing (Statutory and Improvement Areas) Act and the Subsidiary Loan Agreement and in publishing the Regulations. The Loan and Project Agreements were signed on December 5, 1974 and the subsidiary Loan Agreement between the LUDC and GRZ on December 31, 1974. The Housing Act was introduced into the National Assembly on July 31, 1974 and the legal opinion forwarded to the Bank on January 20, 1975. The Housing Regulations were published on April 4, 1975.

3.03 The Housing Project Unit staff was built up during the first quarter of 1975. Response to advertisements was generally very good for posts in the Social Services and Administrative categories and less good in Finance and Procurement. The post which generated most interest was that of Trainee Community Development Officer, about 800 applications being received of which 25 were selected to go on the training program which procedures and requirements also contributed to these delays started in April 1975, which was developed by UNICEF and AFSC staff. Separate office accommodation was constructed for the Housing Project Unit by the City Council and occupation of the new building by HPU staff was effected by the end of March 1975. Until then, the dispersal of staff placed a severe constraint on the Unit's operations.

3.04 The Consultants already appointed by the GRZ for development of the Master Plan and design of its components continued with the production of detailed designs, tender documents and supervision of contracts while the HPU undertook all the design work in the upgrading areas themselves, delays were therefore not experienced with the selection of consultants. However, with the calling of tenders for the first two contracts, it was found that the period from receipt of tenders to the commencement of works was under-estimated and in fact took just over five months made up as follows: (i) Preparation of Evaluation Report: 4 weeks; (ii) Consultation with IBRD: 2 weeks; (iii) Negotiations: 4 weeks; (iv) Approval of tender: 1 week; (v) Preparation, and signature of contract: 6 weeks; (vi) Mobilization period: 4 weeks.

3.05 The main reason for these delays was the fact that the contractors concerned came from outside Zambia and negotiations with the Central Banks of Kenya and Tanzania respectively concerning exchange control and

performance bond problems took some time to resolve. Importation of plant and equipment plus general mobilization on site also took longer than expected but most delays were experienced later as described in Section B. The project unit's staff and consultants' unfamiliarity with Bank procedures and requirements also contributed to these delays.

B. Progress of Physical Works

3.06 The construction schedule anticipated at appraisal is compared with the actual schedule in Chart I, and Table 1 summarizes the achievements as of June 1981. The physical components of the project can be divided into four main categories: on-site preparation, off-site infrastructure, house construction and community facilities. Progress with each category is outlined below:

3.07 On-site preparation. Following delays in start-up, implementation took place at a relatively slow pace, with most contracts taking three times the appraisal estimate for completion. These delays were primarily due to adverse soil conditions, unusually heavy rains, problems of land acquisition, nationwide shortages of materials and spares for plant and equipment, difficulty in finding competent contractors and technical personnel in Zambia, and cumbersome procedures for arranging for the importation of plant and obtaining work permits for the contractors' staff.

3.08 Adverse soil conditions necessitated the substitution of site 7 for site 8 and the eventual abandonment of some 400 plots on site 6. The change in the number of plots developed was complemented by increases in other sites, with the net change being in favor of the lower income groups (Table 1). The substitution was effected expeditiously as design work for site 7 was already complete, bills of quantities had already been prepared and decisions were made quickly by the Bank and the Borrower. Lusaka's high water table and clay soils make precise analysis of site conditions very difficult, hence although more detailed analyses might have been done prior to appraisal there is some debate as to whether or not it might have been cost-effective.

3.09 Problems of land acquisition also delayed the progress of a number of contracts, especially on sites 5 and 7. On site 5, 330 plots were encroached on by squatters who were eventually allowed to remain and the area occupied was treated under the upgrading part of the project since they were adjacent to a part of the George Complex. Work on Site 7 was delayed for over four months as a group of cultivators who had illegally occupied the land obstructed the work of the contractor. The layout of the area had to be revised to accommodate them and the HPU had to station a special team of community development workers on the site to prevent residents from harassing the contractor. Land acquisition problems in George also necessitated several changes in the layout.

3.10 Nationwide shortages of spare parts equipment and supplies adversely affected practically all of the contracts. Even locally-produced items, such as crushed stones, were in short supply as the national vehicle fleet to distribute them was adversely affected by the shortage of spare parts and there were frequent breakdowns of machinery.

3.11 Progress on physical works was also virtually halted for five months early in 1977/1978, when rainfall was 50% more than normal and 20% more than the previously recorded maximum. Extensive damage was done to work already done, especially to roads in Chawama where the contractor had to claim on his insurance before effecting repairs.

3.12 Both site and services and upgrading contracts were adversely affected by a nationwide shortage of competent contractors and of supervisory staff and technical personnel of a suitable calibre. This situation was made worse in two areas where contractors were each given two large contracts to implement at the same time. The HPU had to provide assistance to some contractors to help them to manage the contracts.

3.13 The amount of liquidated damages provided for in the contracts generally proved inadequate to motivate the contractors to improve their performance.

3.14 In all areas the water reticulation part of the contracts went well and the use of self-help to dig trenches for water pipes in Chawama complex did not delay the contractor and involved no contractual complications.

3.15 Site and Services areas were generally completed as planned except for the changes to sites 6 and 8 as noted above. The scope of work in upgraded and overspill areas was expanded significantly to accommodate population growth which had taken place between project preparation and implementation. As work in upgraded and overspill areas progressed also, the assumption that inner access roads would not be used by heavy traffic proved incorrect, especially where commercial premises were located, and some additional lengths of road were built and some roads which were to be left in gravel were given a single bitumen coat to reduce the dust. As tender documents had been prepared on the basis of the provisional quantities and the final layouts were prepared only after consultation with and agreement of the communities, final contract prices significantly exceeded tender prices (Annex 2).

3.16 Offsite Infrastructure work. Relatively few problems were encountered with the execution of these contracts.

3.17 House Construction. Despite the lack of experience among project participants, rising costs, unstable incomes, and continual shortages of materials, the house construction program progressed very smoothly and by March 1981, over 4,000 of the 7,500 houses planned had been built in the overspill areas alone.

3.18 The construction of a new house took an average of two months and cost one-tenth of the cheapest contractor-built public housing unit. No applications for sewer connections have been made by site and services residents as house owners prefer to develop the house first as water-borne sanitation has been given a lower priority by them.

3.19 It had been expected that extensive use would have been made of soil and cement blocks produced by families themselves and that they would

use their own labor to build their houses. Very few families chose to do either, possibly because they were required to complete their houses within a limited period of time and they had less time available for self-help than anticipated. Participants chose to use concrete blocks with cement mortar joints instead. Problems of affordability did not arise, however, as they also chose the house design which allows two families to stay with shared services, making it possible for them to sub-let and recoup the additional expenditure through higher rents.

3.20 Community facilities: A shortage of local counterpart funds led to a delay in the start of work and an eventual reconsideration of the scope and number of community facilities to be constructed under the project. The findings of the evaluation study which was proceeding in parallel with project implementation were taken into consideration. The experience indicated that communities could build their own markets and that there was less demand for the community centers than anticipated at appraisal. Only six markets and seven community centers, instead of 17 of each facility were constructed. Of the 20 primary schools planned, only 8 were retained under the project, the rest were all transferred to the Bank-funded education project and are nearing completion. The reason for the transfer was a shortage of funds in the Site and Services and Upgrading project and savings in the Education project.

C. Progress of Non-Physical Program

3.21 Land Acquisition and Transfer. Project areas comprised some 1,400 hectares of land of which 800 hectares had to be acquired from private holders. Compensation was paid by the Government. Project beneficiaries in site and services areas and upgrading areas were to be granted 30 year leases and 25 year licenses respectively. Before these documents could be granted, however, the land had to be taken through a number of steps as even when land has been acquired: (i) title had to be transferred to the Council; (ii) an improvement area plan prepared and approved by the Surveyor General, and (iii) the declaration of the area as an "Improvement Area" gazetted. Both the slowness of the legal process of acquisition and the lengths to which private holders would go in order to delay the process of state takeover were under-estimated and the Project therefore suffered delays for both these reasons.

3.22 Plot Allocation. The Housing Project Unit was responsible for advertising Site and Service plots, receiving applications, checking eligibility and preparing lists of qualified applicants for approval by the Council's Plot Allocation Committee. Allocation of plots in the overspill areas was also handled by the Housing Project Unit. Plots were offered in these areas first to residents displaced by essential services, second to those displaced by the dedensification exercise and last to tenants who wanted to build and others on the basis of need.

3.23 In the site and services component, 2,690 normal plots and 975 basic plots were offered in six sites. At appraisal it was agreed that 50% of all plots should be allocated to people with incomes of between K20 and K70 per month. This was open to revision subject to IBRD approval.

3.24 In earlier site and service schemes applications were checked manually and only a few people at a time were selected. In order to speed up the allocation procedure and to ensure that the process was seen to be impartial, a points system was developed which ranked applicants not only according to income but also family size, security of present tenure and present living conditions. The Housing Project Unit advertised the plots in blocks, starting with 2,000 plots in October 1976. There was an overwhelming response to the advertisement as some 20,000 forms were sent out and 12,700 returned. Initial problems were encountered with incorrectly filled-in forms and verification of information and by the end of April 1977 only 60 people including three with incomes below K70 per month had paid the deposit of K59.25 and had been allocated plots. The plots were readvertised and the forms and verification procedures were simplified and by the middle of 1978 the situation had improved and out of a total of 624 plots in Matero, 300 were allocated to people with incomes below K70 per month. The requirement for an initial deposit was also later dropped and application forms were printed in at least one local language besides English.

3.25 Due to constantly increasing costs it soon became evident that households with incomes of K70 per month could not afford the Project and the income ceiling was therefore raised first to K85 and then K120 per month. The need to abandon some 400 plots in site 6 led to a very high development cost for the remaining plots which made them unaffordable to the target group. Income criteria were therefore waived and beneficiaries for the remaining plots are being charged at market rates. Due to the slow plot takeup in site 7, the last site to be serviced and the one farthest from the city center, it was suggested that the conditions should also be waived and the plots let at market prices on a first come first served basis, as the project was almost fully disbursed and infrastructure was lying unused. The Bank acceded to both changes.

