Chawama Self-Help Housing Project, Kafue, Zambia

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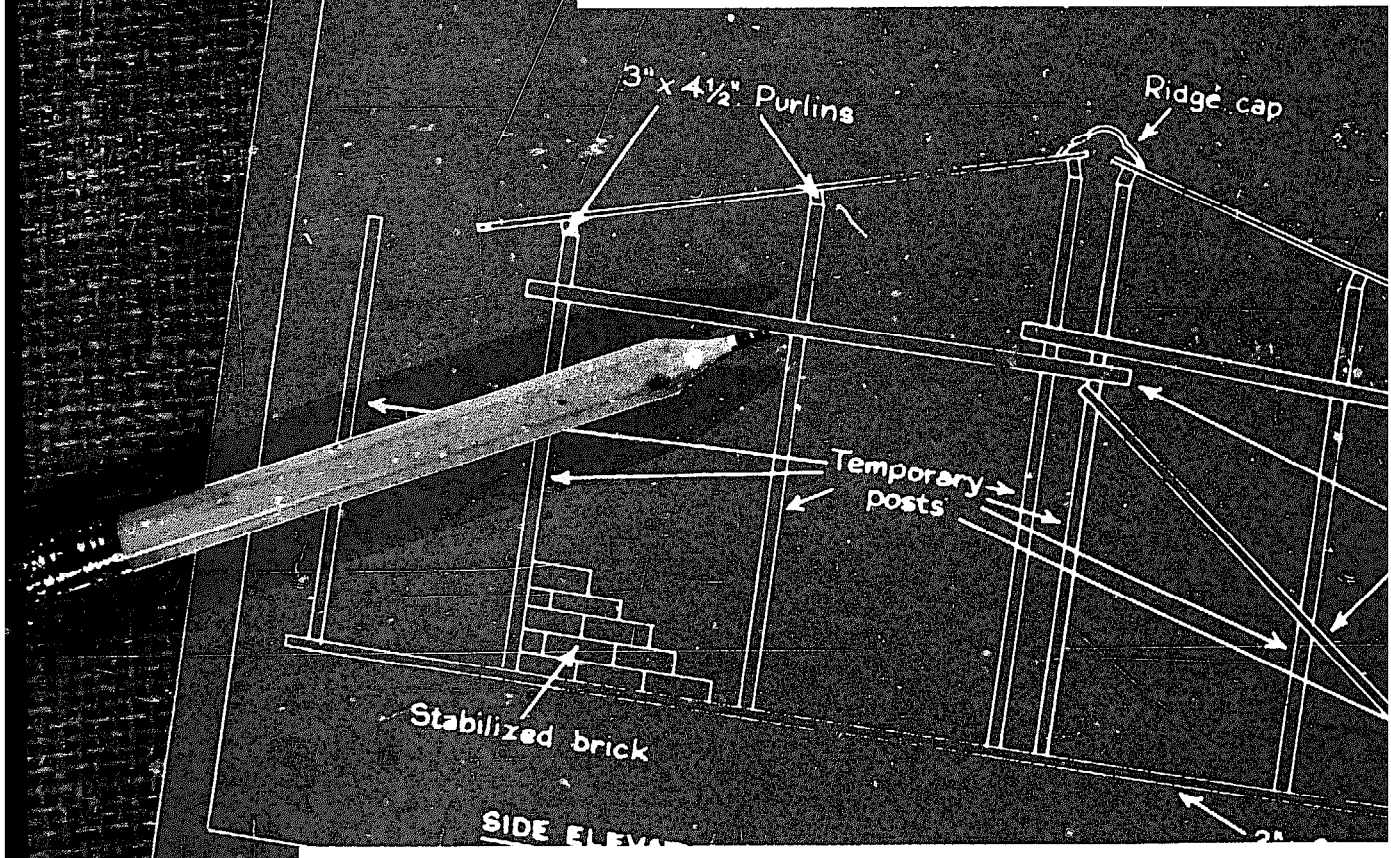

In cooperation with Kafue Township Council and the Republic of Zambia

AMERICAN FRIENDS SERVICE COMMITTEE
1501 CHERRY STREET, PHILADELPHIA, PA. 19102

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CHAWAMA SELF-HELP HOUSING PROJECT

KAFUE, ZAMBIA

1968-1973

Between 1968 and 1973, a project to improve the conditions of life of squatters in Kafue was conducted jointly by the Government of Zambia, the Kafue Township Council and the American Friends Service Committee. The area of Kafue city where the project was located was Chawama, meaning "A Good Place" in the Chinyanja language. The objective of the project was not only to provide acceptable housing with suitable amenities but also to develop patterns of cooperation among the residents which would create the conditions of a viable and harmonious community.

The following report of the Kafue self-help housing project reflects national policies and circumstances which existed in that city at the time of the project.

Prepared by staff of
the American Friends Service Committee
1501 Cherry Street
Philadelphia, Pennsylvania 19102

1975

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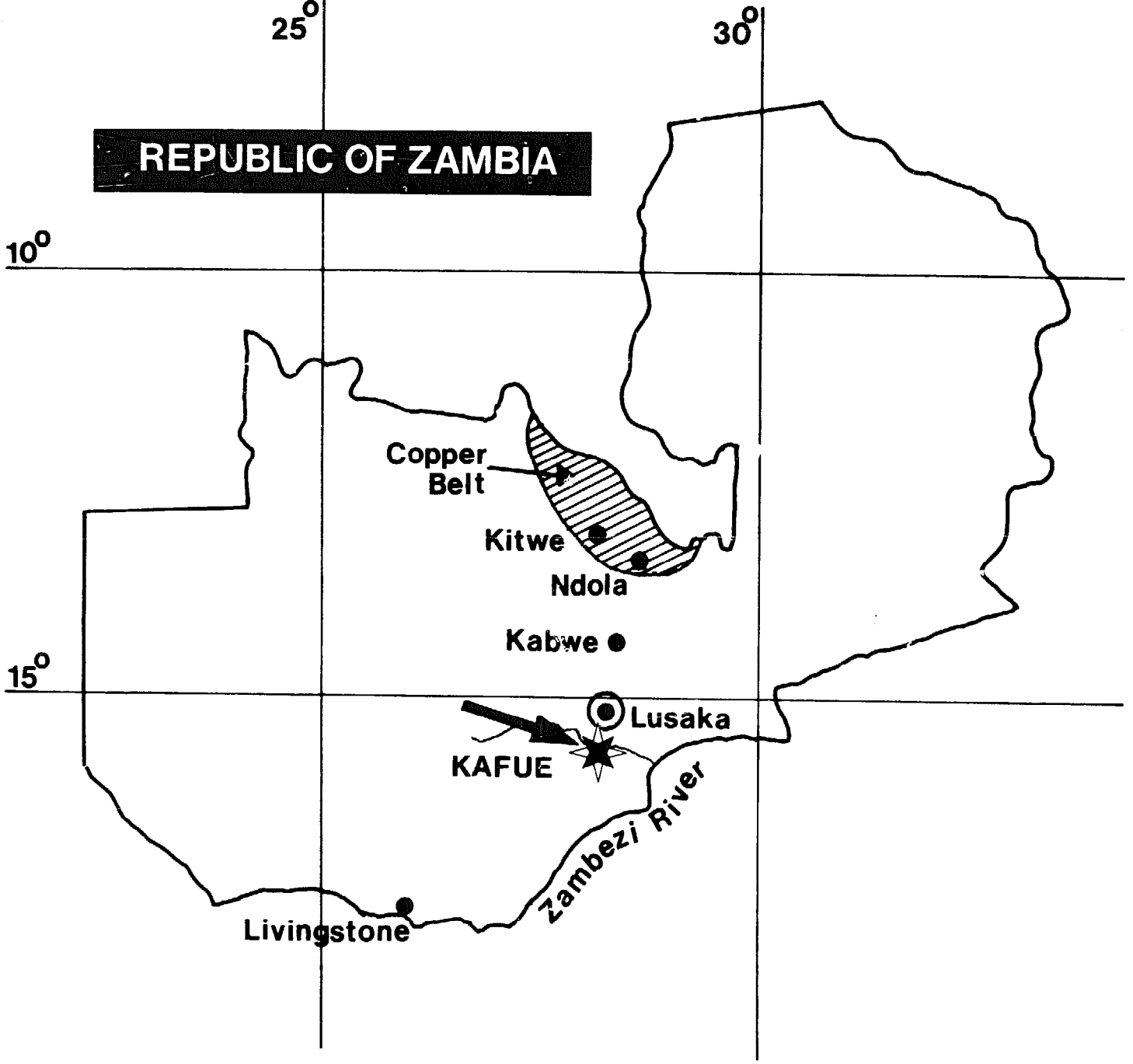
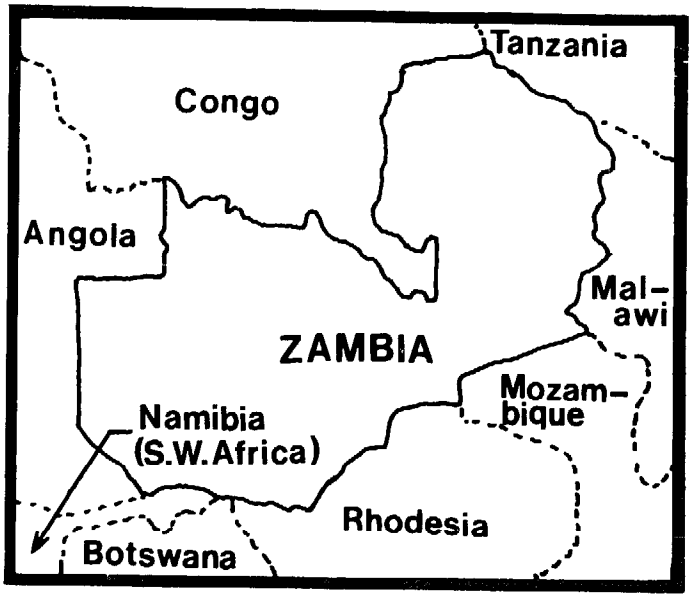
REPUBLIC OF ZAMBIA





Excerpt from Address by his Excellency Dr. Kenneth Kaunda, President of Zambia, on July 14, 1972 on the occasion of his visit to the Chawama Self-Help Housing Project, Kafue, Zambia.

Friends, this scheme is important at three levels: locally, nationally, as well as internationally. It is important locally because, as the Ministers like to point out, you are fulfilling one obligation on the part of each one of us, that is, self-reliance. Self-reliance. We want to be able to do things on our own, individually as well as collectively. At the local level, we are satisfied that you are encouraging, rebuilding, rekindling, the spirit of corporate action. Corporate action. In the ancient days of our forefathers, the cooperation in every village was the order of the day. With the coming of industrialization and economic development, we are fast forgetting our past, our rich past. We are becoming more and more selfish, becoming more and more individualistic in a dangerous way.

Yet this scheme here is reviving that past, that element in man that caused cooperation in society, which is as God made. This is a very important reminder. And I am told by both Mr. McAllister /AFSC field director/ and Mr. Mulenga /AFSC project staff member/ that in fact some of you had never practiced this before. You found yourselves together, in a new society at Kafue-Chawama, and actually working together. There is the fruit of your participation, and I am very proud of the efforts you put into this.

At the national level, you are succeeding again. Only last year I went around the countryside and urged our people, our chiefs, our party leaders, civil servants, prison officers, police officers, teachers, headmasters, everybody. I said, "Countrymen, every village must begin a project to build in every village brick houses." Build brick houses. Because we want the good life for each and every subject in the country through his efforts, through our efforts individually and collectively, in society where he actually is.

Why are we making this requirement, this demand of the nation? Here on the stand with me is the Minister of Local Government and Housing. One of the things I said to him in my letter of appointment was that housing was one of the most challenging things that faced the party, government, nation, and people. His duty was to find out the various means to promote this very heavy program at all levels to see that our people, in the shortest possible time, have decent housing. Now you are making that challenge for him a lot easier, here.

No government has built all the houses for all its people. This is impossible. Unless, of course, we stop building clinics, hospitals, schools, roads, and put all of the little money we have on the housing program alone. We have got to be ready to work equally hard, as hard as we can push ourselves. With work we would be able to build houses, schools, hospitals, roads and so on as a matter of self-help.

There is another aspect which is important both at the local as well as national level. This aspect is, I have seen Zambian mothers working hard, participating fully as citizens in their own right—digging foundations, making bricks. I have spent some time making bricks myself.... I hope that our press took photographs of those mothers who were working very hard, and that they will show the whole country what these mothers, these wonderful representatives of Zambia, are doing.

Let me now move on to the international character of this program. The most important single thing in creation is man. Man. Everything else is there because of man. What is important about man is not his country of origin, not his tribe or ethnic grouping, not his color, not his religion, not anything else; what is important about man is simply that he is man. It is not even his height, or his size, simply that he is man, a fellow human creature, put here by God.

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PREFACE

The history of the American Friends Service Committee's interest in Zambia dates from 1957 when it was Northern Rhodesia and part of the Federation of the Rhodesias and Nyasaland. At that time the AFSC representative was based in Salisbury, Southern Rhodesia and sought to promote communication between colonial and African leaders. Six months before Zambia achieved national independence, in October 1964, the AFSC began a community development project in Broken Hill, now named Kabwe.

Housing became a focus for AFSC work in 1966. At that time Zambia's Deputy Director of Community Development suggested that the Service Committee consider ways of enabling low-income families in the Lusaka peri-urban area to build their own houses. AFSC's Field Director in Zambia then had had extensive experience in self-help housing in the United States. Exploration of the situation and consultation with Government officials, including President Kaunda, gave evidence of a strong interest on the part of Zambian authorities in AFSC's taking an active role in this field of work.

In October 1968 as a result of these explorations and consultations, the American Friends Service Committee and the Government of Zambia concluded an agreement. Under this contract AFSC undertook to provide social and technical assistance to Zambia in relation to urban community and housing needs. Specifically, the Service Committee was asked to take part in the development of a self-help housing project in Kafue. That city was in the process of such great industrial expansion that it was called "the Birmingham of Zambia." In the first four years following Zambia's independence, the population of Kafue more than quadrupled, growing to over ten thousand.

Kafue is a planned city and had developed housing for its industrial workers. However, adequate housing and other municipal services had not kept pace with the influx of other job-holders and job-seekers. As a result squatter communities had spread rapidly around the city. The residents of these communities had moved to Kafue from other parts of Zambia, chiefly to find employment which would produce more income than they could earn in the rural villages. They took up unauthorized residence on unused land, building houses of mud and wattle with grass thatch roofs or with any discarded materials they could find. Water and sewerage were poor or non-existent. There was obviously an urgent need for improvement in housing and municipal services for people in the Kafue squatter settlements.[1]

The Kafue self-help housing project was sponsored jointly by the Kafue Township Council, the Zambian Government and the AFSC. The purpose was to encourage some 228 families to join in building adequate and economical homes with reasonable security tenure. The project followed the general lines of a previously established Government program of assistance to self-help homebuilders, entitled "Aided Self-Help Site and Service Scheme." However, it added the ingredients of organization and training of housebuilders in construction groups. Particularly in its organizational and educational dimensions, it may stand as one model for other self-help housing projects in

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1. See Appendix B, "A View of the Kafue Squatter."

Zambia. It has shown that people from various parts of Zambia can overcome any differences in background for the sake of a joint effort to build a new community. This project was, in part, a demonstration of the feasibility of the Government's own scheme.

The project sought to meet human needs for cooperative efforts, in addition to the need for housing. By drawing together families which had moved to Kafue from diverse rural areas of Zambia, it was a means of putting into action Zambian Humanism.

The project may also be seen as an instance of productive collaboration between an American voluntary agency and an African Government as they joined together to meet a pressing social need. The AFSC found that it could respond to the Government's explicit request for assistance with a flexible and informed approach, as well as with a philosophical outlook in respect to self-reliance which was in harmony with the Government's. Zambian participation in all aspects of the project, from planning to actual construction, was central to the philosophy underlying the program's development. Thus the AFSC played a catalytic and facilitating role, not a controlling one.

SUMMARY

Under an agreement with the Government of Zambia concluded in October 1968 and in cooperation with the Kafue Township Council, the American Friends Service Committee carried out a project of self-help housing for squatter residents of Kafue. This was a rapidly industrializing city with a growing shanty-town population, located 26 miles south of Lusaka, Zambia's capital. The AFSC's aim was to help the Government of Zambia carry out what it had chosen to do. Through careful attention to self-help organizing principles, the project demonstrated the value of the Government's own "Aided Self-Help Site and Service Scheme."

In 1969 a survey of some 1200 households in Kafue's chief squatter areas was conducted by the AFSC staff. This revealed that most families had resources to improve their dwellings, but would not do so owing to fear of eviction and lack of necessary knowledge and skills. On the basis of this survey, the AFSC and municipal staffs drew up a program emphasizing the involvement of homebuilders in all phases of planning and construction. Government and municipal engineers also drew up plans for providing water and sewerage to the new neighborhood, thus responding to the most pressing needs for improved living conditions.

The AFSC staff, including the Zambian community development workers, recruited squatters of varying backgrounds and brought them together in groups composed of seven to 19 families. Prior to beginning construction, each of the 20 groups held sessions over a period of two months to plan for the building of their houses, to learn the requirements of the $200 Government loan which each received for building materials, and to establish their mutual obligations for work, normally set at 1000 hours per family. After this preparatory period the actual construction began, progressing from the pressing of bricks through the tying down of the galvanized iron roofs.

The first construction groups began work in January 1970 and number 20, the last group, finished most of its houses in August 1973. Altogether 228 houses were built. Out of this cooperative effort in facing construction problems and group disharmonies, a sense of community emerged. This was reflected most visibly in a community committee, various clubs, and a school and playground built cooperatively by the local residents. This community spirit in so diverse a group of residents stands as one of the project's fundamental results.

The AFSC's contribution was the provision of American and Zambian staff who had the supervisory, technical and community development skills required. The Service Committee also furnished some materials and services, chiefly special tools and storage. The AFSC's contribution amounted to 61% of the project's $351,500 monetary costs. Zambia's private sector contributed 10% of the total, chiefly in cash for construction materials and for some of the transport costs. For water, sewerage and road construction, the Zambian Government and the Kafue Township Council contributed 25% of the total at the beginning of the project. The homebuilders themselves initially contributed out-of-pocket approximately 4% of the costs. By 1977, however, when the homebuilders will have paid off their loans from the Government, their share will have become fully 19% of the total; approximately 10% will then be the amount of the Government's share.

This demonstration of community effort stimulated considerable interest among and frequent visits by Zambian officials and leaders from other towns, as well as visitors from other African countries and abroad. The Kafue project represents one model of self-help and some of the Zambians who served on the staff have already been called upon by the Government to help with other housing projects. The success of the training methods and community organization patterns instituted by the American Friends Service Committee have led the Government of Zambia to invite AFSC to provide similar orientation and training of social development and technical staff for a large squatter upgrading project in Lusaka. Thus, the experience gained at Kafue is continuing to influence the development of housing policy in Zambia; and the Zambians who received training there are having a continuing influence on housing and community development programs and practices.

Chapter I

THE NEED FOR SELF-HELP HOUSING IN ZAMBIA

A. Urbanization in Zambia[1]

Zambia's urban population exceeds a quarter of its total national population, thereby placing it among the most urbanized of black African states. The Government's Second Five Year National Development Plan, prepared in 1971, states that the yearly urban population increase during the period of 1963 to 1969 was 7.6% for males and 10.1% for females. This compares with an overall national population increase for the same period of 2.7% per year, a rate at which the nation's population will double every 27 years.

A factor contributing to this urban increase was the removal, following independence in 1964, of legal barriers to rural-urban migration. At that time the ordinances limiting urban residence to job-holders were struck from the statute books. The termination of this "stay on the land" police power of the colonial government was as much a factor in urbanization as the deteriorating conditions of the villages.

Economic conditions in the rural areas markedly declined during the immediate post colonial period. On the other hand, between 1964 and 1970 real incomes in urban areas rose by about fifty percent. A massive inflation took place, estimated at about 40% for the period, and with it a steep decline in the peasant farmer's purchasing power. The ratio of the urban dweller's average real earnings to those of the peasant farmer increased from 13 to 1 in 1964 to 18 to 1 in 1969. Added to this was an overall decline in milk and cattle sales and in output of maize (the staple crop) and tobacco. At the same time there was only a moderate increase in the number of schools, clinics and roads useful to villagers. With these generally dwindling prospects on the land and the brighter prospects in the cities, rural Zambians were both pushed and pulled to the cities.

In the middle and late 1960's the Zambian Government undertook many creative and extensive projects to provide employment and services for rural people in order to encourage them to remain in the rural areas. In spite of these efforts squatter neighborhoods continued to grow in ever widening circles around Zambia's major towns and cities. Lusaka, the capital city, is the principal example. The population of Lusaka grew from 55,000 in 1954 to 258,000 in 1969 and then to an estimated 381,000 by 1973. Of this 1973 population about 150,000, or close to one half of the city's inhabitants, were squatters living in sub-standard housing without water, sewerage, streets, schools and other such amenities. It is estimated that in 1976 the population of Lusaka is likely to be between 435,000 and 487,000, and between 751,300 and 810,500 by 1985. Thus at current rates of population growth and influx from rural areas, one-half to three-quarters of Lusaka citizens could be living for years to come in sub-standard houses without amenities. These projections lend great urgency to the Government's Site and Service Scheme for the urban centers of the nation.

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1. Lusaka Sites and Services Project - Request to the International Bank for Reconstruction and Development, July 1973.

B. Profiles of Squatter Settlements in Zambia

Squatter settlementsin Zambia are not urban catchments for vast numbers of unemployed. They represent, rather, a transitional stage for the rural migrants to the cities. Various studies disclose that up to one-third of the residents of Zambian squatter settlements have lived in them for several years, although most had been born or raised elsewhere.[1] Many have migrated from other towns, having left their home villages long ago. However, the squatters are not social castaways mired in a culture of poverty. Many are people of initiative possessing a strong desire to improve their lot. That they took the risk of forsaking the security of their villages to seek a livelihood in a crowded, complex and disordered city is evidence of their motivation.

The typical squatter is an unskilled laborer or service employee such as a watchman or servant; but his neighbor may be a skilled construction, service or maintenance worker, or a small entrepreneur.

Income of the squatter household may come not only from wages but also from small enterprises, the sale of surplus garden produce, piece work, handicrafts and so on. For example, the median income of households in Kafue's squatter settlements in 1968 fell in the Kwacha 30 to 40 ($42 to $56) per month range.[2] The majority of squatter families bring in enough money to be able to make modest improvements to their homes, which they have usually built themselves with negligible cost outlay.[3] Yet they continue to live in rudimentary dwellings lacking adequate sanitation, subject to the perils of windstorms, fire, chronic dysentery or more deadly contagions.

Why do they not seek a change in their living situations? First, no squatter owns the land on which his dwelling stands; there is no security of tenure. Squatters hear persistent rumors that their settlement areas are illegal and will be visited by government demolition squads and bulldozers. They see no purpose in spending money on maintenance or improvement of a house which may at any time be demolished. Second, because job opportunities materialize or evaporate in any given city over the years, a good proportion of the squatters are relatively mobile and prefer freedom of movement with little financial loss that a cheap dwelling confers. Furthermore, for those who do plan to stay a long time, there is a third factor, namely lack of knowledge and skills to improve a house or add amenities. Fourth, the traditional solidarity and security of the home village, in which everyone has rights and responsibilities in relation to his neighbor, are diminished in the city.

In a new urban setting families can only occasionally develop a sense of belonging to a larger community. Thus, squatters are often powerless to change their conditions through corporate action or to speak with one voice to municipal or national authorities.

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1. J. H. van Doorne, "Social Integration of Migrants to Kafue Town," University of Zambia, 1970; Bard McAllister, "A View of the Kafue Squatter," AFSC 1970 (See Appendix B); Research Unit of Department of Community Development (Government of Zambia), "Ground Floor to Development: A Survey of Nguluwe Compound," 1967, mimeo.
2. Appendix B, "A View of the Kafue Squatter," pages 29-30.
3. Appendix B, page 37.

As a general proposition it can be said that there is no lack of shelter in Zambia. A place to sleep and to keep one's belongings can be fabricated from whatever materials come to hand. The newcomer to the city will somehow get by in a marginal fashion. The real shortage lies in urban amenities, such as water, sewerage, roads and schools. These can be provided only through the assistance of municipal or national government.

C. Housing Patterns and Planning in Zambia

Under the pattern instituted by the colonial administration, housing for the town dweller was usually job-related. When a person took a job, a house was provided for him by the employer, who charged rent as a percentage cut from the worker's monthly wage. The mining companies on the Copperbelt, railways and the Government in its hiring of civil servants all operated in this way. In the 1950's and 1960's, however, a major change took place, and employers no longer built houses to accommodate their increasing labor forces. Instead, they generally provided each unhoused worker with a housing allowance of about K 5.50 ($7.70) per month, obliging him to find his housing for himself. If he was patient enough to remain for months or even years on a government housing waiting list, he might with luck rent a small house from the local township, which built housing by means of a central government subsidy. Otherwise he joined the many others like him in one of the squatter compounds on the outskirts of the city, where he might build a house of mud and wattle, poles and thatch in the traditional manner or occasionally improvise from cast off materials.

Government rent subsidies for municipally owned houses ended in 1958. Then responsibilities for housing were dispersed among several different bodies. Government agencies built chiefly for their own workers; building societies made loans for house construction available to a strictly limited clientele; the Government's African Housing Board provided some loans and expertise to municipalities. None of these agencies proved equal to the immense and mounting need.

Following Zambia's national independence in 1964, the new Ministry of Housing and Social Development was given responsibility for mapping out an overall housing and urban development policy. Subsequently the Ministry of Provincial and Local Government was assigned responsibility for housing policy throughout Zambia. Within that Ministry, the Department of Town and Country Planning determined land use; and the Zambian Housing Board provided site plans, house plans and technical services for house construction. In addition, the Housing Board maintained control over the Direct Building Organization which built access roads, water supply systems and sewers for government house construction only. Thus, the Government continued to provide medium density housing for the middle classes. Yet one of the standing instructions to the Ministry of Provincial and Local Government was "particularly to foster home ownership schemes through self-help for people of modest means."

Schemes for low-cost housing which the colonial administration had instituted did not prove adequate to the need. Private industry was no longer interested in taking on low-income housing projects. Public funds, building skills and supervisory talent were not sufficient. Pressed increasingly for a solution that was potentially equal to the problem and consistent with the ideal of Zambian Humanism which emphasized the dignity of each human being,

government planners turned toward finding ways to encourage Zambian town dwellers to construct their own houses.

Thus, in 1967 the Government launched a new program called the "Aided Self-Help Site and Service Scheme" to run parallel with its other efforts in low-cost housing. The Scheme's first year goal of 2000 new units was not met, although the planning and intentions behind it were sound. Other schemes, one of them drawn up by an international consulting firm on town planning, were proposed. At the same time many officials, including Zambia's President, felt that the idea of cooperative self-help housing in urban areas deserved an adequate chance to display its strengths.

Chapter II

ZAMBIA'S SITE AND SERVICE SCHEME

A. Examples of Early Urban Housing Projects

Various approaches to meeting urban housing problems were considered by the Zambian Government in the initial stages of developing the Site and Service programs. Some were initiated prior to independence in 1964. The following excerpts from a study of urban housing policies in Zambia give some background.[1]

> The Zambian Government inherited a traditional British colonial housing institutional framework at the time of independence. It was organized to serve the needs of the Europeans and had little relevance to Africans, who in fact were forcefully encouraged to live outside the town. Initial government efforts were aimed at raising housing standards and providing housing for all Africans. The impossibility of implementing these policies soon became obvious and increased attention was given to the concept of sites and services as a means of meeting housing needs for the lowest income people. As Collins (the author of the study) pointed out, the underlying reason for the sites and services program was primarily a negative reaction to the impossibility of controlling unauthorized settlements...The result was to think of sites and services not as a positive program but as a temporary measure to be used until such time as it would be possible to provide a standard housing unit for each household.

Several projects were undertaken in the early and mid-1960's, aimed at providing such basic services as water, sewerage and roads to plots on which people would build their own houses. They had only limited success. Three examples, each from the Lusaka area, may suffice to show this.

1. New Kanyama This project was started in 1963 in order to provide a "temporary resettlement area" in which people could build their own houses until permanent government housing became available. The site selected was unsuitable for permanent housing because it contained rock outcroppings on flat terrain...Minimum services were provided...structures were to be kept temporary, yet 69% of the houses were built of burnt brick or concrete blocks. Later, water supply was increased, markets allowed, roads

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1. All quotations in section A of this chapter are from Alfred P. Van Huyck, Planning for Sites and Services Programs, Ideas and Methods, Exchange No. 68, USAID/HUD Office of International Affairs, Washington, D.C., July, 1971. Van Huyck's chief source is John Collins, The Evolution of Urban Housing Policies in Zambia with Particular Reference to Lusaka (unpublished thesis, Columbia University, 1970).

improved. It was generally recognized that New Kanyama was to be permanent. ...by starting New Kanyama as a "temporary" settlement, a great deal of confusion was caused among the residents, probably retarding natural improvement of the area. The site was poorly chosen...

2. Marrapodi-Mandevu This project was concerned with improvement of an existing unauthorized settlement area... The program floundered for several years because of a constant series of administrative and planning errors...failure of coordination...delayed action. It did not have a well worked out, simplified administrative and financial plan. Cooperation and support of the people was not obtained in advance.

3. Chainama Hills This was an attempt to provide amenities to 3000 new plots on which residents could build, as in New Kanyama, but on a permanent rather than temporary basis. After a crash effort by which within nine months 90% of the plots were ready, the project was terminated. This was because, among other things, its general appearance was too much like unauthorized settlements.

B. The New Government Plan and Its Provisions

The Government's Aided Self-Help Site and Service Scheme was initiated as a major means of attacking the squatter housing problem. The First National Development Plan, 1966-1970, states:

> It will be seen that much emphasis is placed on site and service schemes which will provide plots with adequate services where people in the lower income groups or self-employed can, by their own efforts in cooperation with others, build accommodation suited to their needs. The efforts and resources of our people are here harnessed in schemes which will play a major part in the solution of our housing problem. The greatest possible assistance and guidance will be afforded to these schemes.

Under this national program a local government body, such as a township council, in cooperation with other government bodies on the national level, makes plots of land (40' by 90') available to would-be homebuilders on a ten-year renewable lease basis.[1] These plots are of two types, basic and standard. The basic plot plan provides for a water tap for every four houses and a sanitary pit privy for each plot. The standard plot plan provides for running water for each house and water-borne sewage. All sites are serviced by government roads and municipal trash collection. The township council is responsible for administration of all housing tracts and the technical supervision necessary for construction. Site plans must be approved by each local council; and all financing is carried out through them.

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1. See Appendix C, Exhibit 7, Land Record Card Form.

C. Financing During 1966-1970 Plan

The Government assists the local councils in financing these schemes by providing 50% of the capital costs as a grant. The other 50% comes from the national Government as a loan to the local council which must be repaid by the council over a ten-year period. Development costs borne by the Government include site design, survey work, construction of access roads, and water and sewer networks. Each homebuilder is entitled to a loan of K 144 ($200 at the 1969 exchange rate) for building materials, to be repaid at 5% interest over a 48-month period. Half of this loan to the homebuilder is provided by the national Government and half by the local administration. Repayment by the homebuilder takes the form of a monthly service charge, which also includes taxes, municipal services and a portion of site development costs. Exclusive of loan payments, these range as follows: basic plot, K .82 per month ($1.23); standard plot, K 2.12 per month ($3.00). Such service charges vary from project to project, but including the loan repayment they cannot exceed K 5.50 per month, the statutory housing allowance.

D. Changes in Original Plan

Over the years changes have been made in some provisions of the original Site and Service Scheme which opened it to many more low income people. Initially, only one category of plot was designated, namely the standard plot. The addition of the basic plot concept was one of the most significant changes. To qualify for a basic plot, a family no longer had to make a deposit of K 20 or to give proof of employment. The other change which has been of great benefit to low income people was in the building materials approved. The introduction of sun-dried bricks, in lieu of more expensive materials, markedly reduced the cost to the homebuilder.

E. Government Site and Service Scheme in Kafue

Hopes had run high that the Government's site and service scheme begun in Kafue in 1967 would offer a workable solution to the squatter problems of many cities; but new construction was far slower than anticipated. At the Kafue Government Site and Service Scheme, for example, applications were made for 36 of the 38 original plots; but two years later only half of the houses were completed. After five years, the other houses were still not complete, although all were occupied.

The reasons for this slow progress were numerous. In the first place, "site and service" was a new idea. People were wary and slow to invest in a scheme that might not develop as promised. A precondition for obtaining a standard plot was a K 20 ($28) deposit which could be used to buy construction materials. Only those prospective homebuilders with assured incomes initially had the confidence to accept the risk. Another condition for participating was the obligation to work together and help all other families build their homes. No systematic way was provided for this to take place; therefore, no construction groups really jelled.

Few people thought they had sufficient skill to build a brick and metal-roof house. Little was done to alert people to the technical help actually available. Moreover, working people felt that they could not afford the time necessary to build a house. Those who did participate usually hired construction workers to do the building for them, thus removing any aspect of self-help that might have been present.

Few squatters fully understood the conditions of ownership under the Scheme or were persuaded that the house and the investment would be theirs and that they could sell the house if for any reason, such as a job transfer, they had to move.[1] Some people were not completely satisfied with the house plans provided by the Zambian Housing Board, and did not understand the procedure for getting alternate plans approved. Moreover, the sites offered were no closer to the town and jobs than the squatter areas were; indeed many were farther out. Public transportation to these outlying areas was nonexistent.

These circumstances formed part of the background for the Government's proposal to AFSC to assist in a self-help housing project in Kafue.

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1. See Appendix C, Exhibit 7, Land Record Card Form.

Chapter III

THE KAFUE PROJECT - GOALS, METHODS AND ORGANIZATION

Given the problems which hampered general acceptance of the Aided Self-Help Site and Service Scheme, the Government of Zambia was concerned to find ways to overcome them. Knowing of the American Friends Service Committee's experience in this field, it invited AFSC to help implement the Scheme for urban squatter settlements in Zambia.

A. Squatter Housing in Kafue

The city of Kafue is located 26 miles from Lusaka on the railway and on the main north-south road. Zambia's policies of geographic dispersal of industry fostered a tremendous surge of construction and development of new industry in the city. Already under construction when the AFSC project was launched were a fertilizer factory, a textile mill, and a plastic boat factory. In operation were a fishnet manufacturing plant and a brewery, and plans had been laid for construction of an iron and steel complex. This expansion meant many new jobs and resulted in a doubling of the population every year from 1964 to 1969. Kafue's population in December 1970 topped twenty-eight thousand.

House building for new industrial and construction workers, however, by no means kept pace with demand. Moreover, no provision was made for those employed or self-employed in jobs such as service, maintenance and small business. These residents of Kafue followed the only course open to them to provide shelter for themselves and their families; they occupied small plots of land on the edges of the city and built in traditional or improvised ways.

Late in 1968 and early in 1969 the AFSC Field Director, with the assistance of students from the University of Zambia and its Research Unit in the Department of Community Development, conducted a detailed study of the squatter areas of Kafue.[1] The Government's estimate of 200 squatter families proved to be an underestimate by over one thousand. (In the year following the survey the number of squatter families was thought to have nearly doubled.) The survey identified the squatters' origins, resources and aspirations, especially their desires for better housing and neighborhood amenities. The information obtained provided useful background for planning the pilot project at Kafue.

By establishing a project in an area where the squatter situation was serious, but still within manageable proportions, the AFSC and the cooperating government departments hoped to demonstrate methods of group organization which could assist the Government in implementing housing plans for this and other towns. The AFSC thus undertook to help the Government do what it had already chosen to do in respect to the housing needs of squatters, and to demonstrate the effectiveness of joint effort and cooperative spirit, thereby aiding the development of a sense of community.

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1. See Appendix B, "A View of the Kafue Squatter."

B. The Project Plan

Under an agreement signed in October 1968 with the Government of Zambia, the American Friends Service Committee agreed to provide social and technical assistance for the Kafue Township Council's Self-Help Housing Project. This was located in Chawama, part of Shillinga Kaseba which was one of the eight areas of the town occupied by squatters.[1] The project plan was designed to involve the homebuilders in all phases of planning and construction of their houses. It was designed also to develop a sense of community by means of the cooperative activity of homebuilding.

C. Goals

The underlying goals of the project were:

1. to cooperate with the Zambian Government in experimenting with new approaches to the organization of construction efforts along self-help lines which could be duplicated elsewhere;

2. to encourage the development among the diverse residents of the squatter compounds of a sense of community through the cooperative activity of self-help construction.

D. Methods

In addition to the preliminary survey of the squatter population, a series of basic steps was carefully planned:

1. recruiting and organizing groups of squatter residents interested in working together, with Zambian leadership and under Zambian instruction;

2. training Zambian staff in construction techniques and group organizing methods, as well as basic instruction in nutrition, cooperative principles, and literacy;

3. recording project experiences for use by other interested groups and individuals.

E. Organization

1. Project Management Team The Kafue project was a site and service program of the Kafue Township Council (KTC). The Council delegated its authority on all matters concerning the project to the Project Management Team. Members of the Team were the Chairman of the Township Council who chaired Management Team meetings, the housing officer, the treasurer, the engineer, the community development officer, and the site and service technician. The AFSC Field Director and other project staff met regularly with the Project Management Team which carried out the following responsibilities:

   a. approval of all plans and handling of all financial arrangements;
   b. approval of applications by homebuilders for building material loans;

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1. See Appendices A and B, Project Agreement and "A View of the Kafue Squatter."

c. establishment of policies for allocation of plots;
d. approval of the ten-year renewable lease agreement with each homebuilder;
e. establishment and collection from the homebuilders of the monthly service charge.

2. Field Management Team Members of the Field Management Team were the AFSC Field Director, the AFSC Construction Supervisor, the housing officer of the Kafue Township Council, the site and service technician, community development officers of the KTC, and three members of the AFSC community development staff. The Field Management Team had the following responsibilities:

a. to interpret the aims of the project to potential homebuilders;
b. to assist in the organization of building groups;
c. to teach necessary building skills and provide technical supervision;
d. to maintain building standards;
e. to encourage group initiative in fields of interest such as nutrition, literacy and small economic enterprises.

3. AFSC Staffing Pattern The AFSC Field Director in Zambia served as Field Manager of the Kafue project. He was responsible for overall supervision and for the technical assistance provided by AFSC. Working in close association with the Field Manager was the Construction Supervisor, an AFSC staff member who was responsible for the building aspects of the project, including selection and supervision of construction teachers and assistants.

Nine Zambians completed the staff: three community development workers who assisted in the formation and ongoing work of the building groups and community-wide organization; six construction teachers who trained homebuilders in construction techniques and maintained construction standards. At any one time no more than five construction teachers were on duty.

4. Recruitment of Zambian Staff[1] Qualified applicants responding to newspaper notices and other publicity were interviewed and selected by the Field Manager. The bases of selection were:

a. demonstrated interest in the philosophy and objectives of the project;
b. respect for people and a demonstrated capacity to work effectively with others;
c. skill and knowledge as they related to the needs of the project;
d. past experience appropriate to the job description;
e. educational experience and qualifications adequate for the work;
f. demonstrated willingness to accept the discipline required by community work;
g. willingness to work as a member of the staff team, assuming a responsible role in the planning and execution of program;
h. working knowledge of the English language and an appropriate local language.

