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SRI LANKA SHELTER SECTOR ASSESSMENT

JANUARY, 1981

Shelter Sector Assessment

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SHELTER SECTOR

ASSESSMENT

I. INTRODUCTION

A. General

This Shelter Sector Assessment has been prepared on the basis of a short period of background research in Washington and four weeks of field work in Sri Lanka in September/October 1980 and a short visit in December. The brief nature of such a study makes it impossible, of course, to undertake new research or develop new data. The study does represent, however, the review of many reports concerning housing and material relevant to housing, the review and interpretation of the considerable data available on housing in Sri Lanka, formal and informal discussions held with a large number of Sri Lankans (mostly government officials but including representatives of the private sector), international aid advisors and representatives and members of AID involved with assistance to Sri Lanka. We have carefully considered the views and opinions of these individuals most of whom, of course, have backgrounds in Sri Lanka, and Sri Lanka's housing, which go far beyond what this team could absorb in four weeks. We have drawn liberally on the World Bank's report Sri Lanka: Key Development Issues in the 1980s, dated May 20, 1980, for most of the general economic information contained in Section III of this document, and took particular note of that report's concerns with housing, urban development and construction. (See complete list of persons contacted in preparation of this report, pp. 366-369.)

The conclusions and recommendations contained herein, however, are those of the Shelter Sector Team. The report is intended to provide AID with sufficient background and a series of findings, conclusions and recommendations to enable it to make judgments concerning housing in Sri Lanka. Although all of the material in the report will be familiar to officials of the Government of Sri Lanka (GSL), it is hoped that some of the conclusions and recommendations will be of use or will stimulate thinking as those officials continue to deal with meeting the housing needs of Sri Lanka.

B. Summary Overview

The current Government, which was elected in 1977, has made a major commitment to increasing and improving the overall housing stock in Sri Lanka. In doing so, it has launched some new programs and expanded existing ones embodying many

of the concepts now being adopted by other developing countries to house the poor, e.g., aided self-help, sites and services, core housing, slum and shanty upgrading. In addition, a number of papers have been written conceptualizing these ideas and studies prepared by, for instance, the Urban Development Authority in the case of slum and shanty enumeration, as the basis for initiating new programs. In short, the GSL either has under way or there has been put forth to it in proposals all the basic solutions (that is, types of physical structures or programs) currently being used in the developing countries to alleviate the shelter problems of their poor.

As stated above, the short nature of this Shelter Sector Assessment made it impossible to undertake new research or develop new data. Nor does the study attempt to assess and make recommendations concerning allocation of resources between sectors within the Public Investment Plan, that is, as they apply to Government-determined priorities.

What the Study does attempt to do is to assess the Government's and, to some degree, the private sector's capacity to implement housing programs from both a technical and financial capacity and, in this context, describe and assess the success of the programs now being carried out and their probability of success in the future. This includes the degree to which the programs are reaching the people who need help the most, the poor.

The Study also contains suggestions on ways in which the study team feels modifications might be made to enhance the effectiveness of existing programs, some new ideas that might be tried and ways in which the private sector might play a greater role.

In this connection, particular emphasis has been paid to the Government's policies with regard to subsidies for housing and the implications these subsidies have on the Government's capacity to fund its programs over the long run. In implementation, the two major areas looked at closely were the Government's capacity to develop and manage its programs, both administrative and technical, and the capacity of the construction industry to carry out major housing programs given the demands on the building and construction industry for other things.

In making these assessments and suggestions, the Study has attempted to use the latest data available since, as indicated above, development of new data was impossible. For the most part, housing data relates to the 1971 Housing Census and the 1973 Survey of Consumer Finances carried out by the Central Bank. Data from the 1978 Survey is just becoming available and has been used to the extent possible

along with information furnished by the Urban Development Authority and other organizations working with housing and development programs.

Statistics demonstrate that there is an absolute shortage of housing units in the country, mostly concentrated at the lower income levels (reflected in overcrowding); there will be a requirement for an additional number of new units to reflect increasing population and family formation as well as replacement of those units whose conditions will be so bad as to make upgrading impossible. Finally, to minimize the drain on resources, financial and human, required to produce new housing, the upgrading of those units and communities now considered unsatisfactory should be maximized whenever possible.

To do this within the bounds of what can be financed under Government programs, standards should ideally be reduced to a level commensurate with the ability to pay of the beneficiaries. Such an approach characterizes the Aided Self-Help Program instituted by the Government. Recognizing that there are some families at the lower end of the income scale who must receive a subsidy to attain even a minimum standard of housing and recognizing that the Government has been deeply committed to heavy subsidies for housing at income levels where it clearly is not necessary, this study recommends an initial reduction in subsidies (with the eventual aim of further reductions) and a shifting of those subsidies so that their benefits accrue primarily to those who need them the most rather than to those who can manage without them.

Our analysis of currently projected Government programs related to needs and <u>likely</u> government resources which will be made available for housing (we do not attempt to judge whether resources are more profitably invested in other sectors) indicates that it is impossible to achieve program targets as they are now spelled out unless the Government continues to move increasingly toward lower cost solutions and institutes a phased program to begin to recover a large share of costs.

Thus we recommend a major shifting of program types and of how they are to be financed within the overall program targets (numbers of units) and the overall Investment Plan allocations.

II. SUMMARY OF FINDINGS AND CONCLUSIONS; RECOMMENDATIONS

Listed below is a summary of the findings and conclusions, and the recommendations of the Study Team. The underlying rationale and a more detailed treatment of these are contained in the body of the report.

A. Summary of Findings and Conclusions

These have been grouped in a rough subject matter order. There may be some overlap, but this is deemed worthwhile to emphasize a point.

1. Need for Housing

There is a severe current deficit in the supply of housing affordable by most income groups in Sri Lanka. Various projects indicate a need for 40-50,000 new units in urban areas and 100,000 new units in rural areas annually until the year 2000 to provide for new households and to replace or upgrade deteriorating existing stock. Although the rural needs in absolute terms is greater, the per capita need is substantially higher in urban areas.

Housing deficits have existed for several decades but have been aggravated by recent low private sector participation in housing production. To put this need in perspective, it should be noted that during the period 1963-71, only 16,000 units per year on the average were constructed in urban areas by both the public and private sector. The comparable figure for rural areas was about 80,000. From 1971-77, only a total of 4,800 units were constructed by the public sector. An additional 20,000 housing loans were made by the National Housing Fund during this period, but this included home improvement loans. Private sector figures are not available but fall short of needs particularly among the poor.

Most housing for the poor is inadequate: high room and house occupancies, high per acre densities in urban areas, poor construction in terms of materials and foundations and lack of such basic services as water and sanitary facilities.

Rural-urban migration has not been occurring in Sri Lanka at the rapid rate it has in many developing countries. The urban population as a percent of the total population is projected to grow from slightly less than 20% in 1963 to only 30% by 2000. It is currently approximately 24% of the total population. Colombo presents a special problem, however, with the metropolitan region now containing about 57% of the total urban population and expected to retain this percentage.

Rural housing, although in most cases built of temporary or semi-permanent materials and without piped water and sewage facilities, is not as serious a situation as the urban one because of the greater availability of land, easier access to building materials, the fact that it is possible to dig wells and pit latrines and a more conducive situation for self-help.

Therefore, Sir Lanka's urban housing problem is increasingly serious as demonstrated most vividly by the large and growing slum and shanty areas of Colombo which contain nearly 50% of Colombo's people and which result in an economic and social segregation of the occupants.

2. Government Policy and Organization

(a) Policy - There is no comprehensive and consistent national shelter policy or framework set forth by the Government. Instead, there is a series of ad hoc policies, laws and regulations to deal with specific issues as they are addressed. Some programs seem to have been created because of substantial political support. Some subsidies are very high, but there is no clear policy; some sub-projects vary within programs, e.g., Model Villages. There had been a stated policy to switch the Model Villages Program to Aided Self-Help but as of October 1980 there continued to be direct construction of completed units in some cases. There is overlapping between the Urban Development Authority (UDA) and the National Housing Development Authority (NHDA) on some things growing out of less than clear-cut distinctions in the laws governing these institutions. There is a policy to increase the private sector's participation in housing but no concrete set of things to do and, therefore, nothing has really been done. Although there are moves ahead to consider a new Housing Bank and a committee has been formed to study the situation and make recommendations to the Cabinet, a State Mortgage and Investment Bank already exists. In other words, things are proceeding piecemeal without any overall framework. There is great pressure to move ahead but time needs to be devoted to setting forth a clear policy.

(b) Organizations - The GSL has centralized its shelter and urban development functions in one ministry, the Ministry of Local Government, Housing and Construction. This situation should provide the basis for developing a comprehensive national shelter policy and facilitate the planning, development and implementation of programs. Such a concentration is different from the type of organization found in most developing countries,

where separate ministries of public works, housing, local government, social services, etc., are often all involved in some aspect of housing and where the only way to get at even small problems is through inter-ministerial coordinating committees.

Despite the centralization in one ministry, strong central coordination and leadership of the numerous, and in many cases new, government housing programs and organizations are lacking. There is no one coordination unit within the Ministry for all shelter and urban programs and projects, even for those implemented by the public sector. At no one central point in the Ministry or elsewhere was the team able to ascertain how many projects there are, where they are, what they cost, how they are handled, or what is projected for the future. Consequently, too many agencies and organizations are off doing their own thing. There have also been a lot of papers, etc., written relating to lowering standards, adopting core house principles, slum and shanty upgrading, better urban planning, etc., but no one appears to be coordinating or screening these efforts in a consistent way. There is no system of prioritizing; the pressure is on to produce and implement.

(c) Institutions - The Government has set up a number of new institutions in the housing field, some of which overlap in certain areas. Most of them need some management restructuring, better procedures, and improved staffing. There are defined roles, but these tend to get mixed. These institutions sometimes do a lot of the same things. Lines of responsibility are not clear. As stated earlier, there is some duplication of functions between UDA and NHDA , for example:

UDA is intended as the Government's primary planning agency. As such, it has a significant role to play in developing rational land use guidelines and identifying suitable areas for urban expansion in all the secondary towns as well as in Colombo. It is at least questionable whether it should also be implementing projects. In the housing sector it is, for instance, the implementing agency for the slum and shanty upgrading programs.

NHDA is an implementation agency charged with developing housing. As such it has been quite effective to date and has established an impressive record in only fifteen months. But some caution is warranted. NHDA may be a bit too housing-production-oriented to do a good job with, say, an integrated slum and shanty upgrading program or expanding the Aided Self-Help concept to urban areas without strong policy as well as technical and operational guidance required in these types of

programs. The Rural Housing Division (RHD) within NHDA was originally conceived as the Aided Self-Help counterpart to the Building and Development Division, the direct construction unit. Recent developments, however, have reoriented the housing programs with the result that most of the future efforts will be in ASH-style housing. This threatens to overwhelm the RHD unless some reorganization and/or increased staffing takes place.

The slum and shanty program appears to be a workable concept but the entity handling this program is too small to implement it on a large scale. It is only a unit within a division of the UDA and may be organizationally in the wrong agency (see above). The present leadership of the Slum and Shanty Unit has the right ideas but neither the political and organizational support nor a management orientation. (As this paper is being finalized, it has been learned that the Slum and Shanty Unit has been elevated to Division Status in UDA, a step in the right direction.)

The role of the State Engineering Corporation (SEC) should be given attention (some 8000 employees). At the present time, 80% of its work is housing, yet it was set up to design and build factories. It is apparently a major lobbying force in support of high-rise housing projects - any shift away from such programs must deal with redefining a role for the SEC consultancy and SEC construction divisions.

The administration by the National Housing Department of the National Housing Fund, which makes and services loans under the Government's urban loans, appears to have a number of shortcomings including a poor collection record. The function is slated to be transferred to the NHDA which now performs such a role for the Aided Self-Help Program but the function does not appear to be consistent with NHDA's primary role as a developer of Government housing.

The State Mortgage and Investment Bank (SMIB) is an existing bank under the Ministry of Finance and Planning. Although not noted for speed in processing applications, SMIB appears to service reasonably efficiently a significant number of loans, albeit not for low-income people. Its role needs to be considered relative to a new Housing Bank or to possible servicing of Government housing loans.

(d) Programs - Government officials in the MLGHC and its related corporations and authorities have demonstrated a strong receptivity to new ideas and methods for ways to address the housing needs of the country. In fact, almost all currently adopted solutions now

being used in developing countries for housing the poor are being used in Sri Lanka in its programs. are being tried as pilot programs or have been put forth as proposals in papers and studies and are under consideration. Some caution is in order, however, as all programs do not have universal support. Thus, programs can build on existing efforts using ideas which have been proposed in earlier studies but the programs which could emerge will do so only by sustained efforts to shape something different from the present Aided Self-Help-Rural and Direct Construction-Urban programs.

Aided Self-Help, a program to provide building materials loans with a minimum of infrastructure, appears to be regarded as a strictly rural program, yet it is being used in some cases in the Greater Colombo area and there is no reason it could not be expanded to urban areas. The ASH program is in some cases a sites and services program as well; thus, a model exists but it must be extended to larger scale and more urban projects in order to meet housing demand and provide alternatives for the urban poor.

The present program of Direct Construction far exceeds the level of housing affordable by all but a few Sri Lankans - if costs were fully recovered. This is true due to several factors, including:

- choice of building materials;
- site planning (efficiency of road and service layouts as well as grading, filling, and footings and foundations);
- engineering design standards;
- level of infrastructure (design standards);
- apparent designer preference for multi-level solutions;
- with proper design control, the cost of DC programs could be significantly reduced. They now average Rs 150,000 to Rs 200,000 per unit.

The Mahaweli Development Authority, which has the responsibility of implementing the Mahaweli River Basin hydro/irrigation scheme including the resettlement of some 140,000 families, has developed a bare-bones minimum solution to providing settlements: each settler receives one-half acre for his home and subsistency farming, an irrigated plot for cash crops, a small cash grant to help him build a house and get underway and minimal community infrastructure. A hierarchical system of hamlets, villages and townships will be established to provide community services.

The Model Villages Program, although supposedly shifted to Aided Self-Help, still appears in many cases

to be an expensive Direct Construction program. Although the team was not able to see more than several MV projects, at least some projects seem to substitute an entirely new structure for the individual's old home. While this may be necessary in some cases, it should be examined carefully.

As it is now constituted, the Electoral Program provides a specific number of new housing units in each electoral district each year but, too, it is an extension of the expensive Direct Construction Program.

Estate housing (housing for plantation workers) is a responsibility of the individual estate management (government-owned) and is not a responsibility of the Ministry of Local Government, Housing and Construction. From all reports and a brief field observation, estates do not in many cases provide adequate housing.

(e) Staff - Based on interviews and discussions held by the team, the top and middle level staff of the institutions and government organizations involved in housing appear to be excellent with considerable experience and a drive to carry out the programs. There does, however, appear to be a shortage of implementation people.

It was reported, although difficult to ascertain in a short period, that technical people, i.e., architects/planners/engineers are in short supply, a situation which could obviously affect the implementation program cited above. Government salary levels and perhaps the level of responsibility assigned to architects and planners within NHDA may well be the constraint to finding sufficient professional staff rather than any real shortage of people, although the Middle East has taken its toll by luring away large numbers of technicians for various projects.

3. Development Plan and Government Finances

The current 1980-1984 Public Investment Plan allocates Rs. 11.6 billion to Housing, Water Supply and Urban Development, or 18% of the total capital budget of Rs 63.2 billion. Activities in this sector have been designated one of the three lead programs of the Plan, the other two being the Mahaweli Development Program and the development of a Free Trade Zone. Of the Rs 63.2 billion, Rs 6.4 billion was allocated to housing or 10% of the Plan. The Government elected in 1977 announced a program to construct 100,000 housing units under the Public sector.

Regardless of the large percentage of the capital budget allocated to housing, it appears unlikely that the housing goal can be reached without a significant

increase in the budget or a major revision of the housing program. An inflation rate of 10% per year was used to project costs for the investment plan. Those estimates have now been superseded by events. In late 1979, construction costs rose dramatically, e.g., cement doubled in price. These increases as well as the general price level rise of 20-30% and severe revenue constraints have had a serious impact on the viability of the plan in general, and the housing sector in particular.

4. Costs and Standards

On the whole, Government housing programs are too expensive and the standards too high for many of the families who are allocated these houses (see comments on Direct Construction programs above).

5. Cost Recovery

Cost recovery in most Government housing programs is inadequate to meet a reasonable portion of actual costs, both because the stated repayments or rents are set too low (this applies to the recovery of capital costs and financing costs) and because the collection of payments is not adequate.

Some Government housing officials feel that collection of rent and loan payments is of secondary importance to the function of supplying homes to low income families. Many families not now doing so could afford to pay all or a larger portion of their housing costs if standards were adjusted to reflect the ability to pay.

Actual expenditures (rents) by families for housing are in many cases higher than amounts cited in official sources. This suggests an ability and willingness to pay more for housing than the amount called for in current high-subsidy programs although not enough is known about this subject. There also appears to be a general feeling among numbers of people that Government loans do not need to be repaid.