3.26 One hundred commercial plots were offered for the development of medium sized industry, small businesses and shops in Chawama, George and Matero. All of the plots were allocated by June 1981 but only 29 had enterprises on operation and a further 12 had construction activity on site. Reasons given for the poor rate of development of larger plots intended for medium-sized industries include: (i) the high building standards required by the Council; (ii) the fact that the sites are provided with water and electricity, and (iii) businessmen not being offered materials loans or access to the materials stores.

3.27 Issuing of Occupancy Licenses. The Housing Project Unit acted as agent for the Department of Lands in the registration and issue of occupancy licenses in upgraded areas and of leases in site and services areas on the basis of the Housing (Statutory and Improvement Areas) Act of 1975.

3.28 As the process of transfer and declaration took longer than anticipated registration for occupancy licenses did not start in Chawama until the middle of 1979 and is still going on. The registration exercise involves checking the rights of all individuals to the ownership of a property, entering the particulars on an occupancy license form and registering the same particulars in the register of titles. Upon registration, the

original occupancy license delivered to the claimant becomes documentary evidence of entitlement to the possessory rights to the property. The process of checking claims took longer than anticipated because owners were seldom at home.

3.29 By the time licenses and leases could be issued in Chawama, beneficiaries' occupancy was already secure and to date they have shown little interest in collecting their licenses, especially as this requires full payment of service charge arrears. Reluctance of financial institutions to recognize licenses as adequate collateral for mortgages and of the Personnel Division of the Prime Minister's office to recognize them as proof of eligibility to house owner allowances has also contributed to the lack of incentives for beneficiaries to collect their licenses.

3.30 The installation of infrastructure and allocation of land proceeded at a much faster pace than acquisition, transfer to the council and declaration. When problems of cost recovery started to emerge, the LUDC found that it had no firm legal basis on which to evict plot holders. Imposition of strong sanctions therefore has to be deferred in each area until the land is fully processed.

3.31 Briefing of Communities. The importance of ensuring community understanding and participation in order to win cooperation and minimize resistance was fully recognized at the design stage. The means by which information on the Project could be disseminated and community attitudes fed back had, however, to be worked out by trial and error in Chawama the first upgrading area.

3.32 To maximize involvement of the community the Housing Project Unit established a field team in the area led by an experienced community development officer and containing other community development officers, surveyors and engineers. The team initially worked through the existing party leadership structure but the arrangement resulted in very little information filtering down to the individual family with the result that the proposed routes for roads met with strong opposition from affected families and businesses. A decision was therefore made to set up a road planning group for the whole settlement which would act as a decision making body on the location of roads and other facilities. The group was composed mainly of branch and section officials and HPU staff and its work was complemented by a more thorough briefing of individual families affected by the proposed infrastructure. This system speeded up the planning process and was adopted in other settlements.

3.33 In the site and service areas, community organizations had to be established and this was again done through the party structure of sections and branches. Community leaders were encouraged to take an active part in the process of briefing residents, plot allocation and the organization of self-help projects. In order to enable them to do this many leadership seminars were held to inform and get reactions from local leaders. In an effort to get the "Development" message across to as many people as possible the HPU's Communication Unit used plays and live music to describe the aims of the Project and methods being used to obtain them. The fact that none of the delays experienced were due to problems with the communities testifies to the success of this exercise. The main problem encountered

was changes in leadership which meant that at elections, aspiring candidates tended to try and win the favor of constituents, sometimes at the expense of the project. This also led to a lack of continuity as newly elected leaders had to be briefed again so that leadership seminars were a continuing activity.

3.34 Operation of Materials Depots/Issue of loans. Approximately 25% of the total cost of the Project was planned to be spent on loans for building materials including nine materials depots and equipment. Participants were issued with loan cards and were able to obtain the value in materials indicated on the cards from the materials depots. All participants were eligible for a loan and a questionnaire was issued to all those applying for a loan to assess their ability to repay. The amount of the loan was based on the cost of upgrading or constructing a two-room core.

3.35 Building material costs increased significantly during the implementation period (Annex I) and this meant that the original loan amounts soon became inadequate for their purpose and they were therefore increased accordingly. The number of loans available was consequently decreased so that only half the residents scheduled to be resettled in George Complex under the optional resettlement program were offered loans and there were no loans for house improvement or for optional resettlement in Chaisa/Chipata Complex, the last to be upgraded. Cash sales had to be stopped and only people with loan cards were allowed to purchase materials and the amount of material was limited. Initial problems were encountered because (i) peaking of demand for materials, especially when resettlement to overspill areas occurred, meant that the HPU was unable to maintain adequate supplies or provide enough transportation; (ii) the opening hours of the stores were not convenient for beneficiaries; (iii) the demand for materials such as sanitary plumbing and fittings was found to be much less than expected as participants gave priority to four walls and a roof and tended to leave improvement to a later date, and (iv) shortages of foreign exchange in the economy as a whole meant that local suppliers had difficulty in coping with bulk orders for raw materials.

3.36 Midcourse measures introduced to improve matters included (i) giving priority to resettled households; (ii) making daily announcements of materials available; (iii) staggering of opening hours, and (iv) hiring of temporary staff and additional transportation to supplement the establishment at peak periods, and (v) adjusting the type of materials purchased to suit demand. The material depots have now been taken over by the LUDC, which is continuing to issue loans.

3.37 Costs. Table 2 compares total project costs as estimated at appraisal with estimated final costs as of December 1980. In terms of US dollar equivalents final costs exceeded appraisal estimates by only 1%.

3.38 The Kwacha was devalued twice during implementation, and, although this increased the Kwacha value of Bank funds (Chart 2), this was offset by local price increases (Annex 1) due to inflation. Bitumen prices, for example, increased by 60% and labor by 57% during the implementation period, reflecting the oil price increases and declining copper revenues. The accompanying nationwide shortages, especially of spare parts

for plant and transportation equipment, also contributed to price increases through the resulting delays in contract completions.

3.39 Costs were closely monitored during implementation and major overruns were accommodated by the scaling down of the community facilities component. Overruns on the scaled-down project were largely due to increases in the scope of work in upgraded areas and increased overhead costs due to the retention of the HPU for an additional two and one-half years.

3.40 Disbursements. As shown in Chart 2, disbursements started approximately six months later and then proceeded at a slightly lower rate than expected at appraisal, with an increase in the lag for final disbursements. The pattern otherwise closely reflects the implementation schedule as inflation increased the nominal value of the amounts disbursed.

3.41 Procurement. As provided for at appraisal, contracts were grouped to maximize competition while ensuring that as much work as possible could be carried out by local contractors. Work was divided into different components with provision for separate tendering for each component. Details of contract groupings are set out in Annex 1.

3.42 Overall tendering procedures worked smoothly except for an early problem in obtaining bids. Initial prequalification of contractors for civil works contracts advertised in 1974 through notification to Embassies met with very poor response. Following further consideration and consultation with local firms the advertisement for prequalification was published in Kenya, Tanzania and Zambia and applications were received from contractors from the three countries. Tenders were subsequently invited on the basis of firms prequalified. Very few tenders were received for each contract but the rates quoted were consistent with prevailing market rates. The first tenders were mainly from firms in Kenya and Tanzania but for subsequent tenders a number of Zambian firms also tendered and were awarded contracts.

3.43 Altogether contracts worth approximately US\$7.5 million were executed by foreign firms and contracts worth approximately US\$6.8m were executed by locally-based firms.

ZAMBIA

LUSAKA SQUATTER UPGRADING AND SITE AND SERVICES PROJECT

Table 2: Actual Costs^{1/} Compared with Appraisal Estimates
('000K and US\$ Equivalents)

COMPONENT	APPRAISAL ESTIMATE		ACTUAL		DIFFERENCE Cost Overrun (Cost Underrun) (US\$Equiv)
	(Incl. Conting.) K	US\$ Equiv. ^{2/}	K	US\$ Equiv. ^{3/}	
SITE PREPARATION--UPGRADING AREAS					
Chawama	1,020	1,587	1,052	1,347	15
George	699	1,088	1,775	2,272	109
Chaisa/Chipata	812	1,263	2,352	3,010	138
Sub-total	2,531	3,938	5,179	6,629	68
SITE PREPARATION--SITE AND SERVICES AREAS					
Sites 1 and 6	2,137	3,325	2,024	2,591	(22)
Sites 3, 4, and 5	1,682	2,617	1,422	1,820	(30)
Site 8/7	1,361	2,118	1,286	1,646	(22)
Sub-total	5,180	8,060	4,732	6,057	(25)
PRIMARY INFRASTRUCTURE					
Water Main and Reservoir	1,856	2,888	2,222	2,844	(1)
Trunk Sewer	912	1,419	1,484	1,899	34
Ponds	295	459	342	438	(5)
Roads	478	744	809	1,035	39
Pumps	49	76	42	54	(29)
Security Lighting	559	870	930	1,190	37
Sub-total	4,149	6,456	5,829	7,461	16
VEHICLES AND EQUIPMENT					
Project Unit Vehicle	44	68	56	72	6
Stores Vehicles & Equipment	186	289	320	410	42
Community Center Equipment	74	115	9	11	(90)
Building Equipment	6	9	12	15	67
Garbage Trucks	278	433	375	480	11
Sub-total	588	915	772	988	8
COMMUNITY FACILITIES^{4/}					
Community Centers	247	384	112	143	63
Health Clinics	261	406	804	1,029	153
Demonstration Houses	16	25	21	27	8
Markets	395	615	99	127	(79)
Building Material Depots	137	213	220	282	32
Sub-total	1,056	1,643	1,256	1,608	(2)
BUILDING MATERIALS - TECHNICAL ASSISTANCE					
Building Materials	5,609	8,728	5,234	6,699	(23)
Engineering/Arch. Services	885	1,377	298	381	(72)
Future Project Preparation	38	59	61	78	32
O&M Study	100	156	126	161	3
Training of Workers	212	330	35	45	(86)
Project Unit Operations	3,312	5,153	6,306	8,072	56
Sub-total	10,156	15,802	12,060	15,436	2
Land	120	187	105	134	(28)
Schools ^{5/}	2,745	4,271	2,745	3,513	(18)
TOTAL	26,525	41,273	32,678	41,828	1

1/ As of December 1980.