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1. See Appendix F, Text of Pamphlet Used to Recruit Project Participants.

F. Staff Development and Training

A central element of staff development was in-service training to strengthen individual skills and understanding of the basic concepts and approaches of the Kafue project. Aside from the informal, day-to-day guidance by the Field Manager and Construction Supervisor, in-service training took two forms: Field Management Team meetings and special training sessions involving outside resource persons.

Field Management Team meetings took place each Monday morning, beginning in September 1969 and continuing throughout the duration of the project. At these sessions the staff reported on their efforts in recruiting, orienting and encouraging construction groups. Announcements were made; special events planned; problems of morale, modifications of routine and unforeseen developments discussed and responses formulated.

Six special training sessions took place during the project's first two years. Because of the importance of group processes and leadership, arrangements were made with the University of Zambia's Oppenheimer School of Social Service in Lusaka to provide a series of in-service training sessions on group dynamics techniques for the entire project staff. These sessions, led by university instructors in Sociology and Social Services, began in April 1970, scheduled for three hours every other Monday afternoon over a period of several months. Topics included:

1. ways of producing better understanding of society and the social organization of participants, pointing up some contrasts in cultural differences in Zambia;
2. use of groups in a self-help housing project and ways to stimulate participation;
3. the staff person's role in regard to task-oriented groups;
4. ways to improve group participation; communication, group process.

In addition, in August 1970 a series of five training sessions employing specialized techniques for group interaction began under the guidance of a professional on the subject who had considerable experience in Zambia. These sessions allowed construction staff and community development staff a chance to appreciate better each other's specific work situation. For example, during the third session the dimensions of discord between the community development and construction staffs were brought out into the open; each staff listed the things the other staff did or did not do that made its own work more difficult. Discussion of these points of irritation followed. A series of follow-up sessions later in the year focussed on communication.

Another series of in-service training sessions began in October 1970 under the direction of an educationist from the Office of Civil Service Training in the Office of the President. These sessions dealt with work organization, analysis and efficiency.

In late April 1971, still another series of sessions was held, led by an architect, which dealt with house plans and living space.

In 1972 all staff, including community development members, took part in four sessions on plumbing techniques at David Kaunda Technical School in Lusaka.

Finally, the full staff met with members of the Zambian Architects Institute at the Zambia Housing Board for a thorough discussion of the planning of a house and the use of materials.

All of these planning, organizational and training methods and procedures, as well as the dual emphasis on providing housing and on building a sense of community, gave distinctive aspects to the Kafue project as compared to other self-help housing undertakings.

Chapter IV

KAFUE SITE, PLOTS, HOUSE DESIGN AND COSTS

A. Site Selection

In mid-1967, AFSC and Zambian Government representatives began exploration of the need for an experimental effort in low-cost housing in Zambia. During the year that followed, through visits, enquiries and reports by the AFSC Field Director in Zambia, the town of Kafue emerged as a most suitable locale for such a project. The reasons were plain. Shantytowns were spreading around Kafue at an unprecedented rate. The Government's effort at self-help housing there was faltering and slow. Kafue's municipal councilmen and national government officials were increasingly concerned to deal with the city's growing squatter problem and were eager to try new approaches. The AFSC's proposal to promote cooperation and participation on the part of residents before beginning construction had won the special interest of Zambia's leadership. In a new and growing town like Kafue the project's potential impact as a model for future self-help housing efforts was seen to be considerable.

With the approval of the Ministry of Local Government, the Kafue Township Council set aside a 175-acre site in the Shillinga Kaseba squatter area about one mile from the center of the city on the main road leading from Lusaka to Livingstone.[1] This site was on government land and was at that time the one site closest to town on flat land which had not been set aside for other uses by the Department of Town and Country Planning. It is in a shallow valley bounded on three sides by hills. Compared to the other squatter areas, this site was sparsely settled with only 48 families living there.[2] Some local residents knew it as "the place of the lions." Shortly after beginning construction work, the residents renamed it "Chawama," meaning in the Chinyanja language "A Good Place."

B. Plots

The plan for the use of the site called for 228 housing plots, 40' by 90' each, a pattern of primary and secondary roadways, three and a half acres reserved for a school, one and a half acres for a sports ground, one and a half acres for a market, and smaller plots for a bus stop, clinic, shops and a tavern. This is shown on the site layout, page 19.

Each house, 290 square feet in area, is located on its plot so as to allow maximum family use of the land. Each is set back 20' from the front boundary, usually an access road, and five feet from one of the side boundaries. Thus out of each plot's 3600 total square footage, approximately 3300' remain for a garden or fruit trees, for customary outdoor living and privacy, and for possible future enlargement of the house. The plots were laid out to allow a minimum of road frontage, with only a small space between cleared

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1. See Appendix B, "A View of the Kafue Squatter," map on page 3.
2. Of the 48 squatter families on the site, 47 joined the project and built new houses for themselves.

plots. This lay-out makes it impossible for squatter shacks to be built in the future between the brick houses.

Assuming that an average 1300 square feet of each plot is reserved for outdoor living, which is the high average for the squatter communities surveyed in 1969, 2000 square feet remain for the average Chawama resident's garden. This contrasted with the average 10,000 square feet of garden space of most established families. Thus it was the lucky Chawama resident whose plot lay on the periphery of the site, since that family could begin a garden adjacent to the house on land outside the leased territory. About half of the residents of the Chawama project maintain gardens, but few are able to raise enough maize, groundnuts or pumpkins to meet their needs. At best, gardening families are only able to raise a small surplus of vegetables for sale as a means of supplementing their incomes.

Disadvantages to those residents not able to start gardens directly adjacent to their houses were offset by numerous other advantages, chief among them being the on-site access to water. Each family paid a flat rate for 3000 gallons per month of piped water for laundering, bathing and cooking.

C. House Design

The Government's loan of K 144 ($200) for building materials fell far short of the total costs of a core house on a basic plot when everything was included. The cost of the house as originally designed, however, would have been even higher. To bring costs down as close as possible to the loan, the AFSC Construction Supervisor designed a modified Type D core house. (See illustration of house plan on page 20.) The modifications included the elimination from the original plans of

1. two interior doors, plus locks and frames,
2. a jog in an exterior wall,
3. paint,
4. stucco and plaster,
5. concrete floor,
6. concrete blocks, replaced subsequently by Cinva-Ram blocks.[1]

These modifications brought the cost down from K 330 to K 173.

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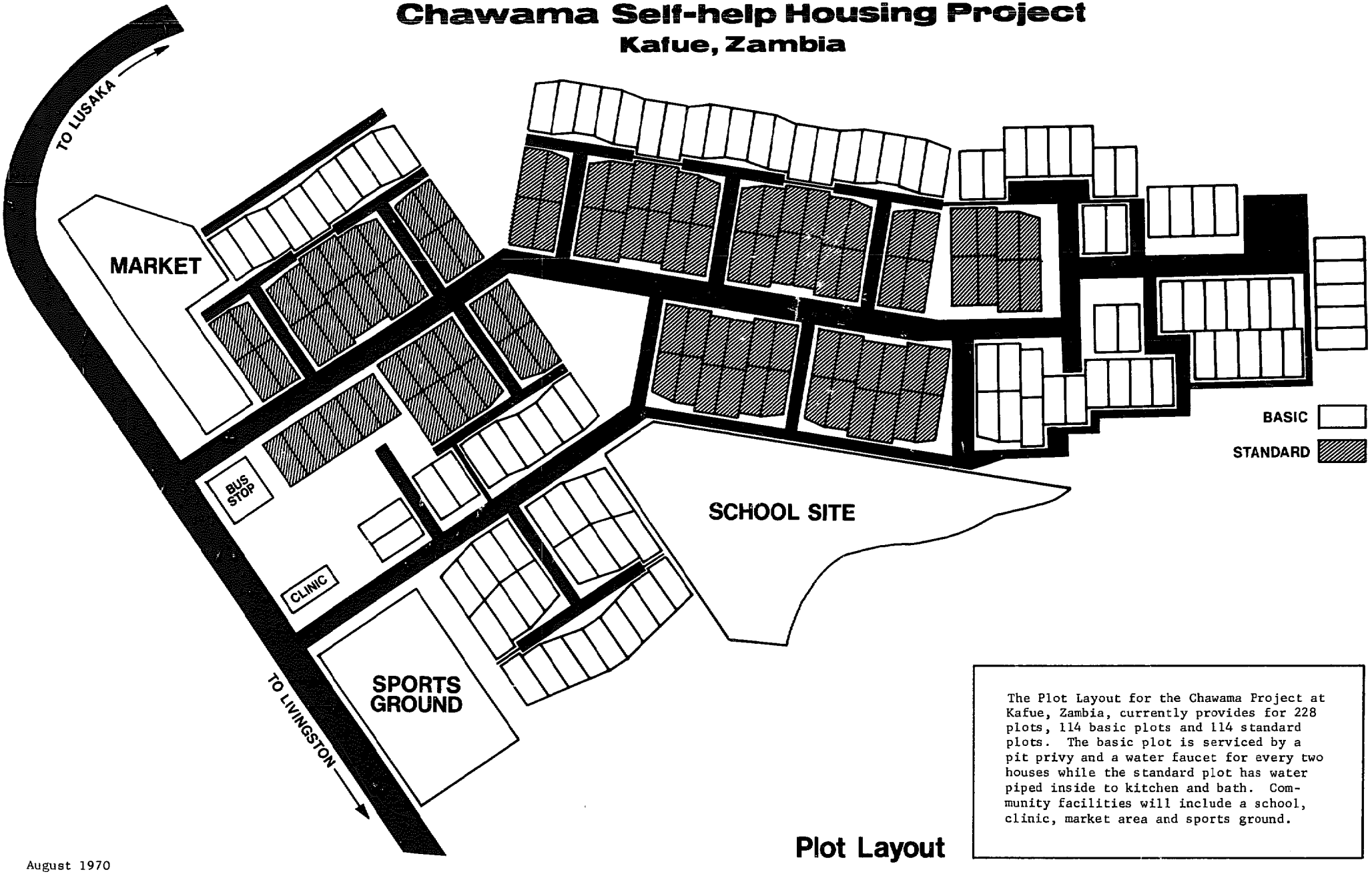
1. Cinva-Ram Blocks Without the development of a way to make inexpensive earth-cement building blocks, the cost of a self-help house in the Government's Site and Service Scheme would have been beyond the means of the participants. Instead of substituting the use of adobe blocks, known in Zambia as "Kimberly bricks," for the cement blocks, the Chawama project emphasized the advantages of earth-stabilized bricks. Using cement and laterite in a ratio of 1 to 20, these were made in the Cinva-Ram machine. The Cinva-Ram is a hand operated block-making machine developed in 1952 by the Inter-American Housing and Planning Center (CINVA) in Bogota, Colombia. Use of the Cinva-Ram machine requires a level of technical knowledge which is not beyond the ability of the local Site and Service technician. However, local technicians needed a certain amount of assistance; and this help was available from the University of Zambia.

Chawama Self-help Housing Project
Kafue, Zambia

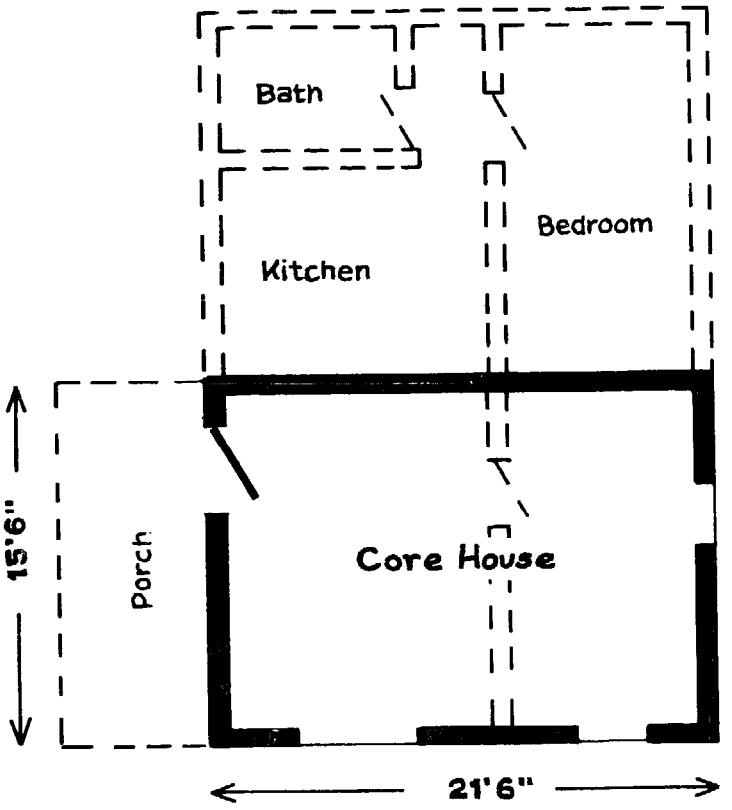


The Plot Layout for the Chawama Project at Kafue, Zambia, currently provides for 228 plots, 114 basic plots and 114 standard plots. The basic plot is serviced by a pit privy and a water faucet for every two houses while the standard plot has water piped inside to kitchen and bath. Community facilities will include a school, clinic, market area and sports ground.

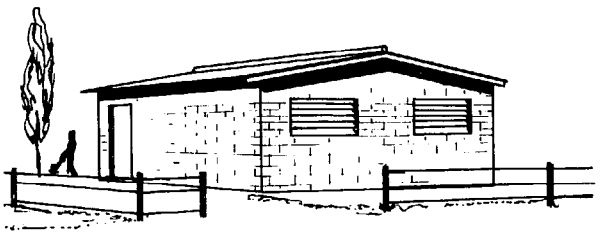
Plot Layout

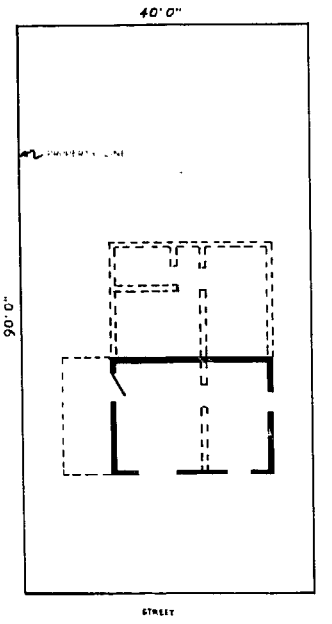
August 1970

Chawama Self-help Housing Project
Kafue, Zambia
(house plan)



Additions which can be made to the core house.





This design, drawn up by the Zambian Housing Board for the Government Site and Service Program, is of a modified "type D" core house with additions outlined.

Specifications

Floor dimensions inside: 14'6" x 20'6" (297 square feet)
Maximum indoor height: 9'
Minimum indoor height: 6'7"
Height of floor above ground level: 1'

Walls: earth-cement bricks 4" x 6" x 12"

Roofing: galvanized corrugated sheet metal nailed to 3" x 4½" wooden purlins with 2½" screw nails with neoprene washers. Purlins were wired to the masonry.

Windows: 24" maximum width. Option of glass in metal casements or movable sheet metal louvres fixed to metal rods.

Staff attempted to find an alternative to the galvanized sheet metal roof which accounts for slightly over 60% of the total loan amount. However, no other material was acceptable to the Zambian Housing Board, which itself was looking for cheaper alternatives in roofing. Grass thatch, the traditional roofing in Zambia, is cheap and provides good insulation against heat and rain. Its drawbacks are that it is combustible, can harbor vermin and must be periodically replaced. Moreover, it connotes low prestige for the house-dweller. Asbestos sheeting, the third alternative, is more difficult to handle. Therefore, the conventional, if hotter, metal roofing was adopted.

D. Costs

1. Economies Expenditures during construction were carefully watched. In theory the Government loan to the housebuilder was to pay for basic essentials - roofing material, wood purlins, metal door and window frames. Therefore, housebuilders were not supposed to have other building supplies charged against their total loan allocation if such charges left too little money for purchase of roof, window frames and door frames. However, with the loan available from the start of construction, participants did often use the loan money for cement for the Cinva-Ram blocks, for foundations and mortar. As a result, the typical builder had to pay very little out of pocket by the time the house was nearly complete. When the walls and roof were up, the family could move in even without windowglass and doors in place. In traditional Zambian housing windowglass is not considered necessary and doors fitted into door frames are the exception rather than the rule. Homeowners customarily covered their doorways and windows with sheet iron, burlap bags or cardboard, just to keep out the rain. These substitutes reduced the initial costs of the house.

2. Initial Costs to Participants[1] Building material costs at 1969 prices for each Type D core house were as follows.

Core House

roof		K 88	U.S. $123[2]
metal roofing	K 53		
wood purlins	30		
wire, nails, etc.	5		
foundation cement		7	10
door frame		7	10
window frames (3 - metal)		21	30
bricks		27	38
miscellaneous		8	11
privy		15	21
roof	8		
bricks	7		
Total cost for core house		K 173	$243

1. Costs rose approximately 15% during the period 1969-1973, the dates of the Kafue project. Therefore, the same core house in 1973 would cost approximately K 199 without additions in contrast to K 173 at 1969 rate of exchange. The last five construction groups at the project in fact found that their K 144 loan did not buy as much as the first groups had been able to purchase. They therefore had to dig into their own pockets to make up the difference.
2. All dollar figures in this chapter are at the 1969 exchange rate of K 1.00 to U.S. $1.40.

Extras

door and hardware	K 9	U.S. $ 12
windowglass	9	12
concrete floor	14	20
concrete porch	22	31
door #2	16	22
plaster	24	34
paint	10	14
Total cost of building materials for extras	K 104	$145
Total costs, complete Type D house	K 277	$388

In order to complete the core house on the basic plot, the housebuilders had to contribute K 29 out of pocket, the amount needed in excess of the K 144 loan. Estimated costs of putting on the finishing touches increased the total costs to a point where personal outlay above the loan amount came to K 133.

In addition, it should be noted that the housebuilder on the standard plot is subsidized by a K 135 grant from the Government to cover the costs of installing plumbing within the house, for kitchen sink, shower and toilet. The basic plot housebuilder, on the other hand, received a subsidy of K 3.50 for concrete, costs of the concrete ring, riser and seat, and costs of pit digging for his privy. (See the illustration of the plot lay-out on page 19, with the legend describing the differences in services between basic and standard plots.)

3. Long-term Costs to Participants In addition to initial costs, participants were obligated to meet other costs by means of monthly payments.

These long-term costs are as shown on page 23.

	Standard Plot[1]		Basic Plot	
	Kwacha	U.S. Dollar Equivalent	Kwacha	U.S. Dollar Equivalent
Repayment of K 144 loan[2]	K 3.38	$4.73	K 3.38	$4.73
Service charge[3]	2.12	2.97	.82	1.15
Average rate (tax) on house value[4]	.52	.73	.37	.52
Monthly average	K 6.02	$8.43	K 4.57	$6.40

These charges are payable to Kafue Township Council (KTC), which has the power to repossess the plot if payments are not made.

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1. Standard plot housebuilders were obliged to pay a deposit of K 20 on their loan before beginning construction, payable in four monthly installments. The deposit was used to purchase building materials.
2. The loan must be paid back within four years after the completion of the house. "Completion" is ambiguously defined; so a family may not begin its loan repayments until months after moving into its house. The interest charge is five percent on remaining balance; thus the total repayment cost after 48 months is K 162.24.
3. a) This charge covers initial costs of site planning, road construction, water and sewerage (estimated to be K 90 per basic plot and K 340 per standard plot), as well as ongoing costs of services provided by the KTC such as trash collection, fire protection, police and water.
   b) The KTC estimates that it subsidizes this charge for services by K 2.03 per plot per month.
   c) The charge for water, included in this figure, is estimated to be K .50 per 1000 gallons; each plot is assessed for use of 3000 gallons per month, or K 1.50.
   d) This charge falls due beginning 30 days after the Project Management Team approves the family's application; thus people are expected to pay virtually from the start of their association with the project.
4. The rates (taxes) levied are based on an index of K 1.47 per annum for every K 100 of assessed value. The assessed value of the average basic plot house is K 300, annual rate K 4.41; average standard plot house assessed value is K 425, annual rate K 6.25.

Chapter V

CONSTRUCTION GROUPS

A. Recruitment[1]

At an assembly held in Shillinga Kaseba in September 1969, the Government's Regional Secretary for Kafue outlined the project's aims.

In October 1969 recruitment of the first of 20 building groups began. In order to complete the planned 228 houses, optimal size for a group was reckoned at 20 families. The Zambian community development workers played a primary role in recruiting. Under their leadership, staff members went from house to house on the Chawama site, eventually reaching all 48 families who were then living there. Initially, only those families were considered; by mid-1970 all but one of them had joined a construction group. Once the original 48 had been reached, invitations to join were extended to those living in other parts of the Shillinga Kaseba neighborhood who had been resident there for at least a year. When all of the people of Shillinga Kaseba had been given an opportunity to join, applications from residents of other squatter neighborhoods in the Kafue Estates area were considered. The number of non-Zambians, namely migrants from Rhodesia and South Africa, who were allowed to participate was limited to 25% of the total of 228 families in the project.

The recruitment drive got off to a fast start. After the first and second construction groups had begun building, one Sunday morning a group of 25 families came to the project site, asking to be enrolled and to start work immediately. Out of this gathering a third construction group composed of 18 families began work some weeks later. During the project's first five months, from January to May 1970, 85 families forming five separate construction groups joined together to build each other's houses.[2]

B. Composition of Construction Groups

The families in these first construction groups were bound together by a similarity in means of livelihood and the common experience of eviction from land on which they had been squatting for at least two years. (Construction of a sewage treatment plant had forced the move.)

The first four construction groups built their homes on contiguous plots and became in many ways models for later groups. Household heads in the first four groups were for the most part self-employed and earned meager incomes. The majority of those in later groups held regular contractual jobs, and therefore included among their numbers more affluent workers, a few of whom even owned cars. The first four groups, composed of 16, 16, 18 and 19 families respectively, were larger than the 16 groups that followed, in which the median number of families was nine.

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1. See Appendix F, text of recruiting pamphlet, "Do You Want a Modern House?"
2. Approximately half of the families put together and occupied temporary shelters adjacent to their house sites during construction.

Staff could discern only a few direct family ties among all of the families involved: two brothers working in two different groups; an uncle and his niece in two different groups, and so on. Exceptional in this regard was a patriarchal clan of several families of South African origin, all members of a religious sect and artisans in basket-making. They formed half of group number four. Tribally, every building group was quite heterogeneous; members of the Tonga, Bemba, Lozi, Nyanja and other Zambian tribes appeared in almost all groups. Communication was facilitated by a wide use of Chinyanja, the language of the Nyanjas, and on occasion of English. Political feelings run strong in Kafue; so the recruiting staff had to make careful explanations and give assurances to the community that the project was open to all, regardless of party, religion or tribal affiliation.

Thus, most of the participating families had only squatter status in common. In consequence, a family's rights and responsibilities vis à vis other families did not interlock according to village patterns; and people were relative strangers to each other. Therefore, it is not surprising that among the foremost objections to the project by these squatter families were the prospect of having to work together and the special activities required by the plan to make this a cooperative undertaking.

The families' common status as squatters, however, had important consequences for their motivation. They wanted security comparable to that which they had enjoyed in their traditional milieu. In the villages the communal use of land, mutual aid, sharing of hardships and pleasures, and the fact that one's house would not be bulldozed had given substance to that security; and their memory of this heightened their desire to see it restored in the urban setting. This objective encouraged the participants to set aside personal resistance and to cooperate in a group effort which did not have the traditional reinforcements of kinship or common language.

These semi-urbanized squatter families needed continuing encouragement. They needed help not only in learning the procedures of housebuilding and of borrowing money at interest but also in organizing cooperatively. In this process the community development staff played a central role.

C. Preparative Study Sessions

To accomplish these ends, the project's community development staff assisted each group of would-be homebuilders to organize study sessions, prior to the start of construction. They were led, in part, by a temporary chairman and secretary elected by each group. During this period of organization each group met about twice a week, for a total of 14 sessions. The subject matter of these sessions was roughly as follows.

Session 1. Outline of Project Plan

Roles of the Zambian Government, the Kafue Township Council and the American Friends Service Committee in the project

The ways each agency participates in financing the project

Advantages of working in groups

The necessity for groups to make their own decisions

The help to be provided by the AFSC staff

Session 2. Organization of a Building Group, Part A

Role of the group in making decisions

Duties and responsibilities of group members

Duties and responsibilities of the chairman, secretary, treasurer, timekeeper, work coordinator

Session 3. Organization of a Building Group, Part B

Characteristics of good leadership in a self-help housing group

Election of temporary officers

Drafting a constitution

Session 4. Costs and Financing

What is a loan? What is interest? How is interest figured?

Conditions of the Council loan for self-help housing and how repayment is made

What are rates (taxes)? How much must the participant pay each month?

What do service charges cover? How much are the service charges?

Explanation of differences between the basic plot and the standard plot

Session 5. Implications of Home Ownership

The eleven conditions of ownership on the Land Record Card, the official record of the ten-year renewable lease agreement[1]

What one can and cannot do with a house

The procedure to follow if one must sell the house

Methods of allocating plots

Visit to the site and selection by each family of the plot for which it will apply to the Project Management Team

Session 6. Work Exchange Agreement, Part A

Ways families can share their labor in the building of houses

Possible areas of conflict between families and possible solutions considered by the group

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1. See Appendix C, Exhibit #7 - Land Record Card Form.

Sample Work Exchange Agreement read aloud and discussed paragraph by paragraph[1]

Session 7. Work Exchange Agreement, Part B

Continuation of the discussion begun in session 6

Session 8. House Plans

Arrangement of rooms in relation to their use

How traffic will flow through the house

How much space the house must have to allow for the family's expected use

Session 9. Selection of Materials

House materials put on display and relative merits of each explained and discussed

Special attention to Kimberly bricks (sun dried), stabilized bricks (soil-cement), galvanized roofs, plaster and block; doors, windows, floors

Material costs compared

Session 10. Purchasing of Materials

Project store procedures

Ways in which materials are charged against the loan

Way in which cash sales are handled

Economizing on purchases by using project store rather than commercial outlet

Session 11. Landscaping, Kitchen Gardens

Reasons for landscaping

Use of shade trees

How a well planned irrigated garden can produce enough food to more than pay the monthly loan charges and service fees

Session 12. Construction Methods

How a house is built, using a model

Organization of work crews to get laterite from the pit for brick-making, sieving the laterite, mixing with cement and

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1. See Appendix C, Exhibit #6 - Work Exchange Agreement Form.

brick-making, digging foundations, laying brick, setting doors and windows, installing plumbing, roof construction

Session 13. Final Organization, Part A

Adoption of constitution by individual construction group

Signing of Membership Agreement in construction group

Election of permanent group officers

Session 14. Final Organization, Part B

Finalizing details of the Work Exchange Agreement

Signing of Work Exchange Agreement by all families

Many consultants from the Township Council, private business and the construction staff of the AFSC were invited to participate in these sessions. They shared their knowledge with the group, and their presence gave members of the group the opportunity of getting to know them. Most consultants came at the expense of their employers.

D. Budget Analysis

During the course of these study sessions the community development staff had a number of discussions with each family, individually, regarding the added burden to the family budget of owning a house. Each family was helped to analyze its own budget in light of these new demands and to face squarely whether or not it could meet the financial obligations of home ownership. For people who have always received their shelter free, it is a major adjustment both psychologically and financially to have to make payments for mortgage and taxes. One of the steps in the adjustment is to go over the family budget in detail.

Without exception this budget analysis[1] was the first time the families had ever thought about their expenditures in an organized way. Just how close the budgeting must be is illustrated by the income spread of Kafue squatters questioned in the AFSC survey[2] which shows a median income of K 30 to 40 per month. Families building on basic plots had to have a minimum K 5 per month to spend on housing. Using the Western rule of thumb of 20% of income for shelter, 86% of the families could afford a self-help built house costing no more than the loan for materials from the Council. In fact, all interested families were able to participate, since even those without sufficient income were able to draw on resources of other family members. In a number of cases, project staff helped families develop or discover additional sources of income so that they could participate. In one family the community development worker encouraged the man to spend two hours a day as a vendor. In another case contact was made with relatives able to help. The benefits of the Zambian extended family system came into play. When on several occasions community development workers sought out the grown sons and daughters of people who would be regarded as extreme hardship cases in Western society, the children readily assumed the financial burden for their parents.

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1. See Appendix C, Exhibit #2, Family Budget Analysis Form.
2. See Appendix B, "A View of the Kafue Squatter," page 30.

E. Continued Guidance

At the completion of the 14 study sessions and the preliminary personal meetings, the construction staff assumed major responsibility for guiding each construction group. They usually began by dividing the group into work crews.

Throughout the construction process the community development worker continued to maintain a personal interest in each family. During the actual building, innumerable problems arose involving relationships among group members and the families' need for encouragement. The community development workers held weekly group meetings during this period so that problems could be discussed. Special effort centered on individual families whose morale sagged or who were thinking of dropping out.

Chapter VI

CONSTRUCTION GROUPS IN ACTION

A. Work Exchange Agreement

The Work Exchange Agreement formulated for the Chawama Self-Help Housing Project in Kafue, modelled on similar agreements used in other self-help housing projects, was an innovation in the Site and Service Scheme as originally conceived in the Government plan.[1] In essence a contract, it sets out each family's rights and obligations regarding cooperative work. It was a key means of keeping costs low, and of including people who could not build on their own, such as those in full-time employment. It also served the purpose of establishing a formal reference point by which groups of families could develop unity and maintain morale over a drawn-out construction period.

In signing the Work Exchange Agreement, each family pledged 1000 work hours to the group, plus additional hours if necessary, as the family's share in the total construction effort. The group itself was supposed to sanction and enforce the Agreement. Any family unable to contribute its full share agreed to pay the group a 40 ngwee (56¢) penalty for every hour not worked before being allowed to move into its house. No distinction was drawn between the work of an adult woman and the work of an adult man. The work of children under 16 was counted as either two thirds or one half that of an adult. The key to the enforcement of the Work Agreement was the Time Record Sheet kept by the timekeeper who was elected by each group.

All participants signed the Agreement. However, none of the building groups enforced its provisions fully, preferring to rely on norms and codes prevailing in their own culture rather than on a formal mode of contract put forward by foreign staff. The adjustments this required of both staff and the Zambian homebuilders deserve some attention, since the staff had to adapt its expectations to the cultural pattern. The modifications of procedure demonstrate some of the lessons learned in the Kafue project.

B. Work Requirements

Each family was obligated to work on the following tasks, presented here approximately in the order in which they were carried out.

1. Clearing plots, which entailed cutting grass, removing stones, et cetera.

2. Shovelling laterite soil into a truck and unloading the soil at the building site.[2]

3. Separating fine and coarse particles of laterite using a quarter inch mesh sieve.

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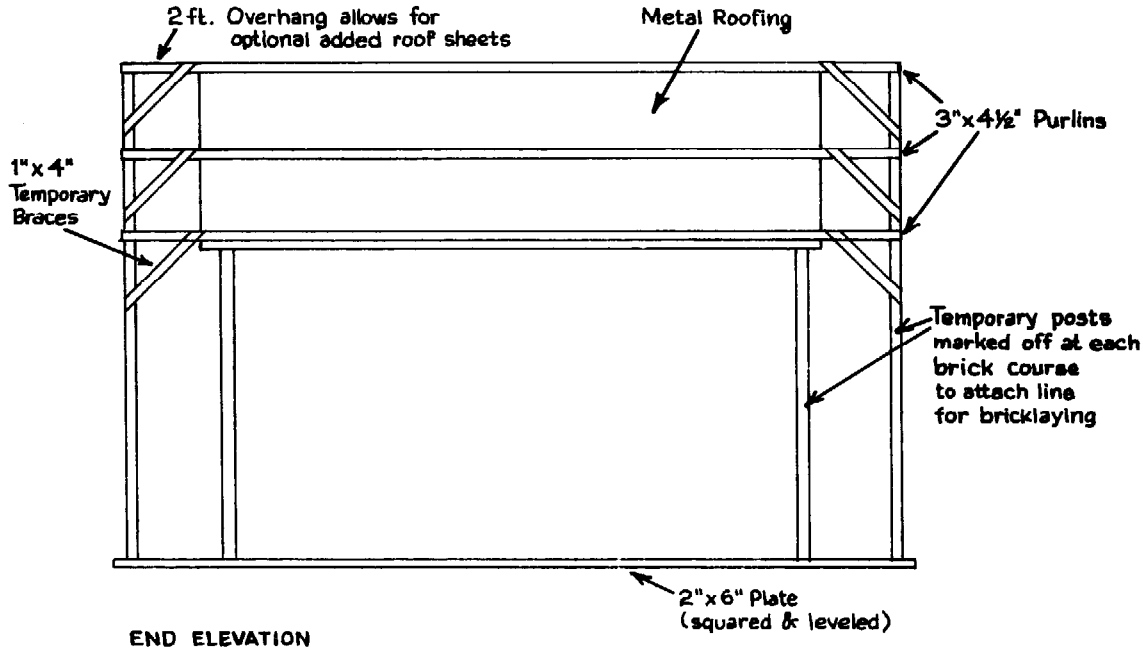
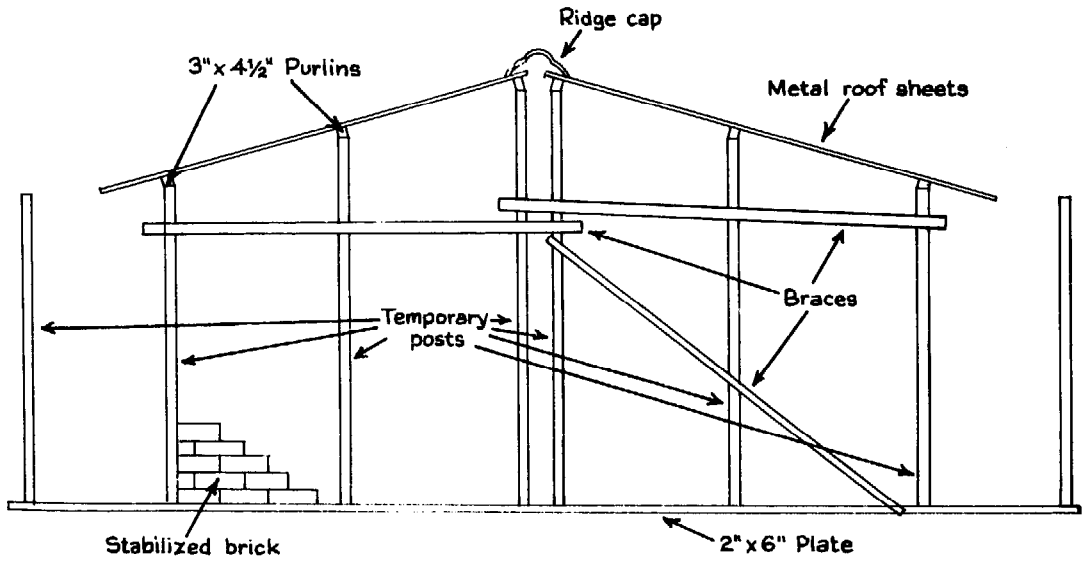
1. See sample Agreement, Appendix C, Exhibit #6.
2. One truckload of soil was required for 400 bricks. This task applied to the first four building groups only. Laterite for the remaining 16 groups was loaded by a machine owned by Nitrogen Chemicals of Zambia.

Chawama Self-help Housing Project
Kafue, Zambia

Construction Method
1970



END ELEVATION



SIDE ELEVATION

CONSTRUCTION METHOD

The method of construction is first to lay down a 2"x6" plate 3 feet outside the perimeter of the building line, square and level. Temporary posts are erected on the plates to support the roof members or purlins and to attach bricklaying strings. The corrugated galvanized iron roof is put in place, the footings are dug and poured and the bricklaying begun. When the brickwork is completed to the purlins, the temporary posts and plates are removed for use on another house.

4. Setting up galvanized iron roof with a temporary supporting frame which was done during the four-month rainy season.

5. Filling in house foundation with larger pieces of stone.

6. Mixing fine particles with water and cement to make bricks, one house requiring approximately 2500 bricks.

7. Pressing bricks with Cinva-Ram machine and setting bricks aside for two weeks of curing.

8. Pouring concrete footings for the walls of the house.

9. Putting up corner posts for bricklaying guides.

10. Laying bricks and keeping them plumb.

11. Setting window and door frames as bricks are laid.

12. Installing roof sheets and purlins, then tying down roofs with wire.

13. Digging pit privy, building privy walls, et cetera.

14. Installing plumbing on the standard plots.

Thus the Work Agreement required of the homebuilders both more labor than is customarily invested in a house and a willingness to learn new construction techniques. For most groups it was 12 to 20 months after the beginning of construction before their houses were occupied.

C. The Beginning of Construction

Despite many delays, the last bureaucratic hurdles were overcome on January 19, 1970. At that time the Kafue Township Council and the Chawama project staff worked out the final details for obtaining and maintaining a flow of necessary inputs, such as soil, timber, cement, equipment, labor and transportation. Some three weeks prior to this date the members of the first building group had signed their Agreements and, unwilling to accept further delays, had cleared their building plots and the working area. Thus, the workers and the plots were ready for building at daybreak on January 20th. The AFSC Field Director described the scene as follows.

> The day started off overcast - heavy rains in the wee hours of the morning - with a fine mist falling until mid-morning. It had been arranged that seven women and a few men would show up at 7:00 a.m.... and it wasn't long until at least one representative from 15 of the 16 families in group number one were busy at work. Some measured out their plot... some levelled the land for the roof frame, some carried stone to support the frame, some sawed timbers, some nailed roofing to the purlins. By mid-afternoon... the roof of the first house was in place.

The next day the group erected the roofs of the second and third houses; and the day after that two more roofs went up. After one week, eight roofs were in place. Members of the first construction group wanted to erect roofs on

all 16 plots immediately. However, project staff were anticipating the commencement of work by other groups, and so explained that there were not enough temporary wooden posts, used to support the roofs until the bricks reached roof level, to allow all 16 roofs to go up.[1] Very soon those families without roofs over their plots began to grumble; and the first of many instances of internal group tension appeared.

D. Differences in Staff and Homebuilders' Expectations

Beyond fulfillment of the requirements for work and other obligations spelled out in the Work Exchange Agreement, staff expected adherence to certain patterns of organization and procedure. These expectations were oriented toward accomplishing the tasks of building the houses. They therefore entailed planning coordination, punctuality, rational use of materials, purposeful employment of human resources and a system of fairness.

The Zambian homebuilders had slightly different ideas. All wanted to finish the tasks before them; but few wanted to ignore the social protocols and human interchange necessary to keep the group working harmoniously. In other words, the process of their labors was just as important to them as the end product.

Reconciling these two orientations meant adjustments that annulled, in effect, many of the provisions of the Work Exchange Agreement and therefore required a revision of staff expectations. This demonstrates the need for Western staff in such projects to be highly sensitive to the insights of the local people in applying foreign technology.

Some instances of adjustment are described below.

E. Adjustments in Procedure

Keeping up morale had been a major concern of staff from the outset, since the momentum and spirit of the first building group could shape the prospects for groups that followed. Before the project got under way, it had been decided to eliminate the element of competition, as a means of avoiding morale problems. Construction contests have been used in other self-help housing projects, such as a government-sponsored project in rural Uganda in the early 1960's. However, the AFSC staff felt that such contests would serve chiefly to introduce conflict into a situation where there was already a high potential for it. Thus, group morale took precedence over the staff's desire to complete houses as rapidly as possible.