Low income families have little experience borrowing money from formal financial institutions. People's Bank and other lenders with experience in consumer lending to low income groups have found that a continuing relationship and education is necessary to ensure a reasonable rate of repayment. Subsidies are applied indiscrimately to various income groups, with higher income families often receiving a higher subsidy than lower income families.

6. Land

Difficulties with transference or acquisition of land title make it difficult for private builders to develop projects. Thus, land ownership (clear title) is a major constraint within the private sector to development of housing - this affects the cost of land as well as the ability to borrow with land as collateral.

The Government owns a substantial portion of all lands and has large holdings in most areas of the country including urban areas. In addition, land acquisition procedures are reasonably expeditious for Government, thus making the process of clearing title a reasonable undertaking; therefore, land availability is not a constraint to housing development if the Government takes part in the process.

Rising land values in Colombo are a major problem. This affects economics of slum and shanty upgrading if land values reflect more productive use of land.

7. Construction and Building Materials

There is general acknowledgment that the construction sector is overtaxed; that there is a shortage of building materials and skilled labor (the latter due to Middle East demands).

Although building materials production in Sri Lanka is inadequate to meet the need, building materials availability is not a constraint. Cost is a problem and cost is a reflection of the construction boom. The supply of building materials has been excellent but the cost has been driven up because of the need to import.

Demand for building materials for low cost housing could be met almost exclusively with local production. Appropriate traditional building materials are widely available. Suitable building technologies may be less widely known but are available.

Availability of skilled labor is regarded as a problem but this appears to be due to its cost. There does not appear to be an actual shortage. There are no ads, no signs at construction sites, etc., although there are ads for skilled workers and professionals for Middle East projects.

There are also projections of shortages of skilled labor in the future. This is based on the fact that current production does use up the available supply. Therefore, if construction increases, shortages occur. There is enough of a demand now that people are getting some increase in wages but labor cost does not now appear to be going up fast.

There appears to be a need to train more skilled labor and small contractors. The current Government apprentice program should be continued although some of these trainees are being syphoned-off to the Middle East.

Building codes and standards are minimal now so they have no effect. New zoning ordinances and building codes are being drafted. It appears, however, that they will not be a constraint. The team reviewed the draft and found nothing unreasonable.

8. Community Organization

Except for some help in construction under the Aided Self-Help program, little is being done to help people to build and upgrade their houses and to organize their communities so as to work on and maintain settlements together; neither the Slum and Shanty Upgrading Unit nor the NHDA for ASH have the mechanism or capacity to carry out hands-on community work. This is particularly important in urban areas because of the greater complexity. Such work as is being done is carried out by private organizations and the Colombo Municipal Council with UNICEF. There is also a demonstration project by Save the Children.

9. Housing Finance

There is no housing finance structure in the country, either public or private, which both serves to generate capital for housing and makes adequate long term loans for those who need them. For instance, there is the State Mortgage and Investment Bank which does make mortgages to higher income people but it does not take in savings.

There is definitely a capital shortage in the country. There are no financial markets for stocks and bonds nor anything like a secondary mortgage market.

There is no credit reporting, no standards for lending, limited collection and loan servicing and general lack of lending/mortgage techniques.

There are plans underway to examine the possibility of a new Housing Bank with International Finance Corporation participation.

10. Private Sector

Unless private money and private initiative are mobilized to a much greater degree than now, there is no prospect for satisfactory progress toward meeting the

housing needs in Sri Lanka. Public sector programs are based on the assumption that the private sector will supply 80% of the overall needs.

The private sector could build a larger share of the housing needs of middle income people if long term financing were provided.

Low income people who now rent or squat would be prepared to invest significantly greater amounts of their own labor and capital in improving their housing if long term financing were available for them to own their homes.

B. Recommendations

1. General Objectives

The team believes that the Government's long-term objective should be to maximize the generation of revenues, both from the private sector and the public sector which are directly attributable to the housing sector, through both repayments of Government loans and rentals and the attraction of private savings. General government revenues which go into housing should be minimized and go only to those people who clearly must have subsidies. Thus, the impact on the Government's capital budget would steadily decrease over time. Without achieving this objective over the long run, it is doubtful if Sri Lanka will be able to achieve its larger objective of eliminating its housing deficits. The financial needs are far too great to be met from the Government budget.

Such an objective would, of course, apply to almost every developing country. Listed below, however, is a series of recommendations for consideration by the Government of Sri Lanka, which relate to the findings and conclusions contained in the previous section. Some of them are longer term in nature, others could be implemented in a reasonably short period. In line with earlier comments on the commitment of the GSL to housing its people, the receptivity of officials to consider new approaches and the drive of these officials to move ahead, these recommendations should be read with the understanding that many of them are currently under active consideration or have begun to be implemented.

2. Specific Recommendations

(a) Government should undertake the preparation of a comprehensive national shelter policy to provide the framework within which it will develop and pursue its housing goals in the future. This policy should pull

together all of the existing policies, regulations and laws, modifying them to make them consistent and adding new elements where necessary to reflect the current long-term objectives. This exercise can begin and take place without losing the momentum now underway but should serve ultimately to coalesce these efforts into a more integrated approach.

(b) As the basis for formulating both policy and programs, the Government should undertake to update the Marga Institute study entitled Housing In Sri Lanka. This study was published in 1976 using data, for the most part, from the Housing Census in 1971 and the Consumer Expenditures Survey of 1973. It would be useful to update this work periodically as a basis for Government planning in housing.

(c) There should be a strong central coordinating function set up in the Ministry of Local Government, Housing and Construction (MLGHC) reporting directly to the Secretary to oversee all Government housing programs. This unit or staff would take the lead in developing a national shelter policy; would promote necessary studies, development of position papers and promotion of new ideas; would ensure that the various departments, authorities and corporations are pursuing programs and objectives that are consistent with those of the Government and are non-duplicatory; would monitor on-going programs as part of the whole and would evaluate these programs as to their progress and achievement of objectives. Such a function, while existing to some degree now, must be strengthened and adequately staffed.

(d) There should be a series of management and organization studies of the numerous state corporations and authorities, some relatively new and others existing for some time, in the shelter and urban sector with a view to examining functions, staffing, procedures and organization structure to determine if these elements are in line to best achieve current Government objectives. Some of the new organizations have now been in business long enough to make an appraisal of how effectively they are operating and whether some changes could be made. There are clearly some duplicating or competing functions. Some of the older organizations need to be appraised to see if their functions are consistent with new government programs and some newly emerging but very important functions, e.g., slum and shanty upgrading, need to be examined to determine how most effectively to organize them.

(e) Public sector resources should go increasingly into Aided Self-Help and Slum and Shanty Upgrading programs as the way to reach the greatest number of people with the available resources. Average unit costs for the total Government program must be reduced drastically if budgetary ceilings are to be maintained and program goals met. Programs should maximize self-help rather than direct construction, to take some pressure off the construction industry and to lower overall costs.

(f) Design of Government housing projects of all types should reflect lower standards and more effective design, both in house design and infrastructure, so as to be more in line with the ability of people to pay.

(g) Government programs should seek to maximize the use of indigenous and/or locally manufactured building materials so as to minimize the need for imported materials.

(h) Government should make a commitment to stronger community organization components in its housing programs possibly by identifying a specific function in both the NHDA and the Slum and Shanty Upgrading Unit.

(i) Recognizing that immediate and complete elimination of housing subsidies is not feasible, Government should initiate a phased program of gradually increasing the amount of cost recovery in its programs. This can be accomplished in the following framework:

(1) Undertaking a detailed study analyzing current levels of subsidy in various programs, the ability and willingness of people to pay for their housing at various income levels and examining such factors as home ownership with secure tenure vs. rental, and different types of financing arrangements such as lengthening the term of repayment and graduated payment mortgages;

(2) Given the current levels of subsidy, determining what would be an acceptable approach to gradually increasing the amount of cost recovery for different income groups;

(3) Determining specifically where Government could accrue profits on its housing and urban development programs so that these profits could be applied as a cross-subsidy in accordance with needs as ascertained from (a) and (b) above.

(4) Once repayments on loans and rentals have been set, instituting good accounting records and a firm collection procedure and pursuing these collections in a way that people understand their obligations, i.e., immediate follow-up if there are arrearages and/or defaults;

(5) As part of the studies suggested in (4) above, Government should determine the best organization to service its low income housing loans, e.g., NHDA (which is now proposed) or, as an alternative, the State Mortgage and Investment Bank which has the administrative mechanism to do so and a proven track record.

(j) Recognizing that there is an assumption that the private sector should produce 80% of all housing in Sri Lanka but that this figure is not being met, Government should undertake a detailed study of that which is required and induce the private sector to undertake its programmed share of housing construction, certainly for middle income families but also for lower income families as well. For instance, Government should consider the provision of serviced sites for sale to private builders and should look to the provision of long term financing for home buyers as a further means of inducing the private sector to increase its production of housing. Direct construction projects, when undertaken by Government, should be used as demonstration projects to induce the private sector to assume a larger share of this market.

(k) The HLGHC should do a complete survey of the estate housing situation with a view to coming up with recommendations to the Ministry of State Plantations to alleviate the problems.

III. COUNTRY SITUATION

A. Introduction

The purpose of this section is to give a brief overview of Sri Lanka - its physical characteristics, its economy, and its population -in order to set the framework for considering what the housing situation is today and what factors might affect it in the future. In this respect, greater attention has been paid to looking at the characteristics of the population and trying to relate these characteristics to their implications for housing. In all cases, except the latest income distribution figures, the data presented are drawn from existing reports and publications, and are here presented with the idea of summarizing information relative to housing considerations.

B. Description of Geography and Climate

Sri Lanka is a tropical Asian island situated eighteen miles south-east of the southern tip of India. Its fundamental environmental setting is derived from its location just north of the Equator and its encirclement by the Indian Ocean. This location combined with the topography of the island creates an environment in which the basic shelter requirements are simple and uncomplicated.

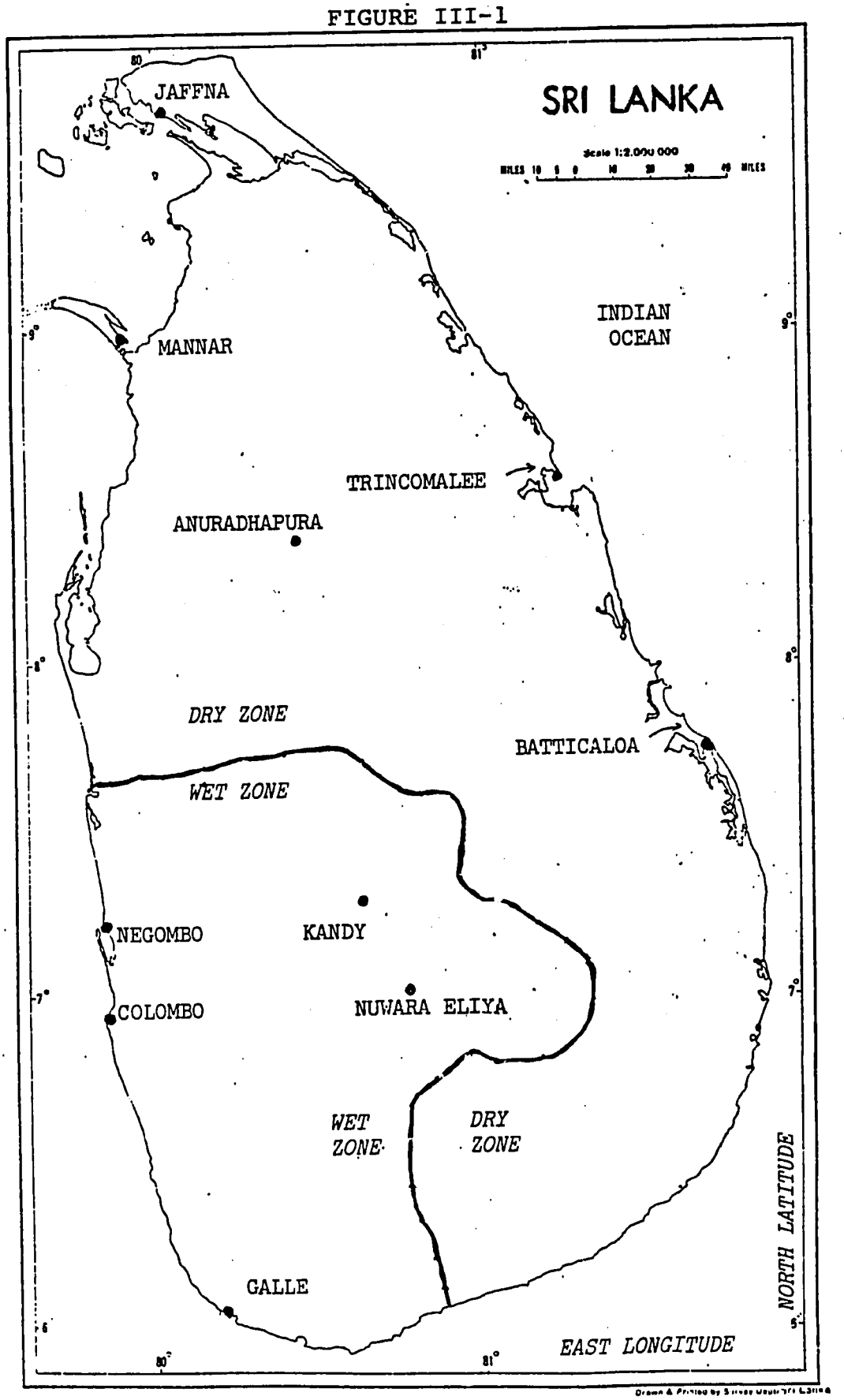
The island's climate is characterized by a warm, even temperature with two distinct physiographic regions in the country accounting for most of the temperature variances. Most of the island, that is, all of the coastal regions and the northern half, has an average elevation of less than 150 meters (500 feet). In this area temperatures range from the high 70s to low 80s, seldom exceeding 90 degrees Fahrenheit. The highlands area in the south-central part is remarkably different from the rest of the island, with high mountains more than 5,000 feet above sea level. (The highest elevation is 2,600 meters or 8,292 feet.) As could be expected, temperatures in this region average considerably lower than in the lowlands. Nuwara Eliya, the coldest town, averages 60 degrees F. and may even experience a few days of frost in January and February. Except for those people who live in the higher elevations (workers on tea plantations, for instance) the provision of domestic heat is not a problem for home owners in Sri Lanka.

The location of the island gives rise to semi-annual monsoons, one from the southwest Indian Ocean starting in May and another from the northeast beginning in October, which carry significant amounts of moisture. In spite of the average four month duration of these monsoon seasons, the rainfall is concentrated in the southwest portion of the country. Figure III-1 illustrates the distribution of the precipitation between the wet and dry zones. The boundary between the two zones is not absolute, hence the transition zone is sometimes referred to as the Intermediate Zone. Because the rains do not fall uniformly and the monsoons are seldom accompanied by high winds, building materials which would not last long in most environments (such as woven palm fronds) frequently last many years.

Flooding and drought are the most common natural hazards to which the island is exposed. Flooding from monsoon rains may occur in most any part of Sri Lanka. The rivers which originate in the highlands radiate out in all directions, meandering with large flood plains to the ocean. Drought or semi-drought conditions are prevalent in the northwest and southeast portions of the country where annual precipitation is less than forty inches.

Sri Lanka is relatively free from the other natural disasters which often threaten other islands in this region.

FIGURE III-1



Major cities and precipitation regions of Sri Lanka.

There is no volcanic or earthquake activity. The country is predominantly underlain by stable granite-gneiss rock with the exception of the Jaffna peninsula at the extreme northern end of the island. There, the subsoil is limestone of the Karst type which is highly soluble, cavernous, and susceptible to sub-surface dissolving which causes surface slumping into deep holes. Cyclones which occasionally strike the island recur on the average only every fifteen years. Then their path is usually across the eastern, less populated part of the country.

The original vegetation of Sri Lanka was predominantly tropical evergreen forests, both wet and dry types, according to the precipitation patterns. In 1960, approximately 40% of the island was forested; in 1980, this percentage is estimated to have declined to 25%. This rapid deforestation for wood products and agricultural development has resulted in significant environmental degradation through soil erosion and increased stream water runoff. Additionally, it has created a shortage of hard woods for building. Bamboo and palm fronds, which are frequently used for building, are in abundant supply.

The soil of Sri Lanka varies according to the distribution of rainfall rather than the composition of the underlying material. In the dry zone the soil is reddish-brown and full of ferromagnesian minerals, whereas in the wet zone the soil is reddish-brown lateritic formed by erosion. The coastal areas are mostly clay overlaid by sand.

The island is rich in industrial rocks and minerals such as gemstones, graphite, and several types of clay. No coal, oil, copper, lead, or zinc have been discovered. The gemstones (sapphires, garnets, moonstones and zircons) and graphite are mined chiefly for export.

The lateritic soil and certain types of clay are used extensively in home building to create building blocks and roof or pipe tiles. In the Jaffna area there are also sources of limestone, which are being used to manufacture cement.