2/ Based on the rate of K1=US\$1.556 as at appraisal.

3/ Based on estimated average rate of K1=US\$1.28.

4/ This component was scaled down during implementation as indicated in Table 1.

5/ Twelve of the twenty schools planned were transferred to the Education Project.

IV. OPERATING PERFORMANCE

A. Performance of Consultants

4.01 Consultants employed generally worked diligently and produced satisfactory work except for the choice of light fittings and distribution of lights in Chawama. However, the designed standards and choice of fittings were agreed to by the HPU as client.

B. Performance of Contractors

4.02 The quality of the work of contractors varied. Performance of most of the small contractors was unsatisfactory. The medium-sized firms which applied for prequalification and were later awarded contracts performed reasonably well although their financial resources, plant and technical manpower was limited. However, HPU selected the best contractors available and facilitated the successful completion of the work by tactful handling, prompt payment for work done and the provision of assistance to some of their contractors in organizing the management of complicated upgrading contracts. Very good work was carried out on time on the schools and urban health centers built under the project. Zambian contractors paid in local currency found it particularly difficult to overcome problems of spare for plant and foreign exchange allowances for this purpose might usefully be extended to them in future large capital works projects.

C. Performance of Suppliers

4.03 Throughout most of the implementation period Dar es Salaam represented Zambia's only outlet to overseas ports and this required transshipment to Lusaka by road or rail. This situation was aggravated by foreign exchange shortages due to the fall in the price of copper and oil price increases. Most of the materials required for low cost houses were manufactured in Zambia and were procured through local suppliers but their supply was generally erratic. Assistance to the sector of the building industry dealing with the production of building materials such as aggregate and concrete blocks is urgently needed.

D. Performance of Standards Used.

4.04 Major reductions in the standards established at appraisal have been with regard to security lighting and garbage collection. In upgraded areas residents were expected to carry their refuse to collection points situated at a maximum distance of 100 meters from their houses, but they have not done so. LUDC dustmen have also refused to fetch dustbins from the houses. The council has subsequently prepared a scheme, based on the use of handcarts, tractor-trailer combinations and janitors and have started operations in one area. The lighting system provided was designed to a lower standard than that agreed to at appraisal (Annex 3) and the fitting used were of a very poor design. The residents do not consider that the system has improved security and HPU and LUDC have arranged for it to be improved.

4.05 Standards were increased for minor access roads because of heavier traffic than anticipated at appraisal, especially on roads with commercial premises. Participants' choice of concrete rather than soil-cement or sun-dried clay blocks for house construction has also resulted in higher standards than anticipated at appraisal.

4.06 Otherwise, standards established at appraisal have been utilized and are performing satisfactorily except for minor changes due to: lack of experience of HPU staff; shortage of materials and plant resulting in the need to utilize alternative less appropriate materials and construction methods; lack of skilled staff with contractors; and, delays in the finalization of maintenance arrangement by LUDC.

E. Reporting

4.07 A management information system which was developed during project preparation formed the basis for reporting to the Bank. The Bank received well-prepared comprehensive quarterly reports on a regular basis.

F. Compliance with Covenants

4.08 The covenants were in close accordance with GRZ intentions and were aimed at timely institution of certain measures which were considered to be critical for achievement of project goals. Genuine efforts made to comply with covenants did not always meet with immediate success and deadlines were adjusted with Bank concurrence.

4.09 Despite changing from the use of government auditors to private firms in its attempt to comply with the audit covenant, LUDC was behind in the audit of its accounts throughout the implementation period. However, project accounts were always up-to-date and this allowed the Bank to assure itself that loan funds were properly utilized. At the end of June 1981 audited reports for LUDC were prepared up to 1976 and final accounts up to 1977. 1977 to 1979 accounts are expected to be ready for auditing by the end of 1981 and those for 1980 by mid-1982. Final HPU accounts should be ready for auditing by the end of September 1981. Compliance with covenants relating to the processing of land and cost recovery is still outstanding. These were dependent on the development of new systems and procedures and considerable progress is now being made in this respect.

V. FINANCIAL PERFORMANCE

A. Pricing

5.01 Project beneficiaries were expected to pay for: (i) plot development which was based on a simple cost/house ratio in upgraded areas and on an assignable area^{7/} in site and service areas. Repayment terms were 7.5% over 30 years where the repayment period was limited to the expected tenure period and the cost was related to the mortgage rate being charged by the Zambia National Provident Fund (ZNPF); (ii) water and sewer through recurrent standing charges based on LUDC's tariffs; (iii) dustbin purchases and management after construction on the basis of a flat fee; and (iv) debt service on building material loans including managements costs. Items such as schools and clinics, which were to benefit the city as a whole were to be paid for through property and local income taxes.

5.02 Total monthly charges were estimated at appraisal to range from K2.75 (US\$4.28) to K19.90 (US\$30.96) and to be within the means of about 92 of all households in upgraded and overspill areas and between 45% and 55% of all low-income households. At completion plot charges were within the appraisal estimate for most sites but the levy of full charges had been delayed by some 3 years for some sites.

B. Cost Recovery

5.03 Repayment to date for both plot service charges and building material loans has not been satisfactory. At appraisal it was expected that by completion about 25% of total capital costs would have been recovered but only 5% have been actually recovered to date. Possible reasons for the poor performance to date are:

- (a) An inadequate institutional framework and mechanisms.
- (i) Collections are inefficient as existing manual systems have proven to be inadequate for monitoring performance and following-up on arrears in a timely manner.
 - (ii) The absence of a debt collection unit in the HPU, when it was responsible for collections, also aggravated the problems due to the inadequacy of the systems and staff shortages in the established departments.
 - (iii) At appraisal it was also expected that monthly charges could be deducted at the source of employment for the wage employed but employers have been unwilling to institute the system and employees have been unwilling to sign the necessary consent forms. These difficulties are further compounded by frequent job changes among some categories of workers and statutory limitations on deductions.
 - (iv) The requirement for beneficiaries to go to city hall to make their payments and queuing due to an inadequate number of cashiers when charges were first being collected also discouraged payment.

^{7/} Total area minus roads and open space.

- (b) Attitudes and previous practices. Zambians have not been accustomed to paying directly for most social services and amenities, and these were not previously available on scales similar to those provided by the project. Studies conducted as part of the evaluation exercise have also confirmed that socio-cultural practices rather than problems of affordability underly the poor performance to date. The system of indirect payments forms part of an entrenched system of subsidies which is difficult to eliminate.
- (c) Lack of political will and the absence of effective systems of sanctions. Water lock-offs have been used, but with limited success to date, as beneficiaries have generally found ways of reestablishing the supply themselves. There has been some reluctance to use stronger measures, such as evictions, because the council is operating under a new system of laws and is unsure of its real powers, especially as declaration of project areas as statutory or improvement areas has generally been delayed. Some members of the political directorate also seem to have felt that the level of services provided was inadequate and therefore discouraged payment pending the provision of better services.

5.04 There now seems to be an increasing awareness, at the political directorate and chief officer levels of the LUDC, of the need for the Council's revenue situation to improve in order for it to improve its services. Especially during the course of the last twelve months, positive measures have been initiated to reverse the adverse trend, most importantly (i) the entire recording, collection and follow-up system is being computerized; (ii) additional cashiers have been stationed in project areas, and (iii) eviction procedures have been initiated for the worst defaulters. These measures are expected to significantly improve cost recovery in the near future.

5.05 Efforts are also being made to secure owner-occupancy housing allowances for project beneficiaries and to require recipients to consent to deduction of loan repayment and service charges at source as a condition of receipt of the allowance. Largely because of the project, the magnitude, negative effects and iniquitous nature of the subsidies have become apparent and their phasing out is one of the principal goals of the housing section of the TNDP. The proposal to grant owner-occupancy allowances to project beneficiaries forms a part of a wider proposal to monetize all public sector housing allowances as a first step towards phasing out of subsidies.

C. Financial Position of LUDC

5.06 Since 1966 GRZ has adopted a policy of making municipalities financially dependent on the Central Government and has been systematically cutting back its grants and LUDC therefore has had to assume greater responsibility for raising its own revenues. Provision was accordingly made in the project for revaluation of water tariffs, revision of property taxes, and recovery of project costs from beneficiaries, and of GRZ funds from LUDC on terms agreed at negotiations. The project itself was expected to generate an overall net cash surplus from 1976 on the LUDC's housing, building materials, water, sewerage and general rate activities.

5.07 However, contrary to appraisal estimates, LUDC has recorded consistent deficits on its Housing account in each of the year 1975 to 1980 and on its Liquor Undertaking account for most of those years and has therefore been plagued with a steadily rising revenue arrears situation. Total arrears have risen sharply from just over one half of a million kwacha in 1975 to K11 million at the end of 1980. By far the bulk of these arrears i revenue collections, which have placed the Council in serious cash flow situations, has been on the water and sewerage account (43% in 1980). The reasons that have been advanced for this situation are substantially the same as those affecting cost recovery under the project.