1. Construction Schedule Unhappiness grew when it appeared that, at the established pace of brickmaking and bricklaying, houses of some first group members would be complete even before the building of some other members' houses was under way. Initially, the following building procedures had been established. House number one, with just posts and a roof standing, was reserved as a shelter for making bricks, house number two as a shelter for lumber storage and cutting. Brickmaking began on the fourth day of construction. Ten days later, with enough bricks made for three houses, the group poured footings for the third house. However, as bricklaying progressed for house number three past windowsill height, group

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1. In June 1971 the use of temporary wooden posts was replaced by metal cornerposts.

members began grumbling once again, saying that the house should not be finished so far ahead of the others. The construction supervisor tried to ease the unhappiness by shifting work to pouring footings for two more houses; but the people were no more happy to finish five houses before all of the others than they had been to finish only one house. Therefore, the first group altered the construction timetables in order to deal with the internal tension which had been growing from the time when eight of its members had discovered that their houses would have to wait to be roofed. The construction supervisor described how this tension was eased, as follows.

> Group 1 had a meeting in the evening. After much discussion, they decided that they wanted to stop building and just make bricks until there were enough for all 16 houses. It's now apparent to me that erecting so many roofs at the start was a mistake - except insofar as the appearance of getting a lot done boosted morale and encouraged recruitment. The unfortunate thing about the evening's decision is that at present rates of brick production it will take at least two months for Group 1 to make all of their bricks. Also a disappointment from the point of view of getting some houses finished to work out the bugs in the erection system, and having something to help future groups work out plans. But if Group 1 loses heart, it could ruin the whole project, so we go along with their wishes.

The first group's decision to complete all brickmaking before beginning house construction established the building pattern which all the other groups followed. It slowed down the completion of some houses; but it enabled groups to stay together throughout the building process.

2. Work Crew Shifts and Workers As construction got underway, the community development staff interviewed individual families to find out what time they had available to work. Based on this information, the staff planned a three-shift day: 7:00 a.m. to 12 noon; 2:00 p.m. to 5:00 p.m.; and 5:00 p.m. to 7:00 p.m. The first group altered this schedule, creating two five-hour shifts: 7:00 a.m. to 12 noon, and 1:00 p.m. to 6:00 p.m. This worked moderately well for the first two construction groups, whose male members were farmers, small entrepreneurs, firewood collectors and fishermen who could govern their own work schedules. During weekdays these men could contribute time equal to or greater than that of the women. Thus, as the first two groups worked they did not have to struggle with a major problem common to self-help housing projects, namely how those with full-time jobs can put in the necessary work hours for reasonably speedy construction.

But as the composition of building groups shifted to include more full-time wage earners, the work schedules had to be altered to accommodate them. Early evening work crew shifts were tried briefly, but with little success. Then weekend shifts for the wage-earning men were tried, but these also were poorly attended. Men who had worked all week long and the wives and children who had served as their surrogate construction group members wanted time to relax. Thus, a pattern developed whereby the greater part of the construction work was carried on by the self-employed men and the wives of regularly employed men. The burden of work fell by default to women who put in a six-hour day, 7:00 a.m. to 1:00 p.m., Monday through Saturday, for a

total of 30 hours per week. Roughly 60% of all the construction work in the project was done by women.

3. Means of Measuring Work Contributions To the Western way of thinking, records of hours worked are a concrete, easy means of keeping track of contributions to overall group effort, and a convenient scale for meting out penalties to slackers. The Zambian approach diverged from this type of measure, however, toward one that made allowances for particular circumstances, nuances of behavior and the attitudes of each group member. The result was a significant shift; Western expectations yielded to Zambian norms.

The first building groups went through the motions of keeping track of hours on the time record sheet kept by the timekeeper; but they generally passed responsibility for timekeeping to the construction teachers. The first group experienced tensions over work hours within two weeks after building began. Some members were, according to the record at least, not pulling their weight; but the group deferred imposing sanctions against the slackers and decided to use the time record sheet merely as a public record of what each family was contributing. After ten weeks the first group was so dissatisfied with this method of accounting for family contributions that it asked for the recording of man-hours to be stopped. Despite staff requests that they continue recording hours, the first group eliminated this procedure and with it the basic premise of the Work Exchange Agreement. Nevertheless construction teachers did continue to record aggregate group hours.

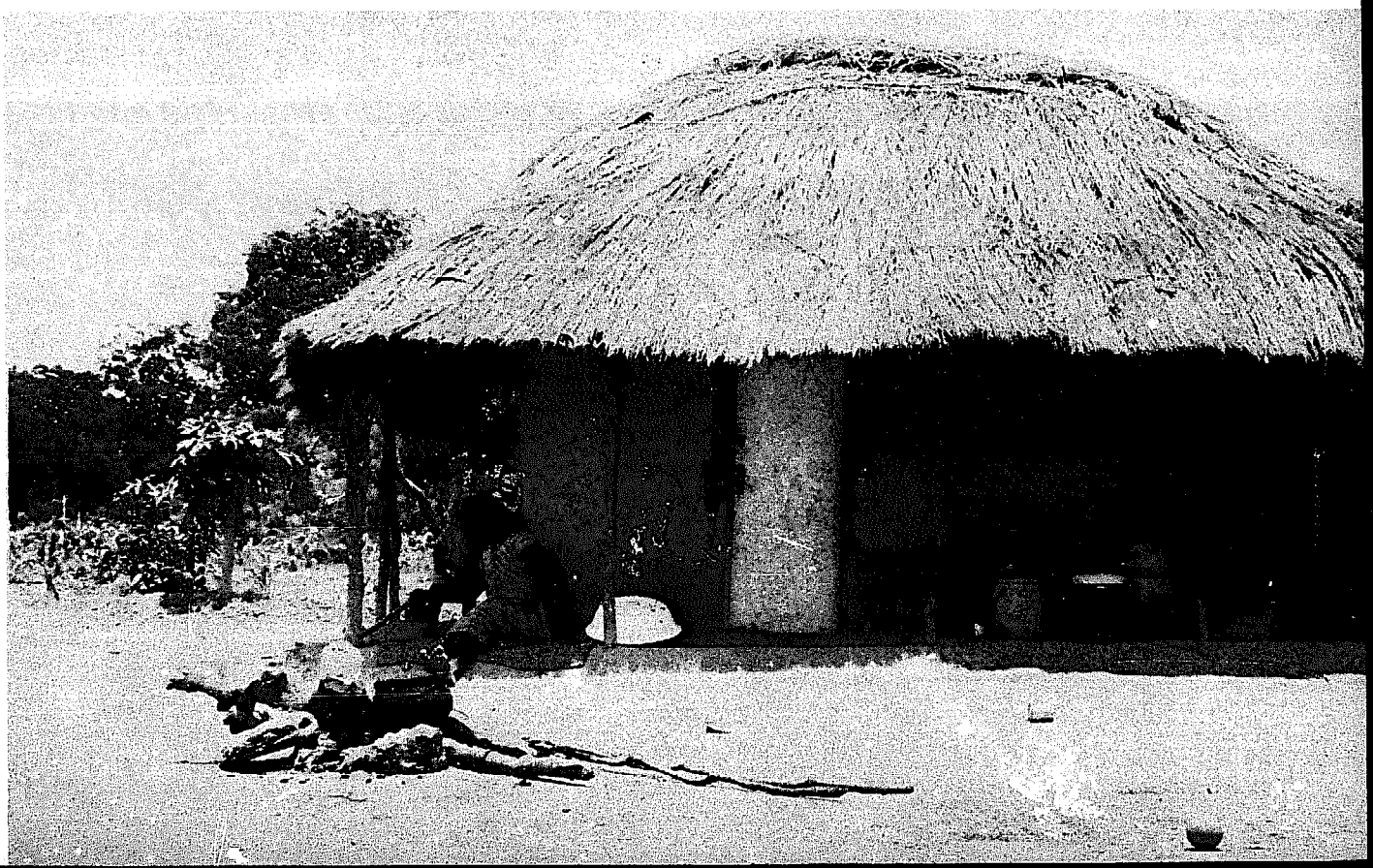
After abandoning the man-hour concept, families continued to work together despite differences in family contribution as great as 500 hours, and despite the fact that groups never called on slackers to pay the penalty charged for hours not worked. Moreover, the earliest project participants advised later building groups not to expel lazy members and not to worry about the actual number of hours contributed.

Why was this so? The reasons probably stemmed from the homebuilders' own social values and norms. According to their view a participant's attitude, not the number of hours worked, was the important consideration. A share of the work cannot be quantified. If one is trying, the hours worked are secondary. Attitude toward the group and its goal was paramount, as shown by the following occurrence. A group was scheduled to begin work on the house of a member whose total hours contributed were among the highest in the group. When they came to his plot he was not there. Someone went to find him and reported that he was in a beer hall. At this the group went away, refusing to work on his house until all others had been finished. His attitude, they reasoned, was wrong. Participants with legitimate reasons for absence, such as illness or attendance at a funeral, were not penalized. However, the groups did penalize those whose absence was judged irresponsible.

The means of dealing with chronic slackers were gradually worked out, although not in ways that the staff had expected or that the Work Exchange Agreement prescribed. In mid-August 1970, the third and fourth building groups were considering how soon to expel their slackers, something they never did. At the same time the second group was discussing ways to encourage participants who were slacking. By this time the first group, which had worked together the longest, had completely abandoned the measurement of hours worked. Thus by accepting each member family's share of work in terms of variable circumstances, ability and attitude, the building groups were able to maintain morale and strengthen their unity.

Traditional squatter housing. In background a half finished house. Wattle will be tied to the poles and the wall plastered with mud. In foreground a woman carrying thatch for a roof.

One of the more substantial pole and dagga houses of Shillinga Kaseba which was replaced with a stabilized earth brick structure.

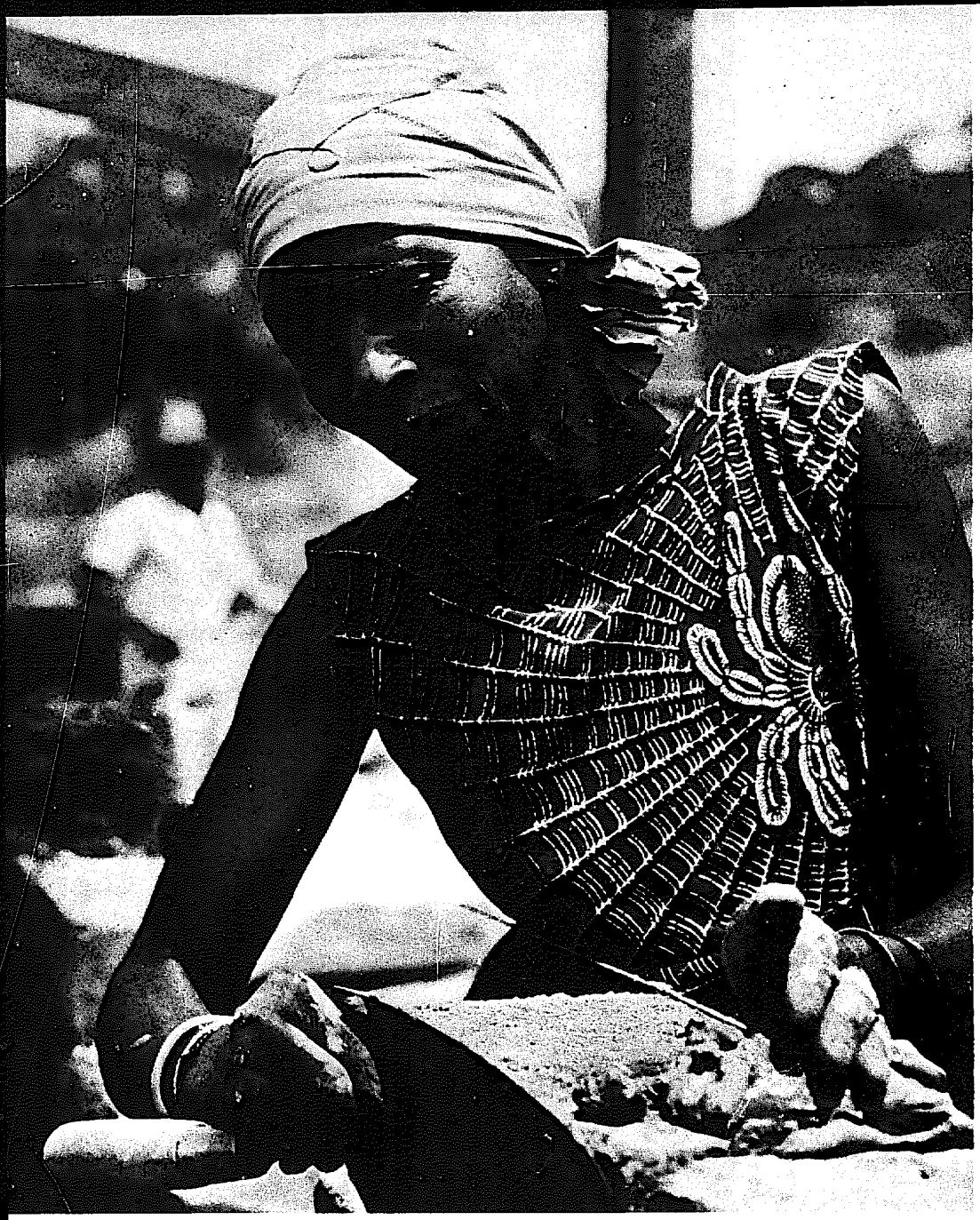


Sieving separated the fine earth for brick-making from the coarse material that was used to fill in under the floor.

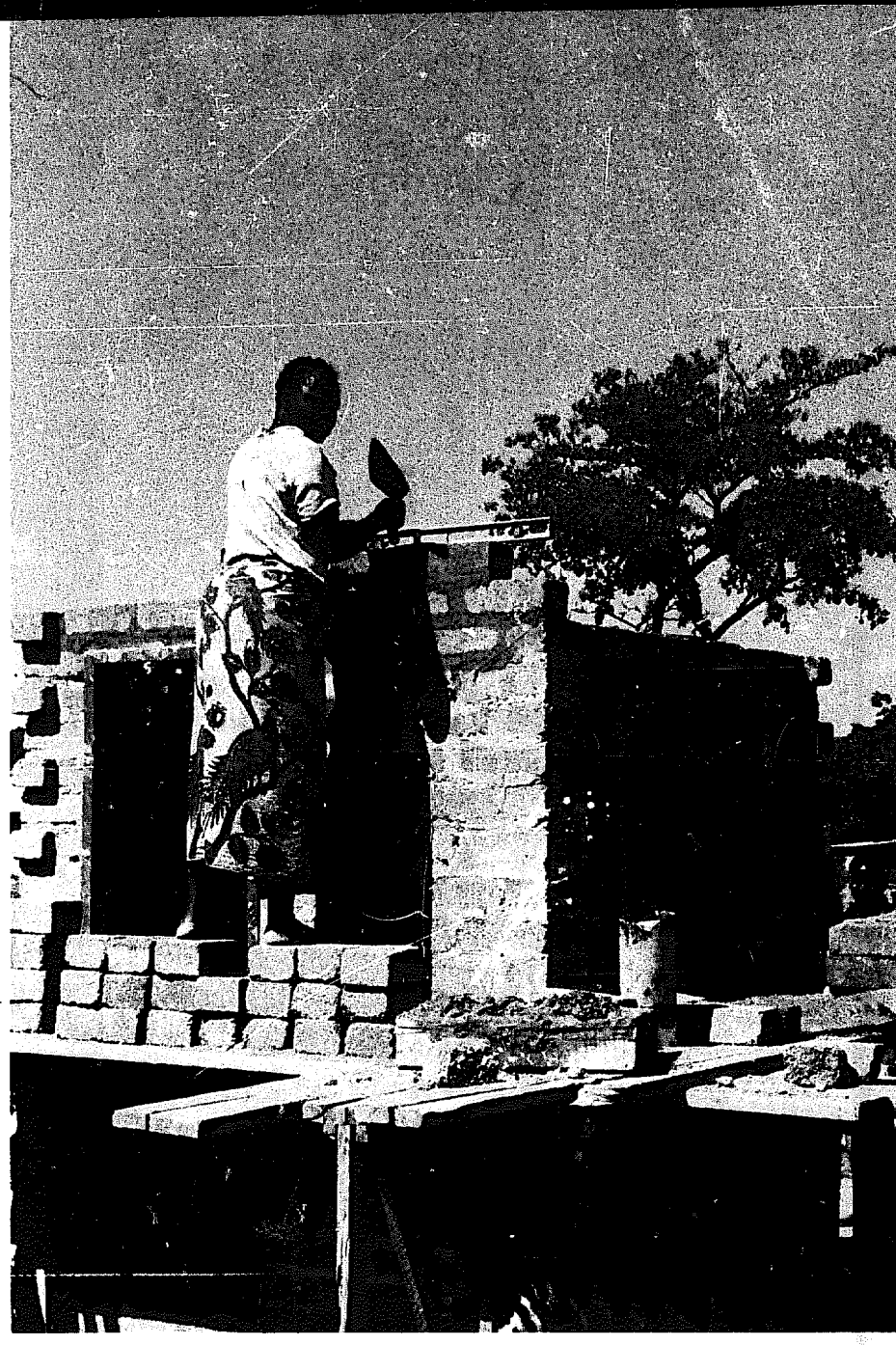
Pressed bricks were allowed to cure for two weeks before going into the walls.

Pressing the earth and cement mixture in the Cinva-Ram which produced the bricks.

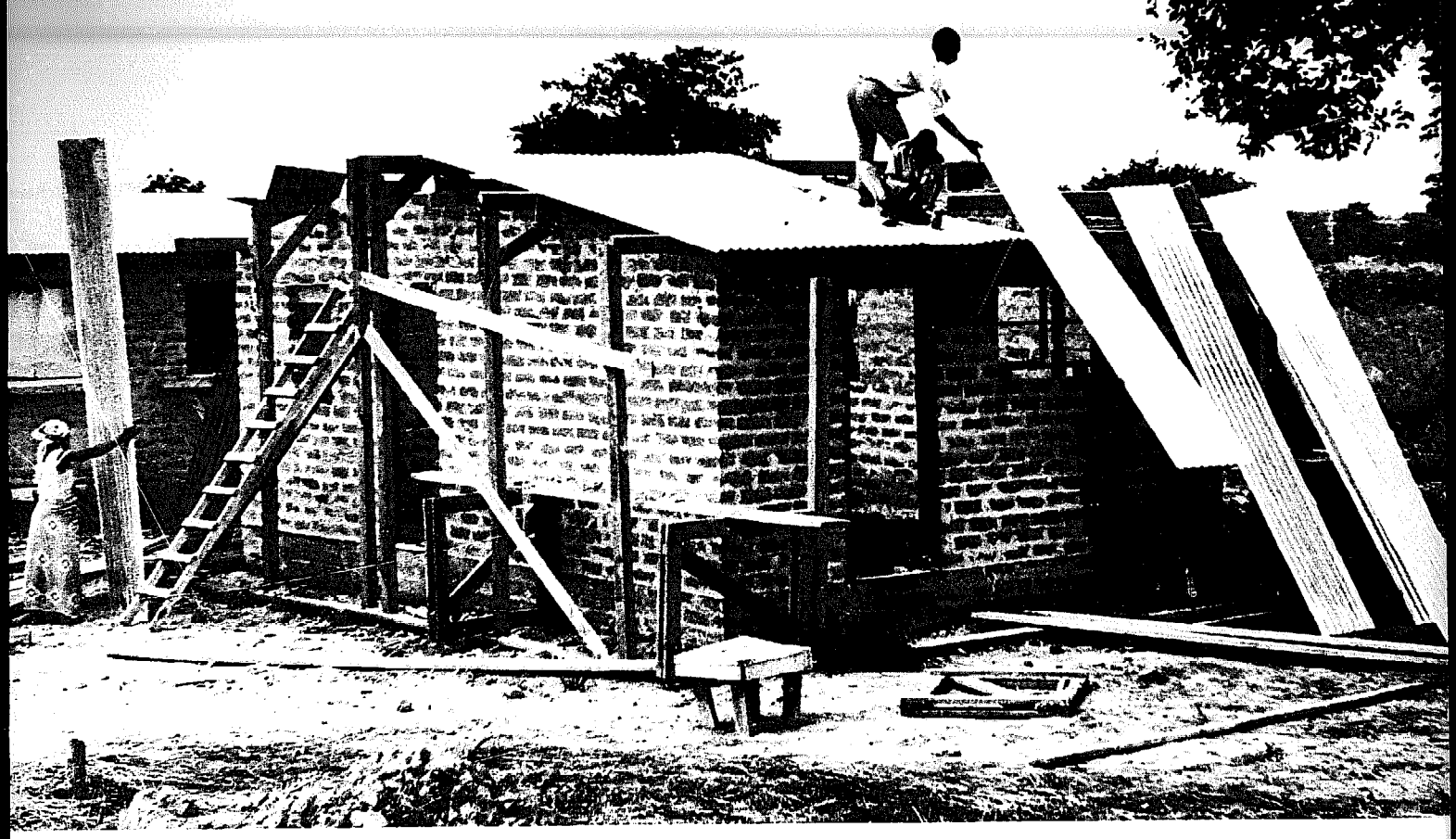
Raising the frame that will support the roof so that work can progress through the rainy season. The frame also aided in keeping the walls square and plumb.



New skills were quickly learned. This lady was a competent bricklayer by the time the 16 families of her group were in their new houses.

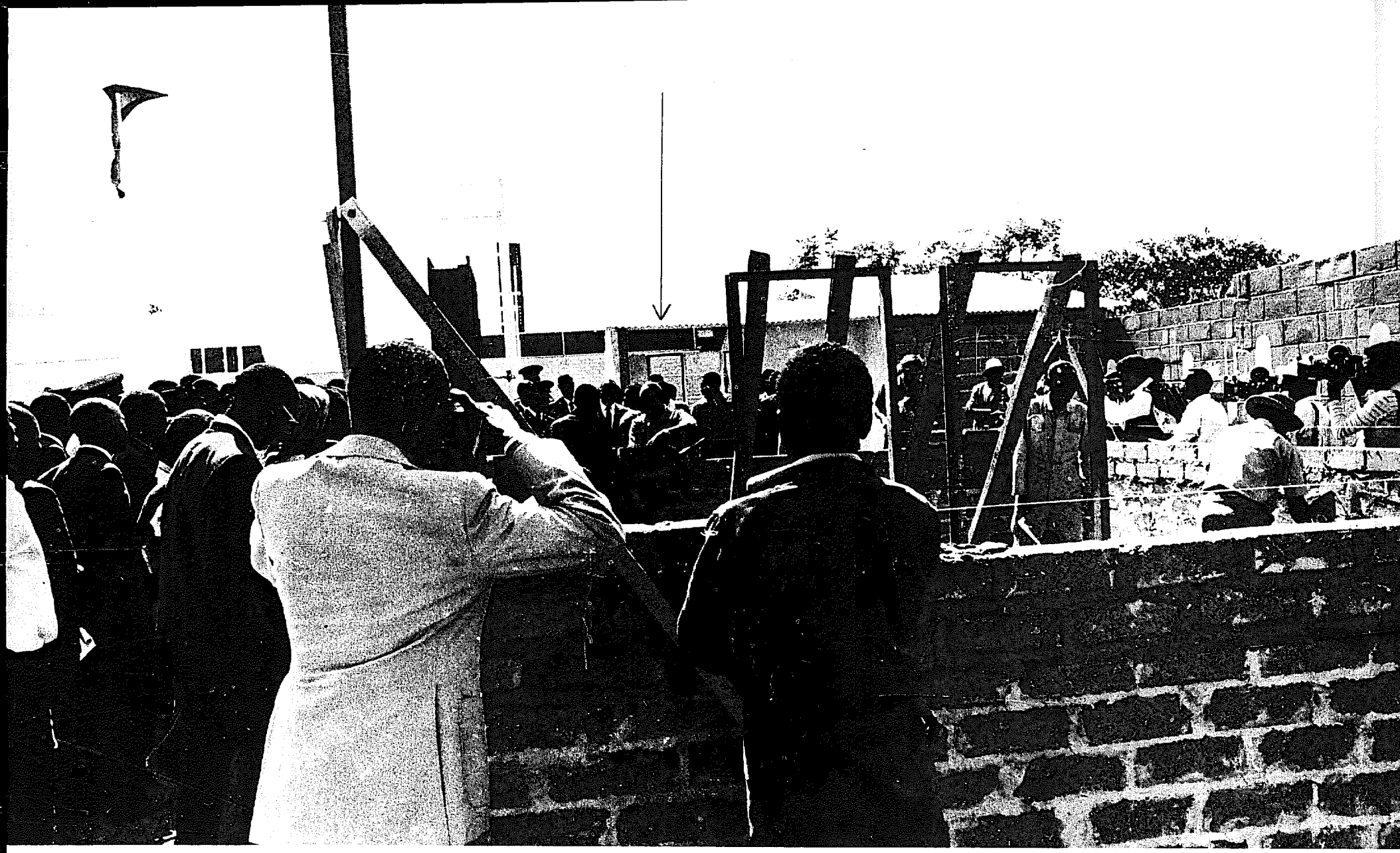


This proficient lady bricklayer puts the last course of bricks on her bathroom. It will have a shower and commode.

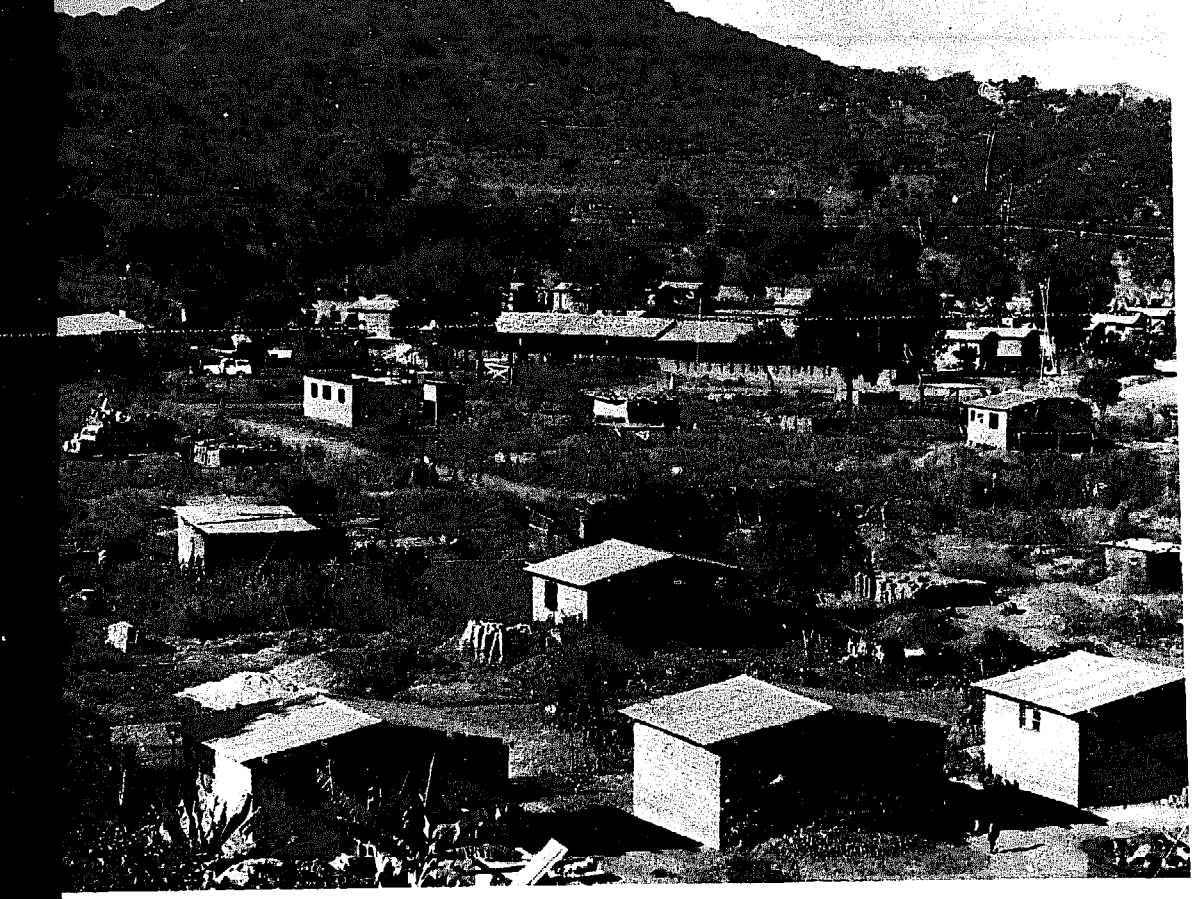


During the dry season the roof went on last in the conventional way.

Completed core house consists of three rooms.
Stuccoed house in background shows individual adaptations.

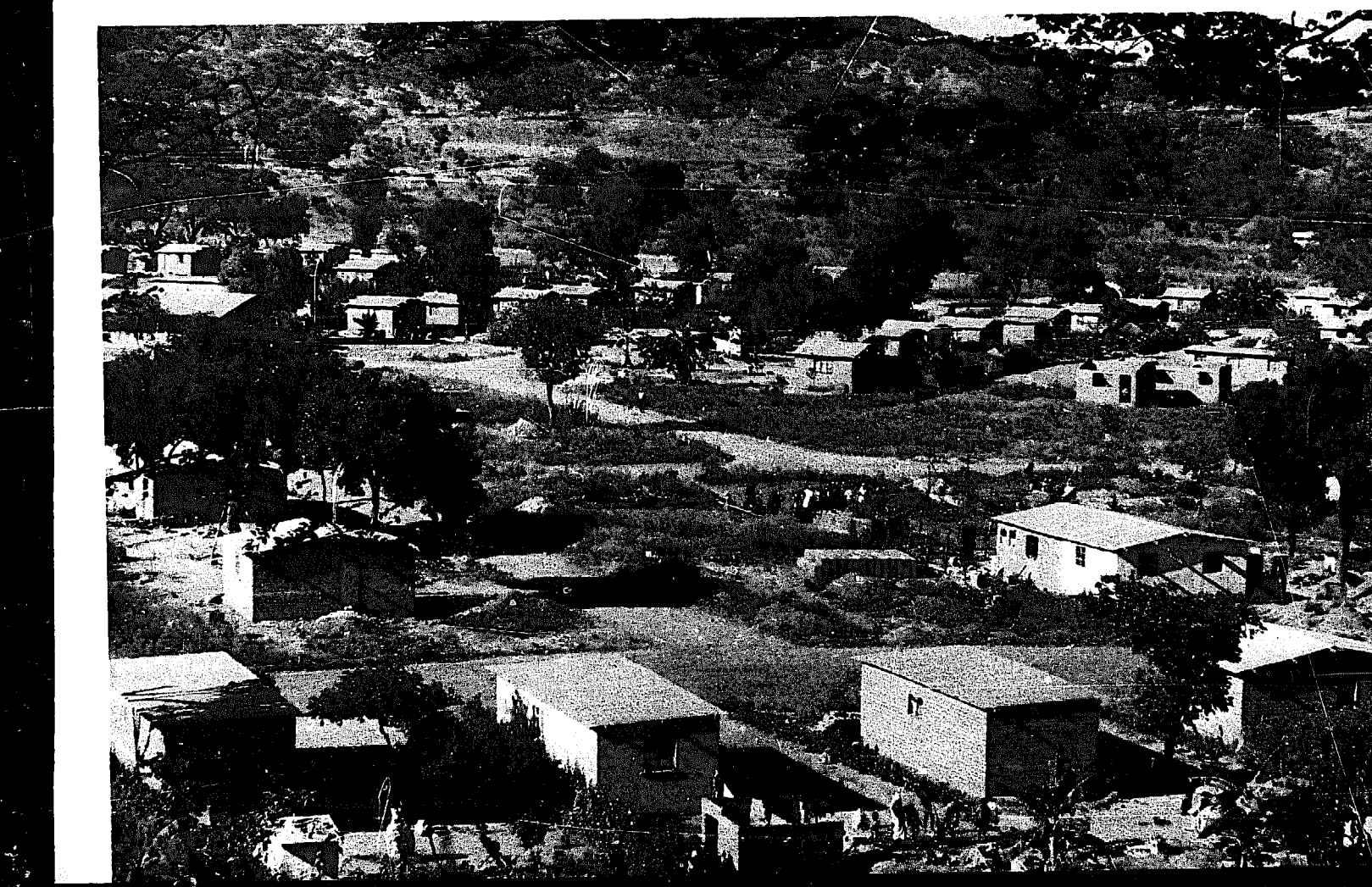


The refined Kafue project method of construction was exhibited at the Zambia Agricultural Fair in 1971. Note string to ensure even bricklaying. President Kenneth Kaunda (in center background) is laying a brick in this demonstration house.



Project is about 50% completed. Nakatete school in center background is ready to open for classes.

About 120 families have finished their houses. Note the construction group in the center of picture making bricks.



Chawama, meaning "A Good Place" in Chinyanja language. It is beautiful. A true expression of the feelings of the families who toiled together to produce this new community.

Chapter VII

GROUP LEADERSHIP, DECISION-MAKING AND INITIATIVES

At Kafue, group cooperation proved to be possible even among people who were strangers at the project's beginning. Cooperation within each group seemed to depend on three people: the chairman, the construction teacher and the community development worker. Too much importance cannot be attached to their continuous, daily encouragement of the construction groups. Their work was central to the progress and successful completion of the project.

A. Group Leadership

1. Role of the Chairman Each construction group selected its chairman during the orientation period. In all cases the group's choice was a man, a woman being most frequently chosen for the post of group treasurer. Leadership ability of the chairmen varied. The most obvious indicator of the chairman's effectiveness was the group's ability to maintain a good pace in meeting construction goals such as the brickmaking deadline or building the houses to roof level by a certain date. The group's ability to deal with problems before they became serious depended on the chairman's interest in holding meetings frequently and on his strengths in leading group discussions. Chairmen were frequently called on to ease group tensions and some of them rose to the occasion. For example, one group was split by a participant's complaint that others had done an injustice to his wife and that the construction teacher had not adequately defended her. The group's chairman, showing great patience and sensitivity, helped the group solve the problem without breaking stride in the work effort. In another case, however, a factionalized group continued to suffer tension and poor work performance because the chairman condoned the disrespectful treatment which the majority faction meted out to the minority. In all cases the community development staff was on hand to furnish support to the whole group and to the chairman. In any extremely difficult situations the AFSC staff intervened to settle a dispute.

2. Role of the Construction Teacher The construction teacher was as important to group unity as the group chairman but in a quite different way. He was the staff member closest to the housebuilders in their work. His forethought, for example in seeing that construction materials were always on hand for the homebuilders and his adroitness in solving work problems, was central to his success with the group. Many groups were initially surprised that their construction teacher was not a boss, but rather a considerate teacher and helper who listened to them. During the construction period responsibilities, usually those of community development staff, frequently rested on the construction teacher. He was encouraged to help the group work out its own problems on the job and to refer only the intractable problems to the community development staff. A certain amount of rivalry existed at first between the construction teachers and the community development staff. For example, the construction teachers felt that the community development staff did not adequately explain to participants the difference between the Government loan and total construction cost. On the other hand, the community development staff were tempted to blame the construction staff for their recruiting difficulties when

prospective homebuilders resisted becoming involved because they thought self-help construction too time-consuming. In the course of time, however, mutual respect for individual capabilities grew and rivalries dwindled. Also gradually the staff became more mutually supportive.

3. Role of the Community Development Worker Mobilizing and sustaining the families' interest and energy from the time of recruitment through to house completion were the community development workers' tasks. These three persons, each with experience in working closely with people, were essential to the project's momentum and smooth operation. Their roles in recruitment and orientation of families and their part in later adjustments in work routine have been previously described. But their group leadership role was of central importance to the morale of the workers and to the progress of the project. Family and group self-confidence and participation grew under their guidance. The community development workers achieved this through the convening of meetings, mediation of conflict, liaison with other institutions and dissemination of information about the project.

B. Decision-Making in Construction Groups

Groups coalesced not only under inspired leadership from the community development staff, construction teachers and chairmen, but also through joint decision-making. Questions most often before a construction group were: Whose house should we build next, an oblique way of asking: Whose behavior and attitude does the group approve of? Which families may move into their houses? Should we admit or expel this or that family?

That the order in which houses were built reflected the group's opinion of member families was shown by the visible lag in effort before work began on the last two or three houses of each group. Each time a group had to decide whose house should be built next, it would put off building the houses of laggard members. In this manner, groups would even single out a laggard husband in spite of the fact that the wife was hardworking. Nonconformity was sometimes punished in this way also. For example, a man who had dropped out of a group because it had refused his request to alter the brickmaking procedure later asked to rejoin. The group did readmit him on condition that his house be built last. The original decision not to alter the brickmaking procedure as suggested by the nonconforming member took up three days of group discussion.

Under the terms of the Work Exchange Agreement, construction group members could invoke sanctions against laggard members. In practice they quietly ignored this option, rarely using a formal, conscious procedure to discipline a member. Each case of readmission of dropouts was treated individually. Much depended on how far a group's work had progressed and on the group's opinion of the individual and of his or her character. One woman had to suspend work owing to poor health. By the time she felt well enough to rejoin, her group's work had progressed too far to accommodate her easily. Therefore she was not readmitted. Rather, she was encouraged to join another group at an earlier stage of its development. This she did and with their help was able to complete her house. The same situation occurred when one family was obliged to drop out for the prescribed period of mourning following the death of a family member. This family rejoined the project but in a later construction group. Thus, the system of organizing groups in a staggered sequence enhanced the latitude of the groups in decision-making, especially on questions of expulsion or readmission.

Group solidarity was evident in the practice of allowing families to move into their homes only when the group gave its permission. In effect this meant that ten families might walk past their own finished houses to help four other families complete their homes. Participants gave a flexible interpretation to what might be considered a completed house. With the essential shell complete, meaning the foundation laid, walls built and the roof on, a family already had something better than their original makeshift squatter dwelling and usually wanted to occupy it then and there. However, to permit families to move into their houses as they became complete and before all of the group's tasks were finished would have jeopardized cooperative group work. Recognizing this, most groups did not allow occupancy until the work on all of the houses was more or less complete, except for doors and windowglass which were considered individual concerns.

C. Group Coordinating Committee

Late in 1970, after nine construction groups had been formed, the project staff asked the groups if they wanted to form a central committee to represent all the groups. The staff saw a clear need for this type of body as the scale of the project increased. By that time about 140 families were involved, and matters requiring everybody's attention were arising. As the Field Director described it, the project participants' response was immediate.

> They grabbed at the idea. Not only did the staff want a committee but the groups also felt the need. Four reasons for a community-wide grouping were outlined by one of the members: (1) so the groups can talk to each other; (2) so the staff can talk to all of the groups; (3) so the groups can talk to the staff; and (4) so the people of Chawama can speak with one voice to the Kafue Township Council.

Thus the Group Coordinating Committee came into existence. It was composed of the chairman and two delegates from each building group. Usually, one delegate was a woman and the other a man. Group treasurers, usually women, were frequently chosen as delegates. Half the members had to be present to transact business. However, if a quorum was not present the delegates would often proceed to discuss issues on the agenda even though they could not take official action. The agenda was decided upon by the Committee chairman and secretary with the help of the project community development worker. Decisions were usually made by consensus.