C. Economic Overview

1. General

The current economic development program in Sri Lanka is the result of a broad mandate to improve the standard of living which the Government received when it was elected to office in 1977. The Government's basic strategy is to remove the administrative controls on the economy, encourage the growth of the private sector, and utilize government resources to rebuild the infrastructure as a foundation in long-term growth.

Sri Lanka today retains the agricultural base which has been its traditional economic mainstay. In 1979 over 25% of the GNP (in 1970 constant prices) resulted from agriculture, hunting, forestry, and fishing. Even though the quantity of tea, rubber, and coconut exported in 1979 declined, these products accounted for 64% of all export earnings. The importance of the agricultural sector is an integral part of the development program. The major public investment project, the Mahawel Project, will provide irrigation to vast areas of the dry zone, as well as farms for over 100,000 families. In addition, rejuvenation of rural villages is an important part of the public investment program for housing. These investments combined with expanded agricultural research, fertilizer subsidies, and farm advisory services are intended to ensure that the agricultural sector remains a prominent part of the Sri Lanka economy in both the near and long term.

In conjunction with the efforts in agriculture, the Government has attempted to broaden the economic base by encouraging the development of nonagricultural industries. A free trade zone has been established, and foreign businesses are being solicited to install manufacturing facilities. Recently for the first time in many years, restrictions against foreign bank operations were dropped and new banking institutions entered the country.

Development of this sort, however, is not easy; the pressure on Sri Lanka's resources is increasing as the economic recovery progresses. The major problem is the lack of the necessary capital to carry out the ambitious schemes. Private capital, depleted during the past decade, expanded during 1978 and 1979 at twice the 1970-77 rate but is being absorbed by private projects. Because Government domestic revenues fall short of what is needed to finance the increased investment, foreign aid is an essential element in the nation's budget for the next few years. During the period of 1980 to 1984, it is estimated that 45% of the public investments in Sri Lanka will be funded from external sources.

2. Recent Trends in Output

In 1979, growth in real Gross Domestic Product was 6.3% - lower than the 8.2% experienced in 1978, but still impressive. The decline was the result of poor agricultural crops and a general slackening in all sectors of the economy from the initial surge caused by the liberalization measures of 1978.

Agricultural growth of only 2% in 1979 was a serious setback. However, the 1980 crop promises to be better with an increase on the order of 5% expected. Production of tea, the major export commodity, increased in 1979 as did coconut and rice crops. Even so, producers suffered from reduced profit margins due to increases in the cost of fertilizer, labor, and transportation.

The manufacturing segment of the economy experienced a 5% rate of increase during 1979. Manufactured exports have become a significant factor during the last two years. World Bank estimates are that the bulk of the 4.6% increase in industrial value added was contributed by export manufacturers of petroleum, fish products, and garments. Nonpetroleum exports rose by 92% in 1978 and 95% in 1979. Garment exports alone were up over 600% from the 1977 levels with only small limited participation from the new firms in the free trade zone.

In 1979, gross investment was 26% of GNP, a 157% increase over the 1977 levels. This massive overall increase in investment has come from foreign sources. Foreign financing during 1970-77 averaged 3.3% but rose to 11.1% in 1979.

The Government's efforts to contribute to the nation's savings were foiled in both 1978 and 1979 as declining revenues converted budgeted surpluses into deficits. The deficit for 1979 amounted to 14% of GNP in spite of drastic measures taken by the government to reduce expenses and raise additional income.

As a result of the growth in foreign financing and an increase in borrowings of Rs 1,070 million by the government, the money supply grew at a 29% rate in 1979 versus the 1978 rate of 11%.

3. Inflation

Nonresponsive indices, rapid growth of certain segments of the economy, and the removal of administrative controls make inflation particularly difficult to forecast in Sri Lanka. The Consumer price index has not been adjusted for shifts in consumer spending patterns since 1952, so that it is widely recognized as a nonrepresentative indicator for planning purposes. In 1979, the official overall index registered an increase of 11%, whereas, an unpublished official consumer price index reflected a rise of 32% during 1979 and 43% between March of 1979 and March of 1980.

Projecting inflationary trends presents more complicated problems. During 1977 and 1978, most subsidies were removed or reduced which permitted prices to increase to market levels. To date, there has not been a corresponding increase in wage levels (in fact, a strike by government workers for higher wages in the spring of 1980 was effectively put down by the government). Whether or not a serious wage-price spiral will develop is difficult to forecast at this time. However, to this point the government has managed to avoid the problem.

The other aspect of inflation which must be considered is the effect of manpower and resource shortages in critical sectors of the economy. During 1979-80, the rapid increase in construction activity created dramatic rises in material prices and wages. Carpenters and masons in Colombo experienced wage increases from 200-300%. Skilled masons who earned Rs 20/day in 1978 could receive as much as Rs 60/day in mid-1980. Cement, which was not only in short supply but also removed from price controls, doubled in price during the first half of 1980. In addition to the construction industry, shortages of certain skilled and technical workers are beginning to appear. For example, trained accountants and engineers are needed in many industries. The long-term effect of excess demand for skilled workers and specific materials is difficult to project, but, if the planned growth in economic activity and investment continues, wage increases can be expected.

4. Employment

Regular and complete data on unemployment in Sri Lanka are not available. However, estimates are that employment increased by over 100,000 during 1978. The preliminary data from the first round of the Central Bank Consumer Finance Survey of 1978 placed unemployment at about 875,000 or 15% of the estimated 5.7 million in the workforce, down from 24% in 1973. Unemployment for the different sectors of the workforce according to the 1978 study broke down as follows:

Urban workers	-	21.2%
Rural workers	-	15.4%
Estate workers	-	5.4%

5. Balance of Payments

Overall, the international trade balance for Sri Lanka as of the end of 1979 was very good. For the fourth consecutive year, international reserves were larger at year's end. Unfortunately, the current

account showed a deficit of $372 million.

The deficit caused by the imbalance in the current accounts has been covered during the last few years by foreign funds in the form of grants, long-term official borrowings, private direct investments, and drawings from the IMF rather than extensive short-term credits or bank borrowings. Perhaps the most important element is the large proportion of the total made up of grants (78% of the total contributions during 1979) which were a significant factor in the 9.8% debt service ratio in 1979.

The major cause for the deficit was increased imports due to trade liberalization compounded by declines in the volume and/or price of all major exports of tea, rubber, and coconut. In 1979, export earnings increased by 16% in rupees (only 13% in SDRs). Imports, on the other hand, rose by 54% in rupees (by 45% in SDRs). The volume of imports increased by 23% and the import prices by 52%.

Imports were dominated by capital and intermediate goods. Of the total investment goods imported, 53% were machinery and equipment, 30% transport equipment, and 7% building materials, The value of food imports declined from 24% of the total in 1978 to 16% of the total in 1979.

6. Near Term Outlook

Recent inflationary trends and reduced revenues have forced the government of Sri Lanka to reappraise its economic policy; in its second annual rolling five year plan, adjustments have been made to several programs in order to cope with a changing environment without sacrificing the long-term goals of the country.

The primary concern for the foreseeable future remains the generation of sufficient capital to carry out the investment projects necessary to increase self-sufficiency. To that end, certain projects (notably, the Mahaweli) were modified to accelerate the schedule for beneficial output. These modifications, along with changes within projects to reduce costs (such as the increase in the use of aided self-help housing schemes), create a medium term plan for capital investment between 1980-84 that attempts to trade off the needs of Sri Lanka with the economic realities.

Even so, the nature and size of the effort being made fosters problems which threaten the current plans. The total investment expenditures for 1980-84 are estimated at Rs 126.2 billion (US $8.5 billion)

of which Rs 67.3 billion (53%) is public sector investment. This extensive public investment, much of which will be carried out through state-owned corporations, may usurp private investment. This could have serious implications for the economy because many of the public investment projects will not produce economic benefits for several years, whereas most of the private investment projects which lose out in the competition for funds would have much shorter gestation periods.

Regardless of whether government competition squeezes out private investment, many of the Government's investment funds are budgeted to come from external sources. The 1980-84 investment plan calls for about 55% of the financing to be generated internally and about 45% to be supplied by foreign sources. The amount of external financing counted on is large and might be optimistic under any circumstances. Over the five year period, however, the likelihood is high that economic problems will curtail the foreign aid activities of one or more major donors. This could have a major impact on the development plans for Sri Lanka.

The need for capital and the problems associated with obtaining it are, of course, to be expected in any developing country. In Sri Lanka, the demonstrated willingness of the government to make difficult decisions in the long-term interest of the country as well as to plan realistically,appear to mitigate many of the problems.

D. Population

To set the framework for examining the shelter situation in Sri Lanka, it is necessary to give a brief overview of the characteristics and location of its population, stressing those factors which would bear on the type of housing now existing or which needs to be provided. In the preparation of this section of the Shelter Sector Assessment, generous use has been made of previously published material as acknowledged (with appreciation) in the notes which follow the section.

1. Present Population

The Central Bank of Ceylon estimated the population of Sri Lanka to be approximately 14.5 million people as of December, 1979.[1] With a size comparable to that of West Virginia, Sri Lanka has a population density of approximately 529 people per square mile. The population is not evenly distributed, being concentrated most heavily in the southwest portion of the island which is where the capital, Colombo, is situated.

Approximately 24% of Sri Lanka's population is currently considered to be urban. (The Census defined as urban areas the local administrative divisions of Municipal Councils, Urban Councils and Town Councils and although this definition does not necessarily relate to a specific population for each category and, thus, makes the distinction between rural and urban somewhat blurred, it is the general definition which is used.)[2]

The United Nations has characterized the settlement pattern of Sri Lanka as:

> . . . a dense scattering of villages in the wet zone, sparse settlements in the dry zone, the capital city of Colombo, and the absence of any outstanding secondary centre (with the possible exception of Kandy for historical reasons), but rather the existence of several small secondary centres. An indication of the paramount importance of Colombo is that the second largest urban centre outside the metropolitan region, Jaffna, had in 1971 a population less than one-twelfth the size of the metropolitan area and only two towns, Dehiwela-Mount Lavinia (itself part of the metropolitan region) and Jaffna, had populations of more than 100,000 in 1971.[3]

Thus, Columbo is far and away the dominant city in Sri Lanka. The Colombo District increased its share of the urban population from 50.3% in 1946 to 54.4% in 1971, although this has changed little since 1961. Projections until the year 2000 show that the urban population of the Colombo Metropolitan Region (CMR) will continue to have about 57% of the urban population of Sri Lanka. (See Table III-1 on the following page.) Current estimates place the population of the Colombo urban area at 1 3 million or 9% of the population of all of Sri Lanka. Clearly this has implications as to where the housing needs are greatest.

Tables 1 and 2, Annex I provide a more detailed breakdown of the populations of the urban areas of Sri Lanka; Figure III-2 gives a spatial picture of the population distribution.

As illustrated by the data presented in Table 3, Annex 1, the population of Sri Lanka is characterized by a large proportion of young people with 39% under the age of 15 and with a pyramidal nature to the age distribution. This table also indicates that the male population is 106% of the female. With such a large proportion of young people, the demand for

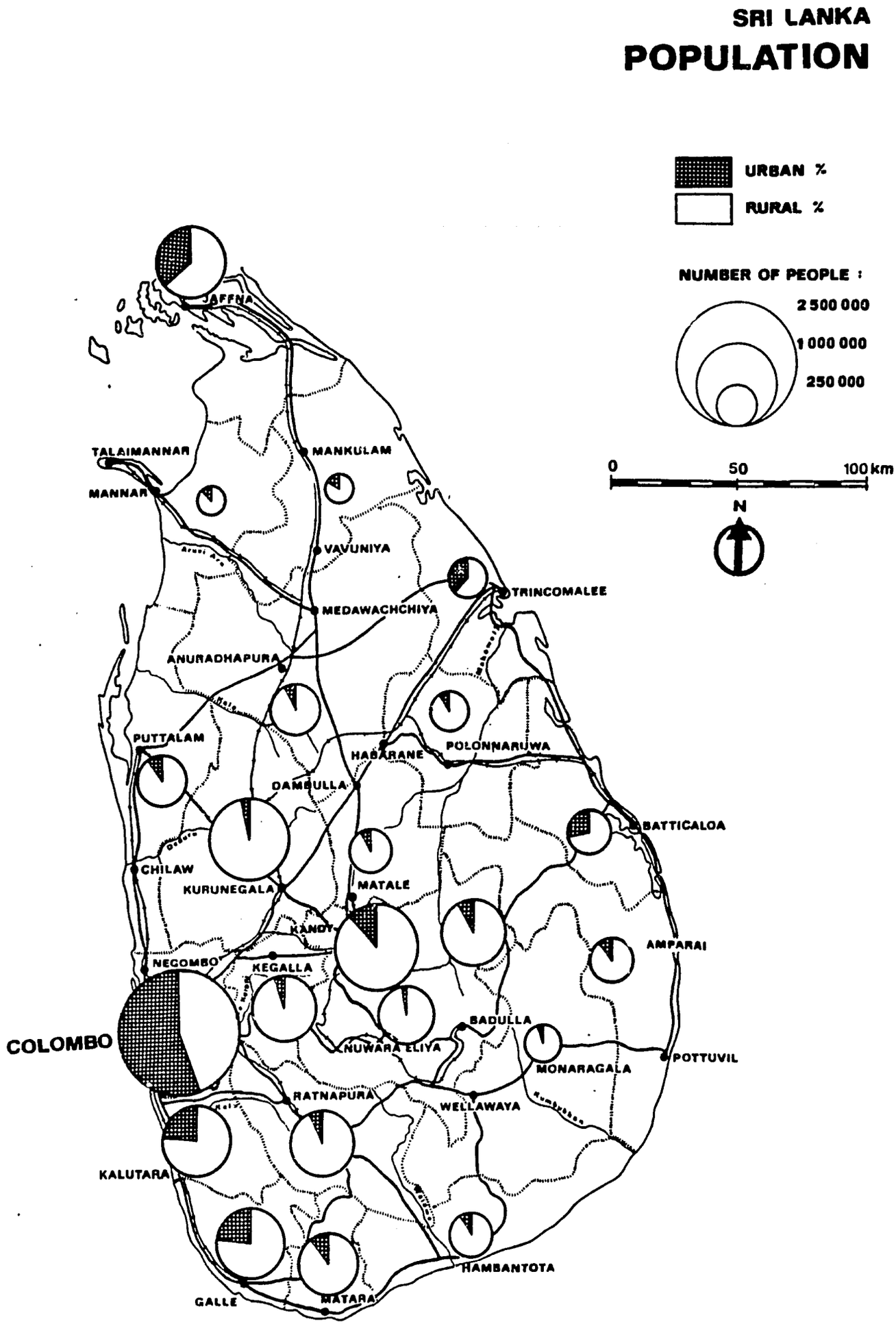
TABLE III - 1

POPULATION, 1946-2001

	CMR Urban	Total Urban	Rural	Total Sri Lanka
POPULATION (000)				
Actual				
1946	629	1,033	5,624	6,657
1953	767	1,239	6,859	8,098
1963	1,150	2,016	8,566	10,582
1971	1,631	2,842	9,869	12,711
Estimated				
1978	1,973	3,438	10,771	14,209
2001	3,326	5,795	13,520	19,315
PERCENT OF TOTAL				
Actual				
1936	9.4	15.5	84.5	100.0
1953	9.5	15.3	84.7	100.0
1963	10.9	13.1	80.9	100 0
1971	12.8	22.4	77.6	100.0
Estimated				
1978	13.9	24.2	75.8	100.0
2001	17.2	30.0	70.0	100.0
NET INCREASE/YEAR (000)				
Actual				
1964-53	19.7	29.4	176.4	205.9
1953-63	37.1	75.2	165.2	240.5
1963-71	58.3	100.1	157.9	258.1
Estimated				
1971-78	48.9	85.1	128.8	214.0
1981-2001	58.8	102.5	119.5	222.0

Source: G. T. Kingsley, A Review of Sri Lanka's Housing Problems and Policies, August, 1978.

FIGURE III -2


SRI LANKA
POPULATION
URBAN %
RURAL %
NUMBER OF PEOPLE :
2 500 000
1 000 000
250 000
0
50
100 km
N
JAFFNA
TALAIMANNAR
MANNAR
MANKULAM
VAVUNIYA
TRINCOMALEE
MEDAWACHCHIYA
ANURADHAPURA
PUTTALAM
HABARANE
POLONNARUWA
DAMBULLA
BATTICALOA
CHILAW
KURUNEGALA
MATALE
KANDY
AMPARAI
NEGOMBO
KEGALLA
COLOMBO
BADULLA
NUWARA ELIYA
MONARAGALA
POTTUVIL
RATNAPURA
WELLAWAYA
KALUTARA
HAMBANTOTA
GALLE
MATARA

housing as these people reach maturity, will continue to grow.