5.08 Although the project has also not impacted as positively on LUDC finances as anticipated at appraisal the burden was significantly less in 1981 than in 1978 and it could still effectively yield a positive financial return and cash flow if consistent and systematic adjustments on service charges and interest fees on building loans are effected. Because it has generally managed to contain average expenditure growth over the past five years relative to revenue growth (17.8% as opposed to 18.3% per annum respectively), the Council has been able to sustain a surplus on its General Rate Fund. However, the overall growing revenue arrears situation of the council as a whole would also have to be arrested if the council is to remain financially viable and capable of servicing its rapidly growing debt obligations, particularly with the Ministry of Finance to which it has defaulted substantially in recent years.

VI. INSTITUTIONAL PERFORMANCE & DEVELOPMENT

6.01 One of the principal objectives of the project was the strengthening of LUDC's planning and execution capability for similar projects in the future while demonstrating the feasibility of designing such programs for providing shelter and related services for the poor. Principal responsibility for project execution was vested in the LUDC through the HPU created specifically for that purpose. A special Inter-Agency coordinating committee, established to coordinate the inputs of other Government agencies and donors was chaired by the PLGAD the parent-ministry responsible for Local Authorities.

A. Central Government Agencies

6.02 At appraisal the then Ministry of Local Government and Housing (MLGH) was the Central Government Ministry with ultimate overall responsibility for the project. In January 1979, the Provincial and Local Government Administrative Division (PLGAD) was created within the office of the Prime Minister in lieu of the MLGH, and responsibility for housing and Municipal affairs except civil servant housing, was retained under this new framework.

6.03 PLGAD's input into project implementation was particularly significant, as it performed both executive as well as operational review functions. Timely advice and guidance were provided with respect to decisions involving the project, including project modifications and requests for increased government contributions resulting from cost overruns. The Division also facilitated feed-back from the evaluation exercise and incorporated the results into the project itself as well as the national policy formulation process. The stability of senior personnel within the Division with direct responsibility for the administration of the project also provided an element of continuity as the project evolved.

6.04 If there was any area in which the PLGAD might have been somewhat weak, it was perhaps in not ensuring that LUDC was more fully involved in project implementation and in ensuring that greater financial control was sustained by the council over revenue collection aspects of the project.

6.05 The performance of the Ministry of Lands and Agriculture was not very satisfactory. Despite the passage of legislation eliminating private land ownership, land for the project was acquired on a piecemeal basis. The exemption of some parcels of land within the larger areas to be transferred to council, while reducing compensation payments and avoiding politically-difficult situations, increased the need for registered surveyors. This meant that the problems of the shortage of registered surveyors, which other legislation was intended to ameliorate, remained a major stumbling block. At one stage when satisfactory progress was being made by the Surveyor General's Department, private surveyors were hired to conduct the perimeter surveys necessary for issue of title but the work was handed back to the HPU uncompleted. Satisfactory progress is now being made by a team of trained but unlicensed surveyors from HPU/LUDC, working under a licensed surveyor in the Surveyor General's Department with vehicles and equipment provided by LUDC and the NHA. Poor coordination between the Surveyor

General's and the Commission of Land's Departments of the Ministry have also contributed significantly to project delays. Significant improvements in the operations of this Ministry are necessary prerequisites for the successful implementation of the national housing and other programs.

B. Lusaka Urban District Council

6.06 The LUDC's generally weak administrative and financial systems and shortage of qualified personnel which were of major concern at the time of appraisal did not respond significantly to the measures included in the project to improve their performance. The majority of its senior posts, especially in its engineering and finance departments were vacant throughout the project implementation period and the council has experienced great difficulty in assuming responsibility for the project, especially for maintenance and collection of service charge and loan repayments as the HPU was phased out.

6.07 Both the operations and Management (O&M) and Water Resources Management and Tariffs studies which were intended to help LUDC improve its operations were completed as agreed at appraisal. As a result of the Water Studies, which were financed by the German Agency for Technical Cooperation (GTZ), a new water and sewerage department has been established with the Council to undertake engineering and maintenance as well as collections. The full recommended rate increases have not been applied and it is unlikely that rates will be increased further as Lusaka already has one of the highest rates in the country.

6.08 The O&M Study was completed in November 1976. During the course of the study a series of 22 working papers were prepared and discussed in detail with a steering committee of chief officers. The fact that virtually no action has been taken may be largely explained by the central finding of the study itself: that the council is severely handicapped by a lack of autonomy over its own finances or manpower. An administrative Committee has recently been appointed by the Cabinet to review the size and organizational structure and gradings of posts in the civil service. As LUDC's District Executive Secretary is a member of this committee, it is assumed that the findings of the O&M study will be taken into consideration during its deliberations.

6.09 The legal status and administrative framework of the Council was changed by the Local Administration Act of 1980, published in December of that year and GRZ's new policy of decentralization. These changes, however, have not yet been fully effected and it is still too soon to predict their ultimate effect on LUDC operations.

C. The Housing Project Unit

6.10 The HPU had its own finance and procurement, community development and engineering departments was thus largely self-contained. The Project Director, who was given Chief Officer status in the Council, reported to one Council Committee, the Inter-Ministerial Advisory Committee and the World Bank. The Project Director, unlike other Chief officers, was empowered to hire staff without going through the Local Government service

commission was able to attract qualified staff through the payment of higher salaries and granting of special perquisites. The Housing Project Unit was innovative and its development of 11,415 serviced plots in the five-year implementation period compared very favorably with the 5,856 plots developed by the Council during the previous 10 years.

6.11 Besides its physical achievements the HPU developed innovative and participatory approaches to the solution of the shelter problem, notably the field team approach and methods of working with communities which prior to the project had exhibited hostility to and suspicion of the Council. The HPU also streamlined the process for allocation of plots and operation of Building Material stores. The support communications unit, also proved to be an invaluable contributor to the project's success and its continuation as a part of the Department of Housing and Social Services is seen by the Director of that department as one of its most important assets.

6.12 The self-contained nature of the HPU and the deficiencies of the LUDC led to their growing apart rather than becoming more closely integrated during implementation. The HPU's communications section, with the assistance of UNICEF sponsored a series of seminars to more fully involve the Council but these were limited in their effectiveness as the senior officers did not generally attend. The Council when called upon to assist with engineering work was also not always able to do so because of chronic staff shortages. Execution of the project has therefore had only a limited effect on the development of the council's capabilities.

6.13 A special unit, the Peri-Urban Areas Unit has been created in the Department of Housing and Social Services of LUDC to coordinate ongoing activities in project areas and to initiate the development of new areas. It has continued to utilize the field team approach for coordinating the activities of and supervising its field staff in these areas and it has taken over the operation of the building material stores and allocation of plots. These operations, however, are quite weak and exist within a largely unchanged framework, and, unless the unit is given some support, they might not survive.

D. Role of Expatriates

6.14 Most of the key posts in the project unit itself as well as the NHA, PLCAD and the Ministry of Agriculture and Lands were filled by expatriates, whose technical and administrative skills contributed significantly towards the project's preparation and successful implementation. The participatory style of management of the Project Unit is generally acknowledged to have facilitated the transfer of skills to the Zambians who took over some of and performed very well in the posts vacated by expatriates when their contracts expired. It is widely felt that expatriates have a continuing role to play in the sector in Zambia and that long term benefits can be derived through appropriate management systems and their careful placement.

E. Overall Project Coordination

6.15 Coordination of the project left much to be desired. The Inter-Agency Coordinating Committee was active and effective at the very inception of the project, but became almost dormant for about three years and then was revitalized during the final year of the project when it met on a monthly basis. It has been most useful in resolving land-related issues and in facilitating the phasing out of the project unit. An inter-departmental consultative committee set up within the LUDC to coordinate the HPU's activities with those of other council departments met with little success, largely because of infrequent attendance by senior council officers.

6.16 On balance, notwithstanding the problems of coordination experienced, if the question of institutional development is viewed in the narrow context of the impact on the physical or structural elements of organizations, then one would have to be conservative on the effectiveness of the LSUSS project. Viewed, however, in its broader context in terms of the upgrading of the capacity of Zambians, both in and outside of Lusaka, to identify, prepare, implement and deliver low-cost shelter, the project must be considered to have had a significant impact. A core of Zambians within the LUDC is now in a position to replicate the low-cost approaches to shelter employed under this project. A number of personnel from municipalities outside of Lusaka have benefited from training and practical exposure to aspects of the management and operations of the project. The National Housing Authority, one of the principal policy and implementing agencies in the area of shelter, has demonstrated its ability to provide useful support services in its fields, and now has tangible evidence of the general viability of a low-cost approach to shelter, about which there appeared to be some reservations in the past. At the Central Government level, a stronger relationship has now been forged between the policy makers and executing agencies in the field of shelter. While it is still too early to determine the full financial viability of this approach, the project through the studies and implementation experience has clearly thrown new light on the fundamental weaknesses in the systems within the municipal organizations involved in its execution. These areas could now be more appropriately addressed and the basis laid for a more effective delivery of low-cost shelter in the future.

VII. ECONOMIC REEVALUATION

A. Rate of Return

7.01 At appraisal quantitative economic benefits were measured in terms of imputed rental values for the dwelling units to be constructed or improved under the project and the value of utilities to households. For purposes of economic analysis, costs included the portion of on-site costs attributable solely to the project, on-site servicing costs, the cost of materials and labor for the dwellings, maintenance costs and project unit operating costs. The same assumptions were used for the reanalysis except that, since service and utility charges were not being collected their value was not included as there was as yet no clear indication of the way in which their payment would interact with rental charges. Field checks on rental values were done for purposes of the reevaluation.

7.02 Whereas sites showed a rate of return varying from 12% to 28% at appraisal, the reestimates for sites on which reasonable building activity has taken place ranged from 10% to 31% with a weighted average of 18% (Annex 4). The lower rates of return can be attributed to the local currency cost overruns on the project as a whole, delay in the benefits caused by time overruns, and the inadequacy of the building material loans for financing full development. Of the recalculated rates shown in Annex 4 that pertaining to the overspill areas is the most robust because these areas were developed quickly and their houses and house rents are well established. In most of the site and services areas house extension and development is still in process. The rates for upgrading areas on the other hand are somewhat of a surprise and probably reflect problems of benefits quantification. For example, we know that densities are up in most of the serviced areas, although rooms and room rents have not noticeably increased to the same extent.