This Committee was a means by which groups could share their experiences and gain advice and support. For example, the eighth building group sought help in dealing with three laggard members. The Committee recommended that they not be expelled from the project. It went further by sending a delegation of members of other building groups to counsel these families. Similarly, the Committee responded to staff requests that it emphasize, to individual families if need be, the importance of paying back the Government loans. In 1972 the Committee had to deal with an ecological concern. Kafue residents in need of firewood had been cutting down trees on the hillside adjacent to the site, thus unknowingly increasing the chances of erosion as well as disfiguring the landscape. At the behest of the Kafue Township Council the Committee reviewed the problem and ruled that no more trees should be cut, thus airing the reasons for such a rule in the course of the Committee discussions.

The Group Coordinating Committee was also involved in supplying Chawama residents with fruit tree seedlings. Under this scheme, pawpaw, mango, guava and banana plantings were moved from the countryside to individual gardens. In mid-1971 the project ordered 100 citrus trees from the Zambian Agricultural Experiment Station near Kasomai. Participants themselves paid for these at cost, as well as for fertilizer.

For the participants, the Committee's major function came to be that of a public interest group, weighty enough to be listened to by the Township Council. The Committee petitioned the Township Council on behalf of the project residents for a number of needed facilities. These included the upkeep of roads in the community, shopkeeper's licenses for those who wanted to establish small stores, the lack of sufficient water taps and refuse bins, an adequately cleared, marked and scheduled bus stop on the main road, and a health clinic for children under five.

Furthermore, the Group Coordinating Committee carried forward the initiative of several of the first building groups in constructing a primary school on the site. Finishing the school remained one of its chief functions well into 1973. It solicited and received a contribution from the United States Embassy, mobilized and coordinated the construction of the building, petitioned the educational authorities for certification and the placement of teachers, and undertook to acquire and look after school supplies.

In the two years after its founding in 1970, the Group Coordinating Committee met as frequently as twice a month, averaging at least one meeting a month. By 1973 these meetings were infrequent at best, being called only for special purposes. With the dissolution of the construction groups as well as the rise of other task oriented groupings, the Committee's reason for being was progressively lessened.

D. Functional Changes in Construction Groups and Group Coordinating Committee

The Work Exchange Agreements of most of the construction groups stipulated that they should be dissolved and membership cease when the terms of the Agreement were fulfilled. The first four construction groups were relatively unified even before their recruitment, and their plots lay generally in one corner of the Chawama site. Therefore, they maintained their relationships after construction was completed. But most construction groups dissolved on completion of their houses since members were scattered throughout the project site.

The functions of the Group Coordinating Committee were largely superseded in 1973 by other community institutions. For example, the United National Independence Party (UNIP) became a major channel of communication and a force for unity within the community. Likewise, the Ward Development Committee, led by the local Councillor elected to the Kafue Township Council, became a primary link to the town government. Although the Ward includes neighborhoods outside Chawama, some Chawama residents became vigorous participants in the Ward Development Committee's meetings to the point where they now exert strong citizen leadership in this area of Kafue town. A Parents' Committee for the community school assumed much of the role that the Group Coordinating Committee had played and, in effect, absorbed those Committee members whose main focus of interest in the community had been the school.

E. Other Cooperative Initiatives

In a number of ways the participants elected to invest their labor and sometimes their meager financial resources in special construction projects, some of which should normally have been provided to Site and Service Schemes by the Zambian Housing Board.

1. Roads As the third building group was about to begin its work, they discovered that no access road had been built for their plots. After waiting several days without success for the Kafue Township Council's grader to do the job, some women from the building group took hoes in hand and built the road themselves.

2. Privies The Zambian Housing Board had too many other demands to dig pits for privies for the project residents, as was customary for Site and Service Schemes. The participants, therefore, did this work themselves. Each group took on the task of digging all pits for its member families, making the extra bricks and constructing the privies. The AFSC subsidized these operations by purchasing a form for molding concrete privy slabs and by hiring a drilling machine for digging pits where the ground was too rocky for hand digging.

3. House Improvements Other cooperative efforts sprang directly out of community needs. Some of these brought together only a few families. Improvements to core houses were encouraged by providing transport, tools and supervision to any four families that would agree to work together to help build another room, a concrete floor or some other addition. As of June 1973 homeowners had built extensions on 30 houses.

4. Demonstration House In 1971 the Zambian Housing Board asked the project participants to build a demonstration house for the Lusaka Agricultural Fair, held in August of that year. A crew of nine participants made the required 2500 bricks on a contract basis. Seven of the construction groups then volunteered a member or members to build the demonstration house. This all-star construction group represented the Chawama community at the Fair. Thousands of visitors to the Fair saw the house go up in a record three days, although four days had been allowed to the group to do the job.

Chapter VIII

THE GROWTH OF COMMUNITY

A. Meeting a Community Need - The Nakatete School

Nakatete means "reed." It figures in the Zambian saying "from a single reed a great field will grow." Chawama residents point out that one reed is weak and easily broken, but banded together a bundle of reeds has great strength. The cooperative effort to build the Nakatete School demonstrated the truth of this saying.

In 1970 there was no local primary school for Chawama children, a fact that spurred the parents to act. The first to announce their interest were the parents in the first four building groups. They were joined by parents from later groups who, for fear their children might be refused places in a school which they had not helped to build, pledged their labor to the undertaking.

As the one organization spanning all families in the project, the Group Coordinating Committee took responsibility for mobilizing the community in the school-building effort. Though the enthusiasm was great, many meetings were necessary to encourage active participation in the construction. As a result of this promotion, the community turn-out for the building of the school was exceptional, at some times being so numerous as to impede adequate coordination and efficiency. Toward the end of 1971, when the deadline for school opening was approaching, every homebuilder dropped work on the houses for a week in order to complete the school. The Coordinating Committee also furthered the project by petitioning the Ministry of Education to apply, on their behalf, to the American Ambassador for financial help from his discretionary fund. As a result the Embassy provided 90% of the funds needed for materials and equipment which covered the costs for roofing, timbers, windows and doors. These funds were supplemented by the American Friends Service Committee.

While the local residents actually built the school, all the bricks were made by secondary school students from Kafue and Lusaka. A workcamp was organized during school holidays in July and August of 1971; and 100 boys and girls, ranging in age from 15 to 20, took part. The Township Council housed them in Kafue schools. They were divided into groups, and in two weeks' time they made all the bricks needed, which proved a highly satisfying experience for them.

By the beginning of the school year, January 15, 1972, the Chawama residents had completed a four-room structure with privies and two additional rooms for teachers. Each room was equipped to accommodate 40 children. Since most schools in Zambia operate on double sessions, the Nakatete School could provide for upward of 300 children.

Since very high value is placed on schooling in Zambia, virtually all Chawama parents entered their children in the Nakatete School. People from outside the Chawama community have also been able to gain admission for their children despite the priority given to those of Chawama. The result has been major over-enrollment by nearly half again the projected number. Extra teachers have been found, including a headmaster. The Group Coordinating

Committee initially served as the main channel between the headmaster, the community and higher authorities in the educational administration, a role subsequently assumed by a Parent Teachers Association. The Ministry of Education commissioned four more rooms, which were completed by January 1975.

B. Construction of a Playground

Zambian young people like to play soccer; and there are a great many young people in the Chawama community in Kafue. A piece of ground had been set aside for a soccer field and government money was supposed to pay the cost of construction. However, funds proved not to be available from either national or local sources. So the young people took matters into their own hands. One Saturday they got together and started clearing away the bushes. A week later they cleared some more; and the work went much faster because about three times as many young people came out to help. In about one month's time they had a beautiful playing field, right in the middle of the community. In preparation for a game with a visiting team, they got paint from the housing project and painted lines; they also put up goal posts.

As a result, these young people not only provided themselves with a playing field, but also learned that they could do things for themselves without waiting for the government to do things for them.

C. Community Life for Chawama Residents

1. Community Organization By 1973 the Chawama residents were becoming an active community. With the dissolution of the construction groups and shifts in the responsibilities of the Coordinating Committee, new networks of relationships and institutions arose. People hitherto unknown to one another became neighbors and became active in the daily life of the community. Cooperative groups and clubs developed; the local branch of the United National Independence Party took on community responsibilities; and a community-wide committee was formed. In such ways and with changes in societal patterns, the process of community formation began to take place among the people of the project area.

2. Economy Small entrepreneurs among Chawama residents established businesses, for example a tailor who used a foot-operated sewing machine, a baker and several brewers of maize meal beer. Maize meal, vegetables and other local products were sold in an adjacent market area. Nearby three small shops owned by residents sold cigarettes, soap, kerosene, matches, tinned margarine and other manufactured domestic products. Virtually all the household heads in the project were earning money regularly as either full-time wage employees or self-employed traders or service workers. Supplemental monies also come into Chawama from the sale of surplus garden produce, part-time skilled service work such as production of concrete privy slabs, and rental of rooms. In 1973 three households rented rooms for K 5 to 7 per month; and one person sublet his entire house for K 12 per month.

3. Services After the Government decided to build a hospital in Kafue, plans for a clinic in the Chawama area were dropped. Residents of the project normally walk about a mile into Kafue city for health care at a clinic there; but a nurse does visit Chawama once a week to provide medical services. Police and fire protection services are likewise based in Kafue city and are therefore distant from the project and are not easily summoned. However, there has been little call for either. Water

service is good. With occasional prodding by the Chawama community through its leadership, trash collection proceeds fairly regularly. Sewerage connections exist for the 114 standard plots; and roads are graded and gravelled periodically.

4. Social Life Church membership of project residents is relatively high. Up to half of the households are believed to belong to the United Church of Zambia, with Catholics and several smaller denominations accounting for up to a quarter of the households. The community development workers have noted, however, that beliefs in traditional superstitions persist and have played a part in some inter-family tensions. Convivial traditional practices also continue. Eating, drinking and passing the evenings in conversation are hallowed pastimes. Families in the neighborhood, often regardless of clan or tribe, do the cooking and other household tasks for a family which has gone into mourning. Funerals and wakes are public events to a greater extent than is the custom in Western countries.

5. Land Use Some tensions in the community have hinged on questions of land use. For example, disputes over plot boundaries sometimes arose when a member of one of the later building groups began to lay out his plot between the plots of two longer established residents, both of whom may have encroached on the middle property by planting trees or part of a garden. This was not an on-going problem, however, although the school's need for more space poses a new source of community tension over land use.

D. Participation by Women

Zambian tradition severely limits women's voice in public decision-making; but a notable aspect of the Group Coordinating Committee was the prominent role given to women. At a preliminary meeting when this Committee was first being discussed, project participants took a crucial step. Someone suggested that two people should represent each construction group on the Committee and that at least one of the representatives of each group should be a woman. This idea carried. The reason for this was that the women did more than half of all the work on the project. However, when the women participants first came to Coordinating Committee meetings, they would sit with their backs at right angles to those of the men, so that they did not face the speaker in front. A first step toward women's participation in decision-making was to convince both men and women that both sexes should face front. Although they continued to sit separately at meetings, women henceforth faced the speakers.

There are traditional taboos for women on some house-building tasks such as putting up the roof. However, since in the majority of families husbands worked full time during the day, the women, and in some cases children, had to fulfill the families' work contributions. As a result the taboos had to give way, and distinctions between women's work and men's work diminished.

In Zambia a woman's role is traditionally only that of wife and mother; therefore widows suffer discrimination and even ostracism. The example of how one widow was encouraged to take part in the project and how she eventually reinstated herself as an active member of the community is particularly interesting. This woman attended 12 preliminary study sessions with a group of families planning to build houses. However, when the Work Exchange Agreement was about to be signed with each family guaranteeing a thousand hours of work to build 16 houses, she said that she was too old and too sick to do her share. Nevertheless, a member of the group persuaded her to sign up on the

theory that she deserved to have one of the 16 houses as much as any other member of the community, and that the actual number of hours worked was not the major criterion for participation. During the 18 months of construction she was not sick a single day and was a consistent member of the building group. Thereby she gained acceptance and was no longer an outcast. However, she had no cash income with which to meet the monthly water payments and repayment of the Government loan. Her one occupation was pounding tobacco for snuff for herself. With the help and advice of one of the community development workers on the project staff, she began peddling snuff in small amounts, thereby gradually increasing the amount of tobacco she could buy from her earnings. By May 1972, she had her own house, had remarried and was purchasing tobacco by the truck-load. She had become an independent and respected member of society and a substantial entrepreneur.

Thus, in a number of ways the project enabled women in Chawama to alter their roles significantly.

E. Authority Roles in Community Life

Beyond the example of cooperative work set by the Chawama residents, they gained additional repute for their vigor and assertiveness in local public affairs in support of their needs and rights. For example, they participated in the administration of the Ward Development Committee and took an active part in the administration of the local school since it represented the chief vehicle of upward social mobility for their children. Public functionaries and municipal councils in Zambia are not accustomed to dealing with a high degree of active interest and participation on the part of the general citizenry in public affairs. Thus, the Chawama residents are unique. However, this has not always been the case.

According to the AFSC Field Director, in 1969 when prospective homebuilders were being invited to take part in the project at its inception, no one seemed to be interested in making choices or decisions. "They just wanted someone to tell them what to do. Size of house, cost, facilities in the house - all of these things are of seemingly no concern." The lack of assertiveness of squatter residents confronted with a chance to take part in a cooperative endeavor may be explained by a variety of historical causes. Not the least important was the heritage of the colonial system of subordination of the illiterate to the literate, the pupils to the schoolmaster, the African subject to the colonial authority. Thus squatters had long since been initiated into their subservient roles. Subservience had been for them one of the chief means of getting by as newcomers in the city.

Participation in the Kafue project encouraged squatters to alter this attitude and to gain self-confidence. For some the exposure to group action oriented toward specific tasks, to planning and to demands that they speak up and take part stimulated bolder thinking. It produced in them a sense that their lives were theirs to control to an extent greater than they had ever imagined. An important part of developing capacities for critical thinking as a means of reaching consensus lay in the study sessions held for participants before construction began. Here in most cases for the first time they had to confront ordered thinking about budgeting their own incomes, about contractual obligations, about adhering to schedules and commitments over a long period of time - in a word about planning. Most important, they were obliged to make choices and to assume responsibility for those choices themselves; no bosses were going to give the orders. Many found this an

unsettling experience at first and were baffled when it was announced that no one was going to tell them what to do. But as trust developed within the group and as participation grew, group self-confidence took shape. After construction began, the groups sometimes challenged staff suggestions. Within less than a year's time they had developed the courage and solidarity to question the provisions of the building loan each family had received and to assert collective dissatisfaction with some of the construction teaching methods, with project vehicle malfunctions and with the slowness of construction. When the construction groups were dissolved, the tradition of speaking out and standing up for individual or collective rights was continued through the Group Coordinating Committee.

Thus, new patterns of authority and expression were established and became an integral part of community life.

F. Chawama Participants Tell Their Story

Chawama residents have frequently been called on to talk about their homes, their community and their cooperative building efforts in an informal way to people representing the general public from other towns and cities, to officials and to foreign visitors. They have been ever ready to oblige the visitors with answers to questions.

For example, in 1972 radio listeners in Zambia were told about the Kafue self-help housing and community development project, related by participants themselves in their own words. Radio Zambia, as part of a series called "Self Help in Action," recorded interviews with Kafue homebuilders for broadcast in three national languages. The community development staff was primarily responsible for promoting and coordinating these interviews.

In these ways Kafue's story has become widely known in Zambia and abroad.

Chapter IX

SOME DISTINCTIVE ASPECTS OF THE KAFUE PROJECT

The Kafue housing project was a pilot self-help, community development scheme, not just a house construction project. As a vehicle for experimentation, it was hoped that methods and guidelines could be developed which could be used in other programs dealing with human problems related to the growth of cities, both in Zambia and elsewhere. One of the aims of a self-help project is the development among the participants of a reservoir of knowledge and experience which can become a long term contribution to the country's development. Thus this project was a learning experience for all taking part in it - the Zambian Government, the Kafue Township Council, the Zambian and American Friends Service Committee staff, and especially the people of the Chawama community.

A. Some Basic Lessons

The Kafue project demonstrated a number of requirements basic to the successful completion of site and service projects wherever they may be undertaken. Of primary importance to any organized self-help scheme is skilled leadership. A large measure of success depends upon the on-going planning and organization. With instruction, guidance and encouragement, unskilled people can learn to perform skilled tasks of homebuilding. Daily adjustments and adaptations of methods and procedures produce new solutions.

B. Keys to Effective Implementation

A number of basic principles in planning and administration which tipped the balance toward the success of the Kafue project can be identified, as follows:

1. thorough advance investigation of the housing situation in Kafue and of the desires and capabilities of the people of the community in regard to improved housing;
2. careful alignment of the project's plan with national objectives and consonance with the existing legal/administrative/financial program of the national Government;
3. close consultation with Zambian officials at all levels before initiating the project, thus building bridges and assuring co-operation from all sides;
4. carefully planned selection and training of Zambian staff, drawing on resource people locally available to assist with the training;
5. involvement of local people, with decisions taken at the basic level, utilizing a community decision-making process;
6. daily provision of needed materials and transportation to avoid delays and inconvenience and discouragement to the workers;
7. sustained and flexible follow-through on all aspects of the project by Field Director and other staff;
8. continuity of field supervision; the Field Director for the Kafue project remained the same from inception to very near completion;
9. strong participation throughout the construction phase by Zambian

staff and Township Council officers in the promotion of community services and organization;

10. utilization of local resources and creation of a broad constituency of interest.

C. Finances

The project enjoyed substantial inputs of money, material, technical and organizational expertise, time and high level attention. Its primary objective was to help squatters in a sub-standard urban settlement develop self-respect and confidence in their ability to improve their lot. Better housing and amenities were the basic needs, and providing them was the focus of the work in the project. But that focus was a means for developing a cooperative and self-reliant community structure which would enable the participants to become responsible citizens. House construction costs per se were only a portion of the total. Initial research and training, including literacy courses, organization of community groups, analysis and continuous study of economical building methods and materials, as well as other administrative and supervisory functions were centrally important cost factors. Additional by-products of the project were the construction of the school and playground at minimal cost. These features limit the degree to which the Kafue project can be duplicated and used as a model for site and service undertakings which are designed solely to increase the supply of housing.

1. Costs As set out in more detail in Appendix H,[1] the Kafue project required a cash outlay of $351,500, figured at the 1969 exchange rate. Of this amount the homebuilders themselves paid approximately $15,000 out of pocket. In addition to this outlay, they will have repaid the Zambian Government over a period of four years approximately $51,787, including interest on their loans. That amount accounts for about 60% of the Government's contribution of $90,000. Thus, each of the 228 families will have paid about $293 for their houses over a period of about four years.

Roughly 20% of the project's total costs were for provision of water and sewer lines, layout and roads, all requiring hired municipal labor. Costs might have been reduced somewhat if self-help techniques had been applied here too, although that would have meant more demands on the homebuilders' time and therefore probably a far longer construction period. Owing to inflation, revaluation and the cutting off of supplies from South Africa and Rhodesia, the total outlay at 1973 prices might have been as much as 25% or approximately $88,000 more.

2. Manpower At any given time the American staff consisted only of the field director and the construction supervisor and their families. During the course of the project there were shifts in personnel. Over the full period there were altogether two American field directors and three American construction supervisors. Families accompanied all of these staff members with the exception of one short-term construction supervisor. They were paid allowances for living expenses, rather than fixed salaries, according to the usual AFSC practice for workers overseas. In all, their contribution amounted to about nine and a half man years over the five year period from the negotiation stage to completion of construction. Total costs for these overseas workers and their families, including their maintenance, travel and other expenses, came to about $115,000, or about one third of the

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1. Project Finances.

project's total costs. Three Zambian community development workers and six construction teachers were paid fixed salaries amounting to a total of $65,000, or about one sixth of the total outlay.

It should be noted that the number of construction teachers usually assigned to site and service projects is in a ratio of one to 50 houses; at Kafue the ratio was one to twenty-five. This difference reflected the additional responsibilities which the construction teachers in the Kafue project carried. These included planning, continuous study and adjustment of methods and procedures, training, and day by day supervision and personalized encouragement.

This concentration of skilled manpower ensured that no homebuilder lacked attention and encouragement. Most homebuilders had no knowledge of techniques needed in building a brick house and, moreover, no experience in planning and budgeting or in working within the new type of organizational structure demanded by this self-help pattern. Therefore greater than usual investment of teaching and supervisory manpower was considered warranted. Staff had responsibilities for providing leadership to stimulate homebuilder interest, for developing group cohesion, for maintaining morale, for acting as intermediary with the bureaucracy and for continuous follow-through in order to ensure progress on the building schedule.

D. Benefits and Outreach

The Kafue project was a practical demonstration of urban self-help and of the ability of people of diverse backgrounds to unite effectively to perform specific tasks. It showed the value of involving people in a program, both legally and financially sound, to promote self-help housing. It also demonstrated that the national Government, the municipal Government, industry and a foreign private agency could cooperate with relative ease and efficiency. It has benefitted all involved as well as others who have come to know about the project and its methods.

1. Homebuilders Those who contributed the most in work, planning and out-of-pocket expenses were the homebuilders themselves. They also benefitted the most in gaining solid and easy-to-maintain houses, adequate outdoor space, water and sanitary facilities close at hand, a neighborhood near jobs, transportation, markets, schools and the security of permanent and legal settlement. More importantly, the families built their houses themselves and thus gained basic knowledge and skills to maintain their homes, to add on to them or to build again should they move. The accomplishment that the Kafue project represents is evident in the pride its residents take in their new community. Many families had dreamed of improving their circumstances by building their own brick houses with water, sewerage and other services close at hand. Accomplishing that dream by creating this better neighborhood was definitely a step up for them.

The homebuilders also benefitted from the learning experience provided by the construction groups. Not only did families learn to overcome a reluctance to work with strangers but they also learned how to make choices for themselves by using new organizational methods. For example, the idea of family budgeting, of sharing costs and of paying off loans on a regular schedule were unfamiliar to most families before they joined a brickmaking group. Moreover, resident families learned the benefits of acting in concert when presenting a case to officialdom and some of the means of exercising their rights as Zambian citizens. Accordingly, many Chawama residents have become

vigorous and purposeful participants in public forums and new organizations.

The major benefit to the participants as a result of their experience in the project was learning how to re-order the way they think about their family futures, their community interests and their roles as urban citizens. These Kafue families presently live together in a mutually considerate way, having created a sound and harmonious community.

2. Zambian Staff Zambian staff, as well as the families participating in the project, gained valuable experience in urban community development techniques. Their skills and services have already been put to use in other communities. For example, in 1972 one community development worker on the Kafue project staff was released, at Government request, to work in a squatter project in the town of Livingstone. On the basis of the experience gained in Kafue, the construction teachers can now teach others basic housebuilding skills. Also, understanding of new methods of project management and logistics gained by the Site and Service technician of the Kafue Township Council will continue to be useful as the Council expands its housing role.

On the basis of the practical training and experience gained in the Kafue project, many of these workers will be able to serve as effective leaders and trainers of others. This development of an experienced cadre is very important since the Zambian Government is continuing to plan means of improving the condition of its shantytown populations.

3. The Government More than 80 Zambian officials, including President Kaunda and his aides, visited the Kafue site following the beginning of construction. The significance of this project for the Government is that it helped to demonstrate the workability of a specific program, namely the Site and Service Low-Cost Housing Scheme, and of a specific principle, namely self-reliance. An important condition for a Site and Service project, however, is that steps need to be taken to ensure the fullest possible participation and mutual aid by the homebuilders themselves. With the Kafue experience as an example, the Government has sought to generate similar cooperative, self-reliant efforts in other communities in order to improve conditions for squatter settlements.[1]

4. Other Observers Approximately 300 people, most of them from outside Zambia, have visited Kafue to learn about the project. Groups from neighboring Malawi and Tanzania have sought information about the project to incorporate into their own housing experiments. Several groups of Zambian, European and American young people took part in short term workcamps at the Kafue site. Untold others within and without the country have heard of the new community and the processes used to build it.

5. AFSC The American Friends Service Committee also benefitted greatly from the project. The AFSC field staff and their families became more knowledgeable and open to adjustments in methods as a result of this experience. From their Zambian colleagues they learned a great deal about the people, the nation and the problems of squatters. They can now serve more effectively to help educate Americans to understand the problems and needs of developing countries.

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1. Lusaka Sites and Services Project, Public Housing Sector 11, pages 2.41 to 2.45. Request to the International Bank for Reconstruction and Development, July 1973.

E. Housing Policy at Kafue

The specific plan of action chosen for the Kafue project was based on careful study of Zambian urban housing policies and of the results of approaches taken in other site and service projects both in Zambia[1] and in other parts of the world.

It was important that the AFSC program conform to national policies concerned with decent housing for all and to the type of housing called for by those policies. Traditional village or rural houses were considered unsatisfactory for urban Zambia. Furthermore, the Government policies recognized that squatter settlements were undesirable eyesores and places where the lack of a sense of community among residents in these settlements precluded any feelings of security, stability and general wellbeing.

Evaluation of existing settlements and the lack of success in the upgrading approach of other housing projects[2] gave strong impetus to the policy adopted for Kafue, namely to build modest dwellings from the ground up, in a carefully spaced pattern less dense than in the squatter areas.[3] Furthermore, given the high priority attached to the development of a sense of cooperation and community, the planners believed this could best be achieved in a new, rather than upgraded, neighborhood. In Kafue, additional reasons for rejecting the upgrading approach were based on the fact that the ground on which the squatter settlements stood was either too marshy or too rocky. Digging sewer and water lines and building roads there would have been prohibitively expensive and unwise from an engineering point of view. Thus, although access to water was the single most pressing housing need of Kafue squatters surveyed in 1969,[4] provision only of water and other amenities was not deemed a wise approach to meeting the needs of squatters at Kafue at that time.

F. The Kafue Project as a Model

If the same amount of resources used for the Kafue project had been applied merely to provide amenities to existing housing in squatter areas, some 1000 dwellings might have been served. Thus a somewhat greater impact on the housing problem would have resulted. The Kafue project's net addition to housing stock, albeit of high and enduring quality with water, sewerage, a school and other community facilities, was relatively small.

However, this tells only the quantitative, not the qualitative story. The Kafue project was not intended merely to add to the housing stock. A major benefit derived from it is its effects on people's conceptions of themselves and their roles in society. Such effects may alter the quality of life for large numbers of Kafue residents and urban Zambians in the years ahead. The project demonstrated one among several possible methods of housing improvement. But more important than demonstrating an acceptable type of housing, it showed that cooperative self-help can work when careful planning is

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1. See Chapter II, Section D.
2. See Chapter II, Section A.
3. An element of upgrading was present in the Kafue project in relation to the fact that 47 of the 48 families living on the selected site chose to participate and thus gained improved housing and amenities. See Chapter IV, Section A and footnote #2.
4. See Appendix B, "A View of the Kafue Squatter," page 51.

directed to stimulating the energies and spirit of the people and to supporting them as they work together.

G. The Kafue Experience at Work

On the basis of the Kafue experiment, the American Friends Service Committee was invited by the Zambian Government to participate in a large urban housing project in Lusaka, the capital of the country. The AFSC has played an active role in preparation of project plans. It has provided a staff composed of community involvement specialists, community development training personnel, and a construction trainer who are now engaged in training Zambians who will be assigned to the project. Many of the methods used at Kafue for promoting cooperative self-help and for creating a sense of community are being applied again to improve the conditions of life for residents in a large urban squatter area. Thus the Service Committee is playing a supporting and facilitating service in this project as it did in Kafue.

Appendix A

PROJECT AGREEMENT AND RELATED DOCUMENTS

Exhibit 1 -- Transmittal Letter from Secretary to the Cabinet, V. S. Musakanya

Exhibit 2 -- Project Agreement between the Government of the Republic of Zambia and the American Friends Service Committee, Inc., October 1968

Exhibit 3 -- Kafue Township Council Agreement with the American Friends Service Committee, Inc., November 1968

REPUBLIC OF ZAMBIA

Telephones:
General Inquiries: 73520
Secretary to the Cabinet: 73888
Telegrams: "CABINET"

P.O. BOX 208
LUSAKA

In reply please quote
No. CO.14/18/2

CABINET OFFICE

31st October, 1968.

Mr. Gilbert F. White,
Chairman,
American Friends Service Committee Inc.,
160 North Fifteenth Street,
Philadelphia,
Pennsylvania 19102,
U.S.A.

Dear Mr. White,

I am directed by His Excellency the President to reply to your letter of the 9th August, 1968, under cover of which you sent me two executed copies of an agreement for the A.F.S.C. to help with our national development effort by undertaking a project in the field of self-help housing. His Excellency sincerely regrets his inability, due to very heavy commitments, to reply personally and earlier.

I am happy, however, to be able to return one of these copies, duly signed by the Minister of Local Government, Mr. Sikota Wina, who is the Minister responsible.

His Excellency sends his regards to your good self.

Yours sincerely,

(V.S. Musakanya)
SECRETARY TO THE CABINET.

c.c. The Hon.S. Wina, M.P.,
Minister of Local Government,
Lusaka.

PROJECT AGREEMENT BETWEEN

THE GOVERNMENT OF THE REPUBLIC OF ZAMBIA
AND
THE AMERICAN FRIENDS SERVICE COMMITTEE, INC.

I. PREAMBLE:

A. The supply of housing in the urban centers of Zambia has not kept pace with the demand. The rapid growth of squatter settlements has been the result of people attempting to provide the much needed shelter for themselves and their families.

B. New and effective schemes for providing healthful, safe and economical housing must be found.

C. It is desirable for the citizens themselves to have a share in the planning and execution of projects designed to improve their housing conditions and social services. By sharing in this responsibility the human resources of the community can be fully utilized and the citizens will gain a new sense of dignity and purpose.

II. WHEREAS:

A. The Government of the Republic of Zambia, hereinafter referred to as the Government, through its Ministry of Local Government is conducting, as part of the national housing program, a scheme whereby wage earners or self-employed persons in the lower income group can, by their own efforts or in cooperation with others, build accomodations suited to their needs.

B. The American Friends Service Committee, hereinafter referred to as the Committee, a non-profit voluntary agency incorporated under the laws of the State of Delaware, with headquarters in Philadelphia, Pennsylvania, to engage in charitable, social, philanthropic and relief work both in the United States and in other countries, supported by voluntary contributions, and having engaged in community development and self-help housing programs in various countries, and having worked in the Republic of Zambia since 1964, and having had intimate contact with the country since 1957, is desirous of cooperating with the efforts of the Government to solve the housing problem.

III. IT IS MUTUALLY AGREED AS FOLLOWS:

A. The Government and the Committee agree to cooperate in undertaking a pilot project in housing designed to meet the needs of people in certain squatter settlements in the Lusaka Area and in incorporating a community development approach, emphasizing techniques of self-help.

B. The Committee Undertakes:

1. To carry out to the best of its ability the plan of operations outlined in the Appendix of this Agreement.

2. To continue its responsibility for the Project for three years, subject to renewal for an additional interval up to two years by mutual agreement, if this appears to be necessary for this project to achieve its goals.

3. To provide the following resources for furthering the purpose of this Agreement:

(a) Personnel

(1) A project administrator, representing the Committee in Zambia, experienced in self-help housing and community development, hereinafter referred to as Field Director.

(2) Such supporting personnel as shall be determined to be needed by the Field Director to accomplish the purposes of the project.

(3) Transportation to and from Zambia and maintenance expenses for non-Zambian staff appointed by the AFSC and their dependents.

(4) Housing for non-Zambian staff appointed by the AFSC and their dependents.

(b) Program Equipment and Supplies

(1) Transportation sufficient to facilitate the work of the AFSC staff.

(2) Such supporting materials and equipment as are needed to interpret the program to people in the project area and to members of the construction teams, such as visual aids.

C. The Government Undertakes:

1. To facilitate the admission of non-Zambian personnel and their dependents, as provided by the Committee and approved by the Ministry of Local Government, including issuance of necessary work permits and entry visas.

2. To assist the AFSC in locating housing for non-Zambian staff.

3. To give customary assistance in admitting any vehicles, equipment and supplies required to be imported by the AFSC for the operation of the program, as well as the personal effects and furnishings of non-Zambian AFSC staff, free of all import duties, taxes, and fees for consular invoices.

4. To relieve the Committee of payment of taxes, including income tax, or fees on its non-Zambian staff members maintained by the Committee, and assets, property or operations within Zambia, including any customary waiving of registration or license fees for vehicles to be used in the program.

5. While petrol rationing is in effect, to facilitate issuance to the Committee of "essential users" petrol rations sufficient for operation of vehicles used in the project.

6. As provided by Zambian law, to permit the Committee to withdraw any assets it may have through regularly established banking channels at the termination of the project, and to allow payment of repatriation costs for non-Zambian members of staff and their dependents to be made in Zambian currency from the Committee's bank accounts in Zambia.

7. To permit the Committee staff to participate in training schemes relevant to the project on the same basis as Government department staff.

8. To provide office space and communication facilities to further the project.

9. To provide the necessary capital funds, tools and equipment for on-site construction.

D. The Government and the Committee undertake jointly:

1. To further the desired close cooperation between project staff and Government personnel concerned with problems within the scope of the project, particularly through access to advice, counsel, and technical knowledge from the several Government Departments related to the squatter settlement problem.

2. To select specific project site or sites in the Lusaka Area mutually agreed upon by the Ministry of Local Government and the Committee.

3. To establish a Project Advisory Panel for the guidance of project staff composed of representatives of the concerned Ministries, the AFSC, and others selected because of their special interest.

E. The Government or the Committee may terminate this agreement upon 120 days written notice to the other, addressed as appropriate to the Minister of Local Government, or to the Field Director, American Friends Service Committee.

F. This agreement may be amended at any time, as mutually agreed, by the Minister of Local Government acting for the Government, and the Field Director, American Friends Service Committee, acting for the Committee or by their designated representatives. The intent of any provision of this agreement shall, as necessary, be interpreted jointly by the Minister and the Field Director.

G. This agreement shall take effect on the date signed by both parties and implementation of the project will begin immediately thereafter.

FOR THE GOVERNMENT OF THE REPUBLIC OF ZAMBIA

S W Mc

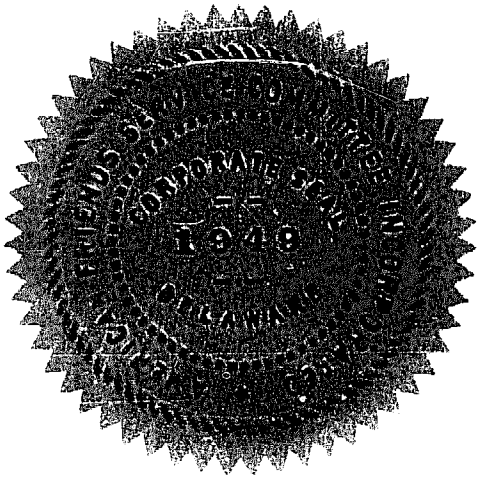
Date 17th October, 1968

FOR THE AMERICAN FRIENDS SERVICE COMMITTEE, INC.

Gilbert H White

Chairman, Board of Directors

Date August 9, 1968



APPENDIX TO
PROJECT AGREEMENT
BETWEEN THE
GOVERNMENT OF THE REPUBLIC OF ZAMBIA
AND THE
AMERICAN FRIENDS SERVICE COMMITTEE, INC.

Outline of Procedural Steps

1. The goal of this pilot project is the comprehensive development of a community of persons drawn from a squatter settlement. Maximum opportunity for citizen participation will be sought in every phase of the project, which is designed to improve housing conditions utilizing self-help methods.

2. The pilot project will be located in the Lusaka Area.

3. The group for the pilot project will be selected by the Ministry of Local Government and the Committee on the basis of the Field Director's findings from consultations with appropriate Government officials and discussions with residents of the proposed project area.

4. The Field Director will work with appropriate Government officials in drawing up a master site plan detailing the location of home sites, roads, water systems, sanitation and drainage, garden plots, playing fields and open spaces, commercial and industrial areas, school sites, cultural and community services, and other facilities. It is anticipated that patterns of settlement leadership would emerge as the people are brought into the development of a site plan. The resulting exchange will help establish criteria and design standards for a community to be created by aided self-help.

5. In consultation with the appropriate Government technicians, homes will be designed by the project on the basis of criteria formulated by the occupants of the settlement area combining the best of traditional ways and designs with economic use of modern building materials and methods.

6. The financial assistance available from the Government and the resources of the people, both financial and otherwise, will be carefully considered so that the resulting plan will be within the means available.

7. As the plans are formulated the construction teams will be organized under the supervision of the Field Director. The self-help construction of housing and facilities will then proceed.

8. Community services such as adult education, health services, schools, cultural and sports organizations, civic organizations, thrift clubs and local industry, etc. will be organized.

KAFUE TOWNSHIP COUNCIL
P. O. BOX 21 - KAFUE

Our Ref: K/26

Date: 6th November, 1968

Acting Permanent Secretary,
Ministry of Local Govt. and Prisons,
P. O. Box RW 27,
Ridgeway,
LUSAKA.

Dear Sir,

RE: PROJECT AGREEMENT WITH THE GOVT. OF THE REPUBLIC OF ZAMBIA AND THE AMERICAN FRIENDS SERVICE COMMITTEE DATED 9th AUGUST, 1968

I refer to the above agreement and to the meeting held in Mr. Muuka's office at the Ministry on 25th October, 1968 and a further 'on-site' meeting at Kafue on 31st October, 1968.

The agreement was noted by my Council at its Ordinary Meeting on 30th October, 1968 and I have been asked to express Council's appreciation as to the selection of Kafue by the Minister as the 'pilot' area for the implementation of the agreement which will greatly assist in ensuring the success of the Self-Aided Housing project at present getting under way in Kafue in relation to the 1968/71 Housing programme.

As requested by the Ministry, Council has formally agreed to the following:

(a) Provision of one 3 bedroom staff house at an economic rental not to exceed K100.00 per month on 1st January, 1969.

(b) Provision of one 3 bedroom house in Nangongwe Suburb at ruling rentals (currently K19.10 per month) from 1st November, 1968.

(c) The possible provision of a further house in Nangongwe suburb.

(d) Provision of a one-room office.
(this now agreed as being a corner office in Beit Hall for which the monthly rental, including light and water, is assessed at K15.00).

This Office will be available for use not latter than 1st December, 1968 after redecoration.

(over)

As discussed, whilst Council's immediate programme on Self-Aided Housing is based on 200 Site and Service plots on land still to be alienated to Council, there is the distinct possibility that construction of a further 400 Site and Service Plots for Self-Aided Housing in the Kafue Estate Ltd. area will be undertaken by Council, subject to the funds being made available.

As the Ministry has a direct interest in the implementation of the agreement, I would be grateful if you would indicate how you would wish this to be effected.

I would suggest in this regard that use be made of Council's Site and Service Management Team on which the Ministry and A.F.S.C. Inc. could be represented as voting members.

Would you please advise.

Yours faithfully,

W. FLEMING
SECRETARY

WF/MH

c.c. Mr. B. McAllister, Field Director, American Friends Service Committee Inc., P. O. Box 97, Kafue

Provincial Local Govt. Officer, Central Province, Box 402, Kabwe

Permanent Secretary Ministry of Works and Housing

Cllr. F.P. Matanda, Chairman, Kafue Township Council Management Committee

Mr. A. Salale, Housing Officer/Chairman, Kafue Township Council Field Team

Accountant

Engineer

Appendix B

A VIEW OF THE KAFUE SQUATTER

A study of squatters and their housing in the Kafue Township Area, as they existed in early 1969, together with comments about the housing problem.