2. Population Growth

The rate of population growth in Sri Lanka is currently quite low among developing countries. "The Island's population increased for many years at an average annual rate of 2.4%, resulting in its doubling in 25 years. In some years, the growth rate climbed to 2.8%, but fertility tended to decline in the 1970's. The 1979 rate was about 2.2%, with population increase adjusted to 1.9% for emigration."[4]

This same characteristic was evident over longer periods with the rate of population increase reflected in the intercensus period of 1963-71, lower (average annual rate of 2.3%) than that corresponding to the earlier 1953-63 interval (average annual rate of 2.7%). In absolute terms, Sri Lanka has been growing by around 890,000-900,000 persons every four years in recent times.[5]

"With a per capita gross national product of $200, an infant mortality rate of 49 per 1000 live births, a crude death rate of nine per 1000 population and a life expectancy of 68 years, a recent World Bank report stated, 'Sri Lanka has about one and one-half times the life expectancy, one quarter the infant mortality and half the birth rate that would be expected at its per capita income level.'"[6]

Although mortality rates have experienced a steep drop in the past few decades, Sri Lanka's crude birth rate has declined consistently. It has fallen from 39.8 per 1000 in 1951 to 26 per 1000 in 1978.[7] Several factors are thought to contribute to the declining birth rate and the drop in the rate of natural population increase in Sri Lanka. Among them are a reduction in marital fertility, widespread education, a rising age at marriage, and a situation of widespread unemployment in the country.[8]

In spite of its current low rate of population increase, the structure of Sri Lanka's population (see Table 3, Annex I) has particularly important implications for the housing sector:

> The age structure of the population and the young components in it will be important factors in the formation of new households, and this in turn will be a critical determinant of future housing demand. The 25-34 age group which would be the segment in which new house-

> hold formation would be highest, has grown at a rate of 1.4% between 1953 and 1963. But its rate of increase during the period of 1963-71 rose to 2.4 although the rate of growth of the total population registered a significant decline . . . The projected rate of increase for the 25-34 age group between 1971 and 1983 will be 4.1% and between 1983 and 1993, 2.2%. Formation of new family units is therefore likely to continue at an increasing rate resulting in increasing pressures for new household formation which will be reflected in the demand for new housing.[9]

(a) Urban Population Growth - It is generally recognized that Sri Lanka's urban population has grown at a modest rate by comparison with that of most developing countries. Urban areas, however, have been growing somewhat more rapidly than rural ones, with a particularly marked rate of increase registered by the populations of the largest urban centers:

> In 1946 the urban population was . . . distributed fairly evenly among the towns of different size with approximately 25% in the towns with populations below 10,000. In 1971 the base containing the smallest towns had contracted from 40 to a mere 6 and the share of the urban population in towns below 10,000 has fallen to 10.7%.[10]
>
> The main concentration of the urban sector is in the Colombo District which contained approximately 51.8% of the total urban population of the country. The intensity of the urbanization of the Colombo District itself is seen in the fact that out of a total population of 2,700,000 in this District the urban population was approximately 1,400,000 or 54%. The Districts with the highest urban components after Colombo are Trincomalee with an urban share of nearly 40%, Jaffna with 32% and Batticaloa approximately 30%.[11]

Kinsley[12] projects that Sri Lanka's urban population will increase by approximately 103,000 persons per year between 1978 and 2001. While this rate of urban population growth is roughly comparable to that of the 1960's, such a projection represents a vast increase in the absolute size of cities. The urban population, roughly 3.4 million in 1978, is expected to reach a level of 5.8 million by 2001.

It should further be noted that the spatial distribution of urban population growth is not uni-

form because of the location and specific nature of many urban functions. An urban growth pattern with internal concentrations of population increase has thus resulted. Within the context of overall modest growth of the Colombo Municipal council area, for example, the Colombo urban area experienced a rate of population growth of 3.42% per year in fringe areas.[13] Kingsley cites several estimates projecting that the proportion of urban to total population will increase from its current level of approximately 24% to 30% by the year 2001.[14]

Relatively slow urban growth in Sri Lanka resulted from a number of causes, among them the slow growth (and from a small base) of the manufacturing sector, the dispersal of estate-product processing activities in non-urban areas, significant State investments in several large-scale industrial plants located around the island close to raw material sources, and a heavy government subsidy to transport facilities which favored mobility over migration. In addition, the virtual elimination of malaria in the sparsely-populated dry zone in the north of Sri Lanka after World War II and the restoration of ancient irrigation works in that area opened large areas of land for resettlement by rural people feeling the effects of population growth in the more heavily-settled rural southern wet zone. The opening up of the Mahaweli Development area and its resettlement of some 140,000 families will continue this movement. Thus, much of the dynamics of movement of the rural population of Sri Lanka has been rural-rural, rather than rural-urban:

> By comparison to the rural to rural migration which took place as a result of the development of the plantations in the wet zone and irrigation in the dry zone, the rural to urban migration has not been significant. Between 1871 and 1971 the urban population increased from 260,000 to 2,800,000. This represented an increase from 10.9% to 22.4% of the population. This increase was due partly to the expansion of the urban areas and partly to the proliferation of urban centres which increased from 19 to 134 during this period. What is classified as "urban" in Sri Lanka comprise municipal, urban and town council areas. The smallest of these have less than 2,000 people and are little or no different from service centres of a similar size classified as "rural." In fact, some large villages perform functions which are more urban in character than the smallest urban centres. The largest urban centre,

> Colombo, has not grown as rapidly as comparable Asian or African cities. Its population increased from 110,500 in 1881 to only 562,000 in 1971 during which time its area increased by about 50% from 9.45 to 14.4 square miles. This population represented 4.6 and 4.4% of the total population and 39.3 and 19.8% of the urban population in the respective years.. . . The slow growth of industry is one of the reasons for this. The number employed in manufacturing increased from little under 300,000 in 1946 to about 350,000 in 1971. Further, almost 75% of those employed in manufacturing in 1971 were in the rural sector. Only about 113,000 were employed in the organized or formal industrial sector in 1976. Thus, the urban-oriented industrial employment formed only a small proportion of those employed in manufacturing. Many of them are distributed in urban areas around Colombo rather than in the city itself.[15]

(b) Rural Population Growth - It is evident from the above descriptions of Sri Lanka's urban population growth patterns that the country has not experienced the wholesale rural-urban drift of population which characterizes many developing nations.

It is also important to identify a particular feature of Sri Lanka's non-urban population: its subdivision into the traditional agricultural rural sector and the plantation, or "estate," sector. This sector is comprised of tea, rubber, and coconut plantations and is located mainly in the center and southwest of the country. Its population consists in large measure of the descendants of Indian Tamils who were brought to Sri Lanka during the late 1800's to work on the plantations, and who have never been fully integrated into the mainstream of Sri Lankan life.

> The pattern of housing development in Sri Lanka has to be seen in the context of an economy in which three major productive sectors are clearly identifiable. There is the urban sector with its modern manufacturing and servicing activities containing approximately 22.3% of the population. Over 50% of the population of this sector is concentrated in the capital city of Colombo and its environs in the southwest of the country. The estate or plantation sector . . . contains approximately 9.1% of the population. The bulk of the population, approximately 68.1% is in the rural sector which is based on traditional

peasant small-scale agriculture producing for the domestic market.[16]

The rural population of Sri Lanka is, thus, increasing in absolute numbers at a rate close to that of the country as a whole. It seems, however, that the nature of Sri Lanka's rural sector (with its emphasis on the utilization for agriculture of sparsely-settled areas in the irrigated regions to the north, with relatively good levels of health and education services in non-urban areas resulting in large measure from the corresponding sector policies of the Government, with its estate sub-sector and with a high apparent degree of awareness that urban migration is not a solution to the perceived shortcomings of rural life, particularly with high unemployment in urban areas) is such that rural inhabitants will choose in many cases to remain in their places of origin. Thus, population growth can be expected to continue in Sri Lanka in rural areas at only a slightly lower rate than the national rate of growth or than that of the rate of growth of urban areas.

3. Ethnic Composition and Cultural Characteristics

The Sinhalese people, sometimes divided on the basis of geography and culture into the low-country Sinhalese and the Kandyan Sinhalese, make up about 72% of the country's population. The other major group is the Tamils, people of South Indian origin and composing about 20% of the population split about evenly between Ceylon Tamils and Indian Tamils. Here the difference is more important, the Ceylon Tamils having lived in Sri Lanka for a number of centuries while the Indian Tamils were originally brought from India in the late 19th century to work the tea and rubber plantations, the "estate sector" to which reference has been made.

A 1948 law led to the disenfranchisement of the Indian Tamils. Subsequently, bilateral agreements between Sri Lanka and India have resulted in the repatriation to India of a number of the Indian Tamils; by mid-1979, the number had reached 306,000. The remainder of the population is composed of Moors, (about 7%) with Burghers (descendants of Dutch colonists), Eurasians, Malays and Veddahs (aborigines) making up the rest.

Table III-2

ETHNIC COMPOSITION, 1971

Sinhalese	71.9
Tamils (Sri Lankan)	11.1
Tamils (Indian)	9.4
Moors	6.7
Burghers/Eurasians	0.3
Malays	0.3
Others	0.1

Source: Derived from Kurian, George Thomas. Encyclopedia of the Third World, Facts on File. New York, 1978, Volume II, p. 136.

Buddhism is the religion of most of the Sinhalese. The Tamils are for the most part Hindus and Islam is the religion of the Moors and Malays. There are slightly less than one million Christians coming from all the ethnic groups. Different languages characterize Sri Lanka ethnic groups, Sinhala being the language of the Sinhalese and the Tamils speaking their language. Both have replaced English in administration and in schools, the use of Tamil being more prevalent in the northern and eastern provinces where Tamils predominate. About 10% of the population can speak or understand English.

The constitution makes no reference to an official religion but Buddhism is generally identified with Sinhalese nationalism and the Sinhals language. Although not officially recognized, the caste system does exist to some degree in both Buddhist and Tamil society, particularly in rural areas.

It has been noted, however, that the effects of a period of colonial existence and of modernization in general have worked to mitigate the rigidity of Sri Lanka's caste system:

> The residual effects of the colonial period and the increasing impact of modernizing industry are yearly bringing more and more persons into the orbit of the urban, market-oriented life of modern Ceylon.[17]
>
> The value system of modern Ceylon is therefore an amalgam of elements, ancient and modern, derived from Asian and European sources. As the society itself is fluid and in a state of accelerating change, so are the

> values that support it. Although elements of alienation are present, the picture is not so much one of conflict of values as of reformulation. Various observers have noted that Ceylonese culture generally and Sinhalese culture in particular have elements of plasticity that permit the harmonious adoption of new cultural items and conceptions while retaining much of the old. Consequently, the introduction of profoundly foreign attitudes and conceptions has not destroyed the moral foundation of Ceylonese society but has brought about a new, if uneasy, form of dynamic equilibrium.[18]

> Rigid caste distinctions appear to exist only in the most rural areas. . . Free public education, combined with early missionary influence, has precipitated a breakdown of the traditional structure. Redistribution of land and economic mobility have encouraged the creation of a class-oriented, rather than a caste-specific society. The flexibility of the caste structure is such that, given sufficient financial resources, one can buy out of a particular caste.[19]

The changes in Sri Lanka's society today have also facilitated the entry of women into positions of significant economic and political importance, in spite of some obstacles which are still posed:

> Today it is no longer necessary to abide by the social and cultural pressures for rigid sex-typed behavior, which in Sri Lanka has been detrimental to improving the status of women. With urbanization and industrialization and a democratic political system, the women have been provided with new opportunities and scope for developing a more dynamic role.[20]

4. Family Size

Little current data is available for analysis with respect to family sizes in Sri Lanka. It is expected that the results of the 1978 Survey of Sri Lanka's Consumer Finances now under preparation by the Central Bank will shed light on recent trends in family size.

The most useful data found with respect to family size in Sri Lanka were those generated by the August-September 1973 field survey conducted by the Marga Institute and reported in that organi-

zation's 1976 publication, Housing in Sri Lanka. These data are presented within a context of household income. As will be noted in a subsequent section of this document, income levels in Sri Lanka have changed quite considerably from their 1973 levels.

The data presented in the referenced Marga publication (in Tables I and VI on pages 205 and 211 respectively) have been combined to produce summary Table III-3 which indicates that average family sizes in urban and rural areas of Sri Lanka are 5.15 and 5.02 members, respectively. Of equal interest from a housing standpoint, however, are families per household. The data indicates that it varied from 1.16 to 1.30 in urban areas depending on income levels and 1.14 to 1.20 in rural areas.

TABLE III-3

FAMILIES AND MEMBERS PER HOUSEHOLD, MEMBERS PER FAMILY, AVERAGE FAMILY SIZE, URBAN/RURAL

Household Income per Month	Avg. # of Families per Household	Avg. # of Members per Household	Avg. # of Members per Family	% of Urban Sample	% of Rural Sample	Weighted Share of Average (Urban)	Weighted Share of Average (Rural)
Under Rs.200	U 1.19	5.34	4.49	29.61		1.329	
	R 1.20	5.02	4.18		43.60		1.82
Rs. 200-399	U 1.30	6.63	5.10	42.41		2.163	
	R 1.14	6.48	5.68		39.36		2.24
Rs. 400-599	U 1.16	7.59	6.54	15.03		0.983	
	R 1.18	7.88	6.68		10.24		0.691
Rs. 600 +	U 1.21	6.29	5.20	12.95		0.673	
	R 1.20	4.76	3.96		6.70		0.266
						5.15	5.02

SOURCE: Compiled from data in Housing in Sri Lanka, Marga Institute, Colombo, 1976 pages 205 and 211.

A survey conducted in late 1979 by the Slum and Shanty Unit of the Urban Development Authority of the Ministry of Local Government, Housing and Construction, yields data worth of mention, with respect to the shanty area "Henemulla Camp" located approximately three miles from downtown Colombo. This shanty area covered 10 acres. The total population of the 655 families living in the site was 3539, giving a gross density of 354 people per acre. The average family size was, thus, 5.4 with 62% of the families having from three to six members.[21]

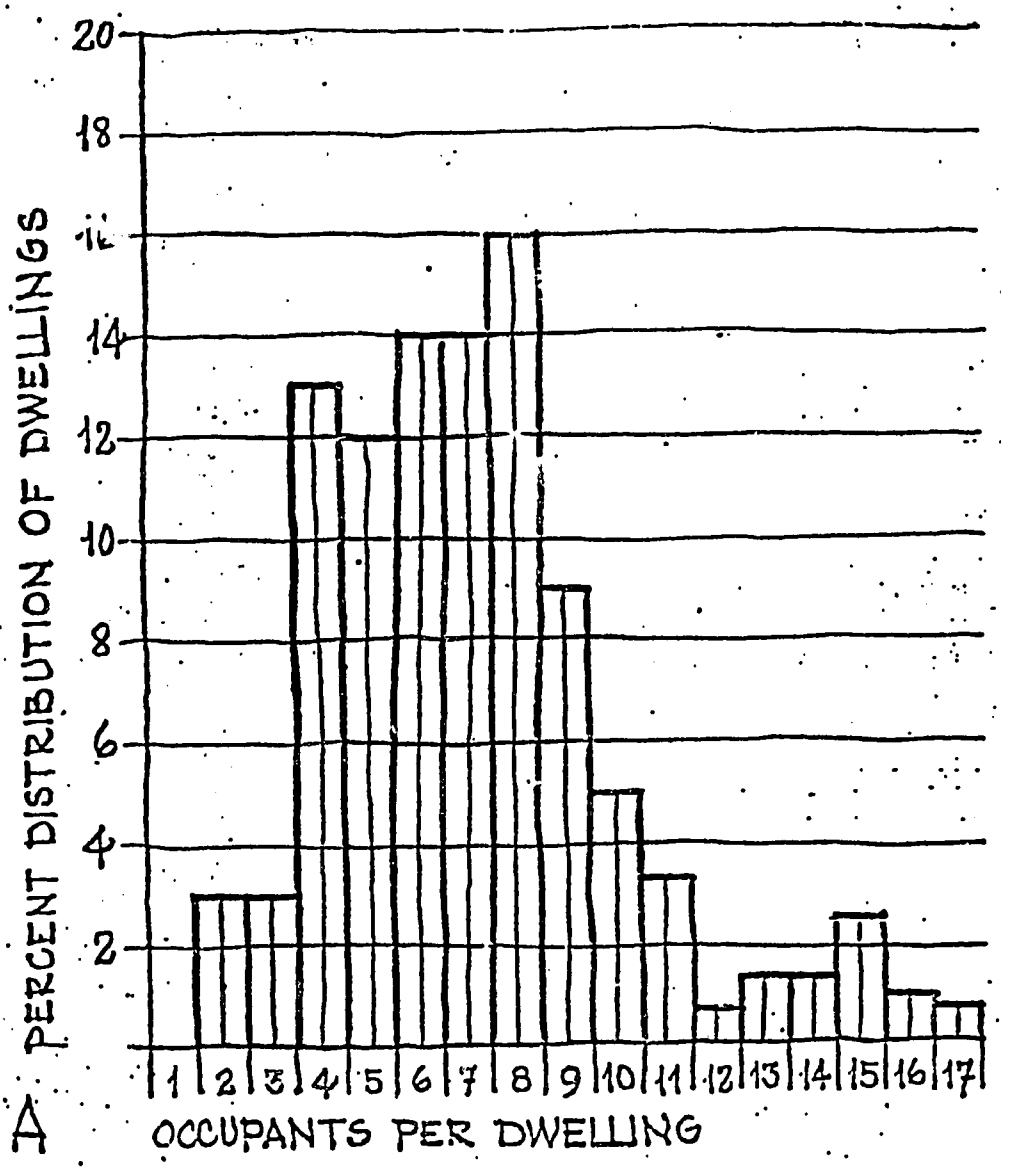
The findings of the Henemulla Camp survey suggests that family sizes in the slum and shanty areas of Colombo, and probably of other low income urban areas of Sri Lanka, are somewhat higher than either the overall urban or rural national averages. Corroborative evidence is offered by the findings reported in the document entitled "Summitpura Urban Housing Project" published by the University of Moratuwa in early 1980 in connection with the Urban Development Authority/UNDP Post-Graduate Diploma Course in Urban Development. In this study, field investigations were conducted in January 1980 in a shanty area in Colombo named Summitpura located approximately six miles from the center of the city. Thirty-one per cent of the dwellings in Summitpura were surveyed. The following excerpt from the project report is offered, along with figure III-3 which illustrates the data which are of interest:

> The survey covered 282 families living in 162 dwellings with a total population of 1,284. The population of young people is very high. In the 282 families there are 304 infants showing an average of more than one infant per family. Out of the whole population nearly 30% are children of school going age, which shows the high dependent ratio of the population. However, it was found that most of the children do not go to school for a variety of stated reasons such as the cost of busfare, clothes, books, lunch, etc. Out of the 368 children, 178 are boys and 190 are girls. It was also found that there were more women than men. Out of the 268 men, more than half are unemployed and only a minority of these are in permanent employment. Thirty-three percent of the dwellings shelter more than one family, leading to an average occupancy rate of almost 8 persons per dwelling . . . and the average family size in Summitpura is 6.2 which is well above the national and the urban average for Sri Lanka.
>
> NB: The unit of "Family," used throughout the survey denotes that group of people, almost always direct kin, who under "ideal" conditions, would willingly choose to live together, sharing the space and services of one dwelling.[22]

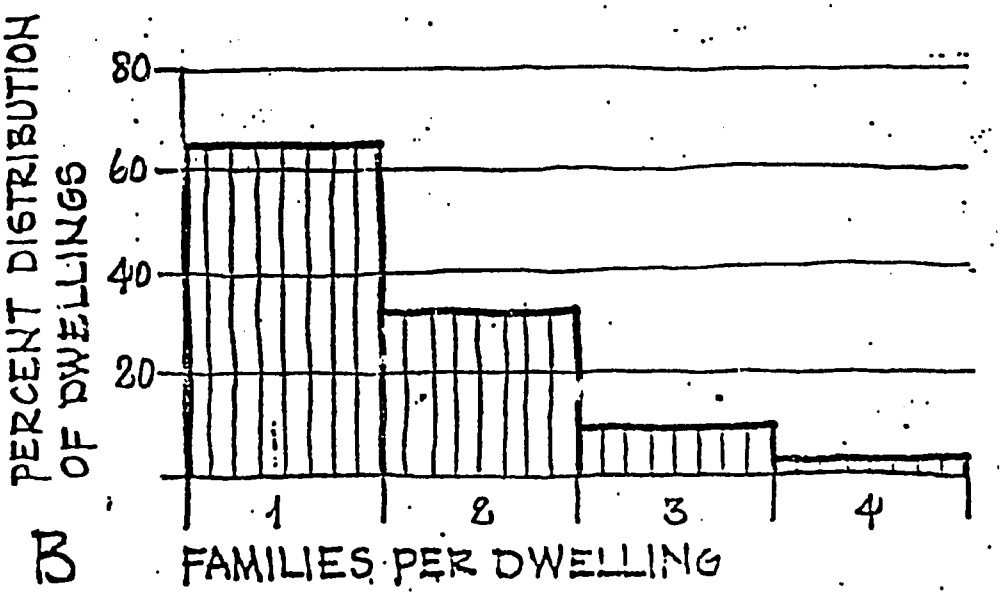
The paucity of current official data on family size and household occupancy levels has been noted. Kingsley cites a figure of 1.13 households per occupied urban unit as of 1971 on an island-wide basis.[23]

FIGURE III-3

DWELLING OCCUPANCY RATE



AVERAGE OCCUPANCY = 7·9 PERSONS/DWELLING



5. Income Levels and Distribution

As of the preparation of this report, accurate official data on current levels, distribution, and sources of income in Sri Lanka are not available. However, the Central Bank of Ceylon conducts every five years an investigation for the acquisition of the data required to publish the Survey of Sri Lanka's Consumer Finance, which was last published on the basis of 1973 data. Tables prepared on the basis of those data are contained in Annex II to this document for purposes of reference.

Information on income obtained in the course of the surveys conducted by the Central Bank during 1978 were made available to this team and are reproduced in Table III-4. It is to be noted that these data are considered tentative and unofficial by the Central Bank. This table indicates that the median urban income per income received was between Rs 500-600 per month in 1978. The levels of income reported in 1978 represent a significant increase over the corresponding data reported in the Central Bank's last survey.

The current level of income and its distribution among the households of the island have been calculated for late 1980 and form the basis of Table III-4 below. As would be expected, it is clear from the data that the level of urban income is higher than that of rural income for all households, although the high level of attention paid to the rural sector by the Government of Sri Lanka has kept the urban-rural income disparity remarkably low.

Overall income distribution patterns in Sri Lanka are quite favorable in the context of developing nations:

> Sri Lanka has become noted among Asian countries for its past attention to the issue of equalizing incomes, largely via transfer payments in kind; that is, where the public bodies allocate expenditures in such a way that priorities are given to those meeting basic needs of the low income groups, such as through health, education and welfare outlays. Evidence of a significant trend toward more equality of incomes just for the limited period 1963-73 comes from a Central Bank of Ceylon survey: the lowest 40% of the country's income receivers obtained 11.9% of total income in 1963 but by 1973 had increased their share by 3.1 points to 15.0%.

From the standpoint of the lowest 40% of population groupings who decide on how incomes are spent (i.e., households, which sometimes are two or more per dwelling), the improvement during the 10 years was more marked: from 13.7% to 19.3% of all income.[24]

Table III-4

PROJECTED LEVEL AND DISTRIBUTION OF FAMILY INCOME, 1980

Rupees/Month

Urban	%	Rural
000 - 346	10%	000 - 240
347 - 482	20%	241 - 346
483 - 696	30%	347 - 482
697 - 909	40%	483 - 697
910 - 1177	50%	698 - 760
1178 - 1391	60%	761 - 1017
1392 - 1605	70%	1018 - 1177
1606 - 2033	80%	1178 - 1605
2034 - 3103	90%	1606 - 2354

Source: Based on preliminary data for the 1978-79 Consumer Finance Survey coordinated by the Central Bank of Ceylon. Projection prepared by USAID team and reviewed by officials of the Central Bank.

Official comment on income distribution underscores Sri Lanka's commitment to the maintenance of politics to ensure continued improvement in the distribution of the nation's income:

> It might be argued that Sri Lanka, at the current stage of development, should emphasize economic growth, even at the expense of equitable income distribution, especially in the context of a relatively high concern for welfare in the past. But, if economic growth has to have a tangible meaning to the masses, the manner in which the growing prosperity is shared among the people becomes a critical factor. At least at the initial stages, when resources are being consciously diverted from consumption to investment, which will inevitably lead to a lowering of real incomes of the poorer classes, it may be prudent not to be over-generous with concessions such as tax holidays

and lump sum depreciation. As emphasized in the last year's Report, an equitable balance between growth and equity will have to be worked out.[25]

6. Employment Opportunities

The nature of data available on employment in Sri Lanka is such that an accurate picture of employment opportunities is difficult to draw. However, information on this subject is to be found in several sources, as detailed below. Tables 7 and 8 in Annex I give detailed data on employment as of 1973. Table III-5 below briefly summarizes the principal types of employment in Sri Lanka as of 1978.

Table III-5

EMPLOYMENT IN SRI LANKA, 1978

ITEM	UNIT	1978	PERCENT
TOTAL EMPLOYMENT	000	2,588.1	
Plantation Agriculture	"	1,428.3	55.20
Non Plantation Agriculture	"	20.5	0.01
Mining and Quarrying	"	13.8	0.01
Manufacturing	"	440.9	0.17
Construction	"	25.2	0.01
Trade and Transport	"	432.4	0.17
Services	"	183.8	0.07
Unclassified	"	43.3	0.02
EMPLOYMENT IN KEY SECTORS	"		
Plantation	"	560.9	
Government	"	445.3	
Semi Government	"	659.4	

Source: Central Bank of Ceylon: Economic and Social Statistics of Sri Lanka, Vol. II No. 2, December 1979, Page: 20.

The preliminary data obtained from the first round of the Central Bank Consumer Finance and Socio-Economic Survey in 1978 indicates a labor force of 5.7 million, which was 29% of the estimated population. The unemployed in 1978, according to the same survey, numbered 874,000. A breakdown of these data by percentage of unemployed in the urban-rural-estate categories is given below:

Table III-6

UNEMPLOYMENT AS PERCENTAGE OF WORKFORCE

Sector	1978
Urban	21.2
Rural	15.4
Estate	5.4
All Sri Lankan	15.3

Source: Central Bank of Ceylon

The characteristics of unemployment in Sri Lanka differ in significant respects from those of many developing countries, with a particularly high rate of unemployment among people possessing relatively high levels of education. Classification by educational categories indicated that unemployment was most severe among those with a secondary or G.C.E. education. Unemployment among those with more education was very low. This category has shown the most significant decline in unemployment (80%) during the 5 year period 1973-1978.

Table III-7

UNEMPLOYMENT CLASSIFIED BY EDUCATIONAL CATEGORY

Educational Category	Unemployment as Percent of Workforce for Each Category in 1978
No schooling	4.0
Primary	7.2
Secondary	21.9
Passed G.C.E. (O.L.)	29.2
Passed G.C.E. (A.L.)	31.7
Passed Degree	3.2

Source: Central Bank of Ceylon

The survey data also show that unemployment among females was more severe than among males. In the case of males, the rate of unemployment as a percentage of the male workforce was 9.6% in 1978, while for females the rate was 25.6%. An agewise classification also reveals that unemployment was

highest in the age group of 19-25 years (24.9%) while it was lowest in the age group of 46-55 years (.8%).

Table III-8

UNEMPLOYMENT CLASSIFIED BY AGE CATEGORY,

1978

Age Group	Unemployment as % of Workforce for Each Age Group
14 - 18	23.6
19 - 25	24.9
26 - 35	11.5
36 - 45	4.1
46 - 55	0.8

Source: Central Bank of Ceylon

Excerpts from an article by M.D. Dias in the Sri Lanka Journal of Social Services in 1978 provide a good insight into population growth and employment following independence, to put the current employment situation into perspective.

> The growth of population in Sri Lanka in the post-independence period has far outstripped the economic development that has taken place during the same period. The annual rate of population growth which fluctuated between 0.9 and 1.7% up to 1946, jumped to an all time high of 2.8% for the period 1946-53. The rate of growth was 2.7% for the period 1946-53. The rate of growth was 2.7% in the following decade and declined subsequently, first slowly in the late 1960s and then more rapidly in the 1970s until it reached 1.6%. Between 1946-77, the total population had increased from about 6 million to just over 14 million. The rate of economic development during this period was around 4.0% annually during the 1950s and 1960s but declined to 3.0% in the 1970s. A considerable proportion of the economic development resulted from increases in productivity, especially in the plantation and paddy sectors, which did not generate a proportionate expansion in employment.

Dias goes on to say:

> Although these figures may not be very accurate they are accurate enough to indicate the nature and magnitude of the unemployment situation in Sri Lanka. Nearly 80% of these unemployed were young people aged 15-29 years of whom 46% were aged 20-24 years. Among the unemployed aged 15-29 years, 56% were male. Thus it can be seen that the unemployed persons are mainly young persons. Further almost 45% of them have received formal education up to the secondary school level. It is clear from these figures that the unemployed persons in Sri Lanka are mainly educated youth living in rural areas.
>
> The sharp increase in unemployment is only partly due to the rapid increase of population in the 1950s and 1960s and the slow growth of the economy. It is also due to changes in economic and social conditions and attitudes which have persuaded more people, especially among women, to seek employment.[26]

Sri Lanka's employment picture thus shows a shortage of employment opportunities for both skilled and unskilled workers; in the case of the former, due in some measure to Sri Lanka's extraordinary performance in providing its citizens with a high level of literacy and education, and in an overall sense due in part to the current status of the country's economy.

A different perspective on the problem of unemployment emerges in the recently prepared Policy Paper: Slum and Shanty Upgrading in Colombo MC. Describing the employment characteristics of the people living in the slums and shanties of Colombo, and speaking of work patterns which can be said to characterize many of the urban poor in all of Sri Lanka, the Policy Paper points out:

> . . . this target population - the urban poor - cannot be conceived as merely an underprivileged sector of society which deserves more. The reality of the existing urban economy is that a significant number of the labour force (and certainly the majority of slum/shanty dwellers) find employment (often under-employment) outside the formal wage labour in an 'informal' sector which provides cheap mass consumer goods and services, inputs to larger industries and an efficient means of distribution. In this sense, these 'informal' sector workers, who generally

> populate Colombo's slum and shanties, compose an important productive segment of the urban labour force. They represent a valuable current and potential asset for development, working in a sector with considerable labour absorption capacity. Resources allocated for their benefit will beget both increased productivity for this sector and assist in solving Sri Lanka's unemployment problem.[27]

It is enlightening to look also at the data contained in Table III-9 below, which classifies income sources by type of employment for residents of Colombo's slums and shanties. This table is from the 1976 Marga Institute housing study, which indicates more than 28% of the income earners had no regular employment.

Table III-9

INCOME SOURCES CLASSIFIED BY TYPE OF EMPLOYMENT

Type of Work	Percentage
1. Odd jobs	22
2. Port Worker	7
3. C.M.C.	2
4. Labourer	43
5. Selling	9
6. Driver	4
7. Technical Worker	5
8. Clerk, less than	1
9. Ceylon Transport Board, less than	1
10. Others, less than	1
11. No fixed employment	6

Source: Marga Institute, Housing in Sri Lanka, Colombo, 1976. p. 82.

The need to create additional employment opportunities for the unskilled un- and under-employed in Sri Lanka has been noted by other researchers on employment in the country. Citing data reported by Fernando in footnote 28, Dias reports that the following job preferences were found in a survey undertaken by the Central Bank of Sri Lanka in 1969/1970;

Table III-10

DISTRIBUTION OF UNEMPLOYED BY TYPE OF EMPLOYMENT SOUGHT

Type of Employment	Per Cent of Sample
	0.
Unskilled - Agricultural	0.6
Unskilled - Industrial	6.1
Unskilled - Any sort	30.6
Skilled	13.9
Clerical	30.9
Technical	2.9
Teaching	7.8
Professional	3.7
Executive	0.2
Others	3.3
	100.00

Source: Dias, H.D. "Development Policy and Migration in Sri Lanka," Sri Lanka Journal of Social Services, Vol. I, Marga Institute, Colombo, June 1978, p. 42.

It is interesting to note that over 30% of the unemployed in the 26,113 households surveyed were interested in any type of unskilled work except agriculture. More recent data from a 1973/1974 Marga Institute survey of 4,393 educated unemployed youth show a very similar pattern, as revealed in Table III-11.

Table III-11

TYPE OF EMPLOYMENT SOUGHT BY EDUCATED, UNEMPLOYED YOUTH

Type of Employment	Percent
Professional, Technical	18.42
Administrative, Executive, Managerial	0.55
Clerical	15.21
Salesworkers, Salesmen, Shop Assistants	4.46
Agriculture, Forestry, Fishing, Hunting	6.92
Mining	0.18
Transport & Communications	4.67
Craftsmen, Production process workers, Labourers	30.67
Services, Sports, Recreation, other	10.31
Unspecified	9.03
	100.00

Source: Dias, H.D., "Development Policy and Migration in Sri Lanka," Sri Lanka Journal of Social Services, Marga Institute, Vol. 1#1, Colombo, June 1978, p. 43.

Here, again, over 30% of the unemployed surveyed were interested in working as craftsmen, production process workers or laborers.

While specific observations and recommendations concerning the employment-generating-effects which the housing sector of Sri Lanka's economy might have well not been made here, it is not inappropriate to point out at this juncture the high degree of correlation between increased housing construction activity, with a high requirement for unskilled and semi-skilled labor, and the existence of a large segment of the labor force which is currently seeking employment. Nor should the implication of increased activity in housing construction for the creation of supervisory and administrative work opportunities fail to be observed.

Available data indicate the strong need to include income generating activities as part of any program to upgrade Sri Lanka's slum and shanty areas from a physical standpoint if these communities are to become viable human settlements. Such efforts are being made in a pilot upgrading project being done by Save The Children which is covered elsewhere in this report.