7.03 Site 7 has not been included in the recalculation of the Internal Rate of Return as it is still too early to do so. The site was substituted for Site 8 during implementation when the latter was found to be unsuitable for development and therefore was not included in the original calculations either. Due to lifting of the income ceiling criterion (see para. 3.25) for allocation higher income residents, who will have easier access to mortgage funds, are expected to take up the plots and to build rapidly. The supplement of private funds to the public investment already made is expected to eventually still lead a positive rate of return.

B. Poverty Impact

7.04 Evaluation studies ^{8/} conducted in a typical upgrading, normal site and services and a more expensive site and services area indicated that 70%, 55% and 30% of the families respectively came from the bottom 30% of Lusaka's income distribution curve. These figures indicate that the

^{8/} Sanyal B. et. al. "Final Report on the Evaluation of the First Lusaka Upgrading and Site and Services Project." The World Bank 1981.

upgrading and normal site and services projects are accessible to the lowest group and that the mix of levels of development offered by the project offers attractive options to all of the lowest 50-60% of the city's households. The studies also indicated that beneficiaries are generally satisfied with the level of services provided.

7.05 The project also generated demand for approximately 8,000 person-months of labor and resulted in K1.3m (US\$1m) of incremental income to labor through the construction of dwellings.

VIII. PERFORMANCE OF THE BANK AND OTHER DONORS

A. Performance of the Bank

8.01 During the project preparation phase, the Bank played a major role in introducing the concept of affordability as an alternative to the specification of standards as the basis of Zambia's housing program. It also assisted in reducing the scope of the project to more manageable proportions. The reporting system developed by the Bank during project preparation formed the basis of the unit's own management information system which contributed significantly to the project's good management. During implementation the Bank continued to give technical advice and helped with the development and periodic revisions of project-related work programs which helped to maintain the momentum of the project through Zambia's period of economic difficulties.

8.02 In response to the request of PLGAD officials the Bank supported in-depth analyses of the status and trends in Municipal finances^{9/} and the incidence of housing subsidies.^{10/} The findings of these studies have been extensively used by the Division in the further development of the national housing policy and the formulation of proposals, including a possible second project.

8.03 Throughout implementation very good working relationships were maintained with the PLGAD, the Council and the HPU. The Project however became more closely associated with the Bank than with the Council as the Bank was more easily able to get action taken on matters in need of attention. While this greatly facilitated the implementation of the project, it postponed the necessity to address the problems of coordination within the system and for the Council to assume responsibility for the project.

B. Performance of UNICEF and AFSC

8.04 UNICEF and AFSC assisted in the Community Development and Support Communications aspects of the project through the technical assistance and training inputs and the provision of equipment and vehicles. These agencies brought an intimate knowledge of local conditions, gained through previous experience in the sector in Zambia, to bear on the project. Their continued involvement from identification through implementation also contributed significantly towards the project's success.

8.05 While the Bank concentrated on implementation of the project, UNICEF and AFSC were more concerned about the achievement of long-term institutional and community development goals and the acceptance of the fundamental concepts by participants and the community at large. These complementary activities are widely acknowledged to have contributed to the success of the project and the establishment of the basis for ongoing

^{9/} Lynch, E.J.F. "Zambian Local Government Finance" World Bank 1980.

^{10/} Dinh Hinh, and Sanyal, B. "Housing Subsidies in the Public Sector in Zambia". World Bank 1980.

progressive development. However, the Bank's relatively short project cycle was not entirely compatible with the longer horizon on which the other donors' objectives are operationalized and some of their representatives feel that their goals may have been compromised in the partnership with the Bank.

IX. LESSONS LEARNED

9.01 The project, which was one of the most successful first generation urban projects that the Bank has financed has provided a number of useful general lessons which are applicable to similar projects and are worth highlighting here:

Scale. The project was massive by any measure, especially when the many steps involved in the processes that had to be carried out to implement and accommodate it are taken into consideration. Its implementation strained the capabilities of the construction sector and administrative establishment. The number of individual accounts kept by the LUDC, for example, almost doubled and the steps involved in the collections operation have proven to be particularly complex and time consuming, especially as many of the new debtors are self-employed or in the informal sector. The experience suggests that future interventions in the urban sector might more usefully take the form of a series of small and relatively simple projects, each building on the achievements of the earlier ones. This is already being done in more recent urban operations.

Institutional Capacity. Not only the magnitude of the task but also the systems utilized proved to be of critical importance. LUDC accounts for example, were handled manually and the project highlighted the inability of the system to successfully adapt through expansion only and the accounts are now being mechanized. The project experience has highlighted the need to carefully examine and monitor this dimension of the institutional system, as similar problems are likely to exist in other rapidly growing urban areas.

Participatory Style. This was one of the Bank's first attempts to directly address poverty issues and the Bank approached its necessary involvement in the social sectors with caution. The system of participation permeated all aspects of the project ranging from HPU's management style, notably the field team approach, to the involvement of the communities in decision-making through the Road Planning Groups, as well as the involvement of the Political Directorate. The approach is widely acknowledged as having contributed to the project's success and the continuation of the groups and systems augurs well for further development through the progressive upgrading model. The project demonstrated the positive contribution of intervention in the software sectors and the system of trial and error involved in their development.

Land Acquisition. Despite optimism at appraisal that the traditional problems of land acquisition would be negated by government-ownership of all land, the process still proved to be a difficult and time consuming process which threatened the project's success. In subsequent projects a more realistic approach has taken, and, in some cases, land acquisition has been made a condition of board presentation.

Cost Recovery. The unsatisfactory experience demonstrates the need for a more realistic assessment of attitudes as well as procedures and systems for effecting cost recovery. These difficulties were underestimated at appraisal.

9.02 Many of these lessons have already been applied in subsequent urban operations in Zambia and elsewhere as the experience was subject to constant scrutiny through dissemination of the findings of the evaluation and other studies, a constant stream of visitors to the HPU and regular Bank supervision missions.

ZAMBIA
LUSAKA SQUATTER UPGRADING AND SITE AND SERVICES PROJECT
Grouping and Contract Prices of Civil Works Contracts

Contract	Description	Contract Price	Variations & Additional Works	Price Increases		Claims	Final Contract Price	Remarks
				Labour	Materials			
HPU 1	Sites 1 and 6	2,160,000	See Remarks	61,800	111,000	14,843	1,941,640	This Contract was modified by deletion of Site 6
HPU 2	Sites 3,4 & 5	1,225,105	-	24,500	84,788	32,373 ^x	1,324,000	Minor changes on site covered by contingencies
HPU 3	Water Mains & Reservoir	1,676,106	384,673	29,000	95,000	37,000 ^x	2,221,779	
HPU 4	Trunk Sewer	1,013,157	110,691	442,000	63,240	(100,000 ⁺ (12,182 ^x)	1,341,270	
HPU 4A	Trunk Extension	229,800	-	20,000	10,000	-	240,000	
HPU 9	Chavama	898,247	66,543	13,150	59,240	-	1,037,180	
HPU 10	Site 7	1,035,274	15,943	55,000	175,783	96,000 72,000 ^x	1,450,000	(including off site Road
HPU 19	George	978,890	-	75,000	200,000	-	1,754,547	
HPU 26	Gaissa, Chipata, Garden	1,298,464	965,921	112,000	275,000	48,615 ^x 200,000 ⁺	2,900,000	

x Claim for Devaluation

ZAMBIA

LUSAKA SQUATTER UPGRADING AND SITE AND SERVICES PROJECT

Details of Cost Increase Percentages
For Major Civil Works Contracts

Descr- iption	Net Contract Amount	Increase due to Labour	Increase due to Materials	Increase due to Devaluation
		←————— %age —————→		
HPU 1	1,724,097	3.58	8.2	-
HPU 2	1,182,339	2.07	7.2	2.74
HPU 3	2,060,779	1.41	4.6	1.80
HPU 4	1,223,848	3.43	5.16	1.00
HPU 4A	210,000	9.5	4.76	-
HPU 9	964,790	13.63	6.14	-
HPU 10	1,147,217	4.79	15.32	6.28
HPU 19	1,479,547	5.07	13.52	-
HPU 26	2,464,385	4.54	11.15	1.97

Escalation:

<u>Index</u>	1975	-	100
	1979	-	178
	1981	-	230

ZAMBIA

LUSAKA SQUATTER UPGRADING AND SITE & SERVICES PROJECT

DETAILS OF INCREASE IN COST OF
BASIC MATERIALS AND LABOUR
DURING PROJECT EXECUTION

Material	June, 75	Dec. 78	May, 81
Cement 50 kg bag	K 1.25	K 3.00	K 4.65
Building Sand (m ³)	5.00	10.00	15.00
Door Frames each	11.50	18.50	23.00
Purlins each	1.50	4.50	7.00
Flush Door each	10.00	25.00	35.50
Bitumen (MCO (Colas)	0.16 0.17		0.23 0.29
Petrol (Super (Diesel)	0.30 0.13		0.83 0.39

Basic Hourly Wage for Unskilled Labour:

Up to November, 1976 - K 0.19
November, 1976 - K 0.24
September, 1979 - K 0.27
April, 1980 - K 0.33

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LUSAKA SQUATTER UPGRADING AND SITE AND SERVICES PROJECT
On-Site Servicing Standards as Built/Proposed