Prepared by the staff of the American Friends Service Committee, Kafue, Zambia, 1969

TABLE OF CONTENTS

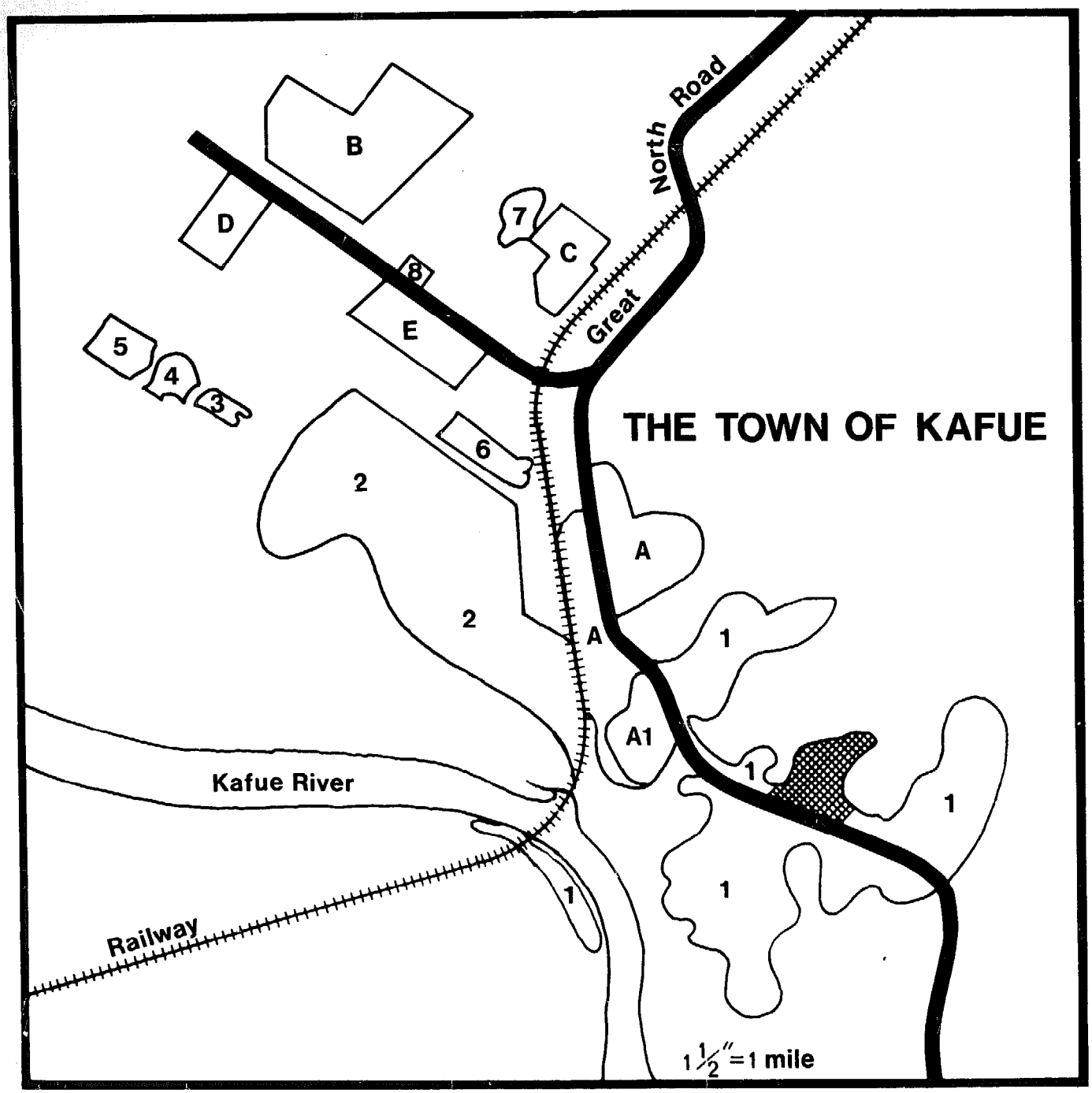
PREFACE

The American Friends Service Committee was asked to help the Kafue Township Council with the development of a 200-plot self-help housing project. After preliminary conversations it was obvious that although officers of the Council knew that there were squatters, very little was known about the numbers, where they were from, how long they had lived in the area, or their plans for the future. From the point of view of planning a resettlement area it was deemed important to know something about the living patterns of the people, how they used their houses, what they thought about their houses, and what they wanted in the way of improvements.

A survey schedule (see Appendix) for the collection of the necessary information was drawn up with the advice and counsel of the Research Unit of the Department of Community Development, and of Dr. Ronald Frankenberger, Dean of Humanities at the University of Zambia. Students from the University were recruited to conduct the survey during the school holidays from 9 December 1968 to 28 February 1969. In addition a secondary school student home on holiday was recruited to help with the survey. The Field Director is indebted to J. H. van Doorne, Research Fellow in Sociology for the Kafue Basin Research Committee of the University of Zambia, who gave invaluable advice and counsel during the preparation of the report.

The map is adapted from a late 1969 aerial photo.

Bard McAllister
Field Director
April, 1970



SQUATTER AREAS SURVEYED

1 Shillinga Kasaba
2 Old Market Farm
3 Federici
4 Zecco
5 Solel Boneh

OTHER SQUATTER SETTLEMENTS

6 Relay Compound
7 Railway
8 Nitrogen

OTHER FEATURES

A Old Kafue
A1 Nangongwe Suburb
B Kafue Estates — Residential
C Cottage Compound
D Textile Mill
E Nitrogen Chemical Plant

SITE OF PROPOSED CHAWAMA SELF-HELP HOUSING PROJECT

INTRODUCTION

The original estimate of the number of squatters in the area had been given as 250 families. The first casual observation of the area left the impression that this was less than half the number. The area to be covered by the survey was arbitrarily set as a circle with a radius of five miles from the post office, plus an extension of about half a mile along the Kafue-Chirundu Road, to include the squatters who had been attracted to the construction work on the Kafue River Highway Bridge.

Nine major squatter areas were identified. The locations of eight of these are shown on the map. The ninth is just off the map to the south, where the Great North Road crosses the Kafue River. It is not included in the study.

The survey started at Shillinga Kaseba (1), and includes the area where the Self-help Housing Project is to be located. Old Market Farm (2) is the largest area and contains the most houses. Federici (3), Zecco (4), and Solel Boneh (5), are named after the three major construction companies working on Kafue Estates. Interspersed with the Railway laborers at Relay Compound (6) are about 90 families of unauthorized squatters. As an appendage to the Railway Cottage Compound (C) is a group of about 25 squatters (7). Near Nitrogen Chemicals (E) is a small area (8) of about 50 families.

Originally it was thought that a team of three interviewers could cover the Kafue squatters during the course of the University holidays. However the gross underestimate of the number of squatters involved, coupled with delays caused by heavy rains and the resulting difficulty of travel within the squatter areas, made it necessary to alter the plan. A complete census was made of the first two areas surveyed: Shillinga Kaseba and Old Market Farm. A 27.6 percent sample was taken at Federici, a 25 percent sample at Zecco, and a 31.6 percent sample at Solel Boneh. The other four areas were not surveyed except to get a reasonable estimate of the number of families involved.

For the purpose of this study a squatter was defined as a person who lived on land that the family did not hold lease or title to. People living on land of the employer, in a house provided by the employer, were not considered squatters. The terms family, household, head of household and husband are used somewhat loosely and interchangeably in this report. In some cases the "family" consisted of a single man or woman living in a house independent of others. In some cases the "husband" might be an unmarried woman or widow who was the head of a group of people living together in one house. A house was considered to be one or more structures that provided shelter for a group of people living in a "family" relationship. "Head of household" might or might not be the eldest person living in a house, but he was the person who assumed chief responsibility for the house and the well-being of the "family."

Training of interviewers consisted of three phases. First the team discussed the purpose of the survey, how it would be conducted, and the reason for each item on the form (specimen appended). Then each team

member interviewed the other team members; and his understanding of the questions and his approach were evaluated in light of the objectives. The second phase consisted of the team member acting as interpreter while the team leader interviewed clients at their homes. Then the team leader observed while the interviewer made house calls. This period covered several days. The third phase consisted of a careful examination of the completed survey forms by the team leader, and a discussion of any misinterpretations, conflicting facts, errors of omission, etc. with the interviewer. At least once a week the entire team met to discuss general impressions and any problems that arose.

It is recognized that there are a few points which are clouded by the prejudices of either the interviewer or the interviewee. For instance, the staff was very reluctant to record the extent of the use of traditional medicine as either a first or last resort; the real underlying motive for people coming to Kafue might be camouflaged by a subconscious conspiracy of interviewer and interviewee, e.g. the reply "looking for work" tells nothing of why the respondent chose Kafue as his destination.

The results of the survey were tabulated "by hand," therefore it was not feasible to make some of the correlations which might provide interesting and helpful insights into the living patterns of the squatter. Earlier research in other communities has indicated that there is a correlation between the stewardship of some people and their religious affiliation. While the information necessary to make such a determination appears on the survey forms, circumstances did not permit this analysis.

Within the scope of this survey it is felt that the mathematical computations are sufficient to indicate trends and categorize characteristics in the gross terms of resettlement. In most instances percentages were rounded to the nearest one-tenth of one percent as a convenience, and a degree of accuracy is not implied. Unless clearly indicated to the contrary, all charts give the percentage of the responses falling in the specified category by area and as a total of all areas.

As stated, the survey began in December, just before the General Election. Kafue is one of the areas where there is strong party feeling. People were often suspicious that the survey was a trick of the minority party to gain votes. The misunderstandings were quickly resolved by Council officials. A similar situation arose following the election.

THE PEOPLE

ORIGINS OF THE SQUATTERS

What Languages They Speak

Language is the greatest barrier to understanding. In a survey such as this it is well to know to what extent the interviewers and interviewees had a common language. To this end, each interview started with a question about the mother tongue and other languages spoken. When the question was phrased in terms of the tribal affiliation the interviewers were rebuked for asking this question at a time when the national leaders were discouraging tribalism in political affairs.

The Tonga speakers constituted nearly a third of the total population, although the proportions varied from 14 percent at Shillinga Kaseba to nearly 70 percent at Federici (Table I). There were 38 African languages represented. Under these circumstances a common or dominant language develops and as the table shows, three-quarters of the heads of household spoke Nyanja, the mother tongue of only 1.5 percent of the squatters. Tonga rated second in importance, with a little over half of the people giving it as one of their spoken languages. Bemba and Lozi were also common tongues.

While it might seem natural for the squatters to locate in language enclaves, this was found not to be the case. There was a heterogeneous mixture throughout, even in the case of the Nyakyusa speaking people in Zecco and Federici.

English is a language of little consequence among the Kafue squatters.

If the interviewer did not speak a language in common with the interviewee, one of the interviewers completed the interview. This situation occurred rarely. Nyanja proved to be the most common language of interview, comprising 64.6 percent of the total. Tonga was the language of a quarter of the interviews, with Bemba, Lozi, Tumbuka, Lenje, English, Nsenga, and Shona following in order of importance (Table II).

TABLE I

PERCENTAGE OF HEADS OF HOUSEHOLD SPEAKING SPECIFIED LANGUAGE

LANGUAGE	AS MOTHER TONGUE						AS SECOND LANGUAGE
	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS	
Shona	-	2.9	-	-	2.6	1.6	5.6
Central Shona	3.8	0.6	-	-	-	1.0	1.1
Gova	1.2	-	-	-	-	*	*
Kalanga	1.7	-	-	-	-	0.3	0.3
Ndau	-	-	-	-	1.3	0.2	0.2
Ndebele	0.4	0.8	-	2.4	-	0.7	2.7
Venda	-	-	-	-	1.3	0.2	0.2
South Lunda	0.4	0.8	-	-	-	0.4	0.5
Lwena/Luvale	2.9	5.0	-	-	1.3	2.8	4.1
Luchazi-Mbunda	2.5	2.7	-	-	-	1.5	1.8
Nkoya-Mbwela	-	0.2	-	-	4.0	0.8	1.0
Kaonde	0.8	2.1	-	-	2.6	1.5	1.8
Bemba	11.3	8.5	-	2.4	1.3	6.1	22.5
Baluba	-	0.2	-	-	-	*	*
Bisa	2.5	0.8	-	-	-	0.8	0.8
Lala	0.4	0.2	-	-	-	0.2	0.2
Lamba	1.2	-	-	-	1.3	0.5	0.8
Swaka	0.4	0.2	-	-	1.3	0.4	0.4
Tonga	14.4	28.0	69.2	57.1	22.4	31.4	53.6
Ila	-	2.1	-	-	5.3	1.9	2.4
Lenje	2.9	0.4	-	-	1.3	1.0	4.9
Sala	0.8	1.2	-	-	1.3	0.9	0.9
Soli	4.2	1.9	-	-	1.3	1.8	2.7
Lozi	8.0	8.7	7.7	9.5	7.9	8.4	16.4
Nyanja	4.6	1.6	-	-	-	1.5	75.8
Cewa	8.8	7.0	-	16.7	5.3	7.8	8.0
Kunda	1.2	0.8	7.7	-	1.3	1.4	1.9
Ngoni	7.2	4.8	3.8	2.4	4.0	4.6	6.4
Nsenga	8.8	6.0	-	-	2.6	4.6	5.4
Sena	-	0.4	-	-	-	0.2	0.2
Tumbuka-Tonga	3.8	2.9	-	-	4.0	2.6	3.3
Chisiska	0.4	-	-	-	-	*	*
Nyakyusa	-	0.6	-	9.5	13.1	4.1	4.2
Mambwe/Lunga	2.5	2.9	11.6	-	1.3	2.8	3.0
Kasai	-	0.2	-	-	-	*	*
Mbondei-Mukinga	-	0.4	-	-	10.6	2.4	2.4
Sutu	-	-	-	-	-	-	0.2
Swahili	-	0.2	-	-	-	*	1.5
English	-	-	-	-	-	-	2.2
Italian	-	-	-	-	-	-	0.2
Portuguese	-	-	-	-	-	-	*
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	239.6
NUMBER	237	479	98	168	244	1,226	
SAMPLE	237	479	26	42	76		

* Less than 0.1%

Language list based on: G. Fortune, S. J., A Preliminary Survey of Bantu Languages of the Federation, Rhodes Livingston Communication Number 14, Lusaka 1959.

TABLE II

LANGUAGE OF THE INTERVIEWS BY PERCENT

LANGUAGE	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Nyanja	79.8	68.7	46.2	35.7	68.4	64.6
Tonga	8.5	18.2	42.4	64.3	21.1	25.1
Bemba	4.6	6.9	11.4	-	2.6	5.0
Lozi	-	4.8	-	-	7.9	3.4
Lenje	2.9	-	-	-	-	0.6
Tumbuka	2.5	0.4	-	-	-	0.6
English	1.7	0.2	-	-	-	0.4
Nsenga	-	0.6	-	-	-	0.2
Shona	-	0.2	-	-	-	0.1
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

Where They Came From

TABLE IIIA

PERCENTAGE OF HEADS OF HOUSEHOLD BORN IN EACH PROVINCE

PROVINCE	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Central	12.2	11.7	7.7	-	6.6	8.8
Copperbelt	-	-	-	-	-	-
Eastern	26.6	18.2	3.8	19.1	15.8	18.4
Luapula	2.1	0.4	-	2.4	-	0.9
Northern	14.0	12.3	11.4	-	10.5	10.5
Northwestern	3.4	3.3	-	-	2.6	2.4
Southern	16.4	30.5	69.3	57.1	23.7	33.3
Western	7.2	14.4	7.7	9.5	13.2	11.5
Other Country	18.1	9.2	-	11.9	27.6	14.2
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

The administrative mind looks upon the squatter as an intruder without local rights. Many consider the solution of the squatter problem to be a simple matter of sending people back to their home villages. Therefore inquiry was made as to where the people came from by country, province, and village of the husband and his wife (wives). Of 1226 households

represented, only five of the family heads had been born in the Kafue area. Sending people home would certainly solve the Kafue Township Council's problem of providing houses and services. But the economic consequences to the area become apparent when we look at the employment pattern of the adult squatter population. Returning people to their province would leave only 8.8% of the squatter heads of household (Table IIIA), thereby rupturing the economic structure by removing industry's labor pool. Sending people back to their country of origin (Table IV) would remove only 14% of the heads of household, again not offering a real solution to the problem.

The five areas studied showed little pattern of language distribution, but when the analysis was on the basis of province of origin, certain tendencies emerged. Shillinga Kaseba showed a strong representation (26.6%) from Eastern Province; while the others showed an attachment to Southern Province. However, Solel Boneh's largest group was the non-Zambians (27.6%). The pattern of origin of first wives (Table IIIB) followed fairly closely that of the origin of husband. The same was also true of second wives, except in Shillinga Kaseba, the area of longest settlement, where proximity seemed to be a significant factor: 41.8% of the second wives of this area came originally from Southern Province, which is just across the river.

TABLE IIIB

PROVINCE OF BIRTH OF ZAMBIAN FIRST WIVES

PROVINCE	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Central	21.1	14.7	13.0	-	8.2	12.0
Copperbelt	-	1.2	-	-	-	0.5
Eastern	28.6	18.8	4.3	24.4	15.1	19.3
Luapula	-	0.2	-	-	-	0.1
Northern	14.6	8.9	13.0	2.4	8.2	9.4
Northwestern	2.2	2.6	-	-	2.7	1.9
Southern	17.3	38.8	65.4	58.5	27.4	37.6
Western	5.9	8.9	4.3	4.9	12.3	8.2
Other Country	10.3	5.9	-	9.8	26.1	11.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	186	426	86	164	234	1,096
SAMPLE	186	426	23	41	73	

The rapid industrial development at Kafue has offered employment for wages to the people of the job-poor area of Southern Province, just across the river. This probably accounts for the relatively large proportion of people from the Southern Province. Conversely, the job seekers of Central and Copperbelt Provinces have had long exposure to line-of-rail jobs. Representation from the other rural provinces seems to be related to distance and lines of communication (Table IV).

TABLE IV

PERCENTAGE OF HEADS OF HOUSEHOLD BORN IN SPECIFIED COUNTRIES

COUNTRY	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Angola	0.8	-	-	-	-	0.2
Botswana	1.7	-	-	-	-	0.4
Congo	-	0.6	-	-	-	0.3
Malawi	10.1	3.8	-	-	5.3	4.1
Mozambique	-	0.2	-	-	-	0.1
Rhodesia	5.5	3.3	-	2.3	-	2.7
Tanzania	-	1.2	-	9.5	22.4	6.2
Zambia	81.9	90.8	100.0	88.2	72.3	86.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

The trails which people followed from their places of birth to Kafue cover practically the face of southern Africa. Except at Shillinga Kaseba, very few people came directly from the village. Many more, especially those in the construction areas, had made an intermediary stop in another rural community before arriving in Kafue. Half or more of the people living in the construction communities, and 40% of the household-heads at Shillinga Kaseba had been working on the line-of-rail (Zambia's urban area) before migrating here.

As will be seen from Table V, a good number of people had been resident in another country just prior to coming to Kafue. Some of these migrated here in pre-Federation days, but mostly this group consists of Zambians who migrated to jobs outside the country and came home only when new work opportunities opened up at Kafue.

TABLE V

RESIDENCE OF HEADS OF HOUSEHOLD PRIOR TO MOVE TO KAFUE
As a percent by selected categories

CATEGORY	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Village of Birth	23.7	7.9	11.4	9.5	1.2	10.1
Other Rural	20.3	24.9	30.8	40.5	26.4	26.9
Line of Rail	41.2	60.8	53.8	47.6	69.7	56.5
Other Country	12.7	5.8	3.9	2.4	-	5.4
Not Stated	2.1	0.6	-	-	2.6	0.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,221
SAMPLE	237	479	26	42	76	

How Long They Have Been Here

Length of residence is a clue to the stability of the squatter population of Kafue. It is also an indicator of the growth rate of the community. Table VI.

The survey revealed that Shillinga Kaseba is the "old" community. This is true from the point of view of the age of residents as well as length of residence. Only five heads of household were born in Kafue, all resident at Shillinga Kaseba. Ninety-eight percent of the community migrated to the area. Thirty-eight percent of them arrived at least ten years ago, thus antedating the urban migration following Independence.

Less than one-fifth of the Old Market Farm population was at Kafue at the time of Independence; over half of the residents arrived within the past twelve months, obviously attracted by the economic activity of Kafue Estates Limited.

The communities of Federici, Zecco and Solel Boneh are the creations of the industrial development since 1967. The few families (7.5%) who were in Kafue prior to the construction boom moved to these areas to be closer to work.

TABLE VI

LENGTH OF RESIDENCE IN KAFUE OF HEADS OF HOUSEHOLD
Shown as a percentage for specified periods of residence

LAPSED TIME	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
0 - 6 Months	7.2	20.7	11.5	7.1	1.3	11.6
6 -12 Months	10.5	30.1	80.7	83.4	81.7	48.1
1 - 2 Years	9.7	19.0	3.9	-	2.6	10.1
2 - 3 Years	6.8	8.8	-	9.5	7.6	7.7
3 - 5 Years	9.7	7.1	-	-	2.6	5.1
5 - 7 Years	9.7	2.9	3.9	-	-	3.3
7 -10 Years	5.9	1.6	-	-	-	1.8
10 or More Years	38.0	9.4	-	-	1.3	11.2
Born Kafue	2.1	-	-	-	-	0.4
Unknown	0.4	0.4	-	-	2.6	0.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

According to Zambia, A Pocket Guide, issued by the Zambia Information Service, Kafue had about 1,700 Africans at the time of Independence. Of course this figure does not include people living on the land now occupied by the eight squatter areas. There were probably not over 200 people living in these areas at the time of Independence. In the last two years

just the squatters alone have added an estimated 3,880 to the population.

At the time of the survey Kafue had grown to a town of well over 10,000.

What Ties with the "Home Village"

TABLE VII

LAPSED TIME SINCE HEAD OF HOUSEHOLD WAS LAST AT HIS VILLAGE

Percent of heads of household have been away from home village for specified periods of time

TIME	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
0 - 6 Months	5.9	9.2	11.2	2.4	4.1	6.9
7 -12 Months	3.4	11.5	34.7	23.8	17.2	14.9
1 - 2 Years	5.1	9.0	11.2	2.4	2.6	6.3
2 - 3 Years	5.1	8.8	8.2	21.4	23.7	13.0
3 - 5 Years	9.3	10.0	4.1	23.8	18.4	13.3
5 - 7 Years	8.0	8.2	-	9.5	5.3	7.3
7 -10 Years	5.9	6.0	4.1	7.1	9.2	6.7
10 or More Years	51.9	25.6	-	4.8	5.3	20.3
Unknown	5.4	11.7	26.5	4.8	14.5	11.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

Attachment to the home village cannot be reflected by any easily measured factor. That attachments do exist is indicated by the middle-aged man, born in Kafue, who thought of his father's village as his own, although he had never been there.

The survey attempted to ascertain village ties by recording the lapsed time since the head of household was last at "his village." Table VII.

At Shillinga Kaseba 51.9% of the heads of household had not been home in more than ten years. At Old Market Farm this figure was 25.6%. Such long absences from the village were rare in the other areas. The five areas reflect a converse pattern when recent visits are considered. Only 19.5% at Shillinga Kaseba and 38.5% at Old Market Farm had been home within the past three years, while these figures were 65.3% at Federici, 50.0% at Zecco and 47.6% at Solel Boneh.

On the basis of this evidence it might be assumed that with the expected steady expansion of the Kafue industrial complex and the

corresponding steady employment opportunities, most squatters will in fact become permanent residents of the area.

Why They Came

TABLE VIII

STATED REASONS FOR HEADS OF HOUSEHOLD MOVING TO KAFUE
In percent

REASONS	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
To Visit Kin	13.6	4.4	-	-	-	4.3
Seeking Work	62.2	80.8	92.3	95.3	86.7	81.1
Job Transfer	9.0	5.4	7.7	4.7	13.3	7.7
Business	5.6	2.7	-	-	-	2.1
Church	3.2	-	-	-	-	0.6
Undefined Choice	6.0	5.9	-	-	-	3.8
Other	0.4	0.8	-	-	-	0.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,221
SAMPLE	237	479	26	42	76	

Having looked at where the squatters came from, how long they have been here, and their attachment to the natal environment, as clues to the stability of this segment of population, it is now essential to look at the reasons the people stated for coming to Kafue. (Table VIII). Almost to the exclusion of all other reasons, the desire for wage employment brought the people here. A few came because of job transfer, a closely related reason.

The few people who settled at Shillinga Kaseba because of religious affiliation, and those who came to visit kin and stayed on, expressed reasons which can be taken at face value. However, there is much of motivational reasoning hidden in the phrase "seeking work." Why did they seek work in Kafue? Did they leave the village just to seek wages or were there social conflicts that precipitated the move? For a complete understanding of the factors of urbanization a great deal more probing of the motivational element is needed.

Why They Would Leave

TABLE IX

REASONS FOR PLANNING TO LEAVE KAFUE
By selected categories, in percent

REASONS	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
To Follow Job	0.8	21.1	69.2	26.2	28.9	23.3
Seeking Better Job	0.4	0.6	-	-	2.6	0.8
To Join Family	1.2	1.7	-	2.4	1.3	1.4
Only If Forced	3.4	-	-	-	-	0.7
Personal Reasons	8.4	1.6	-	2.4	5.3	3.7
No Plans	85.8	75.0	30.8	69.0	61.9	70.1
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

In thinking about the housing problem it is important to know whether the people plan to make permanent homes in the area or whether they think of themselves as "just passing through." Seventy percent of the heads of household had no plans for the future. The range was from 85% at Shillinga Kaseba to only 30% at Federici. Of those who did have plans to move, following their job was the principal reason. This was a factor for a quarter of the people, except at Federici where 70% were job oriented. At Shillinga Kaseba job orientation was an insignificant factor. The category "only if forced" reflects the realism of the people: many had recently been forced off the site for the sewerage disposal plant.

Given the very real probability that construction work in Kafue will continue at the present rate for the next twenty years, and that factory employment will increase, it is evident that 94.9% of the squatters are potential long-term residents and therefore could be considered in the market for modern housing. This means that 1,320 houses were needed immediately just to shelter the squatters who had no plans to leave Kafue.

COMPOSITION OF THE SQUATTER POPULATION

Who Makes Up the Household

Having learned something of the origins of the people, it is now appropriate that we look at the composition of the squatter population.

At the time of the survey 4,646 people (Table X) were living in the

five squatter areas studied. Of this number 1,096 were husbands accompanied by at least one wife. There were 110 second wives and 14 third wives. Ninety-three households were headed by a man who was either unmarried, divorced or a widower. Women of comparable marital status headed 37 households. Non-members of the family--i.e. relatives, non-relatives living as members of the household, and renters, made up only 10% of the population.

TABLE X

PERCENTAGE OF SELECTED CATEGORIES OF OCCUPANTS IN SQUATTER AREAS AND OTHER RELATED INFORMATION

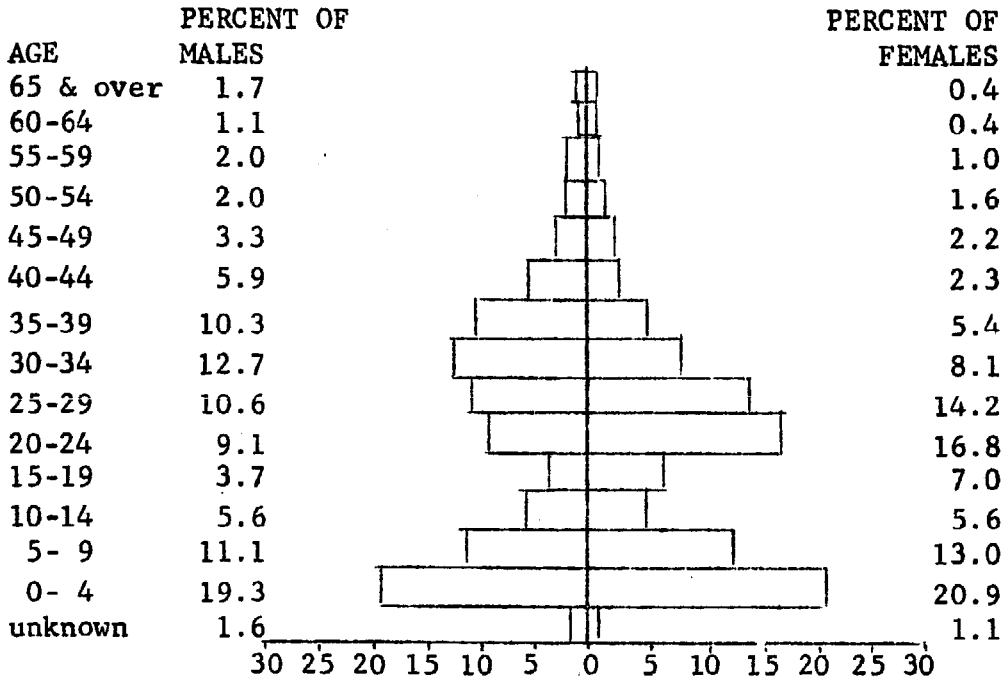
CATEGORY	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS	TOTAL NUMBER
Husband	17.7	23.2	27.2	25.0	29.7	23.6	1,096
Wife I	17.7	23.2	27.2	25.0	29.7	23.6	1,096
Wife II	1.6	2.5	-	4.3	2.4	2.4	110
Wife III	0.1	0.3	-	-	0.4	0.3	14
Single Male	3.4	1.9	3.8	0.6	1.2	2.0	93
Single Female	1.8	1.0	-	-	-	0.8	37
Children at Home	45.7	38.6	34.6	33.2	27.8	37.3	1,734
Male Relative	5.1	4.9	3.5	7.8	4.4	5.2	241
Female Relative	4.3	2.8	1.2	0.6	4.0	2.9	137
Non-relative	1.4	0.6	2.5	3.5	0.4	1.2	57
Renters	1.2	1.0	-	-	-	0.7	31
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	-
NUMBER	1,052	1,833	316	656	789	4,646	4,646
SAMPLE	1,052	1,833	84	160	243		
AV. PER HOUSE	4.5	3.8	3.2	3.9	3.2	3.8	-
AV. CHILDREN PER HOUSEHOLD	3.2	2.5	1.5	2.2	1.6	2.3	-
CHILD. IN RESIDENCE PER HOUSE	2.0	1.5	1.1	1.3	0.9	1.4	-

Age and Sex Characteristics

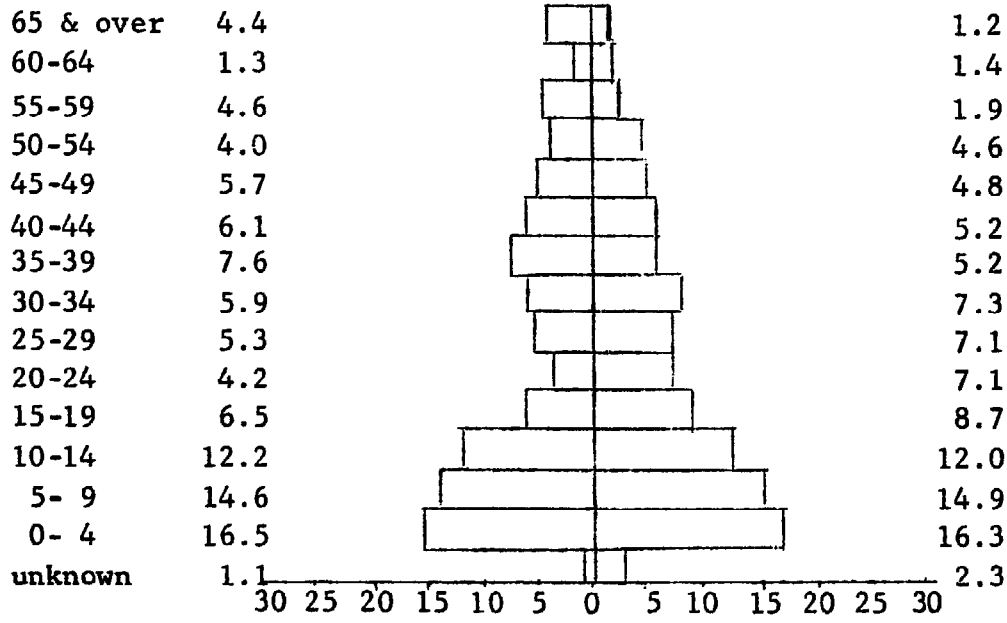
A look at the age distribution of the squatter areas (Table XI) shows that the population was one of young and virile families. Taking the 1963 Census of Africans, Second Report, of the Government of Zambia, Lusaka (1964), as the norm, we find that the proportion of squatters under ten years of age is about right. But then the population between the ages of 10 and 20 is about half of what would be expected. There were only slightly more males in the 20 to 30 year age group than in the norm, but nearly twice as many females. In the 30 to 40 year age group there were over twice as many males as the norm, while there were only 13% more

TABLE XI

AGE DISTRIBUTION, BY SEX, IN PERCENT

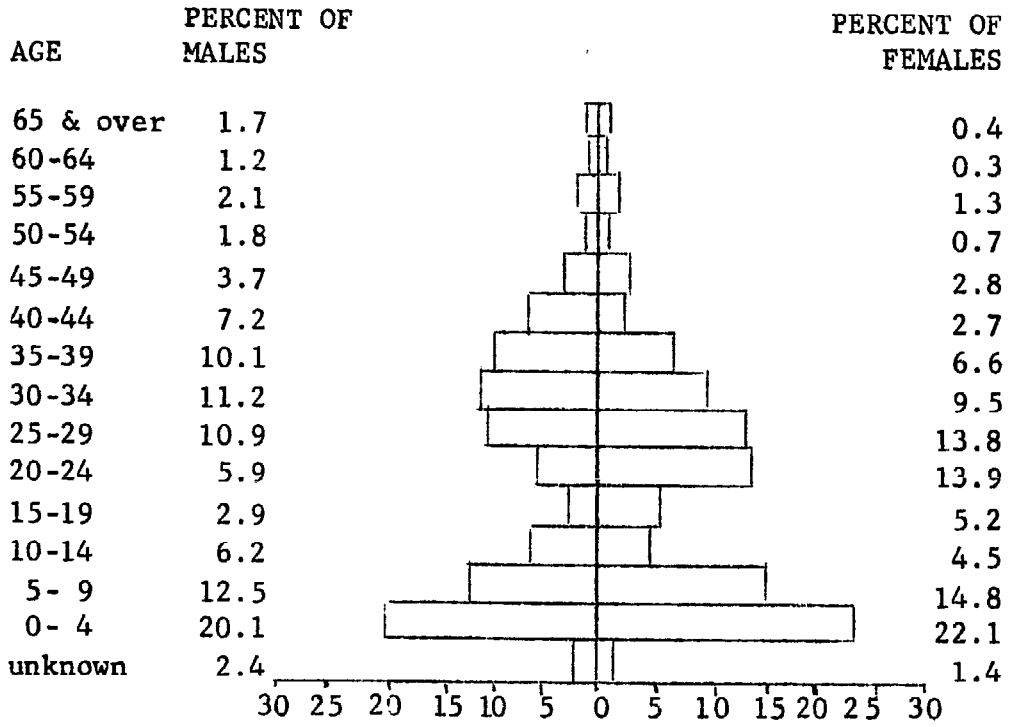


TOTAL OF ALL AREAS

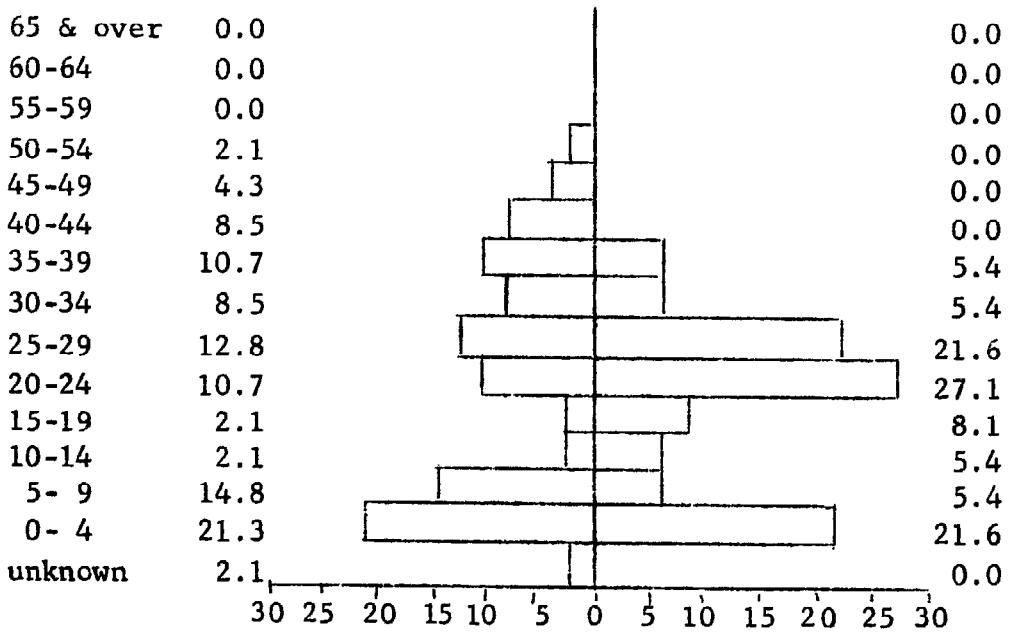


SHILLINGA KASEBA

AGE DISTRIBUTION, BY SEX, IN PERCENT
(continued)

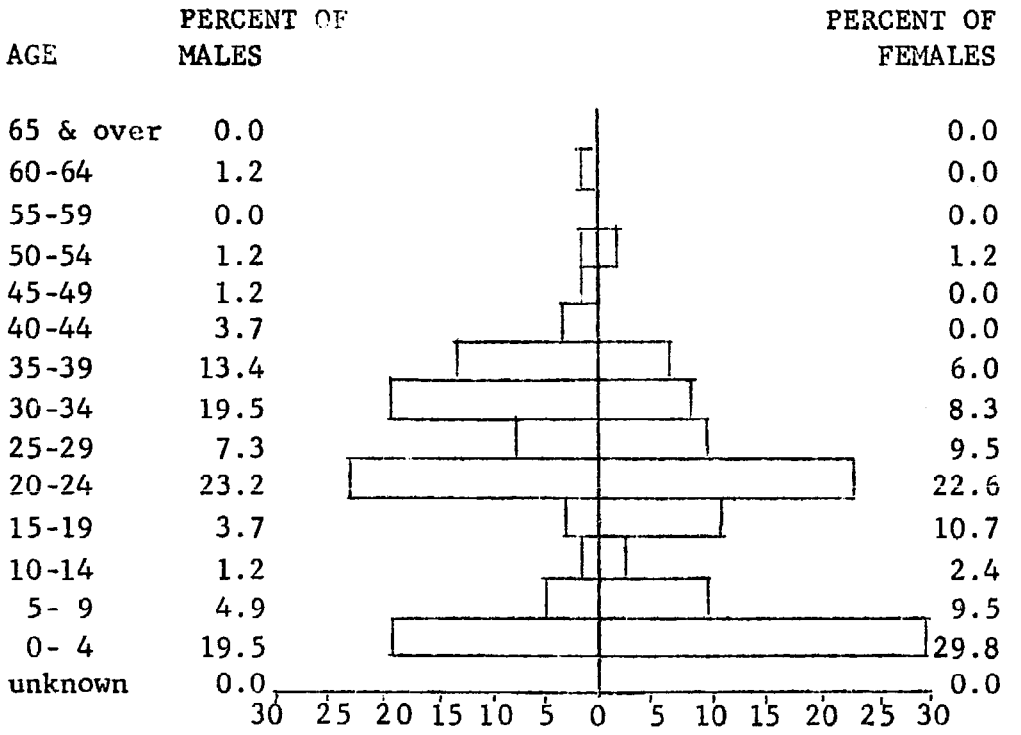


OLD MARKET FARM

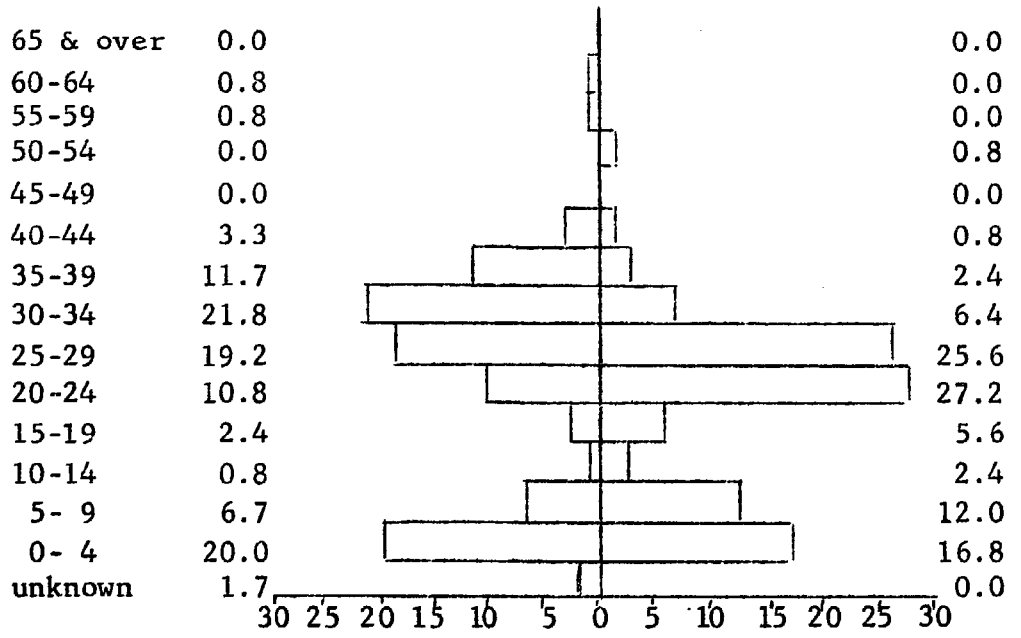


FEDERICI

AGE DISTRIBUTION, BY SEX, IN PERCENT
(continued)



ZECCO



SOLEL BONEH

females. The male population between 40 and 50 years of age was a little higher, the female group only half what might be expected. The older age groups were all smaller than for the country as a whole.