7. Household Expenditure Data

Information on household expenditure patterns reported in the 1973 Survey of Sri Lanka's Consumer Finances prepared by the Central Bank of Ceylon is presented in Annex II, Table 8. It should be observed that data of this nature are difficult to determine with accuracy in most countries. It will be noted that in the two lowest income categories,reported total expenditure exceeded total incomes on the average and for all categories, the amount spent on housing varied only from 6% to 9% with the highest income category reporting only 8%. These figures do not correspond to other studies.

Data obtained by the Marga Institute during a 1973 survey are presented in a summary table contained in that organization's 1976 publication, Housing in Sri Lanka, and are reproduced below.

Table III-12

MONTHLY AVERAGE EXPENDITURE OF HOUSEHOLDS, CLASSIFIED BY INCOME GROUPS

1973 (In Rupees and Cents)

Items of Expenditure	Under Rs. 200		Rs. 200-Rs. 400		Rs. 400-Rs. 600		Over Rs. 600	
	U	R	U	R	U	R	U	R
Food, Drink, Liquor, Tobacco ..	121.20	94.83	180.74	179.04	234.55	263.01	367.27	342.24
Clothing, Textiles, Footwear ..	13.36	6.88	21.96	17.40	34.07	29.60	53.62	65.82
Housing, (Rents, Rates etc.,) ..	18.30	11.63	27.61	17.33	46.88	28.54	84.79	48.14
Fuel for cooking and lighting ..	8.54	4.83	12.18	7.46	12.47	10.78	31.69	20.61
Non-durable Households Goods ..	5.01	7.24	6.35	9.87	8.93	13.63	15.38	19.23
Personal Care and Health Expenses	3.41	4.01	6.42	7.59	13.34	11.37	7.05	23.53
Transport and Communication ..	5.72	5.55	12.32	12.31	29.56	25.40	5.13	37.50
Education and Recreation ..	4.73	5.29	9.29	12.56	25.44	30.96	52.47	49.86
Consumer Durable	.24	.52	.88	1.43	4.13	3.64	17.79	17.99
Any other	3.10	1.00	18.38	5.43	9.68	16.56	46.45	64.37
Total	183.61	141.77	291.13	270.43	419.05	435.59	681.64	689.29
Percentage share of Housing Expenditure	9.97	8.20	9.32	6.41	11.19	6.58	12.44	6.98

Source: Marga Institute, Housing in Sri Lanka, 1976, p. 210.

The data in Table III-13 indicates that at all income levels urban families spend more for their housing than do rural families. The data also indicate that urban families generally spend more of their income on housing as their incomes rise. This appears generally to be true for rural families except for the very lowest income category. This study also corroborates the apparently low percentage of income spent on housing in Sri Lanka.

Somewhat at variance with the above is a report done for AID on Sri Lanka's shelter sector in 1979[29] which looks at housing expenditures as a percent of household income developed from data contained in the Socio-Economic Survey of Sri Lanka 1969-70. The data (with incomes converted to US dollars) are shown below and indicate a slightly higher percentage of incomes going to housing.

Table III-13

EXPENDITURES AS A PERCENT OF MONTHLY

HOUSEHOLD INCOME

	Housing	Fuel & Lighting	Both
All income groups	12.7%	3.5%	16.2%
Under $20 income/ month	8.9	4.9	13.8
$20 - $39	8.6	4.0	12.6
$40 - $59	11.7	3.5	15.2
$60 - $79	14.1	3.3	17.4
$80 - $99	15.1	3.2	18.3
$100 & over	18.2	2.7	20.9

Source: Department of State, Agency for International Development, Shelter Sector Summaries: India, Pakistan, Sri Lanka, July 1979, p. 99.

"Fuel and lighting expenditures are clearly not very income elastic, whereas consumer outlays for housing per se show considerable positive income electricity."[29]

One can conclude from the above data that in Sri Lanka, as in most other developing countries, low income families can spend only a small percentage of their incomes for housing. The demands for expenditures on food in particular, the often precarious nature of their incomes and the relatively mild climate do not permit or require housing expenses by the poor to run very high.

A study by Michael Joachim[30] referred to by Kingsley[31] examines some of these relationships in Sri Lanka. To quote from Kingsley's report, the Joachim study "has shown that the amount a household spends on housing is not only a function of its income but of a number of other variables as well (. . .) as social class, household size and location and type of residence." The study estimates, for example, that a working class household of six persons earning Rs 300-400 per month will spend 5.16% of its income for a rental unit two and one half miles from the city center whereas a white collar worker non-professional household otherwise in the same circumstances will spend 11.16% and a white collar professional 12.76%. An important general finding is that households will pay approximately 25% more to

buy their own house on a rent-purchase plan than they would spend to rent a comparable unit.

Such findings are typical in developing countries and Sri Lanka is no exception. For most families, the opportunity to purchase a home with secure tenure and to pay for it over an extended period of time has not been available. Hence people are inclined to make a minimum investment in their housing. But another important factor in housing expenditures in Sri Lanka has been the very high subsidies available to people who can obtain a Government-sponsored house, both in rental units and in the new Aided Self-Help programs.

For instance, in the latter case, say a Rs 20,000 loan is made to a family for building materials to build a house under the ASH program. Little infrastructure is provided, and that at no cost. The loan is repayable over 30 years at no interest requiring monthly payments of Rs 55.56. If a family earning, for instance, Rs 700 per month were allocated this house, it would require only 8% of their income to make the payments. So, even if such a family were willing to pay 15% of their income if they could obtain the allocation, the lucky family which does obtain the allocation (using the example of Rs 700 per month income) would only have to pay 8% of its income: the monthly payment to repay the Rs 20,000 loan over 30 years at 10% would be Rs 175.51 or 25% of a Rs 700 per month income.

Thus, it can be seen that such data as is available on housing expenditures among low income people in Sri Lanka is not indicative of what these people might be willing to pay given the opportunity to purchase their home providing secure tenure on a long term basis.

8. Community Structure

A number of features of Sri Lanka's community structure today have their origins in the various phases through which the Island has passed. Prior to the arrival of the Portuguese in 1505, Sri Lanka was ruled primarily by the Buddhist Sinhalese, who are today the ethnic majority. There were repeated invasions by South Indian people, who were Hindus and speakers of Tamil, and whose presence resulted in the development of the principal native minority ethnic group. Moorish groups also established themselves as a small but significant element in Sri Lanka. The ethnic and cultural communities corresponding to each of these groups were fairly sharply delineated by the time of the arrival of the colonial powers

which ruled Sri Lanka for some 450 years, during which other smaller groups came into existence as described earlier in this document.

During the late 19th and early 20th centuries, Buddhism recovered a measure of its importance as a cultural influence which it had lost during early colonial rule, and has continued until the present time to endow Sri Lankan society with the gentle, non-aggressive spirit which it teaches.

One feature of Buddhism - caste - played a major part in the community structure of Sri Lanka throughout most of its history; indeed, caste is still a strong force in certain more traditional and less developed parts of the island. The caste system has been described as "a closed network of interrelated families occupying a fixed social position in relation to the other family groups in the given locality."[32]

The caste system, however, is based principally on traditional occupations and depends in large measure on a static population whose member families preserve constant relationships to each other.

Since independence in 1948, a class system based on new occupations and bureaucracy has largely supplanted the caste system in urban areas. The erosion of the caste system has been especially notable in many of the lower-income portions of urban areas in which substantial segments of the population have migrated from other parts of the Island and are no longer associated with their traditional occupations. As has been noted, rural-to-rural migration in Sri Lanka is quite prevalent; this has contributed to a considerable weakening in the rigidity of caste structures in rural areas, although not to the same degree as in cities and towns. Finally, it should be noted that official government policy does not recognize caste distinctions, and that positive steps have been taken to ensure fair and equal access by all Sri Lankans to medical, educational and other social services. Thus, in general terms, class and occupational distinctions have come to characterize Sri Lankan society, in large measure replacing caste as the significant form of organization, particularly in urban areas.

There appears to be relatively little inherent organization per se within low-income communities, in the sense of structures to interact with national systems of health delivery, education, employment, training, or other social services. This is notably so in the case of housing, which is provided by employers (principally in the estate sector and in connection with several large industries), by the Government

(through the shelter programs described elsewhere in this report), and through individual initiative - this last being the single largest source of housing constructed in recent years in both rural and urban low-income areas.

9. Educational Levels

Measured by the standards established by educational levels on a global scale, Sri Lanka fares quite well with respect to the level of education of its people. "In 1970, approximately 80% of those fifteen years of age or older were literate, a reflection of an extensive background of free and compulsory education."[33]

During the nearly 450 years of colonial domination of Sri Lanka, various educational systems were established and co-existed with systems of traditional education which have spanned some 2,500 years. The significant place held by the traditional systems in Sri Lanka's educational process should not be overlooked; while the Sri Lankans who were most influential on a national scale during the rule of the British (1796-1948) had been educated in English, "since the 1880's over 80% of the students had been in vernacular schools . . . There was growing vernacular literacy during this period; in 1953, only one-seventh of the literate persons in the country could read English."[34]

The important role played by education in Sri Lanka's two major vernacular languages has continued since independence in 1948 and through a number of reforms which have occurred in the Island's education systems:

> Since independence the relative importance of English as a language of literacy has decreased. The overwhelming majority of Ceylonese who can read are literate in their native language. Nonetheless, a small, although substantial, segment of the population speak and read more than one language. A small but significant number know both major vernaculars. In urban areas this group includes nearly one person in five.[35]

Sri Lanka's high literacy rate has both resulted from and contributed to the favorable levels of education reported for the country. Literacy - and, broadly speaking, participation in the overall educational process - among females has registered significant improvements over time.

The level and extent of educational achievement among Sri Lanka's people are, ironically, key contributing factors to a generally-recognized dilemma facing the country today: a high level of un- and under-employment among educated youth (a problem discussed earlier under Employment Opportunities).

10. Health and Nutrition

Data drawn from various sources have been used to construct a brief description of Sri Lanka's health and nutrition status. Some minor inconsistencies in statistical values reported in those sources will be noted in the paragraphs which follow. A thorough review of Sri Lanka's health sector has recently been prepared. In it, the interested reader will find additional material on Sri Lanka's performance vis-a-vis the health and nutritional standing of its people.[36]

Major epidemic diseases have declined within the recent past, as is the norm in South Asia and most of the developing world. For the bulk of the population the most prevalent diseases are malaria, intestinal and respiratory diseases. Chronic diseases more typical of developed countries are beginning to show a rising level of prevalence in Sri Lanka, with cancer, heart disease, drug abuse, mental health disorders, and suicide registering increases.[37]

Although conventional health indicators demonstrate the favorable health status of Sri Lanka's population in comparison with neighboring countries at a comparable level of development, infectious and parasitic diseases are deeply rooted in the environment.

Malaria is currently endemic in approximately three-fifth of Sri Lanka and affects 70% of the population.[38] In addition to malaria and gastroenteritis associated with inadequate drinking water supply and unsanitary environmental conditions, cholera, typhoid and helminthic infestations are also environment-related diseases of increasing epidemiological significance in Sri Lanka.[39]

The Sri Lankan government is strongly committed to improving and maintaining the health of the populace. An organized health service has been in existence for over a century, and during 1972-1976 received about 2% of the gross national product and 7% of total government expenditure. The level of those investments is considerably higher than those of many developing countries, and underlies the comparatively impressive health indicators of Sri Lanka.[40]

Government health policy stresses preventive services, and recent initiatives to bolster the effectiveness of this policy have been undertaken. Upgrading the quality and breadth of health services available on a decentralized basis is seen as an important element of the national health program, to relieve the present state of overcrowding of hospitals and to render more effective the country's primary health care efforts.

The quality, quantity, and availability of potable water will clearly play crucial roles in the effort to improve Sri Lanka's health profile. Inadequate and unsafe sources of water are the only ones available to many of Sri Lanka's households, as will be explored in a subsequent section of this report. In this connection, it would be difficult to exaggerate the importance of housing, infrasturcture, and community improvement programs.

Nutrition: While there is general agreement that the levels of nutrition in Sri Lanka are deficient, there is widespread disagreement among authorities over the nature and magnitude of the problem. A recent study by the World Bank [41] found nutritional levels in Sri Lanka "fairly adequate" in terms of protein and calorie availability. A study carried out in 1972 by CARE and the Government of Sri Lanka found 38% of school children aged six to twelve years to be malnourished.[42] The nutritional status of pregnant and lactating women has also been found wanting, with particular deficiencies in protein, calcium, iron, Vitamin A, and the B vitamins.[43]

While there is an overall shortage of food, Sri Lankan government policies which emphasize social welfare and egalitarian food distribution[44] serve to mitigate the severity of the problem. Another positive factor is the presence in the Sri Lankan diet of certain foodstuffs which compensate, to a degree, for the calorie and protein shortfalls.

At the present time, over 50% of the food consumed in Sri Lanka is imported. To reduce its heavy dependence on imported foodstuffs, the current development strategy involves a move from traditional plantation, export-oriented agriculture toward an emphasis on the production of food for local consumption.

FOOTNOTES

For Section III-D

[1]Central Bank of Ceylon, Statistical Department, Economic and Social Statistics of Sri Lanka, Vol. II,No. 2, December, 1979, p. 16.

[2]See: Housing in Sri Lanka, Marga Institutes, Colombo, 1976, p. 7.

[3]United Nations Development Programme, Colombo Metropolitan Region, Regional Structure Plan, April, 1978, p. 2.

[4]United States Department of State Bureau of Public Affairs, Background Notes, Sri Lanka, April, 1980, p. 2.

[5]United States Department of State, Agency for International Development, Shelter-Sector Summaries: India, Pakistan, Sri Lanka, Washington, D.C., July, 1979, p. 85.

[6]United States Department of Health, Education, and Welfare, Office of International Health, Division of Program Analysis, A Background Paper on Sri Lanka's Health Sector, March, 1979, p. 4.

[7]Marga Institute, Participatory Development and Dependence, the Case of Sri Lanka, Colombo, October, 1977, p. 5.

[8]United States Department of Health, Education, and Welfare, Op. Cit., p. 7.

[9]Marga Institute, Housing in Sri Lanka, Colombo, 1976, pp. 2-3.

[10]Gunatilleke, Godfrey,"The Rural-Urban Balance and Development - The experience in Sri Lanka," Marga Quarterly Journal, Vol. 2#1, 1973, p. 46.

[11]Ibid, p. 47.

[12]Kingsley, G. Thomas, A Review of Sri Lanka's Housing Problems and Policies, Colombo, August, 1978, p. 6.

[13]Cited in "Policy Paper: Slum and Shanty Upgrading in Colombo M.C." prepared by the Urban Development Authority of the Ministry of Local Government, Housing, and Construction, Colombo, (updated), p. 8.

[14]Kingsley, Op. Cit., p. 31.

[15]Dias, H. D., "Development Policy and Migration in Sri Lanka," Sri Lanka Journal of Social Sciences, Vol. 1#1, 1978, p. 48.

[16]Marga Institute, Housing in Sri Lanka, Op. Cit., p. 7.

[17]Nyrop, Richard F., Area Handbook for Ceylon, U. S. Government Printing Office, 1971, p. 223.

[18]Ibid, p. 224.

[19]MetaMetrics, Inc., Jaffna Market Town Feasibility Study, (updated), Social Soundness Analysis, Annex IV, p. IV-12.

[20]Dias, Malsiri, "Sociocultural Factors Affecting the Status of Women," Status of Women, Sri Lanka, University of Colombo, 1979, p. 14.

[21]Ministry of Local Government, Housing, and Construction, Henemulla Camp Housing Survey, 1979, p. 2.

[22]University of Moratuwa, Summitpura Urban Housing Project, Colombo, 1980, p. 6.

[23]Kingsley, G. Thomas, A Review of Sri Lanka's Housing Problems and Policies, Op. Cit., p. 36.

[24]United States Department of State, Agency for International Development, Shelter Sector Summaries: India, Pakistan, Sri Lanka, Op. Cit., p. 89.

[25]Central Bank of Ceylon, Annual Report, 1979, p. 37.

[26]Dias, M.D., "Development Policy and Migration in Sri Lanka," Sri Lanka Journal of Social Science, Vol. 1, June 1978, Colombo, pp. 40-42.

[27]Policy Paper, Slum and Shanty upgrading in Colombo M.C., (E. Selvarajah, J. Arn, D. McNeil, coauthors,) pp. 2 & 3.

[28]Fernando, M. A., "Employment and Unemployment in the Rural Sector," unpublished paper.

[29]United States Department of State, Agency for International Development, Shelter-Sector Summaries: India, Pakistan, Sri Lanka, Op. Cit., p. 99.

[30]Joachim, Michael, Public Sector Investment in the Direct Development of Urban Housing in Sri Lanka (Unpublished Ph.D. dissertation, University of Edinburgh, 1973).

[31]Kingsley, G. Thomas, Op. Cit., p. 12.

[32]Nyrope, Richard F., Op. Cit., pp. 97-98.

[33]Ibid, p. 5.

[34]Ibid, p. 89.

[35]Ibid, pp. 92-96.

[36]See: United States Department of Health, Education and Welfare, Op. Cit.