DESCRIPTION	UPGRADING SQUATTER AREAS		OVERSPILL		SITE AND SERVICES			
	AS BUILT	AS PLANNED	AS BUILT	AS PLANNED	BASIC SITES		NORMAL SITES	
					AS BUILT	AS PLANNED	AS BUILT	AS PLANNED
Water	Stand Pipe @ 1 per 25 Dwellings	Stand Pipe @ 1 per 25 Dwellings	Stand Pipe @ 1 per 25 Dwellings	Stand Pipe @ 1 per 25 Dwellings		Stand Pipe @ 1 per 25 Dwellings	Individual Connections	Individual Connections
Sewerage	←-----Pit Latrines provided by Developers outside Project-----→						Individual Water Borne Connections	Individual Water Borne Connections
Roads	6m-bituminised main access roads and Bus routes. 3m bituminised (single seal) on 4m gravel base for internal sketal roads. No direct access to all plots.	Graveled 4m internal sketal roads, no direct access to all plots. Bituminised 6m bus routes	6m-bituminised main access roads and Bus routes. 3m bituminised (single seal) on 4m gravel base for internal sketal roads. No direct access to all plots	Graveled 4m internal road system, no direct access to all plots, bituminised 6m Bus Routes.		Graveled 4m internal road system, direct access to all plots, bituminised 6m access Roads.	Graveled 4m Internal road system. Direct access to all Plots. Bituminised 5 or 6m wide.	Graveled 4m Internal road system. Direct access to all plots. Bituminised 6m access roads.
Drainage	←----- Open earth channels with culverts under roads as required -----→							
Security Lighting	- Lamp Standard 1 per Ha. (Chavuma) 1 per Ha. but fixed on Main Roads only for the sites	Single Lamp Standard @ 2 per Ha.	- Lamp Standards @ 1/ha. (Chavuma) @ 1/ha. but fixed on main roads only for other sites	Single lamp Standard @ 2 per ha.	Single Lamp 1 per Ha. on Main Roads	Single Lamp Standard @ 5 per Ha.	Single Lamp @ 3 per Ha.	Single Lamp Standard @ 5 per Ha.
Garbage Removal	←----- Periodic collection by Lusaka Urban District Council -----→							

ZAMBIA

LUSAKA SQUATTER UPGRADING AND SITE AND SERVICES PROJECT

LUDC FINANCES: General Rate Fund Performance (With Project)
 (December 31, 1976-1981)
 (K '000)

	1976 (Actual)	1977 (Actual)	1978 Revised (Estimates)	1979 Revised (Estimates)	1980 Revised (Estimates)	1981 (Budgeted) (Estimates)	Average Growth (1976-1981) %
Net Expenditure ^{1/}	4312.7	4564.2	5452.9	7419.7	9103.6	9531.5	+ 17.8
<u>Revenues</u>							
Rate Income	3395.5	3883.9	6460.0	6717.0	7830.0	8850.0	
Personal Levy	1278.1	1447.4	1350.0	1475.0	1570.0	1600.0	
Total	4673.6	5331.3	7810.0	8192.0	9400.0	10450.0	+ 18.3
Surplus Deficit							
Actual	350.9	767.1	2357.1	772.3	296.4	918.6	
Appraisal Estimates ^{2/} (with project)			1538.0			1525.0	
Appraisal relative to actual Preference			819.1			(606.4)	
- Surplus (deficit)							
6 surplus (deficit) as of appraisal estimates			53.3			(40.0)	

NOTES:

1. Net expenditure is gross expenditure for each General Rate Fund committee, less revenues specifically received from those committees.
2. Calculated at appraisal for only 1978 and 1981 and years prior to 1976.

SOURCE: LUDC Annual Abstracts and Estimates and Appraisal Report.

ZAMBIA

LUSAKA SQUATTER UPGRADING AND SITES & SERVICES PROJECT

Economic Reevaluation

1. The economic rate of return on the various sites in the project as estimated at appraisal and at completion are as follows:

	<u>Number of Dwelling Units</u>		<u>Internal Rate of Return</u>	
	<u>At Appraisal</u>	<u>At Completion</u>	<u>At Appraisal</u>	<u>At Completion</u>
Upgraded squatter settlements	17,000	20,000 ^{a/}	11.7%	9.9%
Units on new plots serviced to the same level as upgraded squatter areas	7,600	5,000 ^{b/}	27.5%	31.3%
Site and Services Areas (Site 5 basic)	1,200	678 ^{b/}	23.5%	11.5%
Site and Services Areas (Sites 1, 3 and 4 normal low-cost)	1,200	955 ^{b/}	17.0%	11.8%
Site and Services Areas (Site 6 normal medium cost) ^{c/}	2,000	61	na	13.0%
Weighted average				18.45%

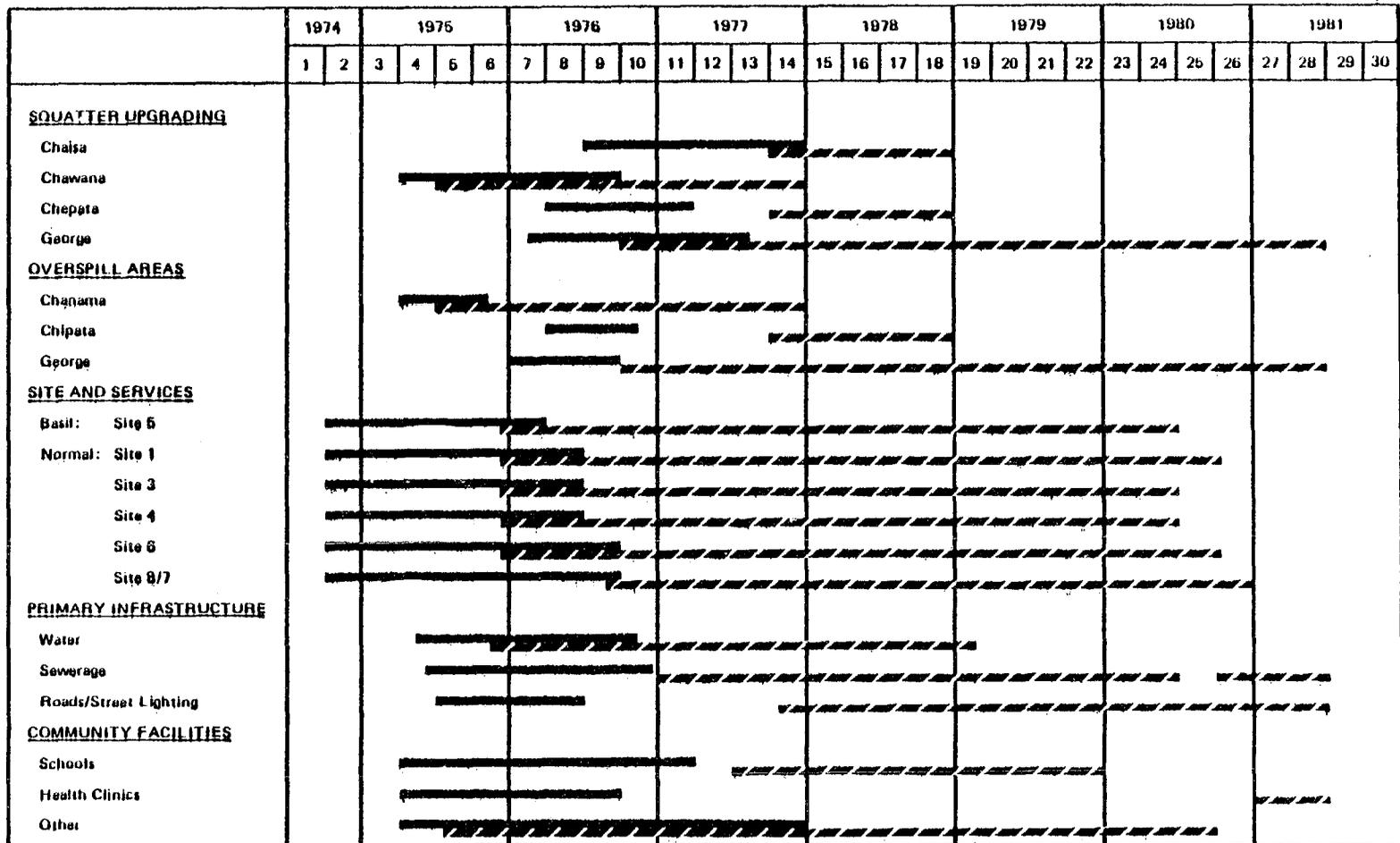
^{a/} Figure represents units serviced. 3,000 units were improved. 1,200 of these were also extended.

^{b/} Units completed or nearing completion.

^{c/} Rate was calculated for Site 6 and 8 together at appraisal. Site 8 was found to be unsuitable for development and was therefore excluded from the project.

2. Cost breakdowns and assumptions, together with the cost and benefit streams used in calculating the above rates of return are contained in the project files.