However there were marked contrasts between the five areas. Shillinga Kaseba presents a fairly normal population pyramid, weighted toward males in the 35 to 50 year bracket, and short on males in the 15 to 30 year bracket. All other areas show marked negative distortions in both the male and female groups for the children from 5 to 15 years of age. There are very positive distortions for both sexes in the 20 to 40 year olds. Old Market Farm's distortions were not as extreme as for the three construction areas, but they were still quite pronounced.

When looking at the sex ratios of Kafue squatters we find there is close to a 1:1 ratio in all areas except Federici, where the ratio for all occupants is 126 males to 100 females. If only the adult population (over 20 years) is considered, Federici had a ratio of 116 males to 100 females, and Zecco had a ratio of 124 to 100.

When sex ratios are extracted for broad age groups of the total population we find that in the 15 to 29 year old group there were only 63 men for every 100 women, and in the 30 to 44 age group there were 180 males for each 100 females. The older men, 45 and over, outnumbered the women 200 to 100.

Studies of the Copperbelt (1951) and Broken Hill (1964) show similar shortages of men among the young adults, with correspondingly high ratios for the older groups. Kapferer, in the Broken Hill study, attributed the discrepancy to the migration of the labor force from an old and declining employment center. Just the opposite factors prevail at Kafue, leading to the conclusion that the cause lies deeper than just labor migration. At Old Market Farm, Federici and Solel Boneh, all with very few single heads of household, the proportion of women in any five-year age bracket between 15 and 29 years is much larger than the proportion of men of the same age. This would lead one to believe that the difference might be due to wife-taking patterns; however this matter needs more exhaustive investigation.

From the point of view of this study the important fact is that Kafue squatters tend to be young families. Young families tend to have less capital for housing while at the same time needing more "under roof" space. While the space need for a newly married couple may be small, the need soon grows with the family. Therefore housing should be so planned that necessary expansion can take place in an orderly progression.

Their Schooling

The most striking fact revealed by a look at the educational achievements of the heads of household (Table XII) and their spouses (Table XIII) is the contrast between men and women. Whereas two-thirds of the men had one or more years of schooling, only a third of the women had received any schooling. The differences between the various areas is relatively slight.

TABLE XII

PERCENT OF MALE HOUSEHOLD HEADS ACHIEVING SPECIFIED YEARS OF SCHOOLING

YEARS OF SCHOOL	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
0	40.8	34.4	34.7	26.2	31.2	34.1
1	0.9	1.1	-	-	1.6	0.9
2	5.0	1.7	4.1	-	-	1.9
3	9.2	6.6	7.1	4.8	-	5.5
4	12.4	17.3	23.5	26.2	22.1	18.8
5	14.2	8.7	4.1	14.3	9.0	10.2
6	8.7	13.5	7.1	11.9	11.5	11.5
7	3.7	5.5	4.1	11.9	5.3	5.9
8	2.8	9.4	11.2	4.7	12.7	8.3
9	0.5	0.9	4.1	-	-	0.8
10	1.8	0.9	-	-	6.6	2.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	218	457	98	168	244	1,185
SAMPLE	218	457	26	42	76	
VOCATIONAL TRAINING	26.2	27.1	50.0	35.7	64.8	40.7

TABLE XIII

PERCENT OF FIRST WIVES AND FEMALE HOUSEHOLD HEADS ACHIEVING SPECIFIED YEARS OF SCHOOLING

YEARS OF SCHOOL	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
0	69.2	61.5	47.8	51.3	72.5	62.7
1	2.5	2.0	-	2.4	-	1.6
2	4.9	6.1	4.6	2.4	1.3	4.2
3	3.4	6.5	12.8	12.2	-	5.9
4	7.7	13.3	26.7	17.1	12.4	13.7
5	4.9	4.3	-	2.4	5.6	4.1
6	4.9	4.1	8.1	9.8	2.6	5.0
7	1.5	1.1	-	-	5.6	1.9
8	1.0	0.9	-	-	-	0.5
9	-	0.2	-	2.4	-	0.4
10	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	205	444	86	164	234	1,133
SAMPLE	205	444	23	41	73	
VOCATIONAL TRAINING	1.0	1.8	-	-	4.3	1.8

The only sharp break in the educational career of the men comes after completion of the 4th year of school. Drop-out was almost complete by the end of elementary school, with only a token number going on to secondary school--2.8% of the total. The one exception was at Solel Boneh where 6.6% had completed Form II. This seeming anomaly is probably related to the employment practice at the textile mill.

Of the male heads of household 40.7% stated they had received some form of vocational training. Again Solel Boneh is unusual with over two-thirds having received training.

As in the economies of most countries it can be assumed that the place of the squatter of Kafue on the economic scale has been pretty firmly pegged by the level of educational achievement. Except for some form of government subsidy, coupled with an element of self-help, the housing market open to these people is very limited. Commercial home purchase schemes and rentals for adequate housing will forever be beyond the means of most of them.

Their Religious Preferences

TABLE XIV

RELIGIOUS AFFILIATIONS OF HEADS OF HOUSEHOLD, IN PERCENT

RELIGION	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Roman Catholic	26.2	30.0	30.8	23.8	27.6	28.1
Apostolic	15.2	13.9	7.7	11.9	6.6	11.8
Salvation Army	2.1	7.1	11.5	14.3	7.9	7.5
African Reformed	6.7	5.2	-	4.8	2.6	4.5
Seventh Day Adv.	3.4	3.7	3.9	9.5	3.9	4.5
Jehovah's Witness	10.9	5.4	-	-	-	4.2
Free Church	2.1	2.3	11.5	-	6.6	3.4
United Church	2.9	1.6	-	-	1.3	1.5
Mohamed	3.8	1.2	-	-	-	1.2
Anglican	0.8	1.6	-	-	1.3	1.1
Dutch Reformed	2.9	1.2	-	-	-	1.1
Methodist	2.1	0.8	-	2.4	-	1.1
Other	2.1	1.2	-	14.3	-	2.9
None	18.5	24.2	34.6	19.0	42.2	27.1
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

Wherever people gather together religious fellowships of diverse persuasions develop.

As can be seen from Table XIV, the heads of household surveyed at

Kafue represent a wide range of religious identity. 27.1% claimed no affiliation. The largest group was affiliated with the Roman Catholic Church, being 28.2% of the total. Members of the Apostolic Faith were the next largest group (11.9%), with the Salvation Army coming third (7.5%).

OCCUPATIONS OF THE SQUATTERS

Do They Work

Perhaps the most common myth which persists about squatters is that they are a great mass of unemployed. The Kafue study shows that only 6.5% of the heads of household were unemployed (Table XV). If those who reported that they found only casual employment are included in the unemployed, the total would be 8.5%.

Shillinga Kaseba came closest to being the stereotype squatter community with 11.4% unemployed. But even this relatively high figure is not enough to condemn the area as a sanctuary for the unproductive, since many of the unemployed were in reality "retired" and therefore not in the labor market.

TABLE XV

TYPES OF EMPLOYMENT OF HEADS OF HOUSEHOLD, IN PERCENT

EMPLOYMENT	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Hired Workers	48.5	75.1	95.9	100.0	97.6	79.5
Self-employed	43.1	15.3	-	-	1.2	14.5
Casual	2.5	3.8	-	-	-	2.0
Unemployed	11.4	9.6	4.1	-	1.2	6.5
TOTAL	105.5*	103.8*	100.0	100.0	100.0	102.5*
NUMBER	237	479	98	168	244	1,226

*Excess of 100% = those who worked for wages and had a business of their own.

Where They Work

As would be expected the rapid expansion at Kafue offered most employment with the construction companies. Table XV shows the percent of household heads who were hired workers. Table XVI shows the percent of these hired family heads in various types of employment. Stated in other

terms it can be said that 100% of the family heads of Zecco were in construction work; as were 91.6% of Federici, 61.4% of Solel Boneh, 58.7% of Old Market Farm, and 27.2% at Shillinga Kaseba. Thus it can be seen that construction work provided the livelihood of 65.0% of the family heads.

Self-employment was of significance only at Shillinga Kaseba where 47% of those employed reported having their own business, and at Old Market Farm where 16.9% of those employed were so engaged.

TABLE XVI

PERCENTAGE OF HEADS OF HOUSEHOLD IN SPECIFIED EMPLOYMENT

EMPLOYER	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Construction	53.1	78.2	95.7	100.0	62.2	76.9
Kafue Textiles	10.5	8.9	4.3	-	37.8	14.3
Government	8.7	1.7	-	-	-	1.6
Nkwazi Mfg.	7.0	2.2	-	-	-	1.6
Brewery	7.8	1.4	-	-	-	1.4
Shops	4.3	1.7	-	-	-	1.1
Bars	4.3	-	-	-	-	0.5
Z. Youth Service	2.6	0.3	-	-	-	0.4
Domestic	1.7	-	-	-	-	0.2
Other	-	5.6	-	-	-	2.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	115	360	94	168	238	975
SAMPLE	115	360	25	42	74	

How Long They Have Worked

In economically stable communities people tend to hold the same job for a relatively long period. The boom and growth of Kafue is reflected in the length of time squatters have been in their present jobs (Table XVII). At Shillinga Kaseba a fifth of the heads of household had held their current jobs for five years or more, reflecting the earlier occupation of the area. A twentieth of Old Market Farm had held their jobs five years or more. No one in the other three areas had held the same job that length of time. The rapid growth of the squatter areas was reflected by the fact that 25% of Shillinga Kaseba had been in their current employment for less than 12 months; at Federici 80% had been employed less than one year, at Zecco 73%, and at Solel Boneh 79%.

That Kafue squatters may settle more or less permanently can be assumed from their past employment record. Of those responding to the question about length of time in their previous job (Table XVIII), one third of those at Shillinga Kaseba had been in the same employment for five or more years. The same was true of 15% at Old Market Farm, 20% at

Zecco, and 5% at Solel Boneh. No one at Federici had been in their previous job for five or more years. The percentage of those holding the previous job for less than one year was much lower than those in their present job for less than one year. These figures reflect the rapid increase in job opportunities, but most significant is the indication that circumstances permitting, people do not drift around in the labor market.

TABLE XVII

PERCENTAGE OF HEADS OF HOUSEHOLD IN PRESENT JOB FOR SPECIFIED PERIODS OF TIME

TIME	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
0 - 6 Months	19.0	48.7	54.0	52.4	53.7	44.9
7 - 12 Months	6.7	16.1	26.6	40.5	25.0	20.2
1 - 2 Years	15.6	7.7	7.1	4.7	7.8	8.8
2 - 3 Years	7.6	4.4	4.1	-	4.9	4.5
3 - 5 Years	8.9	4.2	4.1	2.4	2.5	4.5
5 - 10 Years	5.0	2.1	-	-	-	1.8
10 or More Years	14.4	3.1	-	-	-	4.0
Not Stated	11.4	4.1	-	-	4.9	4.8
Unemployed	11.4	9.6	4.1	-	1.2	6.5
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

TABLE XVIII

PERCENTAGE OF HEADS OF HOUSEHOLD IN PREVIOUS JOB FOR SPECIFIED PERIODS OF TIME

TIME	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
0 - 6 Months	12.4	16.4	39.0	17.6	20.3	18.2
7 - 12 Months	7.2	12.2	11.8	14.7	13.7	11.9
1 - 2 Years	19.0	20.0	18.7	23.6	35.8	23.5
2 - 3 Years	12.3	19.0	18.7	14.7	15.5	16.5
3 - 5 Years	14.4	13.5	11.8	8.8	10.0	12.2
5 - 10 Years	19.0	10.3	-	5.9	4.7	9.3
10 or More Years	14.4	5.2	-	14.7	-	6.7
Not Stated	1.3	3.4	-	-	-	1.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	153	407	59	136	190	945
SAMPLE	153	407	59	34	59	

What They Do for a Living

An examination of the types of jobs held by the 79.5% of household heads who worked for wages shows that the category of laborer was dominant in each area (Table XIX). Construction skills were fairly representative throughout. Solel Boneh with its 37.4% employed in the textile industry showed a larger proportion (20.1%) of fitters/plumbers, and seemed to reflect the state of development of the mill and the corresponding lack of housing at the time of the survey.

TABLE XIX

PERCENTAGE OF HIRED HEADS OF HOUSEHOLD IN SPECIFIED JOB CLASSIFICATIONS

CLASSIFICATION	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Laborer	21.8	32.8	39.3	59.4	31.0	36.2
Bricklayer	15.6	19.5	11.6	11.9	10.9	14.9
Carpenter	15.6	12.0	10.1	4.8	9.7	11.4
Fitter/Plumber	10.4	7.5	4.3	4.8	20.1	10.2
Machine Operator	7.8	2.8	7.5	9.5	8.0	6.3
Waiter/Servant	9.6	3.6	4.3	2.4	-	3.3
Painter	4.3	4.2	-	2.4	-	2.5
Truck Driver	-	5.3	-	-	-	2.0
Watchman	3.5	4.2	-	-	-	2.0
Clerk	4.3	0.6	4.3	2.4	1.3	1.9
Electrician	0.9	0.8	-	-	5.5	1.7
Welder	-	-	4.3	-	5.5	1.7
Fireman	2.6	0.3	-	-	-	0.4
Compound Police	2.6	-	-	-	-	0.3
Foreman	-	0.8	-	-	-	0.3
Other	0.9	5.6	4.3	-	6.7	4.2
Unspecified	-	-	-	2.4	1.3	0.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	115	360	94	168	238	975
SAMPLE	115	360	25	42	75	

While working for wages was the orientation of most of the people interviewed, it is interesting to note that 43% of the people at Shillinga Kaseba and 15.6% at Old Market Farm were self-employed. The variety of self-employment shown in Table XX is of interest. Peddlers make up the largest single category. To the 67 "heads of household" who were so employed should be added the 43 wives who supplemented the family income by peddling, making a total of 110 peddlers. It should be noted that the 43 wives who worked as peddlers represent 66% of the working wives.

TABLE XX

PERCENTAGE OF SELF-EMPLOYED HEADS OF HOUSEHOLD IN SPECIFIED OCCUPATIONS

OCCUPATION	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Peddler	34.3	43.9	-	-	-	37.6
Charcoal Burner	18.6	-	-	-	100.0	12.7
Farmer	14.7	1.4	-	-	-	9.0
Basket Maker	11.8	4.1	-	-	-	8.4
Fisherman	2.9	12.3	-	-	-	6.7
Chairmaker	10.8	-	-	-	-	6.2
Carpenter	-	4.1	-	-	-	1.6
Shop Keeper	-	4.1	-	-	-	1.6
Blacksmith	2.0	-	-	-	-	1.1
Bricklayer	-	2.7	-	-	-	1.1
Other	4.9	27.4	-	-	-	14.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	102	73	-	-	3	178
SAMPLE	102	73	-	-	1	

Where They Would Like to Work

TABLE XXI

PERCENTAGE OF HEADS OF HOUSEHOLD EXPRESSING SPECIFIED EMPLOYMENT DESIRES

CATEGORY	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Own Business	0.4	1.7	4.1	-	-	1.0
Better Job	13.4	13.8	-	-	2.6	8.6
Special Training	0.5	0.6	-	-	-	0.3
Kufue Factories	9.7	1.9	-	-	-	2.6
Construction	0.8	-	-	-	1.2	0.4
No Plans	74.8	81.6	95.9	100.0	93.7	86.4
Other	0.4	0.4	-	-	2.5	0.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

Over 13% of the people in Shillinga Kaseba and Old Market Farm stated a desire for better jobs, and almost 10% at Shillinga Kaseba wished for the stability of employment in the new factories (Table XXI). Many

respondents commented that they would continue to live where they were as long as a job was available, implying that employment was the chief criteria in their lives. Given the tendency to stay with a job, and the long range employment prospects for the new Kafue, it is safe to assume that the present squatter population will remain in the area for a long time. This assumption is supported by the fact that only one person in ten had any plans for changing their present employment.

While most people were employed at what they considered their highest skills, there were a few (12.6%) who thought their skills were not being utilized. Bricklayers, carpenters and drivers were chief among this group. No attempt was made to ascertain why these people were not employed at their highest skill.

What They Earn

For most workmen the purpose of the job is the wage which permits him to enjoy the comforts of the economy. One of these comforts is adequate shelter in the form of a modern house, hence our interest in the family income.

The survey attempted to ascertain the income of each family. Although a few gave answers which seemed impossible, it was felt that the majority of stated incomes were forthright and accurate. This conclusion was substantiated by a comparison of the wage scales supplied by the principal employers and the wages stated by the respondents.

Incomes were from several sources. Many of the older families relied heavily upon help from their children. In addition they sold garden produce, made objects for sale, or did an occasional odd job. In 65 cases (4.9% of the households) the wife added an average of Kwacha (K)12.50 a month to the family income.

The 24 casually employed workers had incomes averaging K18.50 per month, with the mean income falling in the K10 to K19.99 category. Two families stated their income was less than K5 per month, though outward appearances would indicate they had resources far above this figure.

Of the 178 self-employed heads of household, 31 also worked for wages. Ten of the self-employed declined to state their income from this source. At Shillinga Kaseba 29 of the 102 self-employed household heads earned less than K5 from their own entrepreneurship. One of the 73 self-employed at Old Market Farm also came in this category. The self-employed of Old Market Farm were generally more successful than those of Shillinga Kaseba. Their average income was K42, compared with K20 at Shillinga Kaseba. The mean income was in the K20 - 29.99 category, compared with the K10 - 19.99 at Shillinga Kaseba.

As would be expected, working for wages was the major source of income. 975 heads of household, or 79.7%, reported income from wages (Table XXIII).

TABLE XXII

INCOME IN KWACHA* PER MONTH FROM SELF-EMPLOYMENT
Shown as a percentage of self-employed heads of household

INCOME	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
K 0 - 4.99	28.5	1.4	-	-	-	16.9
5 - 9.99	12.7	5.5	-	-	100.0	11.2
10 - 19.99	26.4	26.0	-	-	-	25.9
20 - 29.99	11.8	27.4	-	-	-	18.0
30 - 39.99	9.8	5.5	-	-	-	7.9
40 - 49.99	2.9	11.0	-	-	-	6.2
50 - 59.99	2.0	2.7	-	-	-	2.2
60 - 100.00	1.0	4.1	-	-	-	2.2
100 or more	-	9.6	-	-	-	3.9
No Reply	4.9	6.8	-	-	-	5.6
TOTAL	100.0	100.0	-	-	100.0	100.0
NUMBER	102	73	-	-	3	178
SAMPLE	102	73	-	-	1	

* One Kwacha (K) is equivalent to $1.40 approximately.

TABLE XXIII

PERCENTAGE OF FAMILIES WHOSE MONTHLY INCOME FROM WAGES IS WITHIN DESIGNATED CATEGORIES

WAGE	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
K 0 - 4.99	-	0.3	-	-	-	0.1
5 - 9.99	-	1.4	-	-	-	0.4
10 - 19.99	7.8	2.5	-	2.4	1.3	2.6
20 - 29.99	17.4	11.7	7.4	14.3	12.2	12.5
30 - 39.99	27.9	35.8	52.2	52.3	37.7	39.8
40 - 49.99	20.8	23.6	33.0	19.0	26.9	24.3
50 - 59.99	12.2	9.7	-	4.8	9.7	8.2
60 - 99.99	5.2	11.4	-	2.4	9.7	7.5
100 or more	5.2	0.8	-	-	-	0.9
No Reply	3.5	2.8	7.4	4.8	2.5	3.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	115	360	94	168	238	975
SAMPLE	115	360	25	42	75	

The median income for each area fell in the same category: K30 - 39.99. The average income was highest at Old Market Farm, being K50; while it was K49 at Solel Boneh, K48 at Shillinga Kaseba, and K43 at Federici and Zecco.

Although the various components of the income picture are of interest, it is the total family income (Table XXIV) which determines the budget available for housing. When all sources of income were considered, Solel Boneh headed the list with an average income of K49 and the mean falling in the K40 - 49.99 category. Next was Shillinga Kaseba with an average of K48 and the mean in the K30 - 39.99 bracket. Old Market Farm families reported average income of K45 and a mean income in the K40 - 49.99 category.

The average income for all squatters surveyed was K44 per month. The mean income was in the K30 - 39.99 range.

Savings are an important aspect of family finance, especially for acquiring a house. Although saving is not thought of as an attribute of squatters, it was found that 17.2% of those surveyed had some form of savings. The post office was the savings institution for 10.2% of the people; 4.5% saved at banks; and 2.5% saved elsewhere. Only two people used the new Development Bonds. No attempt was made to ascertain the amount of savings.

TABLE XXIV

PERCENTAGE OF FAMILIES WHOSE INCOME FROM ALL SOURCES IS WITHIN DESIGNATED CATEGORIES

INCOME	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
K 0 - 4.99	5.5	1.7	-	-	-	1.7
5 - 9.99	4.2	1.3	-	-	1.3	1.6
10 - 19.99	10.6	4.6	-	-	1.3	4.1
20 - 29.99	16.0	13.8	7.7	16.7	9.2	13.2
30 - 39.99	16.0	22.9	50.0	52.4	38.2	30.8
40 - 49.99	17.7	23.2	34.6	19.1	26.3	23.2
50 - 59.99	6.8	9.8	-	4.7	10.5	7.8
60 - 99.99	11.4	12.1	-	2.4	9.2	9.1
100 or more	6.3	3.1	-	-	-	2.5
No Reply	5.5	7.5	7.7	4.7	4.0	6.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

A PROFILE

From the information considered so far we can draw a profile of the Kafue squatter something like this: He is married to one wife, who has borne over two children, of which at least one is living in Kafue with them. He was born outside the area and probably lived on the line of rail before coming to Kafue. It has been over three years since he has visited his village. Regardless of his mother tongue, he now speaks Cinyanja. If he lives in the older squatter areas he probably arrived in Kafue before 1964. If he lives in one of the construction areas he arrived here early in 1968. He came to Kafue looking for work and found it in construction. He has been on the job less than 18 months but plans to stay in Kafue as long as there is employment. Due to his relative lack of education (five years or less), his earnings per month will probably never rise much above what K45 would buy in 1969.

THE HOUSE

ITS STRUCTURE

What It Is Made Of

In a humanistic society the well-being of the common man is of paramount importance. It is generally recognized that the condition of a society cannot rise much above the physical environment in which it lives. Since man comprehends by symbols, the family soon comes to think of its own worth in terms of the house in which it lives. Therefore it is fitting that Zambia is concerned about the squatter areas growing around the urbanizing centers of the country.

The quality of houses occupied by the squatters of Kafue covered the whole spectrum--from grass supported by a few poles to a six-roomed concrete block house complete with bathroom fixtures but no running water.

The survey did not inquire into the reasons for choice of building materials, though such information would have been valuable.

Traditions in building are rapidly changing in Zambia. Probably the oldest form of house still seen today is the columnar structure made with a few poles supporting grass walls, and topped with a cone of grass thatch. At a later stage comes the pole frame interspaced with saplings lashed together with bark, and dobbed inside and out with clay (pole and dagga). Of more recent origin is the house made of sun-dried earth blocks (Kimberley Brick). With the introduction of the rectangular building block, the house took on a similar shape. In fact in urban areas even houses of grass or pole and dagga tend to take the rectangular shape. Corrugated iron and asbestos are rapidly replacing thatch as roofine material. The Kraft paper bags used for shipping cement have taken the place of grass in some of the construction areas.

In classifying houses by type we have defined the home as all of the buildings occupied by one household. Except in the case of kitchen shelters, multi-unit homes tended to be constructed of the same materials. In the very rare cases where this was not true, the home was classified by the building material of the "main" structure.

Grass construction was not common in Shillinga Kaseba (6.7%) or in Old Market Farm (2.1%) (Table XXV). On the other hand it was common at Federici (65.4%) and Solel Boneh (19.8%). On the surface it might appear that there is a correlation between type of construction and length of time the area had been settled. However this assumption falls apart in the case of Zecco, where only 2.4% of the houses had grass walls. In actual fact all three of these settlements were created within about a fortnight.

Pole and dagga with grass thatched roof was the most prevalent construction in the target areas (60.0%). An additional 5.6% of the houses were made of pole and dagga with metal roofs. At Zecco, except for the

few grass houses, nearly all (97.6%) were of pole and dagga, 7.1% of the total having metal roofs. Metal roofing was more prevalent at Solel Boneh (18.4%). Only one of the metal roofed houses at Shillinga Kaseba exceeded the standard of Kimberley Brick.

TABLE XXV

PERCENTAGE OF HOUSES BUILT FROM SPECIFIED MATERIALS

MATERIALS WALLS	ROOF	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Grass	Grass	6.7	2.1	65.4	2.4	19.8	11.6
Pole/Dagga	Grass	53.7	57.7	30.8	90.5	61.8	60.0
Pole/Dagga	Metal	1.6	1.6	3.8	7.1	17.1	5.6
Kimberley	Grass	24.1	13.9	-	-	-	10.1
Kimberley	Metal	6.8	18.3	-	-	1.3	8.7
Burnt Brick	Grass	-	0.4	-	-	-	0.2
Burnt Brick	Metal	-	0.6	-	-	-	0.3
Concrete	Grass	0.4	0.2	-	-	-	0.2
Concrete	Metal	2.9	-	-	-	-	0.6
Other		3.8	5.2	-	-	-	2.7
TOTAL		100.0	100.0	100.0	100.0	100.0	100.0
NUMBER		237	479	98	168	244	1,226
SAMPLE		237	479	26	42	76	

At Shillinga Kaseba 30.9% of the houses were of Kimberley construction, 6.8% of the total were Kimberley with metal roof. At Old Market Farm thatched pole and dagga was the common type of construction (57.7%), Kimberley Brick with metal roof was the second choice (18.3%). Only nine houses in all, eight of them at Shillinga Kaseba, were made of the much more expensive cement block.

The wide range of construction materials used by the squatters studied may have an economic bearing, but certainly concept of self is also a determining factor. As long as building materials are at hand, almost literally for the taking (be it earth and poles from the land, or cement and roofing from the construction companies), economics seem to be a secondary factor. Less tangible considerations seem to dictate the choice.

In spite of the variety of building materials, the general condition of upkeep was remarkably uniform, there being only slight variation from the norm--neat and tidy.

What Size

Three measures of the size of the home were taken (Table XXVI). First was the plinth area, being the total plinth area of all the

buildings used by one family. Second was a tabulation of the number of buildings or units, and the number of rooms which made up the home. Third was an estimate of the open space used by the family. This was defined as the swept space around the buildings. Garden space will be discussed under the section on agriculture.

House sizes showed a fairly uniform distribution throughout the five areas studied. The average plinth area was 285 sq. ft. at Shillinga Kaseba; 269 sq. ft. at Old Market Farm; 267 sq. ft. at Federici; 292 sq. ft. at Zecco; and 291 sq. ft. at Solel Boneh.

The oldest area, Shillinga Kaseba, had a higher proportion of houses (17.3%) under 100 sq. ft. in plinth area than any of the other settlements. If the category of houses under 150 sq. ft. is considered then again Shillinga Kaseba stands out as the place of small houses. However, one finds that the range of houses from 200 sq. ft. to 900 sq. ft. is fairly uniform in each of the groupings. The median house size was in the category 201 to 300 sq. ft. and the average house had a plinth area of 275 sq. ft.

TABLE XXVI

PERCENTAGE OF HOUSES OF SPECIFIED TOTAL PLINTH AREA
(ONE OR MORE BUILDINGS)

SQUARE FEET	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Less than 100	17.3	12.1	11.6	-	2.6	9.5
101 - 150	21.1	17.4	23.1	2.4	14.5	16.0
151 - 200	16.4	23.5	26.9	7.1	17.1	19.1
201 - 300	20.0	23.9	23.1	59.5	39.5	31.0
301 - 400	10.5	9.8	7.7	21.4	19.8	13.3
401 - 500	5.5	5.0	-	2.4	3.9	4.1
501 - 600	2.5	2.0	-	4.8	1.3	2.2
601 - 700	1.7	1.0	-	2.4	-	1.1
701 - 800	1.7	1.0	3.8	-	-	1.1
801 - 900	0.8	0.2	-	-	-	0.2
901 - 1000	-	-	-	-	-	-
1001 - 1100	-	-	-	-	-	-
1101 - 1200	-	-	3.8	-	-	0.3
1201 - 1300	-	-	-	-	-	-
More Than 1300	1.7	0.6	-	-	1.3	0.8
Not Stated	0.8	2.9	-	-	-	1.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

When considering housing standards, of more significance than the area of the house is the number of buildings and rooms making up the home.

There were more squatter families of Kafue living in one-roomed structures than any other floor plan. The range was from 35.4% at Shillinga Kaseba to 71.4% at Zecco. The next most common floor plan was two buildings of one room each. There were 360 such homes, or 29.4% of the total. Seventy families lived in three one-roomed structures; eight families in four one-roomed structures, and one family lived in seven one-roomed buildings. A total of 1,024 families, or 83.5%, lived in structures where each room was a separate building. Only 113 families lived in homes that had two or more rooms under one roof. The largest house had six rooms.

For the area as a whole there was an average of 1.8 rooms per family, or in other words there were about 2.1 people per room.

TABLE XXVII

NUMBER OF HOUSING UNITS COMPOSED OF
SPECIFIED NUMBER OF ROOMS AND BUILDINGS

ROOMS	1	2	3	4	5	6	7	TOTAL ROOMS	FAMILIES
1	582							582	582
2	80	360						880	440
3	25	34	70					387	129
4	5	16	21	8				200	50
5	2	2	4	2	3			65	13
6	1	1	1	1				24	4
7			2	1	1		1	35	5
8				1				8	1
9		1					1	18	2
TOTALS:									
ROOMS	853	911	334	63	22	-	16	2,199	-
FAMILIES	695	414	98	13	4	-	2	-	1,226
BUILDINGS	695	828	294	52	20	-	4	-	

How Large the Lot

While the number of persons per room is a fair indication of housing pressure throughout the world, it is not as significant an indicator in Zambia. A great deal of living is done out of doors, hence the open space around the houses takes on major significance.

Except for Federici, which is built on a rather small "island" in a wide expanse which floods during the rainy season, the new communities had the largest cleared spaces--about 1300 square feet of swept area. At Shillinga Kaseba the open space averaged 1000 square feet, although a third of the homes fell into the 401 to 600 sq. ft. category; and over half of the houses were surrounded by less than 600 sq. ft. of swept area.

At Shillinga Kaseba houses were relatively far apart and gardens were generally adjacent to the house. At the other extreme was Federici, where houses were located compactly, since much of the surrounding area was under water during the rainy season, and gardens worthy of the name were not to be found.

Comments from the people indicated that they valued open space for the privacy it affords. Some had let newcomers know that they did not want another house close by. Others indicated a willingness to share the area. In a few instances standing water during the rains dictated the location of the house, sometimes a well-established path or road perpetuated a space relationship.

A sketch map was made of each family holding. These maps were done on a grid 120 feet square. The center of the home was placed in the center of the grid. It is perhaps significant that less than 5% of the maps showed another home encroaching on the grid.

It should not be inferred from these figures that lots of 1440 square feet in an urban setting would provide people with the space they would choose if left on their own. If Zambia is to develop a culture of its own and not drift by default into the culture of Urbanized Twentieth Century, a careful study of the objective and subjective use of space should be made and the findings incorporated into all urban planning.

TABLE XXVIII

PERCENTAGE OF HOUSES HAVING SPECIFIED CATEGORIES OF CLEARED AREA SURROUNDING THE BUILDINGS

SQUARE FEET	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Less than 150	1.3	0.2	-	-	-	0.4
151 - 200	2.5	1.8	3.8	-	-	2.0
201 - 400	15.6	7.3	38.5	9.5	5.3	11.4
401 - 600	33.6	16.3	11.6	4.7	15.8	17.6
601 - 800	8.4	8.9	7.7	4.7	3.9	7.2
801 - 1000	2.1	8.3	11.6	7.2	6.6	6.9
1001 - 1200	4.2	7.9	11.6	23.1	23.7	12.8
1201 - 1400	0.8	6.2	-	14.8	14.5	7.3
1401 - 1600	5.9	2.3	-	2.2	2.6	2.9
1601 - 1800	0.8	2.5	-	-	3.9	1.9
1801 - 2000	3.8	9.9	3.8	9.5	1.3	6.5
More Than 2000	18.5	22.6	-	14.8	21.1	18.9
Not Stated	2.1	5.2	11.6	9.5	1.3	4.9
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

What It Cost

Perhaps the chief limiting factor in providing housing in the urban world is the cost. In economic terms the people surveyed certainly had the shelter problem solved. (Table XXIX) 56.4% stated that they had made no cash expenditure for their house. At Federici, Zecco and Solel Boneh those spending nothing for their houses were 61.5%, 81%, and 84.4% respectively. Only 36% of Old Market Farm found free housing, while 46% of the Shillinga Kaseba families were housed without cash outlay. No one in the Federici, Zecco or Solel Boneh areas paid more than K30 for shelter; although 15% of Old Market Farm homes and 13.4% of those at Shillinga Kaseba cost more than this amount.

TABLE XXIX

CAPITAL EXPENDITURE, BY CATEGORIES, ON THE PRESENT HOME

COST	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
K 0.0	46.0	36.0	61.6	81.0	84.4	56.4
0.01 - 5.00	16.8	15.2	30.8	11.8	2.6	13.9
5.01 - 10.00	10.9	14.1	3.8	-	6.5	9.3
10.01 - 20.00	8.4	11.6	3.8	4.8	6.5	8.5
20.01 - 30.00	4.2	7.5	-	2.4	-	4.0
30.01 - 40.00	2.9	5.6	-	-	-	2.8
40.01 - 50.00	2.1	3.5	-	-	-	1.8
50.01 - 60.00	1.3	2.7	-	-	-	1.3
60.01 - 80.00	1.3	0.4	-	-	-	0.4
80.01 - 100.00	2.9	1.2	-	-	-	1.1
100.01 - 150.00	0.8	1.0	-	-	-	0.6
150.01 or More	2.1	0.6	-	-	-	0.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

The self-help factor seemed to be largely responsible for the economy of housing. Two thirds of the houses in Shillinga Kaseba and Old Market Farm were built by the occupants. Self-help was an even larger factor in the other three areas, with the peak being at Zecco where 95.3% of the houses were constructed by the occupants. Close to a third of the families in the two older areas purchased their houses or hired someone to build them, whereas the bought house was relatively rare in other areas.

This cultural practice of acquiring shelter by the sweat of one's brow could be viewed as an obstacle in solving the housing problem in Zambia. Some squatters around urban centers have in fact given up Council housing because they were not psychologically ready to pay money for shelter. However, many other families coming to the urban complex could

find no shelter available from any source except to build their own in squatter areas. Consequently there is no housing shortage in Zambia, since each family builds its own. Coupling this fact with the aided self-help housing technique which incorporates necessary services could be one of the means for upgrading the nation's housing standard.

Only 33 families out of 1226 paid rent. Almost without exception these families were new arrivals in Kafue. Fourteen of these were at Shillinga Kaseba, and 19 at Old Market Farm. Thirteen of the rentals were for K3 or less per month, twelve were between K3.01 and K4 per month, and eight ranged up to a high of K10 per month. The few renters and the amount of rent paid indicates that "landlordism" has not penetrated Kafue as it has some of the other urban areas of Zambia.

What Tenure

In the mind of the general public the act of squatting is associated with the illegal possession of land. In this survey an attempt was made to learn what the squatter thought about the acquisition of land for a house.

Very few people had any idea who owned the land on which they lived. Some thought they knew, but in fact the land belonged to another party. 87.3% thought they were on State land when in fact only 11% lived on State land. 9.2% thought they lived on private land when in fact 89% were on private land. Eleven families had no idea who owned the land and had made no attempt to ascertain ownership. Even among those who thought they knew, little effort was made to seek any kind of permission to build. 70.3% stated they had not asked for authority to build. The most common source of authority was from the employer. Some of the more recent arrivals (3.8%) stated they had received permission to build from the "head man" of the area; 2.5% asked permission of U.N.I.P.; and 2.1% said the Township Council had given them permission to build. In actual fact Old Market Farm, Federici, Zecco and Solel Boneh are on land owned by Kafue Estates. Two-thirds of Shillinga Kaseba is private land, the balance State land.