[37]United States Department of Health, Education, and Welfare, Op. Cit., pp. 21-22.

[38]Ibid, p. 30.

[39]Ibid, p. 97.

[40]Ibid, pp. 103-104.

[41]The International Bank for Reconstruction and Development, Development in Sri Lanka: Issues and Prospects, Report No. 137-CE, March, 1978, p. 1.

[42]Robert R. Nathan Associates, Inc., An Evaluation Report of the PL 480 Title II Program in Sri Lanka, Washington, DC, for Office of Food for Peace, USAID, May, 1978; cited in U.S. Department of Health, Education and Welfare, Op. Cit., pp. 43-44.

[43]U.S. Department of Health, Education and Welfare, Op. Cit., pp. 47-48.

[44]It is estimated that 30-35% of Sri Lanka's calories and 25-30% of its protein move through the Government's food subsidy and rationing system in a given year.

IV. SHELTER SECTOR DESCRIPTION AND ANALYSIS

A. Government and Its Relation to Shelter and Urban Development

1. Basic Organization

Sri Lanka is a republic with a President as head of State and Government, who is elected to serve a six year term. The Government has Executive, Legislative and Judicial Branches. The present administration came into office following the 1977 elections.

The President is responsible to the legislative branch (Parliament) for the exercise of Presidential duties under the constitution and any written laws. There is a Cabinet of Ministers headed by the President who determines the number of ministers and makes the selections from members of parliament. (He currently holds three portfolios himself). The determination of the number of ministers and ministries and the assignment of departments, subjects and functions was most recently done on February 14, 1980, and published in the official government gazette on April 30, 1980. That part of the gazette notice pertaining to the organizational units and functions of the Ministry of Local Government, Housing and Construction (MLGHC)- the ministry most involved in this study- is contained in Annex III.

Sri Lanka is a unitary state, divided into 24 administrative districts governed by the central government through constitutionally mandated district ministers who are members of parliament, and by subordinate government agents who are members of the Ceylon Administrative Services. Locally elected municipal, urban, town and village councils have limited powers but come under the overall direction of the MLGHC.

The parliament, a unicameral legislature elected by universal suffrage to a six year term, currently has 171 members but will have 196 in the next election, scheduled for 1983. Parliament has powers to make laws and to amend the constitution. Legislation is passed by simple majority vote but a two-thirds majority is required for bills to amend the constitution (except in certain cases which must be approved by referendum).

For the most part, housing and urban development functions have been centered in the MLGHC. This Ministry includes several state corporations and boards which are under the administration and control of the Ministry, the most important of which are the National Housing Development Authority, the Urban Development Authority, the State Engineering Corporation, the Common Amenities Board and the National Water Supply and Drainage Board.

The functions of the MLGHC listed in the official government gazette are broadly stated: e.g., public utility service of local authorities including water service schemes, drainage, electricity and housing schemes; technical assistance and advice for the planned development of urban and rural areas and specific responsibility for the Greater Colombo Plan; planning of housing schemes and the construction of residential buildings; regulation of ownership and construction of houses and regulation of rents and rented premises; and the borrowing of money for housing projects. Detailed descriptions of the Ministry and its sub-units and corporations are contained in Section IV, D., 1.

The other ministry of particular importance relative to this study is the Ministry of Finance and Planning which is, of course, involved in budget allocations under the Public Investment Plan and in this capacity has a review function of programs proposed by the various ministries. These processes are more fully described in sub-section 3 below. Finance is also responsible for the State Mortgage and Investment Bank also described in Section IV, D., 1.

There are several other ministries which touch on housing or human settlements in several ways. The Ministry of Plan Implementation, which, among other functions outlined in the gazette (including formulation and appraisal of plan implementation strategies and evaluation and monitoring of foreign aid and technical cooperation), is developing integrated district plans which include housing.

The Ministry of Lands and Land Development is another one of the players when it comes to housing and urban development projects. Generally, this ministry acquires land for public purposes and must approve the use of government land for projects. If there is any dispute it is referred to the Cabinet for resolution. It is possible that under the new environmental act the Ministry my play a more substantive role in land use, as the Act will put more teeth into environmental matters.

The Mahaweli Development Project is a large irrigation - hydroelectric scheme which comes under a separate ministry. The project is administered through the Mahaweli Development Authority (MDA). The scheme envisions the settlement of over 140,000 families on land available for irrigation. The MDA has plans, already being implemented in some cases, for settlement communities which will be a type of sites and services program with community facilities. Development of these communities is independent of the MLGHC.

Several other ministries also have housing programs related to their constituencies. Most important are the Ministry of State Plantations and the Ministry of Janatha Estates Development. These are parallel ministries responsible for the management of large government agricultural and estate lands, primarily tea. Workers on the government estates are housed on the estates and the housing is therefore a responsibility of the government and the particular estate. This is an area of much concern due to the low (in some cases deplorable) quality of housing on the estates. Provision of such housing, however, is outside the MLGHC although it constituted some 10% of the housing stock in Sri Lanka in 1971. Similar in nature is the Ministry of Agricultural Development and Research which has under it the National Agricultural Diversification and Settlement Authority. The NADSA is working on, among other things, marginal tea lands and development of minor export crops. It has a project with the World Bank which includes some housing. The Ministry of Rural Development gets involved in integrated development of selected villages and, as such, may be involved in the MLGHC Aided Self-Help scheme. Finally, the Ministry of Fisheries is actively promoting better housing in the fishing villages but is working with the MLGHC.

The Ministry of Health is involved in establishing health standards in settlements and has Public Health Inspectors. They advise local authorities with regard to health standards related to housing and have played a role in the establishment of building codes. The Ministry of Social Services apparently does not get involved in the services to be provided in new or upgraded settlement areas but is more involved in such things as social insurance aid to the destitute and handicapped, child care problems and disaster relief.

The Ceylon Electricity Board under the Ministry of Power and Energy handles residential power. The electricity is metered and charged for.

Finally, with regard to civil service housing, civil servants are assured access to a house at cheaper than normal rents with the house related to the position. Some ministries do, however, build and provide houses directly for some of their employees. Since this appears to be neither a problem or an issue (as it is in some countries) the team made no further investigations.

2. Politics and Legislation

The present government came to power in 1977 and has completed about half of its six year term. It has been characterized by a liberalization of government controls and a series of policy reforms. A thorough discussion of its action, progress toward achievement and an overall review of the macro aspects are contained in Public Investment 1980-1984 published by the National Planning Division of the Ministry of Finance and Planning (MFP) in May 1980 and a report by the World Bank entitled Sri Lanka: Key Development Issues in the 1980's, Report No. 2955-CE, May 20, 1980 both prepared prior to the Consultative Group meeting in July 1980.

Of particular interest to the shelter sector were stated reforms to liberalize imports and payments, the lifting of price controls and greater reliance on the market mechanism, interest rate reforms to encourage greater savings, a shift from consumer subsidies to producer incentives and removal of excessive administrative controls.

The priorities of the investment program which was developed were determined by the need to step-up economic growth, increase employment, increase economic self-sufficiency and achieve long term balance of payments viability.

Three lead programs were identified in the Investment Plan: the Accelerated Mahaweli Program described in sub-section 1 above, the creation of the Greater Colombo Economic Commission to develop investment promotion (free trade) zones, and the Housing and Urban Development Program. Part of the rationale for selecting these programs was the need for immediate benefits in terms of employment in the construction industry and the need to meet critical shortages in housing the middle and lower income households in urban areas.

After six years of very little production of housing by the public sector and private sector production falling far short of meeting the needs, even though the exact production figures are not known, the new government announced that it would produce 100,000 new housing units. The projected public sector goals were based on the assumption that the private sector would produce four times as many housing units. Thus, the government's policy is to accord a very high priority to public sector production of housing. The various direct government programs are described in Section IV, D., 1, b.

Nevertheless, to achieve its goals and to carry out the policy, there is no comprehensive overall National Housing Policy as the basis for a coordinated consistent set of sub-policies, laws, regulations and organization. Instead, there are: (1) an ad hoc series of laws and regulations, some of those being a carry-over from the previous administration, which actually work at cross purposes to current efforts; (2) a reorganization of functions and creation of new authorities within the government's housing operations which have created a multitude of organizations not completely rationalized yet and which have caused some duplication, some competition, and some lack of direction; and (3) lack of clear cut policies in such areas as subsidies, slum and shanty upgrading and increased public sector participation.

Some brief background is necessary to set the framework for the situation facing the new government when it took over in 1977. Prior to World War II, housing was almost entirely a private sector activity; there was no central public agency which controlled or regulated housing. However, with shortages of housing developing in urban areas during the War, the government began to intervene through restrictions on rents while, at the same time, realizing this would probably discourage private housing construction. Thus, a Housing Loans Act was passed in 1945 as a countermeasure for the purpose of promoting private housing. A Housing Loan Fund was set up to make loans to companies, co-ops, associations of individuals to finance housing schemes or building materials for the execution of housing schemes.

Slightly before this in 1948, it had been acknowledged that rent control would be a permanent feature of government policy and, furthermore, that government policy would entail responsibility for housing middle and working class people, with private enterprise taking care of the upper middle and upper classes. In this connection, grants were made to municipal, urban,

town and village councils to assist in their housing projects, but in practice these fell far short of meeting the needs.

From this point on, shortages of housing have developed in Sri Lanka and the situation has gradually deteriorated.

The Marga publication on Housing in Sri Lanka classified this period regarding housing legislation into five phases as follows:

1942-48	Rents were controlled within the ceiling of 1941 rentals
1948-53	Landlord-tenant relations were regulated, tenants given security, and the obligations of landlords made enforceable
1953-61	New housing and larger houses were exempted from rent control
1961-71	The exemption from rent control of houses built after March 1953 was withdrawn
1971 on	The Rent Act of 1972 brought all houses under rent control, which was made more stringent.

In addition to rent control, the Ceiling on Housing Property Law was passed in 1973 which, in essence, provided for the acquisition by Government of all housing units not required by the owner for his or her family's use.

The latter two laws are still in effect and are described in greater detail in Section IV, D., 2. Suffice it to say that they exert a restrictive impact on the development of housing by the private sector and, along with certain exemptions that were provided under rent restriction, have actually encouraged such resources as were available to go mainly to upper income housing.

With regard to land policy, the Land Reform Law of 1972 limits private ownership of land to 50 acres per family (25 acres in the case of paddy land). Land in excess of this total was acquired by the Land Reform Commission. As pointed out in the previous section, the Ministry of Lands and Land Development acquires land for public purposes and must approve the use of Government land. More recently, both the Urban Development Authority and the National Housing Development Authority

have been given powers of compulsory acquisition of land under the Land Acquisition Act. In the case of the UDA, land can be acquired at the value at the time of gazetting of the area, and, in the case of the NHDA, at July 1977 values.

Once it has been decided to acquire land from private holders for government purposes, the acquisition can move ahead rather quickly. If there is objection on the part of the owner as to the compensation offered, the acquisition moves forward while the claim or dispute is being settled. Thus, the availability of land is not a problem for government housing projects and particularly so since the government holds title to a large amount of land. The same is not true regarding land available to private developers and this is discussed in more detail later in the report.

With regard to tax policies and incentives to encourage housing production, the government has tried to initiate such efforts over the years with little apparent success mostly because of the offsetting disincentives or lack of long-term finance. Current tax measures are discussed in detail in Section IV, D., 3, c.

With its emphasis on socialism and redistribution of income and wealth, the government's housing policy of the 1970's is described in the Marga Institute's housing study "as one of promoting as broad-based an ownership of housing property as possible aimed ultimately at a 'more equal' distribution of wealth and the removal of glaring disparition in incomes. The Rent Act and Ceiling on Housing Property Law were efforts in this direction as well as several other acts to prevent exploitation of low income tenants.

In addition to the social legislation, government policy during this period was to increase the overall housing stock by both expanding the public sector construction of housing and increasing private sector construction through the tax incentives mentioned above.

With regard to the public sector, this Government introduced the Aided Self-Help and Direct Construction Programs, both of which are described in more detail in subsequent sections. The former is a program of providing building materials and certain services for low income families in rural areas and the latter was established to provide essential rental accommodations for lower and middle income families in urban areas. The public sector also included the concept of slum and shanty upgrading for the first time.

Both programs proceeded very slowly during 1972 76 with only about 1300 houses completed under ASH and less than 2800 under low cost direct construction. Apparently somewhat more successful was the program to make loans to individual home builders from the National Housing Fund, which amounted to about 20,000 loans. To carry out the policies with regard to public sector programs, the government began the process of creating new corporations and activities in the sector: the Building Materials Corporation and the Common Amenities Board are both described in detail in Section III, D. Not measuring up during this period, however, was private sector production where the restrictive social legislation offset the tax incentives and production in urban areas was about half of what was needed. In addition, the provision of heavy subsidies in the public sector programs became firmly established during this period.

The new government's main policy thrust since being elected in 1977, as stated above, has been to increase the public sector's commitment to produce housing, primarily by continuing the Aided Self-Help, Direct Construction and Housing Loan Programs, with the addition of several new sub-programs (Model Villages/ Electoral Housing) through significant government allocations (see next section of report) and the creation of several new authorities to supplement those created earlier in the 1970's; mostly, it appears, to give more independence to the agencies which plan for and will produce the public sector housing and urban development, i.e., the Urban Development Authority and the National Housing Development Authority. It has also accepted the policy that the private sector should still build the bulk of the housing.

But the government has not come to grips with subsidies in housing; for example, there is no policy as to what level of subsidy is rational nor which income level should receive what subsidy. In recognition of revenue shortfalls, Government is shifting its programs away from the more expensive Direct Construction to Aided Self-Help in urban areas, it is considering expanding its efforts in slum and shanty upgrading and, perhaps most important, there is a growing awareness that cost recovery is crucial. These are, however, ad hoc decisions which appear to be made as the situation warrants rather than as the result of overall policy considerations. A detailed discussion of these program shifts is contained in Section IV, D., 1.

3. Public Investment Plan and Budget

The Public Investment Plan (PIP) for Sri Lanka covers a five year period. The current plan, prepared by the National Planning Division of the Ministry of Finance and Planning, is dated May 1980 and covers the period 1980-84. The Plan is designed as a "rolling plan" i.e., it is revised and moved forward each year. The next one will cover the years 1981-85. The 1980-84 plan is the second prepared by the current government.

The purpose of the "rolling plan" concept is to introduce a greater flexibility into the process and to take account of the previous year's performance. The program is reviewed at the end of each year and the investment targets revised to apply to the subsequent five year period. The overall coordinator for the process is the National Planning Division. This Division has, for instance, analysts who review the budget proposals submitted by the Ministry of Local Government, Housing and Construction from the macro, sectoral and project levels.

The current plan was based on sector papers prepared by the various ministries; in the case of the MLGHC the sector paper covered Housing, Water Supply, Local Government and Construction and was prepared in February 1978. It was this sector paper which supported the Government's announcement of a 100,000 unit housing program.

In preparing the 1980-84 PIP, a two stage approval procedure for projects was introduced in 1979. Projects with a capital cost of over Rs 2 million are now submitted to the Committee of Development Secretaries (CDS) in summary form for approval in principle. If the CDS approves, an interdisciplinary committee is set up with specific terms of reference and time targets for detailed project preparation before final approval and submission to the Cabinet.

As stated in the previous section, the government has designated three "lead" projects for the PIP; the accelerated development of the Mahaweli area, the development of the Free Trade Zone and Housing and Urban Development. The latter is categorized in the Plan document as Housing, Water Supply and Urban Development.

The Government has come under some criticism from the World Bank, the IMF and other aid-disbursing governments in the past year for the proportion of its capital investment going into the lead projects, particularly as these investments relate to construction intensive projects. Nevertheless, the Government stated in its PIP document for 1980-84 that the Plan sought to achieve a reasonable degree of consistency in the allocation of resources between the lead projects and other projects. It further stated, however, that high priority was still attached to the lead projects and, for instance, noted the urgency of easing the acute housing shortage in urban areas. It did, however, further note that additional emphasis was being placed on projects which had a higher and more rapid direct return on investment and which emphasized local materials, employment, high foreign exchange earnings and savings. Policies were intended to stimulate the private sector into greater economic activity so as to take on a larger share of investment. Broad scale objectives of the Plan were stated as accelerated economic growth, large-scale employment creation and to safeguard the living standards of the poor.

However, a conscious attempt was apparently made to scale down or rephase two of the lead projects (those involving the most construction), i. e., Mahaweli Development and Housing, Water Supply and Urban Development (HWSUD). The Plan document states that the HWSUD category was reduced from a proposed level (by the MLGHC, presumably) of Rs 19 billion to Rs 11.6 billion in the 1980-84 Plan. This was accomplished through a greater shift toward Aided Self-Help housing programs from the more expensive Urban Housing Program (Direct Construction) and a postponement of nearly half of the Urban Housing Program until 1982. It is not exactly clear what the latter means since it is still within the Plan period. There was also, apparently, a significant scaling down of investment in the plans for the new capital complex at Kotte which is located in the Greater Colombo area.