ZAMBIA
LUSAKA SQUATTER UPGRADING AND SITE AND SERVICES PROJECT
CONSTRUCTION SCHEDULE: AT APPRAISAL AND ACTUAL



LEGEND

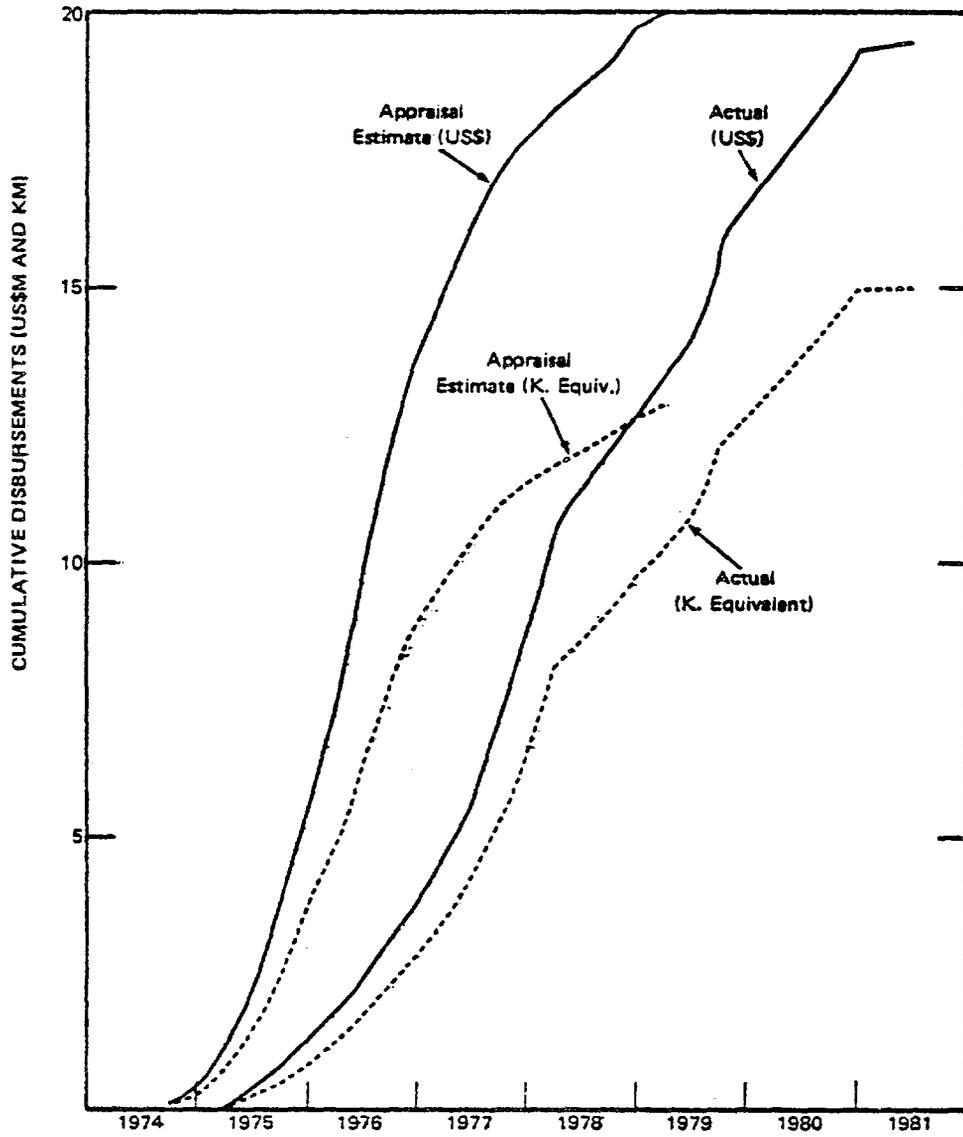
▬ Duration as Estimated at Appraisal
 ▨ Actual Duration

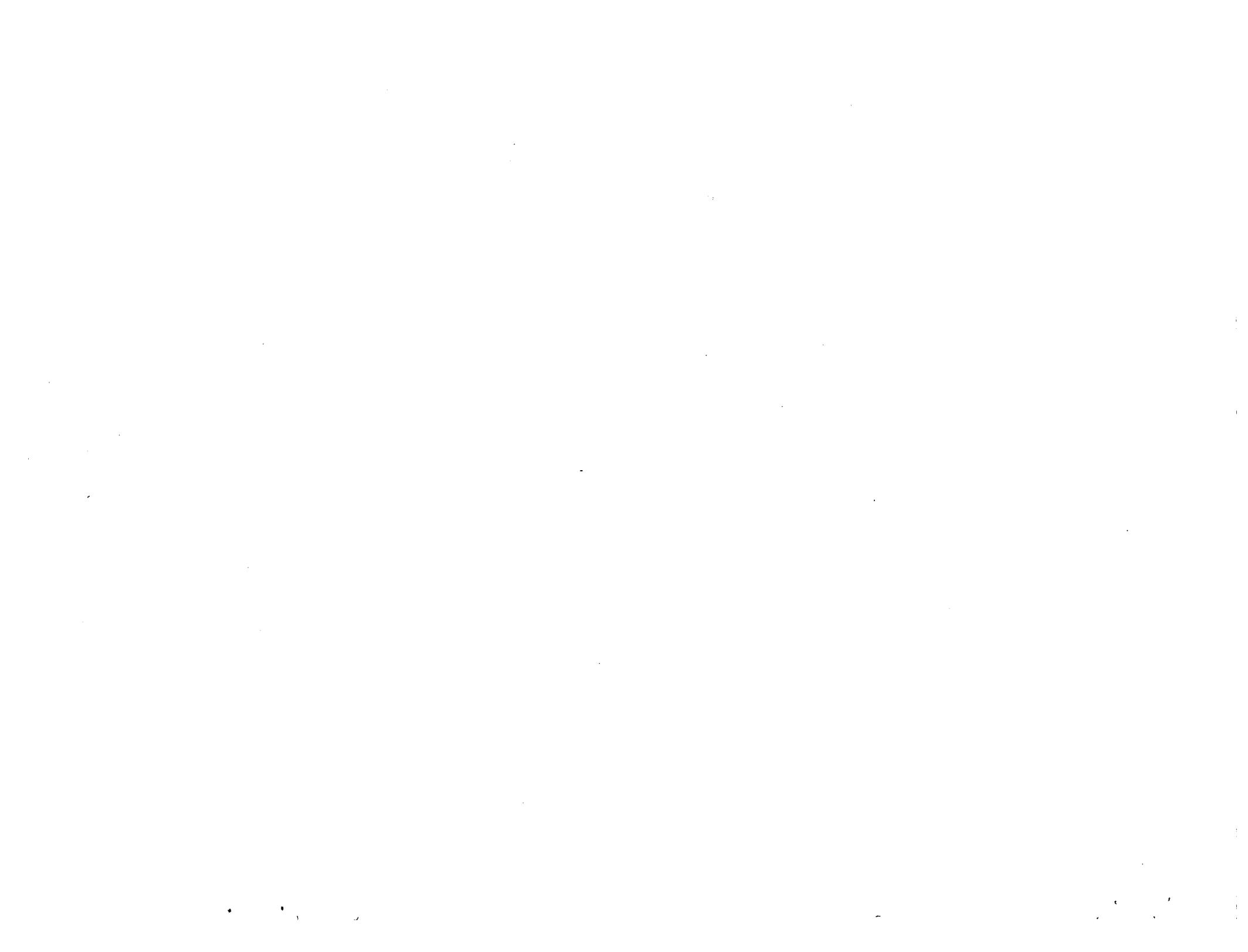
Note: Site 7 was substituted for Site 8

CONTRACT GROUPINGS

HPU 1 Sites 1 and 6
 HPU 2 Sites 3, 4, 6
 HPU 4 and 4A and 21 - Sewerage
 HPU 5, 5A, 7, 22 - Roads and Street Lighting
 HPU 26 - Chaisa and Chipata Upgrading and Overspill
 HPU 14, 15, 16, 17, 23, 24, 28, 29, 29A, 30, 31, 32, 33, 33A, 35 - Others (Markets, Material Stores and Community Centers)

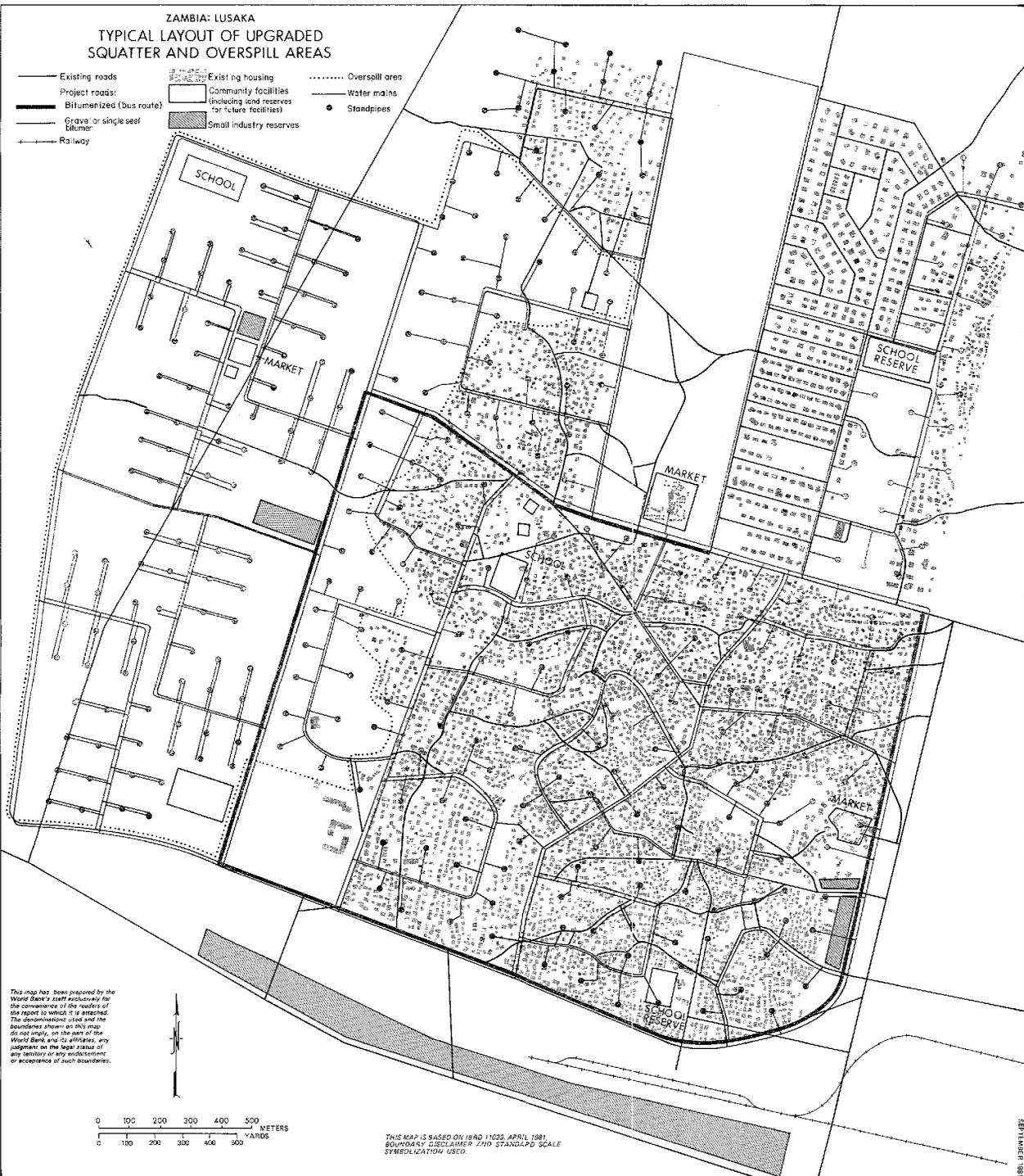
SCHEDULE OF DISBURSEMENTS (Estimates and Actuals as of 7/81)