The general impression gathered by the interviewers was that building a house in the vicinity of other traditional houses is a normal and natural act. European concepts of land tenure are not part of the thinking of the people. Therefore there is no conscious or subconscious feeling of transgression associated with the act of squatting in an urbanizing area.

THE AMENITIES

Where to Water

A home consists of much more than the shelter structure. The availability of water is a most significant factor.

At Kafue it was not considered unreasonable to carry the family water a mile or more (Table XXX). Generally speaking people would walk further for a piped supply of water, even though water was available from a well closer at hand. The 18% of Shillinga Kaseba who lived near the river preferred this source. Nearly three-fourths of the people of Old Market Farm and a quarter of those at Shillinga Kaseba were so far from any piped water supply that they preferred to use the wells in the vicinity of their houses. Without exception these were shallow open wells. During the latter part of the dry season most of them go dry and it becomes necessary to dig deeper. During the rainy season the water stands almost at ground level. Most of the wells had a ridge of earth around them to prevent surface water from running in. A few of the wells had a concrete slab over the top, with a hole through which the bucket was lowered.

TABLE XXX

PERCENTAGE OF HOUSEHOLDS GETTING WATER FROM CATEGORIZED SOURCES

SOURCE OF SUPPLY	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Local Well	25.1	72.6	3.9	33.3	-	38.0
Local Tap	41.1	2.0	96.1	66.7	100.0	45.3
Council Suburb	14.1	1.6	-	-	-	3.4
Railway Station	-	21.8	-	-	-	8.6
River	18.1	1.0	-	-	-	3.9
Not Stated	1.6	1.0	-	-	-	0.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

The amount of water carried to the house varied greatly from family to family (Table XXXI). Estimates of the amount used were based on the size of containers and the number of trips made daily. It was estimated that the average family used about 13 gallons per day. In addition to the water carried to the house there was a certain amount used at the source for laundry and bathing, but no attempt was made to estimate this amount.

In spite of the seasonal variations of water in streams and wells there seemed to be little change from one source to another for the rainy season or the dry season.

The people living at Federici, Zecco, and Solel Boneh had the advantage of a piped water supply, although it was only one tap in each area. About 4% of the families at Federici and about a third of those at Zecco preferred to use the open wells near their houses.

TABLE XXXI

PERCENTAGE OF FAMILIES CARRYING SPECIFIED AMOUNTS OF WATER TO THE HOUSE EACH DAY

GALLONS PER DAY	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
2	0.8	0.8	-	-	-	0.5
4	5.9	7.3	-	2.4	1.3	4.6
6	0.8	9.3	3.9	-	3.9	5.0
8	16.2	14.8	23.1	9.5	14.5	15.0
10	8.4	8.5	3.9	21.4	17.1	11.7
12	23.2	21.8	19.2	33.3	34.3	25.9
14	0.8	3.3	-	4.8	-	2.1
16	28.1	20.8	42.3	21.4	17.1	23.3
18	2.9	4.5	-	-	1.3	2.6
20	5.4	5.2	7.7	7.2	6.6	5.9
22	-	-	-	-	-	-
24	2.1	0.4	-	-	-	0.6
26	0.4	0.2	-	-	-	0.1
28	-	-	-	-	1.3	0.2
30	0.8	0.4	-	-	-	0.3
More Than 30	1.3	0.6	-	-	-	0.5
Not Stated	2.9	1.6	-	-	2.6	1.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

Conveniences

The disposal of human wastes in squatter areas has not been formalized in terms of modern concepts of sanitation. At the time of the survey there was not a single latrine in the three areas of Federici, Zecco and Solel Boneh. However, about 6% of the homes at Shillinga Kaseba and Old Market Farm had latrines. A special place for bathing was three times as common as the latrine at Shillinga Kaseba, but only 23 homes (4.8%) at Old Market Farm had bathing enclosures. Zecco also had 4.8% homes with bathing enclosures, but there were no such facilities at Federici or Solel Boneh.

The absence of latrines in squatter areas may be a factor affecting the open space between homes. This space is used as repository for human wastes. Whether or not the store of folk knowledge has determined a space-use ratio for optimum sanitation would make an interesting bit of public health research. The pressure on the use of land in urbanizing areas most assuredly would disrupt the ratio. Changes in the physical facilities for sanitary purposes would therefore have an effect on the elimination-sex mores of the society. These changes become part of the subtle process of urbanization and should be given serious consideration in any project dealing with rehousing squatters.

Kitchens in the European sense of a room reserved for the preparation of food are not a part of the typical squatter home. About a third of the families had some form of structure for this purpose; however, most families used the open space around the house. Wind, sun, and the season determined just where the cooking would be done for any particular meal. During the rains the cooking fire was moved inside the house. This use of the open space permits a comfort which would be sacrificed if urbanization brings changes in house styles before it brings a change in fuels used.

What Fuel

Wood gathered from the surrounding area was the principal fuel for 80.8% of the squatters. The demand on this traditional source of fuel is already showing up in the denuding of the forested area around Kafue. The continued pressure of urbanization could have disastrous effects upon the area's ecology.

Some families (the 11.3% who used charcoal and the 4.5% who used paraffine) had already found the chore of fuel gathering too time consuming and strenuous.

For lighting, the wax candle was the choice of 61.8% of the people, while 33.7% used a paraffine lantern. A small number (4.5%) did not use any means of artificial light.

The desire for electricity expressed by a few residents at Shillinga Kaseba and Old Market Farm was probably for lighting purposes. However, from the point of view of conservation of forest cover and the need for a ready supply of cheap fuel, the necessity for providing electricity to the resettlement areas becomes apparent.

To Market

The urban dweller cannot depend upon raising and gathering food; therefore the cash he receives from employment must be converted into food. Through fairly stable habit the people tended to patronize particular shops. The contributing factors were complex and outside the scope of this survey. However, an attempt was made to determine where people shopped for food in relation to the place of abode (Table XXXII). In both Shillinga Kaseba and Old Market Farm people tended to drift toward the center of town for shopping.

Although the people of Shillinga Kaseba live much closer to the shops of Nangongwe Suburb (Map, 3a) than to those on Main Street, it was found that 95.9% preferred to shop in town. In fact, 20.7% of the replies mentioned a particular store by name. The Suburb and Main Street are about equally distant from the Old Market Farm area. Without a decided advantage of distance, it was found that 35.4% shopped at the Suburb, and 88.8% preferred Main Street. Here again a particular store was mentioned by 13.5% of the people.

TABLE XXXII

PERCENTAGE OF HOUSEHOLDS SHOPPING AT SPECIFIED PLACES

PLACE	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Suburb	2.5	35.4	53.8	4.8	9.2	18.9
Township Center	75.2	75.3	46.2	4.8	17.1	50.0
Khosa Store	20.7	13.5	-	4.8	3.9	10.6
Zecco Area	-	-	34.6	-	2.6	2.3
Solel Boneh Area	-	-	11.5	59.0	46.2	16.0
Textile Mill Gate	-	-	-	24.0	23.7	7.1
Zecco Gate	-	-	-	9.5	13.2	3.5
Peddlers	-	0.4	-	-	-	0.1
Other	1.6	1.6	-	-	-	0.8
TOTAL	100.1	126.2	149.1	106.9	115.9	109.3
NUMBER	237	603	147	180	282	1,449
SAMPLE	237	479	26	42	76	

There were peddlers serving these areas with a few items but only two families mentioned them as sources of supply.

The compounds of Federici, Zecco and Solel Boneh are located about three miles from the town center. Federici is closest to town, and here it was found that 53.8% used the Nangongwe Suburb markets, while 46.2% used Main Street; the shops in adjoining Zecco were mentioned by 34.6%, and 11.5% patronized the shop at Solel Boneh.

At Zecco only a token number mentioned the town shops, while 59% used the shops at Solel Boneh, and 24% used the shop just outside the gate of the textile mill.

The shoppers at Solel Boneh were most cosmopolitan of all: 26% used the town shops, 13.2% shopped at the store near the Zecco construction yards, 23.7% bought from the store near the textile mill, and 46.2% patronized the shops in their community.

What Health Care

Illness is a common phenomenon of man; therefore health services become an important aspect of the housing facilities for every urbanizing area. There is no hospital in Kafue. The Rural Health Clinics are the dispensers of scientific medicine in the area. 88.4% of the families used these services, while 9.3% relied on home treatment and 3.1% reported using the traditional doctors. These figures hardly account for the number of persons seen around the shelter of a traditional healer at Old Market Farm, but perhaps his practice was made up of patients from rural areas and Rhodesia, as the interviewers maintained.

TABLE XXXIII

PERCENTAGE OF HOUSEHOLDS USING SPECIFIED HEALTH SERVICES

HEALTH SERVICE	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Rural Health Center	91.6	93.4	88.8	100.0	85.7	92.0
Traditional Doctor	-	4.8	-	23.8	5.3	6.2
Self-administered	0.8	1.7	15.3	-	5.3	3.1
Hospital	1.7	1.7	-	-	1.2	1.2
Other	5.9	2.9	3.6	-	4.1	3.3
TOTAL	100.0	104.5	107.7	123.8	101.6	105.8
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

The Food Supply

The rainy season had started long before the survey got under way. The general impression was that all the space between every living area was being utilized for garden. Actually only 62.3% of the families reported having gardens. Almost without exception the gardenless families were recent arrivals. Shillinga Kaseba with its population of "old-timers" had the highest proportion (80.7%) of garden owners, followed by Old Market Farm (67.6%), Zecco (57%), Solel Boneh (52.7%), and Federici trailing with only 27% of the families having a garden.

The preferred location for a garden was adjacent to or within sight of the house (Table XXXIV). This was true of all gardens at Zecco.

TABLE XXXIV

OCCURRENCE OF RAINY SEASON GARDENS, BY DISTANCE FROM HOME SITE; IN PERCENT OF HOUSEHOLDS

DISTANCE	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Adjacent to House	74.5	65.2	23.1	57.0	50.1	59.7
Within 1/2 Mile	4.2	0.4	-	-	1.3	1.2
Within 1 Mile	0.8	0.4	3.9	-	1.3	0.8
Within 2 Miles	0.4	-	-	-	-	0.1
Within 3 Miles	-	-	-	-	-	-
More than 3 Miles	0.4	1.0	-	-	-	0.5
No Garden	19.3	32.4	73.0	43.0	47.3	37.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

14% of the Federici gardens were a mile or so from the settlement because all of the nearby land is under water during the rains. This may have been as much a factor in the low incidence of gardens in the construction areas as the recent arrival of the people. The more distant gardens of the Shillinga Kaseba residents could be attributed to the fact that they had recently been shifted from their homes to make room for the sewerage disposal plant, but their gardens remained in the old location.

The larger gardens were usually some distance from the house due to population pressure.

The size of garden plot is an important factor in the economic life of the people (Table XXXV). The limited amount of land above water in the vicinity of the construction villages is certainly one reason for the small gardens in these areas (1/4 acre or less). Shillinga Kaseba, with its more favorable location, had a large proportion (70%) of its gardens of 3/4 acre or more; nearly one gardening family in ten had five or more acres under cultivation. Old Market Farm, the area which includes both "old-timers" and a new influx, seems to have forfeited part of its agricultural land to urban expansion: only 25% of the gardens were 3/4 acre or more in size.

TABLE XXXV

OCCURRENCE OF RAINY SEASON GARDENS, BY AREA IN CULTIVATION, IN PERCENT OF HOUSEHOLDERS

CATEGORY	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
1/4 Acre or Less	7.9	40.0	77.0	79.1	51.6	40.1
1/2 Acre	12.1	23.8	11.5	4.2	43.8	21.3
3/4 Acre	1.0	6.8	-	12.5	2.3	5.1
1 Acre	18.3	9.6	-	4.2	-	9.2
1-1/2 Acres	7.3	2.5	-	-	-	2.9
2 Acres	10.5	3.4	-	-	2.3	4.4
3 Acres	6.8	0.3	-	-	-	1.8
4 Acres	7.9	0.9	-	-	-	2.4
5 Acres	0.5	0.3	-	-	-	0.3
Larger than 5 Acres	8.9	1.2	-	-	-	2.7
Unspecified	18.8	11.2	11.5	-	-	9.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER	191	323	26	96	128	764
SAMPLE	191	323	7	24	40	

Maize was the favorite crop, being grown by 95.2% of the gardeners (Table XXXVI). Pumpkins (56.5%) were the next most popular; both leaves and fruits are eaten. Ground nuts are a strong favorite (33.5%) with the "high land" dwellers at Shillinga Kaseba, but barely represented in the lower areas. Sweet potatoes and tomatoes were also popular. Other crops were of relatively little significance.

Many of the families in the two older areas indicated that they sold some of their garden produce, but the data collected did not give a clear picture of the value of this produce.

TABLE XXXVI

PERCENTAGE OF FAMILIES GROWING SPECIFIED CROPS

CROP	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Maize	92.8	96.0	71.5	100.0	97.6	95.2
Pumpkin	47.1	54.2	28.6	91.8	55.0	56.5
Sweet Potato	28.3	22.9	28.6	25.0	27.5	26.3
Tomato	7.3	12.4	-	49.0	44.9	20.8
Ground Nuts	33.5	7.7	-	8.3	4.5	13.5
Beans	17.8	9.3	-	4.1	2.3	9.3
Cabbage	3.7	2.2	-	-	-	1.9
Peas	0.5	0.6	14.3	-	-	0.9
Irish Potato	1.4	0.3	-	-	-	0.4
Banana	0.5	0.6	-	-	-	0.4
Cassava	0.5	0.3	-	-	-	0.3
Mango	0.5	-	-	-	-	0.1
NUMBER	191	353	26	96	128	764
SAMPLE	191	353	7	24	40	

In addition to gardens there was evidence that some livestock was raised. Chickens were a fairly common occurrence, 28.9% of the families owning one or more birds. The incidence at Shillinga Kaseba was greatest, where 43% owned chickens. In total, 355 families reported owning 2,485 birds, of which only 479 were kept in pens. In addition to the chickens kept at Kafue, 658 birds were reported as left in the home village. There were also 296 doves and 105 ducks reported.

Of the smaller mammals, goats were most common. Eighty-one families owned 527 goats, of which only 24 were in Kafue. Fourteen of these were in Shillinga Kaseba and ten at Old Market Farm.

Cows were kept by only 11.2% of the families. Of the 1,285 animals owned by 137 families, only 22 were on range near Kafue; the remaining 1,263 head were at the home village. The 22 cows kept locally were all owned by families living at Shillinga Kaseba. In addition, residents of Shillinga Kaseba owned 40 cows in custody of relatives in the home village. Forty-six families at Old Market Farm (9.6%) had 297 cows at the village; thirty-eight Solel Boneh families (15.8%) owned 431 cows; and forty Zecco families (23.8%) owned 495 cows. None of the Federici families reported owning cattle.

Customarily livestock is considered as savings, and not thought of as current operating capital. More will be said about this under the subject of planning for new houses.

Gardening and small livestock must be looked upon as current income for people in transition from the village culture to urban existence. However these sources do not supply all the family food. On inquiry it was learned that quite a list of foods are regularly purchased (Table XXXVII).

Mealie meal was purchased by 95.1% of the families. This varied from 100% at Federici and Zecco, to only 92.8% at Shillinga Kaseba, where gardening took on significant proportions for 11% of the people. Bread was a regular purchase for 63.5% of the families, but by area there was considerable variation--ranging from only 19.3% at Federici to 93% at Zecco. Beans and vegetables were high on the grocery list for the industrial tracts, but of less importance in the older compounds.

TABLE XXXVII

PERCENTAGE OF FAMILIES REGULARLY PURCHASING SPECIFIED FOOD ITEMS

FOOD	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Mealie Meal	92.8	96.8	100.0	100.0	98.7	95.1
Bread	57.5	59.7	19.3	93.0	73.6	63.5
Fish	25.6	53.0	96.0	66.6	70.5	54.7
Beans	6.9	24.9	57.6	71.5	57.9	35.9
Vegetables	12.6	28.6	45.2	66.6	48.7	35.2
Meat	18.9	37.0	42.3	35.7	39.4	33.5
Sugar	15.1	24.3	11.5	40.5	34.2	25.6
Oil	2.5	18.9	15.4	35.7	32.2	19.9
Margarine	1.7	5.0	3.8	7.1	5.3	4.6
Milk	3.3	5.0	3.8	-	2.6	3.3
Eggs	0.4	1.2	3.8	-	2.6	1.3
NUMBER	237	479	98	168	244	1,226
SAMPLE	237	479	26	42	76	

A PROFILE

In summary it might be said that the pre-Independence squatter of Kafue lives under conditions very similar to the new arrival: he lives in a one-roomed pole and dagga house with a thatched roof, having approximately 285 square feet of floor space, and sitting in a cleared area of about 1,300 square feet. He built the house himself at a cost of less than five kwacha. The land on which the house stands does not belong to him, a fact that gives him little concern. His wife must carry 13 gallons of water to the house each day, often from a piped supply at least a mile away. The open "bush" between houses serves as the latrine. There is no special enclosure for bathing. The cooking is done in the open, over a wood fire. Shopping is done "on Main Street" or in the "market," for a limited list of foodstuffs. When ill he uses the services of the Rural Health Center. There is ample choice of religious expression in the area. A garden is an important feature of the household, substantially supplementing the family income.

THE DREAM

One of the humanizing attributes of man is his propensity to dream. It is perhaps this characteristic more than any other which has prompted man to migrate across the face of the earth. It is no less the characteristic of the man who leaves his rural village for the promise of Kafue. A new and better house is often part of the dream world of urbanizing man.

How Many Dreamers

To the question: "Are you planning to build another house?" the replies from the different areas varied greatly. 70% of the people at Shillinga Kaseba were thinking about another house; 44% of those at Old Market Farm had building in mind; as did 34.6% of the residents of Federici. In contrast to the first three areas, it was found that only 9.2% of the families at Solel Boneh were looking forward to new houses, and no one at Zecco was dreaming of a new home.

The high proportion of families at Shillinga Kaseba planning a new home could be attributed to the fact that about 50 families had recently been moved off the site of the new sewerage disposal plant. Neighbors may have anticipated a similar forced move. The displaced families had been given a vague promise of participation in a site and service scheme. Conversations with these people indicated that circumstances made them ever conscious of the need to plan for a new house. To meet the needs of those who were planning a new house 436 plots serviced to the national standard are needed.

The interviewers reported many comments to the effect that future plans depended upon the job situation. Perhaps this could account for the small percentage of families at Federici, Zecco and Solel Boneh who were planning new homes. If these folks felt any job security, or were even aware that construction at Kafue Estates might be more or less continuous for the next twenty years, they might have answered this question differently. One might conclude that a population attracted to a new urban complex and engaged as day labor is not planning for long range housing, because the traditional house in a squatter area too easily satisfies the need for shelter.

Why

Of the 436 families (35.6% of the total) stating they were planning new houses, 412 gave reasons for their plans which fell into the following categories:

SIZE			
Want a larger house	211		
Have a big family	16		
Have many visitors	4		
Rooms to rent	3	234	
Poor condition of present house		95	
Desire a better location		5	
Just want a nice house		78	412

Size was the motivating factor for about 57% of those giving reasons, and pride of ownership was the stimulus for the rest. Just a touch of landlordism has crept into the culture: three families wanted rooms to rent.

TABLE XXXVIII

PERCENTAGE OF FAMILIES PLANNING HOUSES
OF SPECIFIED PLINTH AREA
Shown as a percentage of those planning a new house

PLINTH AREA IN SQUARE FEET	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Less than 100 Sq.Ft.	5.5	1.5	-	-	33.3	3.8
101 - 150 Sq.Ft.	5.5	5.6	13.3	-	-	6.0
151 - 200 "	15.9	17.0	-	-	-	14.8
201 - 300 "	37.1	28.3	73.4	-	33.3	35.2
301 - 400 "	14.0	19.5	13.3	-	-	16.3
401 - 500 "	3.7	11.3	-	-	-	7.4
501 - 600 "	6.7	2.0	-	-	33.4	4.5
601 - 700 "	0.6	1.5	-	-	-	1.0
701 - 800 "	1.2	3.1	-	-	-	2.0
801 - 900 "	-	3.1	-	-	-	1.5
901 - 1000 "	-	-	-	-	-	-
1001 - 1100 "	-	-	-	-	-	-
1101 - 1200 "	-	0.5	-	-	-	0.2
1201 - 1300 "	-	1.0	-	-	-	0.5
More than 1301 Sq.Ft.	9.8	5.6	-	-	-	6.8
TOTAL	100.0	100.0	100.0	-	100.0	100.0
NUMBER	164	195	30	0	9	398
SAMPLE	164	195	8	0	3	

How Big

Frequently when asked the size of house desired the dimensions given were only about 10% larger than the existing house. This hardly seems adequate to meet the stated criteria: more space.

By comparing the sizes of existing houses (Table XXVI, Page 34) with sizes of planned houses (Table XXXVIII) the trend to larger homes is clearly seen. The number of rooms desired in the new house takes a decided jump over present accommodations (Table XXXIX). This change is in keeping with the stated desire for "a place for the boys and girls to sleep," "a room for visitors," etc. The apparent inconsistency between the wish for more space and the diminutive rooms which would result from the projected planning should not cause concern here. This merely reflects the lack of experience in space relationships and house planning.

TABLE XXXIX

PERCENTAGE OF FAMILIES DESIRING SPECIFIED NUMBER OF ROOMS
Shown as a percentage of those planning a new house

NUMBER OF ROOMS	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
1	9.2	5.2	-	-	13.6	6.7
2	15.9	28.2	67.8	-	-	24.9
3	25.0	40.8	32.2	-	45.6	34.5
4	29.2	17.4	-	-	-	19.8
5	8.5	4.2	-	-	13.6	6.0
6	9.2	2.3	-	-	27.2	6.0
7	0.6	0.5	-	-	-	0.5
8	1.2	0.9	-	-	-	0.9
More than 8	1.2	0.5	-	-	-	0.7
TOTAL	100.0	100.0	100.0	-	100.0	100.0
NUMBER	164	213	34	0	22	430
SAMPLE	164	213	9	0	7	

How Well Constructed

TABLE XL

PERCENTAGE OF HEADS OF HOUSEHOLD RESPONDING WHO
PREFERRED SPECIFIED BUILDING MATERIAL FOR A NEW HOUSE

MATERIAL							ALL
WALLS	ROOF	SK	OMF	FEDER	ZECCO	SOLEL	AREAS
Grass	Grass	0.6	-	-	-	-	0.2
Pole & Dagga	Grass	12.0	3.2	-	-	14.4	7.1
Pole & Dagga	Metal	1.8	0.5	-	-	-	0.9
Kimberley	Grass	9.0	5.5	-	-	-	6.4
Kimberley	Metal	65.2	81.1	100.0	-	42.8	73.9
Burnt Brick	Grass	0.6	0.9	-	-	-	0.7
Burnt Brick	Metal	0.6	3.8	-	-	-	2.1
Concrete	Metal	9.0	1.8	-	-	42.8	6.6
Other		1.2	3.2	-	-	-	2.1
TOTAL		100.0	100.0	100.0	-	100.0	100.0
NUMBER		167	217	18	0	21	423
SAMPLE		167	217	5	0	7	

At the time of the survey 60% of the families lived in houses constructed of pole and dagga with thatched roof, whereas only 7.1% of the

"dream houses" would be of this construction. 73.9% wanted a Kimberley Brick house with metal roof. At the time of the survey only 8.7% of the families lived in houses of this standard, and only 1.3% lived in houses of higher standard. Now 11.5% of the families are thinking of housing of higher standard than metal-roofed Kimberley Brick. These figures indicate something of the aspirations of the people.

How Expensive

This study reveals that 56.4% of the families paid nothing and 95.9% of the people paid less than K50 for their present homes. When these same people were asked how much they expected to pay for the houses they were planning, of the 35.6% responding the average estimated cost was K186. The mean was K150. At Shillinga Kaseba the average was K213, with a mean of K125. The people at Old Market Farm showed more conservative estimates, with an average of K169 and a mean of K150. Of the 18 families at Federici who speculated on the cost of a new house, the average was K135 and the mean was K150. As can be seen from the charts, no one at Zecco was planning a new home, and only 3 at Solel Boneh hazarded a guess as to cost. Nevertheless these three estimated the cost to be K150.

TABLE XLJ

ESTIMATED CAPITAL EXPENDITURE FOR A NEW HOUSE
Shown as a percentage of those expecting to pay specified amounts

ESTIMATED COST	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
K 0.01 - 50.00	30.8	9.3	-	-	-	18.3
50.01 - 75.00	2.2	4.7	-	-	-	3.3
75.01 - 100.00	15.4	20.7	22.2	-	-	18.3
100.01 - 125.00	2.2	1.3	22.2	-	-	2.9
125.01 - 150.00	8.1	26.0	55.6	-	100.0	20.5
150.01 - 200.00	8.1	21.4	-	-	-	14.0
200.01 - 250.00	11.1	8.6	-	-	-	9.0
250.01 - 300.00	6.6	2.0	-	-	-	3.9
300.01 - 400.00	7.4	2.0	-	-	-	4.2
400.01 - 500.00	0.7	3.3	-	-	-	2.0
500.01 - 600.00	1.5	0.7	-	-	-	1.0
600.01 - 700.00	0.7	-	-	-	-	0.3
700.01 - 1000.00	1.5	-	-	-	-	0.7
1000.01 or More	3.7	-	-	-	-	1.6
TOTAL	100.0	100.0	100.0	-	100.0	100.0
NUMBER	136	150	18	0	3	307
SAMPLE	136	150	5	0	1	

The amounts estimated for new homes by most of the families are not sufficient to purchase the materials for the simplest house plan suggested for the Government-sponsored Site and Service Scheme. However, the significant fact is that the home planners are ready and willing to invest in new homes many times the cost of their present housing. Whereas 95.9% of the squatters surveyed paid less than K50 for their present shelter, 95.5% of those planning new homes estimated the cost would be K75 or more.

What Facilities

When asked what things they wanted in their new homes most people said they just wanted a house, but occasionally there was more elaboration (Table XLII). 276 families or 22.5% of the squatters expressed a desire for specific items. Doors, a stove, and many rooms were each mentioned five times. There were 15 requests for metal roofs. 27 families at Old Market Farm wanted bathrooms, and 28 of their neighbors wanted cement floors. Electricity was mentioned by 26 families of Shillinga Kaseba and 15 families of Old Market Farm. The proximity to electric transmission lines may have had something to do with this frequency of choice, or it may have stemmed from the longer period of residence in an urban setting. Toilets were mentioned by 50 families. Not everyone took windows for granted as a basic part of a house; 55 families specifically requested them. The desire for an adequate kitchen was expressed by 70 households. By far the most frequently expressed desire (163) was for water at the house.

TABLE XLII

REQUESTS FOR SPECIFIED FACILITIES IN A NEW HOUSE
Shown as a percentage of those expressing a desire for any facility

DESIRED FACILITY	SK	OMF	FEDER	ZECCO	SOLEL	ALL AREAS
Water	60.0	62.5	50.0	-	40.0	59.0
Kitchen	7.6	24.0	100.0	-	60.0	25.4
Windows	10.5	26.3	-	-	60.0	20.0
Toilet	10.5	29.3	-	-	-	18.1
Electricity	24.8	11.3	-	-	-	14.9
Cement Floor	-	21.0	-	-	-	10.1
Bathroom	-	20.3	-	-	-	9.8
Metal Roof	11.4	2.3	-	-	-	5.4
Doors	1.9	-	-	-	20.0	1.8
Many Rooms	3.8	0.8	-	-	-	1.8
Stove	-	3.8				1.8
TOTAL	130.5	201.6	150.0	-	180.0	168.1
NUMBER	105	133	22	-	16	276
SAMPLE	105	133	6	-	5	

It is difficult to evaluate these desires. Did only five people wish for doors on their houses because everyone else assumed that any new house would have doors on hinges, or were these five expressions from people who did not yet have doors to their homes? Would only the 41 families mentioning electricity pay for connections if power was available, or would many others also want it? How many of the 163 wanting water meant running hot and cold water in the kitchen and lavatory, and a flush commode? It seems safe to assume that these expressions reflect a growing concept of the house as a machine which can enhance one's existence. Equally significant may be the developing concept of self: "I too can have what other urban dwellers have!"

Where

When people were asked where they would prefer to live, 62.2% of the household heads said "some place in the Kafue area." The responses at Shillinga Kaseba (62.7%), Old Market Farm (77.3%), and Federici (73.5%) showed general favor for Kafue; while at Zecco only 42.8%, and at Solel Boneh only 41.0% expressed a desire to remain. Conversely, only 4.2% of Shillinga Kaseba, 5.4% of Old Market Farm, and 11.2% of Federici preferred other towns. Most of Zecco (57.2%) and a large proportion of Solel Boneh (35.6%) preferred to live in some other town. This response may have been due in part to political tensions during the national elections, and in part to the comparison of Kafue amenities with those they had known in places of previous residence. Family ties could also have been involved in these responses. There were a number (15.5% of the total) who had no choice or said they were content to live wherever possible. On the other hand there were 25 at Shillinga Kaseba, 11 at Old Market Farm, and 3 at Solel Boneh who wanted to stay just where they were (3.2% of the total). The fact that only 4 respondents (0.3%) expressed a desire to return to the village might be an indication of just how difficult it would be to force squatters to rural areas.

A Profile

In summary it might be said that the long term squatter of Kafue is thinking about a new home to be built in the vicinity. He wants a three-roomed house of at least 300 square feet built to a standard equal to or better than Kimberley Brick with a corrugated iron roof. The house should be provided with running water, kitchen, doors, windows and a toilet. For this house he is prepared to pay about K140.

CONCLUSIONS

A survey such as this can have a certain academic value but its prime purpose should be to provide a substantive base for social planning. This base is made up in part by the specific data which can be recorded and tabulated in an objective manner, and in part by the subjective experience of those associated with the respondents. That which follows is therefore more than just an evaluation of the facts previously presented.

Kafue has been billed as the "Birmingham of Zambia." Already there is a nucleus for an industrial complex: a textile mill, nitrogen chemical plant, plastic boat factory, and a fish net manufacturer. After the survey started it was decided to place the automobile assembly plant elsewhere, but there is still active speculation that a steel mill will be located in or near Kafue. These activities may attract people from the more sparsely settled parts of the nation at a more rapid rate than the rural to urban migration already being experienced. However the major migration to Kafue can be expected from other line-of-rail towns (Table V, Page 11).

House building for new industrial and construction workers is not keeping pace with the demand, thus forcing many to erect their own shelter. Others find that their wages are not adequate to cover the costs of living and the established rents in the new housing estate. They too must build their own houses.

In the early stages of construction at Kafue people built a house wherever they chose. Often they built on a plot scheduled for development and were forced to move almost before the mud was dry. The powers that be found it necessary to designate the areas of Solel Boneh, Zecco and Federici for temporary housing. Land wardens were assigned responsibility for preventing building outside the specified areas. The pressure on these areas has been tremendous. The number of houses in these three construction areas increased by 16% in the month following completion of the survey.

The Size of the Problem

When thinking of solutions to national housing problems finances become a major consideration. Costs are not only the concern of government, they are also the concern of the individual family. Government has helped families meet housing costs through loans to participants in the Self-help Site and Service Scheme. This scheme assumes that the family will provide all or most of the labor which goes into building the home. The sweat equity in a self-help house is about equal to the capital invested. Thus a family building its own house during non-working hours adds more to the housing capital of the nation than it could possibly add to the economy during a like period of employment--no small contribution to nation building.

At Kafue the Council loan to participants in a self-help site and service scheme is K144. This is repayable over a period of four years at

K3.38 per month. In addition the home owner must pay a service charge on his plot which covers rates, a specified amount of water, refuse collection, and certain other costs, in the approximate amount of K3.00 per month. There is a rather universal and therefore somewhat inaccurate rule of thumb which states that low income families should not spend more than 20% of their income for shelter. Accepting this standard at Kafue would mean that families with a monthly income of about K35.00 could have a house using K144.00 worth of materials. Using this criterion we find that 30% of the squatters could not participate in such a scheme; about 30% of the people could have a very minimal house consisting of about 290 square feet of floor space, constructed of Kimberley Brick and roofed with corrugated iron sheets; about 40% could afford a house above this standard.

Of the families covered by the survey, 436 were planning a new house and could be considered potential participants in a self-help housing scheme. If these families were representative of the income categories of the Kafue squatters it could be said that 320 (70%) could afford to participate in a scheme costing about K6.00 per month. If all the squatters who did not state a wish to leave Kafue are considered then the housing need is for 992 families. On the basis of income 720 families could meet the obligations of the self-help site and service program. Actually every one of the estimated 1390 squatter families of Kafue are potential candidates for a home site with a degree of secure tenure. In the year that has lapsed since the taking of the survey and the publication of this report there has been a 50% to 100% increase in the number of squatters, making the need as of March 1970 in the magnitude of 2100 to 2800 housing units.

To the extent that shelter costs (rent plus electricity plus water) at Kafue Estates exceed 20% of wages earned, there will be even greater pressure on the squatter areas.

If alternative housing were available it is difficult to estimate the demand for home ownership, rentals, and subsidized housing for the marginal income families. But since the aided site and service scheme is the only solution on the horizon it is appropriate to examine variations of the program which could hasten a solution to the problem.

As a conservative estimate it is postulated that 2200 building sites are needed immediately and at least 250 will be needed each succeeding year. About 700 of the initial number should have the bare essential of piped water and be reserved for the lowest income families to build on as best they can. About 700 plots should be for those families who have sufficient income to participate in the self-help housing program, and the remainder of the plots should be completely serviced for those higher income families who prefer to have a contractor build their houses.

A Way to Alleviate It

The chief reason for squatter settlements is the fact that the people have no land tenure. They would invest in more permanent homes if there was any assurance that a bulldozer would not come tomorrow and destroy

their investment in money and labor. This phobia permeates the subconsciousness of squatters in all of the urbanizing areas of Zambia. All that is needed to cure this phobia and release the great resources of the people for the upgrading of the nation's housing standard is to give each squatter security of tenure.

The amount of land at the tenant's disposal is not of great significance to him. It does take on significance however in the long range planning.

It is part of the tradition of the Zambian to rebuild his home whenever the elements or insects have deteriorated it, or the size of the family demands expansion, or when his concept of self dictates a finer home. In the rural setting, where in essence land tenure and land use were synonymous, lot size was of no consideration. However in the urban setting lot size takes on cardinal significance.

Urban planners tend to consider costs of land and servicing plots as the principal criteria. This ignores some of the long range costs of urban blight and the consequent urban renewal spawned by crowding. Here in Zambia, where in essence the title to all land resides with the state, land costs are an artificial and arbitrary factor postulated on a colonial reference. Costs of servicing plots are a real factor but the method by which the pro-rata share is assigned to each plot is arbitrary and often reflects more capitalistic than humanistic thinking.

In those sections of town designed to eradicate the squatter problem lot size should be sufficient to permit certain of the traditional elements of the social structure to flourish. The first house on the lot might be relatively small but there must be room to permit the inevitable expansion dictated by increasing family size and/or affluence. If this growth cannot take place on the lot the family is forced to move to a part of town which allows this growth. Such movement relegates the area of small plots to the status of a slum. If the lots are of sufficient size each family will tend to keep its house up to the style set by the community as a whole. Alterations permit the area to periodically take advantage of changes in the technology of housing.

The necessary costs of servicing the area can also be paced to meet the advancing demands of the people. To begin with all that is required is a piece of ground to which the family has known tenure. A source of water is needed. Over a period of time the reticulation can be phased from one faucet for 20 families to water in each house. Sewerage can start with sanitary pit privies built by the people according to Government specifications. When financially feasible or politically expedient the local governing body can provide water-borne sewerage mains to which each family can connect. The streets and roads can grow in similar manner: first just lines on a map, then a grader cut, followed by a laterite road, and eventually a coating of tarmac.

From the survey of Kafue it seems that an individual lot size of at least 50 feet x 100 feet might meet the space criteria. The anonymous space between houses in the existing squatter areas is a unique characteristic of Zambian society. If this little understood phenomenon is not

to be obliterated by urbanization, adequate spaces must be provided in the form of play parks, irrigated kitchen garden parks, clinic areas, school grounds, sports areas, open markets, etc.

Modernization dictates that government must plan for certain facilities not currently in the active thinking of most squatters. While there is generally a desire for a convenient water supply, a faucet every two hundred yards would satisfy most people. However, provision should be made for the time when people will want water in the kitchen, toilet and bath, and irrigation taps in the front yard and kitchen garden. When water is brought to a location ample provision must also be made to carry the water away, hence an adequate sewerage system must be planned for. Electricity is the coming source of fuel. Soon people will learn that a kwacha's worth of electricity will do much more for them than a kwacha's worth of charcoal. Provision for this service should be incorporated in the original planning.

Transport is a service that people quickly become as dependent upon as breathing. At present various means of public transport are inadequately serving the people. Provisions for improvements need to be made. As citizens become more affluent they may acquire transport of their own: a bicycle today, scooter tomorrow, and a car next week. With this in mind the resettlement areas should include ready access to each plot for pedestrian, cyclist and motorist.

Servicing plots with all of these facilities becomes an important economic consideration. Choosing locations with these costs in mind should not overshadow the human considerations of such things as distance from jobs, shopping, schools and recreation. An examination of the locations of squatter areas in Zambia today shows that the housing pressure on an area is directly related to these factors. Resistance by squatters to moving to some resettlement areas is due partly to the fact that the new areas are not as satisfactory from the point of view of these availability factors as are the squatter areas.

The estimated costs of squatter resettlement are staggering, even in terms of government budgets. The developed countries have not given the necessary priority to their housing problems, nor will Kafue receive all the aid needed. Phased development utilizing the energies and resources of the people to achieve their own housing goals can fill the gap caused by lack of funds.

KAFUE SQUATTER HOUSING SURVEY
Rainy Season 1968-1969

NAME _____ Ref. No. _____

Address _____

Mother tongue _____ Language of interview _____

Other languages spoken _____

Place of Birth	Husband	Wife 1	Wife 2
Country			
Province			
Village			
Last visit			

Arrived Kafue _____ From _____

Reason for coming _____

_____

Any plans to move _____

_____

EDUCATION	Husband	Wife 1	Wife 2
Highest grade			
Vocational			

Children in school _____

Distance to school _____

EMPLOYMENT Unemployed _____

Casual employment _____ Income _____

Self-employed as _____ Income _____

Employer _____

Job _____ Income _____

Other sources of income _____ Income _____

Wife _____ Income _____

How long in present job _____

How long in previous job _____

Special skills not utilized _____

Plans for future employment _____

Savings plan _____ Where _____

Kafue Squatter Housing Survey Ref. No. _____

HOUSE

Construction _____ Maintenance _____

Size: Under roof _____ Open area _____

No. Rooms _____ No. Units _____

Built by _____

Cost _____ Rent _____

Ownership of the land _____

Received authority from _____

Time in this house _____ Other houses _____

Source of water:

Dry season _____

Rainy season _____

Gallons used per day _____

Fuel: Cooking _____ Light _____ Heat _____

Occupants:

	Children			
	Age	Male	Female	Marital Status
Head of house				
Wife 1				
Wife 2				
Wife 3				
Relations:				
Non-relative:				

Renters _____ Rate per month _____

Planning another house _____ Size _____ Rooms _____

Type construction _____ Estimated cost _____

Facilities desired _____

Reason for the new house _____

_____

Where would you prefer to live _____

Interested in self-help _____

_____

Kafue Squatter Housing Survey Ref. No. _____

AGRICULTURE

Gardens	Wet Season	Dry Season
Where		
Size		
Crops		

Livestock	No.	Kind	Where kept

Produce sold	Husband	Wives
Where?		
Income		

What foods do you buy? _____

_____

Where? _____

What do you do when you are sick? _____

RELIGION

Faith _____ Active _____ Nominal _____

DESIRED CHANGES in Kafue:

Kafue Squatter Housing Survey

NAME Ref. No.

Village Name _____ Head Man _____

Quotes: _____

_____

_____

_____

Comments:

Interviewer _____

Appendix C

PROJECT DOCUMENTS

Exhibit 1 -- Application Form for Project Participation
Exhibit 2 -- Family Budget Analysis Form
Exhibit 3 -- Loan Authorization Form
Exhibit 4 -- Membership Agreement Form
Exhibit 5 -- Constitution and By-Laws for Construction Groups
Exhibit 6 -- Work Exchange Agreement Form
Exhibit 7 -- Land Record Card Form
Exhibit 8 -- Time Record Sheet

APPLICATION FORM FOR PROJECT PARTICIPATION

Chawama Self-Help Housing Project
Kafue, Zambia

Details of Applicant

_____
Surname as per Nat. Reg. Card

_____
(Forenames as per Nat. Reg. Card)

National Registration Card No. _____

Date of Birth _____

Place of Birth _____

Full Details of Present Accommodation:

_____

_____

_____

Family Details

Name	Relationship	Age

Employer:

Name _____

Address _____

Weekly/Monthly Wage _____

Have you previously applied for a Council house
State YES/NO _____

If 'Yes', number on Waiting List _____

I hereby apply to participate in the Scheme.

Date _____

_____
Signature of Applicant

FAMILY BUDGET ANALYSIS FORM

Chawama Self-Help Housing Project
Kafue, Zambia

Income Per Month

Wages	1. _____	K	_____
	2. _____		_____
	3. _____		_____
	4. _____		_____
	Total		_____
Source of Support (Estimated)	1. _____		_____
	2. _____		_____
	3. _____		_____
	4. _____		_____
	Total		_____
Other Income	1. _____		_____
	2. _____		_____
	3. _____		_____
	4. _____		_____
	Total		_____
	TOTAL INCOME PER MONTH		_____

Family Expenses per Month

Mealie Meal	K _____	Balance Forwarded	K _____
Relish	_____	Education	_____
Salad Oil	_____	Transport	_____
Vegetables	_____	Rates	_____
Milk	_____	Licenses	_____
Soap	_____	Personal Levy	_____
Recreation, Chibuku, Etc.	_____	Z.N.P.F. Payments	_____
Clothing	_____	Debts	_____
Medical	_____	Savings per Month	_____
Subtotal	_____	TOTAL EXPENSES	_____

TOTAL DIFFERENCE OF EXPENSES & INCOME _____

Financing the House

Savings

Total Savings K _____

Amount Allocated for House _____

Current Savings per Month _____

Savings Allocated for House Each Month _____

Estimated Cost of House

House Plan Designation _____

Cost of Core House K _____

Cost of Expansion _____

Total K _____

Furnishings

1. _____ K _____
2. _____ _____
3. _____ _____

Total Furnishings K _____

TOTAL COST OF HOUSE K _____

Funds Available

Council Loan K _____

From "Other Sources"

1. _____ _____
2. _____ _____
3. _____ _____

Lump Sum from Savings _____

TOTAL AVAILABLE K _____

BALANCE NEEDED (OR SURPLUS) K _____

How Balance Will Be Covered

Current Savings: at K_____ per month

for _____ Months K _____

Other: _____ _____

_____ _____

NOTES:

LOAN AUTHORIZATION FORM

Chawama Self-Help Housing Project
Kafue, Zambia

Ref: Plot J

To: Date.....

From: Kafue Township Council
P.O. Box 21 - Kafue

Dear Sir,

re: SITE AND SERVICE SELF-AIDED HOUSING: ISSUE OF GOVERNMENT AND COUNCIL LOAN

I refer to your application for a Government/Council Loan of K144.00 repayable over 4 years @ 5% interest and advise that the Loan has now been authorized as from _____ 19___.

The rate of repayment is K3.38 per month and the first instalment is due and payable to the Housing Officer in Beit Hall by not later than _____ _____. There-after, instalments are due and payable monthly in advance.

The effect of granting this Loan is that the total amount indicated is placed to your credit and may be drawn on for the supply of building materials in the following order of priority from the Site and Service Stores on Plot J.6.

Roofing Materials
Metal Door Frames
Metal Window
Cement
Sand
Stone

Your attention is invited to the penalties prescribed in the Land Record Card should you fail to maintain these monthly payments.

The Schedule of repayments is as follows:-

1st Payment .....

Last Payment .....

i.e. 48 instalments @ K3.38 per month.

Yours faithfully,

WF/EHCM

Secretary.

OFFICE USE ONLY

Approved by Finance and General Purposes Committee at its ..... Meeting.

---

cc. Accountant.
Housing Officer.
Site and Service Technician.
Community Development Officer.

MEMBERSHIP AGREEMENT FORM

Chawama Self-Help Housing Project
Kafue, Zambia

_____ HOUSING GROUP

By virtue of having been assigned Plot No. _____ in the Chawama Self-Help Housing Project, and having received a loan of K 144 worth of building materials from the Kafue Township Council, we are eligible for membership in, and do agree to join with the group of families detailed on the attached Work Exchange Agreement, to be known as _____, for the purpose of building our own houses.

To this end it is agreed that at least one adult member of the family will participate in all scheduled and called meetings.

We agree to abide by the Constitution and By-laws, and all decisions arrived at by the group, whether or not a member of the family was in attendance at the meeting at which the decision was made.

We assume all liability for accident or injury to members of the family sustained during the course of construction.

We agree to work for the group as requested by the technical staff and/or appropriate elected member of the group, within the terms of the Work Exchange Agreement.

IN WITNESS of this voluntary action for the development of our family, and our nation, we do set our hands:

Signed: _____ Husband

_____ Wife

Date: _____

CONSTITUTION AND BY-LAWS FOR CONSTRUCTION GROUPS

Chawama Self-Help Housing Project
Kafue, Zambia

HOUSING GROUP _____

NAME: The name of this group shall be: _____

PURPOSE: This group is formed to further the development of Zambia, to put the Philosophy of Humanism into tangible practice by helping ourselves to build modern houses.

MEMBERSHIP: Only those persons being granted a lease to a plot in the Chawama Self-Help Housing Project by the Kafue Township Council, and signing the Work Exchange Agreement for said group are eligible for membership. The group shall be dissolved and membership cease when the terms of the Work Exchange Agreement are fulfilled.

OFFICERS & DUTIES: The officers shall be Chairman, Vice Chairman, Secretary, Treasurer, Work Coordinator, and Timekeeper.

The duties of the first four named shall be those customarily performed by said officers. The duty of the Work Coordinator shall be to provide liaison with the technical staff to see that work crews are formed and function for the mutual advantage of the group.

It shall be the duty of the Timekeeper to keep written records of the time each member family puts in on the project. A weekly report is to be made to the group.

ELECTIONS: Officers shall be elected by secret ballot at the first called meeting after action by the Project Management Team on applications for plots and loans.

Officers may be recalled by action of 2/3 of the group membership present at any scheduled or called meeting.

MEETINGS: The group shall determine a regular time each month for scheduled meetings. Called meetings shall be whenever the Chairman deems it essential and verbal notice has been given to the membership.

At the request of five members of the group the Chairman must call a meeting.

BY-LAWS: By laws to this Constitution may be made by concensus of the group and minuted by the Secretary. Where concensus cannot be reached and time is of the essence, by-laws may be adopted by motion duly seconded and carried by the majority of those present at any scheduled or called meeting.

AMENDMENTS: Amendments may be made in the same manner as By-laws.

B Y L A W S

TIME OF SCHEDULED MEETINGS:

QUORUM:

WORK EXCHANGE AGREEMENT FORM

Chawama Self-Help Housing Project
Kafue, Zambia

IN ORDER to fulfill the purposes stated in the Constitution of Housing Group _____ of the Chawama Self-Help Housing Project:

IT IS MUTUALLY AGREED THAT each family engaged in the Construction of a house will contribute a total of 1000 man-hours to the group for the construction of a house for each member family.

IT IS MUTUALLY AGREED THAT should unforeseen difficulties arise my family will contribute such additional hours of labour as are required to meet the average number of hours per family necessary to meet the purpose of this agreement.

IT IS MUTUALLY AGREED THAT a man-hour is the work of one healthy adult working for one hour. One hour of work by a mature woman shall be deemed one man-hour. The work done by children between the ages of _____ to _____ shall be credited at _____ the rate of adults. The work of younger children, while encouraged, shall not be counted in the fulfillment of this agreement. The work of the handicapped and aged shall be credited at a rate mutually determined by the group in each instance, and noted in the by-laws.

IT IS MUTUALLY AGREED THAT only work done under the direction of and supervised by the Technical Staff shall be counted toward the fulfillment of the agreement.

IT IS MUTUALLY AGREED THAT hours worked will be reported to the group Time-keeper at least once each calendar week (Sunday a.m. through Saturday p.m.). Only those hours so reported shall be counted toward fulfillment of this agreement. It is understood to be the responsibility of each worker to report his time to the Time-keeper and that the Time-keeper may ask for proof of work performed.

IT IS MUTUALLY AGREED THAT each family will attempt to keep the hours worked each week in line with the average number of hours worked by other member families.

IT IS MUTUALLY AGREED THAT no family shall move into its new house until the conditions of this agreement are met to the satisfaction of the group and permission has been given by the group.

IT IS MUTUALLY AGREED THAT only the voluntary labour by members of the family shall be counted in the fulfillment of this agreement and that no hired labour, whether to work for the group or on one's own house shall be counted toward the fulfillment of this agreement.

IT IS MUTUALLY AGREED THAT there shall be no premium placed on any skill exercised in the fulfillment of this agreement, and that one man-hour is one man-hour, regardless of the duties performed.

(over)

IT IS MUTUALLY AGREED THAT any controversy between a worker and the Time-keeper or a worker and the technical staff or another worker shall be brought before a meeting of the group and that the decision of the group shall be final and binding.

IT IS MUTUALLY AGREED THAT should the work pledged by this Agreement not be performed during the time and under the conditions agreed upon, that we the undersigned will pay to the group the sum of _____ for each hour owed to the group. These funds may be used by the group for such purposes as benefit the group as a whole.

AS TESTAMENT to this Agreement, we the MEMBERS OF GROUP _____ set our hands.

	HUSBAND	WIFE	PLOT NO.
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

REPUBLIC OF ZAMBIA

LAND RECORD CARD

.....LOCAL AUTHORITY

.....RESETTLEMENT AREA

HOLDING No.....

AREA OF HOLDING.....
(SQ. FT.)

10r—R798 2-67 T

CONDITIONS OF OWNERSHIP

Memorandum of oral agreement entered into between the Local Authority of.....

and .....

this.....day of ..... 19.....

1. The owner paying the rent and observing the covenants hereinafter contained shall be entitled to occupy the within holding for a minimum period of TEN YEARS commencing on ..... as monthly tenant pursuant to the said oral agreement.
2. The rent shall be the sum of ..... payable monthly in advance on the first day of every month and may be revised from time to time by the local authority upon giving notice to the owner.
3. All rent and other charges (including rates and loan charges) must be paid within ..... days of becoming due whether demanded or not.
4. The owner must not permit the holding to be occupied by anyone except his own family and may not sell, transfer or sublet the holding without the consent of the local authority.
5. An owner wishing to sell or transfer the holding must have paid all outstanding rent and other charges and must have repaid in full the loan from the local authority for roofing materials or the intending purchaser must agree to continue repayment of the loan.
6. The "new owner" shall be the person to whom the ownership has been transferred with the consent of the local authority.
7. No sale or transfer of ownership will take place until the name of the new owner has been endorsed on this card by the Registry Office of the local authority and the card stamped by such authority.
8. No building or building work may be erected or carried out without a written permit from the local authority.
9. When a building permit has been granted the building work permitted must be completed within six months from the date of the permit, or the permit renewed.
10. All buildings must be kept in repair to the satisfaction of the local authority, and, if necessary, any part that requires re-building must be re-built.
11. If the owner or new owner fails to pay his rent or other charges within the time stated or fails to observe any of these conditions the local authority may re-possess the holding.

(continued on reverse side)

OWNERSHIP

1 Owner's Name.....

Owner's Signature

Nat. Reg. No. .....

Successor on death

.....

Relationship

.....

Land Record entry

Local Authority Stamp

2 Transferred to .....

New Owner's Signature

Nat. Reg. No. .....

Successor on death

.....

Relationship

.....

Land Record entry

Local Authority Stamp

3 Transferred to.....

New Owner's Signature

Nat. Reg. No. .....

Successor on death

.....

Relationship

.....

Land Record entry

Local Authority stamp

NOTE: No entry on this card is valid unless made by the

.....Local Authority Stamp

LOANS

Date.....Made to.....

By .....

Amount £..... Repayable .....

Entered...../...../..... Recording Officer.....

Discharged...../...../.....

Recording Officer.....

Date..... Made to.....

By .....

Amount £..... Repayable .....

Entered...../...../..... Recording Officer.....

Discharged...../...../.....

Recording Officer.....

Date..... Made to.....

By .....

Amount £..... Repayable .....

Entered...../...../.....Recording Officer.....

Discharged...../...../.....

Recording Officer.....

Date.....Made to.....

By .....

Amount £..... Repayable .....

Entered...../...../.....Recording Officer.....

Discharged...../...../.....

Recording Officer.....

NOTE: When a loan is made this card must be retained by the Lender until discharged. The card must be presented to the Local Authority when the loan is made and when discharged for noting in the Land Record.

TIME RECORD SHEET

Showing hours worked each week and the cumulative total

Chawama Self-Help Housing Project
Kafue, Zambia

GROUP ______________

Family Name	Plot Number	Week:		Week:		Week:		Week:	
		This Week	Total	This Week	Total	This Week	Total	This Week	Total

Appendix D

ANALYSIS OF SOILS IN THE KAFUE AREA FOR USE IN THE MANUFACTURE OF SOIL-CEMENT BLOCKS

Prepared by the National Council for Scientific Research
Lusaka, Zambia
January 1970

ANALYSIS OF SOILS IN THE KAFUE AREA FOR USE IN THE MANUFACTURE OF SOIL-CEMENT BLOCKS

Prepared by the National Council for Scientific Research
Lusaka, Zambia

7th January, 1970

INTRODUCTION

This paper describes tests which were carried out to determine the suitability of certain soils, chiefly in the Kafue area, for the manufacture of soil-cement blocks. The work was carried out as a part of a long-term investigation of soil-cement, in the Building Materials Research Programme of the NCSR. The work was conducted at the University of Zambia Civil Engineering Laboratory.

The programme of tests described was also carried out to assist the American Friends Service Committee, who are currently planning a self-help housing scheme at Kafue. The object of the tests was therefore to find the soil best suited to the purposes of that housing scheme.

The site for the Kafue self-help scheme is a shallow valley, bounded on 3 sides by hills, and lying immediately to the east of the Great North Road, about one mile south of the Kafue Township. Two hundred houses are to be built under the supervision of the American Friends Service Committee; plans for the scheme have been drawn up by the Zambia Housing Board, who will also provide the roads and services for the site.

To make substantial savings in the cost of materials, it is proposed to use soil-cement blocks for walling. The blocks would be made on site using a CINVA-ram machine. It was agreed that tests would be carried out at the University to find the suitability of the soil, and the proportions of soil, cement, and water for best results.

The results given in this paper are preliminary only, since lab. tests are not yet complete, and further production tests will be needed. Its purpose is to give preliminary conclusions, to enable work to begin on site.

THE SOILS

The soil on the site is classified elsewhere as a silt, but is in fact a very well-graded soil containing sand, silt, and clay sizes. From samples taken in 3 locations it would be classified as a silty sand. Such a soil contains a little too much fine grained material to be ideal for soil-cement blocks, as it might be expected to require a substantial amount of cement for stabilization.

(over)

For this reason, and because the geographical restrictions of the site limit the amount of soil available there, it was decided to investigate the suitability of a soil obtainable from a borrow-pit near the Kafue river, some 3 miles south of the site. The 2 soils described above are referred to here as soils 1 and 2 respectively.

A further soil, consisting of soil 1 mixed with a sand from the Kafue river in the proportions of one part sand to 2 parts soil was also tested. This soil is referred to as soil 3.

Finally, for purposes of comparison, a soil which was being used as a road base on the School of Engineering site was tested. This soil is referred to as soil 4.

TESTS ON SOILS

For each of the basic soils, a number of tests was performed to obtain a first estimate of the likely cement and water contents required for satisfactory stabilisation.

In these tests the grading, the plasticity, and the compaction properties of the material were determined. The results are given in Table 1. The results were interpreted to choose a likely cement content and water content. Blocks were then manufactured using a CINVA-ram, using one or more cement contents. Mixing was by hand, and the blocks were moulded as near to the optimum water content as could be judged.

TESTS ON BLOCKS

The completed blocks were weighed on moulding, cured wet for 3 days, and then stored up to a total age of 28 days. They were then immersed in water for 24 hrs, after which some were immediately tested for compressive strength, and others were subjected to a durability test.

The compressive strength test was carried out on the laboratory's 10 ton Amsler Universal testing machine, with the blocks standing on end. The results of this test are therefore lower than they would have been had the standard compressive strength test, between bedding faces, been carried out. The difference is probably a factor of 2 or 3. The failure stress is recorded in pounds per square inch, (see Table 2.).

The durability test involved a number of successive cycles of wetting and then drying in an oven, the block being wire-brushed after each cycle to remove any loose material. The total weight loss after the test is recorded as a percentage of the initial dry weight, and is used as a measure of the durability of the block. If the block has been properly stabilised the weight loss should be very small, about 5% or less. As these tests are not at present complete, the stability of the blocks is gauged from the compressive strength test; 100 psi being regarded as the minimum strength for stability. These results together with figures for water absorption are shown in Table 2.

CONCLUSION

The soil on the site itself varies considerably. Soil from location 2 was stabilised in the laboratory with a soil-cement ratio of 14:1. But the ratio should certainly not exceed 12:1 in practice, as blocks made on site with this ratio did not appear to be adequately stabilised; though the major reason for this was that the cement used was an old bag which had been exposed and could not properly be mixed. The use of such cement must be carefully avoided in practice.

Soil from location 3 on the site had much more clay, and would have been uneconomic without the addition of sand. It is likely that the mixture of this soil with sand will stabilise with 16:1, though the blocks made up with this soil have not yet been tested.

If soil from a wide range of different points on the site is to be used, more comprehensive soil tests must be carried out. Without such tests, the soil-cement ratio to be used should not exceed 10:1, and soils with a similar appearance to those tested should only be used.

The soil from the borrow-pit (soil 2) stabilised well at 16:1, and its use would ensure greater uniformity of properties. If it could be obtained free, the cost of transport would probably be offset by savings in digging and cement.

The major factor controlling the quality of the bricks produced is the mixing. Every attempt should be made to obtain a small pan- or paddle-type mixer. Drum mixers are not satisfactory. It is intended to build a prototype of such a mixer at the Engineering laboratory.

The water content is best judged by the feel of the soil, rather than measured; the optimum is reached when the soil will just bind together when squeezed in the hand. The amount of water which should be added depends to a large extent on the water content of the soil at the start.

Finally, it must again be emphasised that the tests so far carried out are not conclusive; they give an indication of likely results, but it is vital that they be supplemented by regular production tests. From each new area where soil is to be used, and at least weekly thereafter, blocks should be set aside for testing. Some samples should be sent to a laboratory for testing. Others may be tested on site, as described below. Inadequate control of the material has had disastrous results in the past, as a result of which some authorities will not provide loans for soil-cement houses. Only by demonstrating that proper control can produce good results will it be possible to make progress in the use of soil-cement in building.

(over)

A Simple Site Durability Test for Soil-Cement Blocks

1. Make and cure blocks in the normal way, i.e. 3 days wet curing, then store dry.

2. At an age of 7 days, immerse in water for 48 hours, and then remove.

3. For blocks which are WELL STABILISED, the surface will remain hard so that the finger-nail cannot penetrate.

   For blocks that are POORLY STABILISED, the surface will soften but the block will retain its shape and not disintegrate.

   For blocks which are UNSTABILISED, the block will show signs of disintegration.

If blocks are either poorly stabilised or unstabilised, they should not be used externally. The fault may lie either with the mixing, the compaction, or the cement content.

A quick indication of whether compaction is at fault may be got by finding the moulded density of well stabilised blocks, or their moulded weight. Any block whose weight falls more than about 5% below this is likely to be poorly compacted. Well compacted blocks should have a density of at least 120 lb/ft, and may be as high as 130 lb/ft.

Table 1 — Results of tests on soils

Soil	Location of Sample	Grading			Plasticity			Compaction			Remarks
		% Sand	Silt	Clay	P.L.	L.L.	P.I.	Opt moisture	Dry Density	Loose Density	
1.	Loc. 1	50	25	25	16	29	13	12.0	120	83	Loc. 2 gives best soil
	Loc. 2	50	33	17	15	25	10	11.5	121	85	Quality varies substantially.
	Loc. 3	27	44	28	15	24	10	13.5	113	78	
2.	Borrow-pit	55	26	19	12	31	19	13.0	121	86	Properties indicate good for bricks
4.	Lab. Site	53	24	23	15	33	18	14.0	114	74	Clay content too high for economy
3.	Loc. 3 + sand	51	30	19	———			———			Similar to soil from Loc. 2

Table 2 Results of tests on bricks to 22/12/69

Soil	Sample	Soil/Cement	Moulded density (lb/ft^3)	Water abs.(%)	Crushing strength (psi)	Stabilised	Remarks
1.	13/10/1-5	12:1	—	—	220	YES	
Soil from Kafue	14/10/1-2	12:1	130	11.5	300	YES	
site (Location 2)	14/10/3-4	14:1	127	12.8	750	YES	
	20/10/1	12:1	N.R.	17.5	40	NO	Made on site: cement exposed
2	7/11/1-2	12:1	130	7.4	270	YES	
Soil from borrow	14/11/2-4	16:1	123	8.8	220	YES	
pit near Kafue river							
3							
2/3 x soil 1 +		NOT YET TESTED					
1/3 x river sand							
4							
Soil from	18/10/1-2	12:1	129	—	345	YES	
Lab. site							

Appendix E

AMERICAN AND ZAMBIAN PERSONNEL APPOINTED BY AFSC

A. American staff appointed by AFSC to fill the following positions:

1. Field Director - responsible for the overall administration; supervision of community development staff.

2. Construction Supervisor - responsible for site development and building aspects, supervision of construction teachers and construction assistants; works in close cooperation with the community development staff and estimates the materials needed in the project.

B. Zambian staff employed by AFSC to fill the following positions:

1. Community Development workers - who help interpret the program to residents of the squatter compounds, assist in the formation of building groups, and stimulate the groups to seek solutions to their needs and desires; introduce new concepts of thrift, nutrition, childcare, family planning, literacy, et cetera; serve as translators for American staff.

2. Construction Teachers - who provide detailed training to homebuilders. Most of this training is done on the job.

A. American Staff

1. Field Directors -- John Bard McAllister
   Jack Hjelt

2. Construction Supervisors -- Walter Cope
   John Pixton
   Ralph Way

B. Zambian Staff

1. Community Development Workers -- Elias Harrington Jere
   Stephen Mulenga
   Ivy-Joy Setiloane

2. Construction Teachers -- Gabriel Mulombe
   Costa Chilufya
   Sonwell Lupako
   Patson Mbao
   Noah Hacintu
   Enos Sikanyika
   Alfred Kakoma

3. Construction Teacher Assistant -- Abdon Banda

Appendix F

TEXT OF PAMPHLET USED TO RECRUIT PROJECT PARTICIPANTS

"DO YOU WANT A MODERN HOUSE?"
Facts about the Chawama Self-Help Housing Project
of the Kafue Township Council

Prepared by Robert Abner Manda,
Student, Department of Social Service, University of Zambia,
who did field work with AFSC in Kafue, May 1970

What Is A Modern House?

A modern house is constructed of durable materials so that it will not have to be repaired after every rainy season. A modern house is fireproof so that the owner is safe from the destructions of fire. A modern house is dry and warm so that the owner is protected from the rain and cold. A modern house is well ventilated so that the occupants can be cool during the hot weather and the risks of respiratory diseases are lessened. A modern house is served with water, sewerage, electricity, and other conveniences of contemporary society.

What Type Of House Do You Have?

Are the walls built of flattened tins, or cardboard, or pole and dagga? Is the roof made of flattened tins or cardboard? Does your house keep you dry during the rainy season, warm in the cold season, and cool during the hot weather?

Do you have water at your house? Do you have a sanitary means of disposing of human waste? Is your rubbish removed from the vicinity of your house? Is there a good road to your house? Are you proud of where you are living?

Your Council Will Help You

If you would like to have a modern house, the Kafue Township Council will help you. With the assistance of the Government of the Republic of Zambia in providing the capital improvements such as roads, water and sewerage, and the American Friends Service Committee providing social and technical assistance, the Council is making the Chawama Self-help Site and Service Project available to 228 families who want a modern house.

The Chawama Self-help Housing Project

In the Chawama Self-help Project other families like yours are organized into groups of about twenty families to share the labour of building their own houses. Through this group action the families put into practice the nation's ideology: Humanism.

Families share labour as they work in groups, making the construction work

run faster. Group work makes it possible to share the provided equipment more reasonably than if the families worked individually. What more -- brick making machines, picks, shovels, sieves, wheelbarrows and other tools are used freely by the groups.

Working Together

By working in groups the teaching of building skills and the technical supervision to prevent errors in construction can be done more efficiently. To the participant's advantage, the group is helped to beat the problem of high costs in purchasing and transporting building materials. These materials are purchased by the Council in bulk and sold to the participants at low cost from the project store.

Before construction begins the family groups have a series of meetings under the guidance of the community development staff. The various topics pertaining to home ownership and building are discussed at these meetings. The groups decide how they will govern themselves and work out solutions to the problems they will face during construction. It is through these meetings that the family can make up its mind about participation in the project. It is during the group meetings that member families get to know one another.

Choose Your Plot

When the families are sure they want to be part of the Chawama Self-help Site and Service Project, they make application to the Kafue Township Council for a plot. The plots are of two types.

The Basic Plots share a water tap with one to three other plots, and are provided with the concrete for making a sanitary pit latrine. No deposit is required for Basic Plots. The monthly service charge is K 0.82, which includes payment for 3,000 gallons of water.

The Standard Plot is provided with a street in front, water is piped to the plot, there is a sewerage connection on the plot, the home builder will be provided with the fixtures for an inside toilet and shower. When applying for a Standard Plot a deposit of K 20 must be made. The monthly service charge for a Standard Plot is K 2.12, which pays for 4,000 gallons of water.

What It Will Cost

The tenure on both types of plots is the same. The renewable lease is for a period of ten years. With the permission of the Council the leaseholder may sell, transfer or sublet his house. Permission must also be secured from the Council before alterations are made to the house.

All plots are served by a road, dust bin collection, police and fire protection, and usual care by the Council. All plots are 40 feet wide and 90 feet deep.

In addition to the plots the Council will grant to each participant family a loan of K 144 worth of materials. This loan bears 5% interest per year, and is repayable in 48 monthly installments of K 3.38 each. Therefore the total monthly cost on the Basic Plots is K 4.20, and on the Standard Plots it is K 5.50, until the loans are repaid.

What Is More ---

Building a modern house in Chawama will give you certain additional services. As you will be living in a legal settlement you will receive the advantages that the Council and Government provide.

There are plans for a school, a clinic, bus stop, shops and markets at Chawama.

Act Now!

If you like the idea of building a modern house in Chawama you should contact the staff at the Chawama site office. The staff will invite you to a group meeting so that you will have an opportunity to learn more about the project and to meet other participants.

Act now. It is easy to participate. BUILD A MODERN HOME NOW AND HELP DEVELOP YOURSELF, YOUR COMMUNITY, AND YOUR NATION.

Appendix G

CHRONOLOGY OF PROJECT DEVELOPMENT, WITH CHARTS OF CONSTRUCTION GROUP PROGRESS AND SAMPLE PROGRESS REPORT, MAY 1972

1. Negotiations

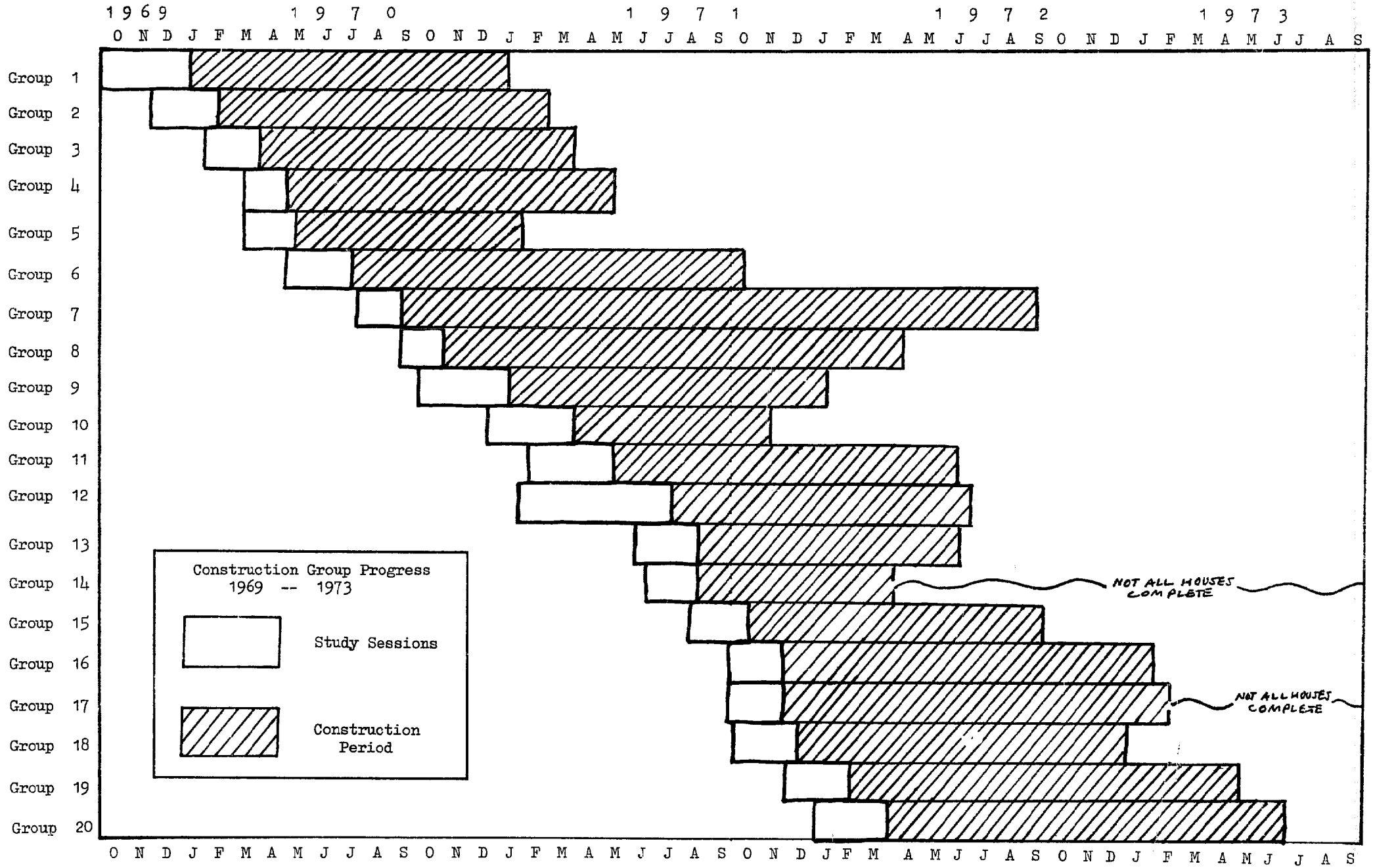
November 1966	Zambia's Deputy Director of Community Development proposed to the AFSC Field Director in Kabwe that the AFSC consider becoming a part of a self-help housing project in the Lusaka peri-urban area.
July 1967	An AFSC representative consults with Zambian President Kenneth Kaunda and other Government officials in Lusaka. The Minister of Local Government and Housing gives approval in principle to a self-help housing project undertaken in cooperation with AFSC.
January 1968	AFSC registered with the Zambian Government under the Land Ordinance Act.
January - August 1968	Drafting and negotiations of Project Agreement.
October 1968	Minister of Local Government and Housing signs Project Agreement in Lusaka.
November 1968	Secretary of Kafue Township Council signs Project Agreement in Kafue.

2. Planning

October 1968	First planning meeting of AFSC Field Director, Kafue Township Council officials and national Government officials in Lusaka.
December 1968 - March 1969	Social survey made of Kafue squatter settlements.
August 1969	Zambian Housing Board initially allocates K 60,000 ($84,000) to the Kafue Township Council for capital costs of developing Chawama site.
September 1969	First official meeting with prospective participants; many follow-up visits by community development and other staff in the following months.
September 1969	First meeting of Field Management Team, taking place every Monday morning thereafter.
November 1969	First meeting of Project Management Team.
November 1969	First 25 plots staked out, ready for clearing.

3. Construction

February 1970	Official opening of Chawama project; the Minister of State for Provincial and Local Government officiated; the Chairman and Councillors of the Kafue Township Council were hosts for the ceremony.
January 1970 - July 1973	20 construction groups organize and build 228 houses; groups range from 7 to 19 families; construction periods range from 8 to 24 months (see Chart of Construction Group Progress attached).
October 1969 - April 1972	Training sessions conducted with each group prior to beginning of construction of their houses; sessions ranged in length from approximately 2½ to 7 months (see Chart of Construction Group Progress attached).
April 1971	Official moving-in ceremonies of 50 families in first three groups.
August 1971	At the request of the Zambian Housing Board, a crew of participants in the Chawama project demonstrated the construction methods used in their housebuilding at the Lusaka Agricultural Fair, building a model house in a record three days.
January 1972	At the beginning of the school year, the Nakatete School is completed and receives the first group of children; the District Governor and the American Ambassador attended the dedication ceremony.
July 1972	Visit of President Kenneth Kaunda to Kafue self-help housing project when he commended the participants on the significance of their effort, ascribing to it "local, national and international" importance.
January - April 1973	All AFSC staff phased out, leaving continuing responsibility with the Kafue Township Council.
July 1973	Last group (#20) completes basic construction of their houses, bringing to 228 the number of houses built.


1969
1970
1971
1972
1973
O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S
Group 1
Group 2
Group 3
Group 4
Group 5
Group 6
Group 7
Group 8
Group 9
Group 10
Group 11
Group 12
Group 13
Group 14
Group 15
Group 16
Group 17
Group 18
Group 19
Group 20
Construction Group Progress
1969 -- 1973
Study Sessions
Construction Period
NOT ALL HOUSES COMPLETE
NOT ALL HOUSES COMPLETE
O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S

CHAWAMA SELF-HELP HOUSING PROJECT
KAFUE TOWNSHIP COUNCIL -- AMERICAN FRIENDS SERVICE COMMITTEE
PROGRESS REPORT, 15 MAY, 1972

Group	Approved[1]	Building[2]	Plan Made[3]	Bricks Made[4]	Damp Course	Wind. Level	Wall Plate Level	Roof	Partition	Sills	Floor	Glazing	Doors Hung	Privy /Toilet	Occupied	Man-Hours
I	16	16	16	16	16	16	16	16	16	16	16	14	16	16	16	N/A
II	16	16	16	16	16	16	16	16	15	11	14	13	14	15	16	16,500
III	18	18	18	18	18	18	18	18	18	13	16	12	14	18	18	20,733
IV	24	19	19	19	19	19	19	18	16	13	14	14	14	15	19	19,773
V	22	16	16	16	16	16	16	16	16	10	14	10	13	13	16	17,728
VI	18	11	11	11	11	11	11	11	9	5	8	4	7	11	11	12,933
VII	18	13	13	13	13	13	12	10	12	5	8	2	5	5	11	13,193
VIII	20	9	9	9	9	9	9	8	9		4		3	7	8	10,360
IX	14	8	8	8	8	8	8	8	6	1	1	1	4	5	8	
X	16	7	7	7	7	7	7	7	7	1	4	2	4	5	7	7,045
XI	10	7	7	7	7	7	7	7	7		2		2	5		4,799
XII	18	11	11	11	10	10	10	7	10		2	1	2	4	2	6,190
XIII	11	9	9	9	9	8	8	5	8					4	2	5,839
XIV	14	9	8	8	6	4	3	3	3					3		N/A
XV	10	7	5	5	5	4	4	1	3	3			1	3		5,296
XVI	11	8	8	8	1	1										4,058
XVII	18	13		9												5,355
XVIII	8	7		4												2,234
XIX	14	11		5												2,984
XX	12	11		1												1,563
	308	226	183	200	171	167	164	151	155	78	103	73	99	129	134	

1. Number of families approved by management team
2. Number of families actually participating in construction activities
3. Number of house plans drawn
4. Number of houses for which bricks have been made

Appendix H

PROJECT FINANCES

Funds to carry out the project came from several sources within Zambia as well as from overseas. It was a trans-national undertaking. The Joseph Rowntree Memorial Trust in the United Kingdom contributed substantially. Two of the mining companies based in Zambia gave generously of both cash and tools. In the United States sources included bequests and other funds given to the American Friends Service Committee for overseas work. The Government of Zambia contributed substantially in cash to the Kafue Township Council; half of this amount was a grant and half a loan to be repaid out of revenues from the sale of beer and liquor in the Township. The Ministry of Provincial and Local Government assisted in numerous ways through technical advice, the layout of the site and the loan of shovels and brick-making machines. The Kafue Township Council contributed staff time, office space and some transportation. Finally, the homebuilders themselves invested an estimated $67 each in out-of-pocket expenditures toward the completion of their houses.

A. Income

Cash contributions may be summarized as follows:

			Percent of Total
Zambian Sources			
Government		$ 90,000	26%
National Government	$84,000		
Township Council	6,000		
Mining Companies		32,228	9%
Homebuilders		15,000	4%
External Sources			
Rowntree Memorial Trust		27,246	8%
American Friends Service Committee		187,026	53%
		$351,500	100%

In addition to the above, the homebuilders will, over a period of four years, pay back to the Zambian Government, via the Kafue Township Council, approximately $45,965, plus $5,822 in interest. This totals $51,787 which accounts for about 60% of the Government's contribution. Thus over the long term it is the homebuilders of Chawama and the frequenters of taverns in the Township who will have paid for all capital costs, and thus almost a third of the project's total financial costs.

B. Expenditures October 1, 1969 to March 31, 1973

			Percent of Total
Overseas Personnel		$ 90,000	26%
Local Personnel		65,000	18%
Field Administration		44,000	12%
Communication & Office	$ 4,435		
Transportation & Travel	29,993		
Rent, Other Costs	9,572		
Vehicles & Insurance		8,900	3%
Preliminary Negotiations & Report		5,600	2%
Tools, Storage, Maintenance		22,000	6%
Construction Materials, Labor		116,000	33%
		$351,500	100%

Maintenance, rather than salaries for overseas personnel, economy measures in building materials and technique, and numerous donations of tools and equipment help to explain the relatively low cash expenditure of the project.