ZAMBIA: LUSAKA
 TYPICAL LAYOUT OF UPGRADED
 SQUATTER AND OVERSPILL AREAS

- | | | |
|------------------------------------|--|----------------------|
| — Existing roads | Existing housing | Overspill area |
| — Project roads: | Community facilities
(including land reserves
for future facilities) | — Water mains |
| — Bitumenized (bus route) | Small industry reserves | ● Standpipes |
| — Gravel or single seal
bitumen | | |
| — Railway | | |



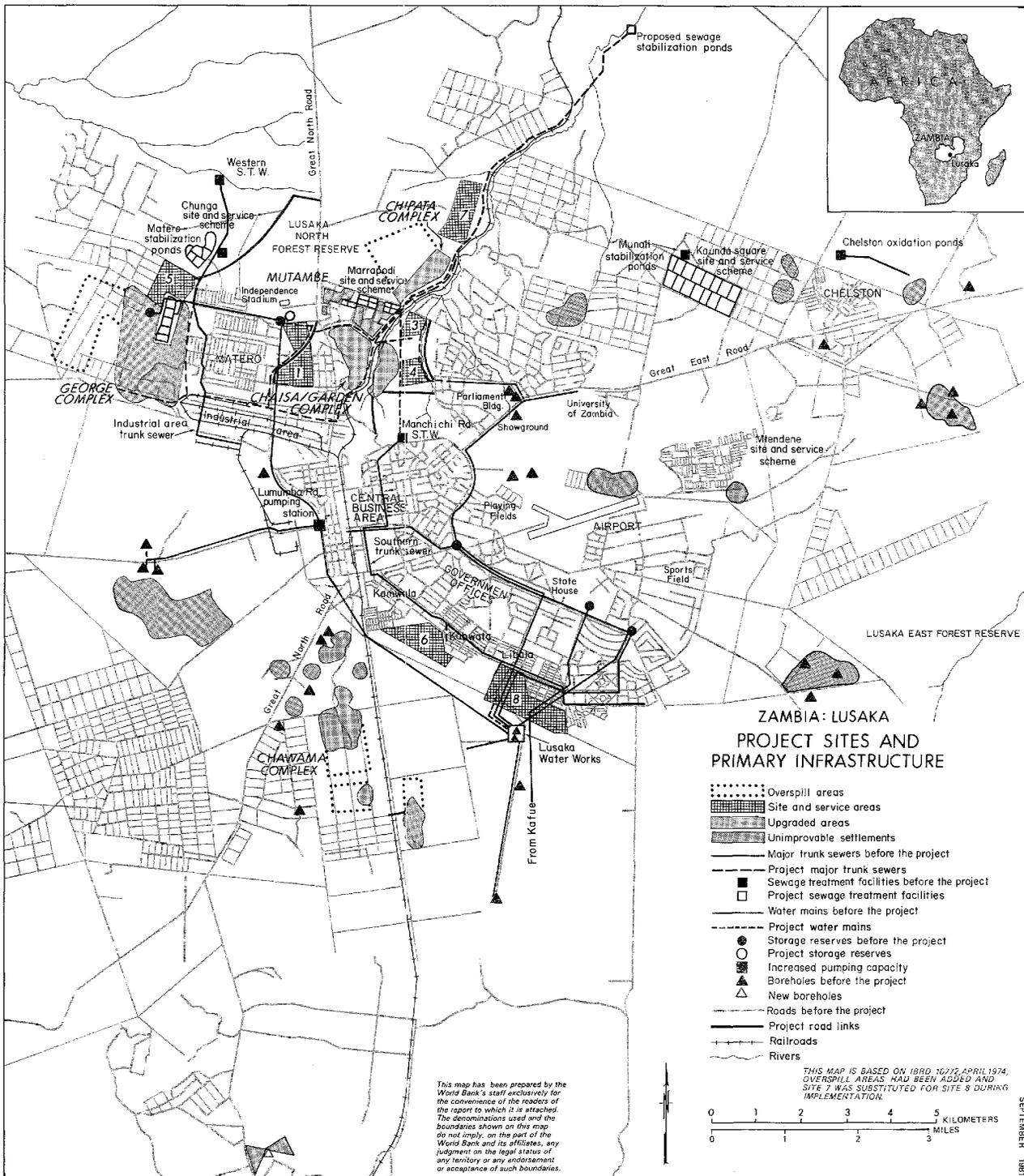
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0 100 200 300 400 500 METERS
 0 100 200 300 400 500 YARDS

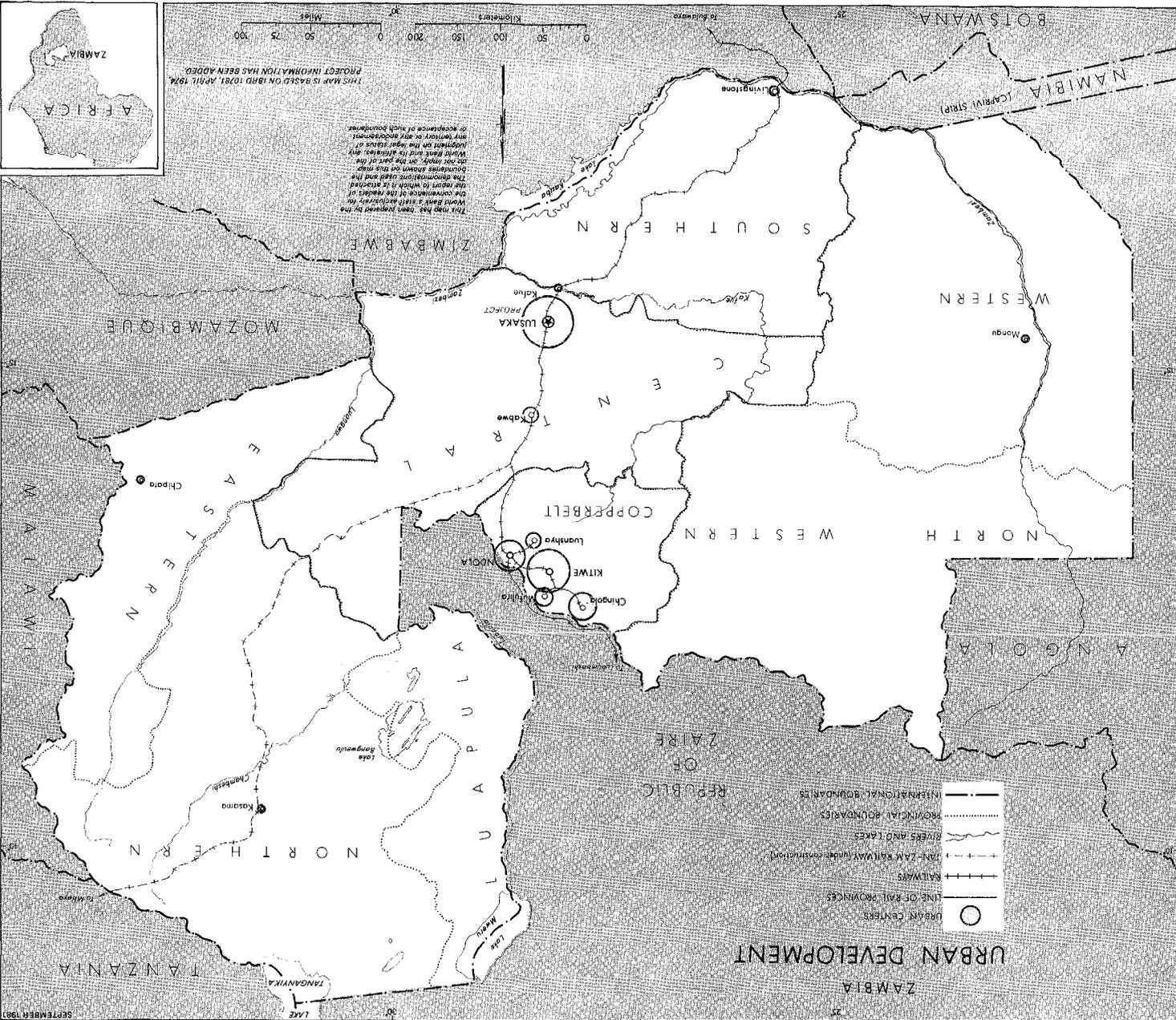
THIS MAP IS BASED ON IBRD 11029 APRIL 1981.
 BOUNDARY DISCLAIMER AND STANDARD SCALE
 SYMBOLIZATION USED.

IBRD 11029/PC/RI
 SEPTEMBER 1981









ZAMBIA
URBAN DEVELOPMENT

- URBAN CENTERS
- LINE OF RAIL PROVINCES
- RAILWAYS
- - - - - RAIL ZAM RAILWAY (under construction)
- RIVERS AND LAKES
- - - - - PROVINCIAL BOUNDARIES
- INTERNATIONAL BOUNDARIES

THIS MAP IS BASED ON 1981 APRIL 1984
PROJECT INFORMATION HAS BEEN ADDED.

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author in the knowledge of the
information available at the time
of its preparation. It is intended
to provide a general overview of
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