Overall, the share of resources to the lead projects was reduced to 43% of the PI total of Rs 63.6 billion in 1980-84. Of this HWSUD amounts to 18% and housing alone at Rs 6.4 billion and 10%. (See following Table, a summary of Government capital expenditure allocations for 1980-84, Public Investment Plan.) Clearly, housing emerges as one of the top priorities of the current government.

Allocation of Government Capital Expenditure 1980 — 1984

(A) SUMMARY — ALL SECTORS

	1980	1981	1982	1983	1984	1980 — 1984 F	1980 — 1984 L	1980 — 1984 T	*Foreign Aid*
1. Total Public Investment ..	9,384.0	11,516.0	13,631.0	15,630.0	17,180.0	—	—	67,341.0	—
2. Extra Budgetary Resources ..	475.0	615.0	750.0	900.0	1,050.0	—	—	3,790.0	—
3. Total Public Investment (Govt. Budget) ..	8,909.0	10,901.0	12,881.0	14,730.0	16,130.0	—	—	63,551.0	—
4. Total Budgetary Provisions ..	11,571.0	12,201.1	12,957.1	14,123.9	12,304.3	34,245.7	28,911.7	63,157.4	21,227.0
Allocated to— ..									
(i) *Agriculture* ..	4,416.6	5,687.9	6,270.6	7,012.8	6,259.1	17,862.5	11,780.5	29,647.0	14,968.3
(1) Accelerated Mahaweli ..	2,015.0	3,397.0	4,014.0	4,471.0	4,310.0	13,362.0	4,845.0	18,207.0	11,030.0
(2) Other Irrigation ..	995.5	673.3	761.0	1,061.7	617.6	1,272.7	2,832.4	4,109.1	1,050.0
(3) Field Crops and Minor Export Crops	767.6	634.7	583.5	579.0	429.2	1,210.0	1,784.0	2,994.0	1,450.9
(4) Forestry and Land Settlement ..	120.6	239.3	255.7	303.6	358.8	427.0	851.0	1,278.0	142.4
(5) Plantations ..	192.4	240.4	298.8	364.5	366.6	600.7	862.0	1,462.7	956.9
(6) Animal Husbandry ..	99.3	168.2	109.4	18.0	13.5	232.7	165.7	398.4	146.8
(7) Fisheries ..	236.2	335.0	248.2	215.0	163.4	757.4	440.4	1,197.8	141.4
(ii) *Housing, Water Supply and Urban Development*	1,953.0	2,370.0	2,575.6	2,476.4	2,260.0	4,262.0	7,353.2	11,615.2	1,936.2
(1) Housing and Construction ..	1,158.0	1,130.0	1,500.0	1,420.0	1,190.0	1,440.0	4,958.0	6,398.0	6.4
(2) Water Supply ..	485.0	1,044.0	1,015.6	656.4	556.0	2,475.0	1,282.0	3,775.0	1,929.8
(3) Urban Development ..	350.0	196.0	—	—	—	163.8	382.2	564.0	—
(4) Unallocated ..	—	—	—	400.0	514.0	183.0	731.0	914.0	—
(iii) *Industry* ..	623.9	116.0	53.2	56.3	55.4	483.6	421.2	904.8	—
(iv) *Economic Overheads* ..	4,070.0	3,418.0	3,379.0	3,761.0	2,789.0	10,279.0	7,138.0	17,417.0	4,059.0
(1) Transport ..	1,257.0	1,362.0	925.0	869.0	902.0	3,911.0	1,404.0	5,315.0	1,372.0
(2) Power ..	583.0	471.0	679.0	1,019.0	300.0	2,527.0	525.0	3,952.0	387.0
(3) Telecommunication ..	466.0	345.0	246.0	383.0	219.0	1,359.0	300.0	1,659.0	1,197.0
(4) Other ..	1,764.0	1,240.0	1,529.0	1,490.0	1,368.0	2,482.0	4,909.0	7.391.0	1,103.0
(v) *Social Overheads* ..	468.3	609.2	737.7	817.4	940.8	1,349.7	2,223.7	3,573.4	263.5
(1) Education ..	259.8	352.4	390.0	338.0	383.5	378.7	1,445.0	1,723.7	77.6
(2) Health ..	151.5	179.2	255.5	377.8	457.7	880.0	541.7	1,421.7	84.9
(3) Other ..	57.0	77.6	92.2	101.6	99.6	191.0	237.0	428.0	101.0

GOVERNMENT OF SRI LANKA PUBLIC INVESTMENT PLAN, 1980-84 (continued)

II—HOUSING WATER SUPPLY AND URBAN DEVELOPMENT

	1980	1981	1982	1983	1984	1980-1984 F	1980-1984 L	1980-1984 T	Foreign Aid
1. *Housing and Construction of which housing* ..	1,158.0 (940.0)	1,130.0 (1,000.0)	1,500.0 (1,300.0)	1,420.0 (1,200.0)	1,190.0 (1,000.0)	1,440.0 (1,344.0)	4,958.0 (4,096.0)	6,398.0 (5,440.0)	— —
(i) Annual construction programmes ..	218.0	130.0	200.0	220.0	190.0	96.0	862.0	958.0	6.4
ON-GOING WORKS									
(ii) Urban Housing ..	650.0	563.0	898.7	990.0	900.0	1,200.0	2,801.7	4,001.7	—
(iii) Aided Self-help houses ..	140.0	293.1	243.3	—	100.0	78.0	698.4	776.4	—
NEW WORKS									
(iv) Electoral Housing ..	150.0	144.0	158.0	210.0	—	66.2	595.8	662.0	—
2. *Water Supply* ..	485.0	1,044.0	1,015.6	656.4	556.0	2,475.0	1,282.0	3,757.0	1,929.8
(i) Annual Programme ..	55.6	27.2	27.0	33.4	39.9	59.0	124.1	183.1	28.0
(ii) ON-GOING WORKS ..	44.3	115.9	92.6	—	—	151.7	101.1	252.8	2.4
NEW WORKS									
(iii) South West Coastal W.S.S.I. ..	149.0	55.0	60.5	34.2	—	190.9	108.0	298.7	190.9
(iv) Greater Colombo W.S.S. II ..	50.0	90.8	99.8	109.6	83.7	266.3	167.6	433.9	266.3
(v) Greater Colombo Sewerage Scheme ..	50.0	363.0	399.3	292.2	315.7	1,136.2	284.0	1,420.2	1,136.2
(vi) Trincomalee W.S.S. ..	25.0	242.0	199.6	73.0	40.3	405.9	174.0	579.9	—
(vii) Other (rural & semi-urban schemes) ..	111.1	150.1	136.8	114.0	76.3	265.0	323.3	588.3	306.0
3. *Urban Development* ..									
(i) Kotte Parliamentary Complex* ..	350.0	196.0	—	—	—	163.8	382.2	546.0	—
4. *Provision for new projects* 1983 *and* 1984 ..	—	—	—	400.0	514.0	183.0	731.0	914.0	—

*In addition to the budgeted provision, approximately Rs. 500 million for the Kotte Complex and other expenditures of Urban Development will be met from Debentures up to a ceiling of Rs. 3,000 million.

Annex IV reproduces pages 36-38 of the PIP for 1980-84 and sets out the framework in which the government is developing its housing programs. Section IV, D., 1, b, of the report describes these programs in detail.

As can be noted in the table on the 1980-84 capital allocations, foreign aid is projected to finance about one third of the PIP. However, at the time the PIP was prepared, housing was projected to receive only a miniscule amount of its allocation from foreign aid sources. In this connection the Government prepared, as an adjunct to the PIP, a document entitled, Project Proposals, for the Sri Lanka Aid Group Meeting which was held in July 1980. This document contained project proposals for which external financing was still being finalized or was being sought. The projects relative to housing are contained in Annex V.

In addition to the PIP there is, of course, an annual budget both capital and recurrent for the GSL. The budget preparation for calendar 1981 was going on while the shelter sector Team was in Sri Lanka. It was the Team's understanding that, because of rapidly rising costs of approved programs in the PIP and revenue shortfalls, the overall budget will have to sustain some cuts. Discussions with MFP staff, however, indicated that deep cuts in the housing program were not likely, although, here again, increasing costs make achievement of program goals doubtful without reductions in unit costs, i.e., further shifts to Aided Self-Help. In fact, the 1980-84 PIP set the number of housing units to be constructed by the public sector over the plan period at 108,051. A detailed discussion of the projected program make-up is contained in Section IV, D., 1.

With regard to the recurrent budget, no attempt was made to analyze the operating expenses of the MLGHC and the semi-independent agencies dealing with housing. As discussed later in the section on government institutions, it does appear that there may be some improvements that could be made to eliminate overlapping functions or improve procedures and staffing but the basic organizational approach seems sound. This study does suggest, however, that some management studies might usefully be undertaken.

The Government has made efforts to reduce its recurrent expenditures, and, in this regard, subsidies for such items as food. It has also stated that subsidies should be revised so as to give maximum benefit to those who need them the most.

The deep subsidies in the housing program do not, however, show up in the recurrent budget and consequently are not so readily apparent. Government housing programs, except for the National Housing Fund, are financed by direct allocation in the capital budget. Policies with regard to cost recovery, although approved at Cabinet level, are implemented through the MLGHC and its agencies. There is no return to the Treasury, again, except for the National Housing Fund, but administration of loans is handled through the National Housing Developmental Authority. To the extent that there is cost recovery it is programmed into MLGHC projects.

Cost recovery is, however, low by any standards. The Aided Self-Help Program provides building material loans including minimal infrastructure, to the beneficiary at 30 years for repayment and no interest. There is a long term renewable lease covering the land with a nominal ground rent of Rs 12 per year.

The Direct Construction Program, although originally rental, now provides flats for sale but the Team was unable to determine the overall policy on setting rents or sales prices. It apparently falls short of an economic recovery. The slum and shanty pilot programs now underway (which provide infrastructure only) have no cost recovery provisions. The Housing Loan Program is considering setting interest rates at 12%, an improvement over earlier rates but still far below the cost of money in Sri Lanka.

Even if repayments were carried out in accordance with the above, the cost recovery, as pointed out, would be very low. But as far as could be ascertained, the collection record is very bad. National Housing Fund accounts are reported to be difficult to follow, delinquencies are high and attempts to put these accounts in order have not been successful. Even if repayments are set at a realistic level, collections must be carried out if any cost recovery is to be achieved.

Finally, housing subsidies are not applied in a rational way so as to provide the highest level to those families who need help the most and being adjusted according to need.

It is, therefore, apparent that the subsidies for housing come out of the capital budget and practices followed now have a long term bearing on that budget. If a realistic cost recovery program were to be phased-in (recognizing the political difficulties of moving from where the government is now to an immediate full-cost recovery) over time, and cost recovery gradually increased, this would, in effect lower the capital allocation in the budget needed to achieve the same unit goals. The impact initially might not be great, but over time it would be significant. To achieve its long range housing targets the Government must start soon to recover a greater share of costs than it is now doing.

4. Urban Planning Functions

Prior to 1978, the Government's urban planning functions were carried out by the Town and Country Planning Department. With the creation of the Urban Development Authority in 1978 (also described in Section IV, D., 1) that agency became the Government's primary vehicle for urban planning.

Urban planning through the middle 1970's, with the Colombo Metropolitan Region having 57% of the urban population (and 14% of the total population of the country) was, of course, dominated by Colombo. With UNDP financing, a team of consultants attached to a special unit, the Colombo Master Plan Bureau, under the Town and Country Planning Department began work on a new master plan for the Colombo area in 1975. The new Government in 1977 introduced some drastic changes affecting the work on the Colombo Master Plan: an emphasis on projects rather than long-term planning, the creation of a Free Trade Zone, and the building of a new capital at Kotte, the latter two being located in the Colombo area. Essentially, the original consultants completed their work in 1978 without being able to accomodate the new aspects, although the UNDP has maintained a team in Colombo.

The new Urban Development Authority absorbed the Colombo Master Plan Bureau and picked up its work on Colombo's Master Plan. Included in the planning work for Colombo is the enumeration of all slum and shanty areas with a view to upgrading, relocating only those families who live on prime commercial land. In the latter case, the sale of this land will be used to pay the costs of relocation.

The Urban Development Authority Law of 1978 which established the UDA also set forth the planning function in Government and provided for the control and direction of development, regulated building standards, land use, property management, etc. (A more detailed list is contained in Section IV, D., 1.)

The growth of other urban areas in Sri Lanka, although not approaching the level of Colombo, has created the need to plan these cities in a coordinated and integrated way. The Government has, therefore, declared the twenty-four district capitals and all urban councils as urban development areas. The UDA has responsibility for the planning and development functions in these areas. Planning work has already started in some of the district capitals (the urban development plan for the Kandy municipal area has been completed) and the rest will commence on a phased basis. Planning for the upgrading of slum and shanty areas will be part of these efforts where a problem exists.

On a district wide basis, the Government has introduced the concept of Integrated District Planning to further strengthen decentralized development. Urban plans will be part of this broader planning effort.

B. Analysis of Current Situation in Housing and Projections

The most recent population census of Sri Lanka was conducted in 1971. As part of that effort, the Government also conducted a housing census which provides the most detailed information available on the current housing stock in Sri Lanka. A number of other housing studies and papers have been done in the intervening years but the statistical information on housing has been derived primarily from the above.

From the standpoint of analysis of the existing housing stock, its shortfalls and its projections, the two most important studies were the 1976 Marga Institute study, Housing in Sri Lanka and G. Thomas Kingsley's report, Review of Sri Lanka's Housing Problems and Policies, issued in August of 1978 in cooperation with the UNDP Master Plan Project. Both of these analyses drew heavily upon the 1971 Housing Census as well as other information. Of particular note has been work done under the Colombo Master Plan Project and some data prepared directly by the Ministry of Local Government, Housing and Construction.

This Shelter Sector Assessment in turn has utilized primarily the studies mentioned above for this section supplemented by other reports, interviews and field visits. In

this connection, Annex VI contains a number of the most pertinent tables from the cited reports as follows:

Table 1 - Population and Housing Stock 1963 and 1971

Table 2 - Families, Households and Floor Space 1963 and 1971

Table 3 - Rooms and Overcrowding in 1971

Table 4 - Distribution of Housing Units by Floor Plan

Table 5 - Occupied Housing Units by Number of Rooms 1971

Table 6 - Construction Materials

Table 7 - Housing Units by Structural Types 1953, 1963, 1971

Table 8 - Housing Units by Type and Percentage Distribution 1971

Table 9 - Substandard Housing 1963, 1971

Table 10 - Housing Tenures 1953, 1963, 1971

Table 11 - Water and Toilet Facilities 1963, 1971

Table 12 - Estimated Housing Backlog 1978

Table 13 - Housing Needs 1978-2001

Table 14 - Population, 1946-2001

The tables listed above demonstrate that Sri Lanka has the same housing problems that beset most of the developing world, although perhaps not as overpowering: lack of water and sanitary facilities; overcrowding and congestion (in terms of families per unit, people per room and units per acre); and impermanence of units (in terms of temporary or semi-permanent construction* or just sheer age).

Any detailed analysis of the 1971 data measured by any yardstick -- level of services, quality of construction, or absolute numbers of units -- indicates that housing which existed in 1971 was inadequate to house properly Sri Lanka's

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* temporary materials in Sri Lanka include mud or earth, cadjan or palmyrah (woven or otherwise processed vegetable materials such as palm tree fronds), and other semi-durable materials. Where the entire house is constructed of such materials, it is considered temporary; where some portion consists of these materials, it is considered semi-permanent.

population in that year. All indicators point to a further deterioration in the level of housing adequacy since that date, as evidenced by such additional information as has become available.

Acknowledging that Sri Lanka's housing situation was less serious than that of many developing countries, the Marga Institute housing study of 1976 nevertheless says:

> One factor emerges prominently however, that is the fact that the national housing stock is inadequate to house the country's population satisfactorily. The high rate of growth of population and the low output of construction, particularly during the decade immediately preceeding 1971, has resulted in overcrowding of houses both in urban and rural areas. High occupancy rates and the appearance of substandard structures are direct consequences of this shortage. Housing in the country, though it has improved considerably during the past two decades, is in need of qualitative and quantitative development. For instance, 45.9% have walls of mud and 40.9% have roofs of cadjan, 55.1% have mud floors and 75.6% are less than 250 sq. ft. in floor area. With regard to housing amenities, 68.8% obtain their water from wells and 34.3% do not have any type of toilet facilities. These statistics show that despite the considerable improvements to housing during recent years, there is much more progress necessary to improve housing standards up to satisfactory levels.

To set the framework for this section of the report it is necessary to point out two factors which bear on any analysis of Sri Lanka's housing. First, as pointed out elsewhere in the report, Sri Lanka does not have the rapid rural to urban migration that exists in many developing countries; the urban population is currently only about 24% of the total population and this is projected to grow to only 30% by 2000. Of some importance in this fact, however, is that the Colombo Metropolitan Region has about 57% of the total urban population and it is projected to retain this percentage. Notwithstanding the above, urban population is expected to increase on the average by some 100,000 people per year over the two decades 1980-2000.

The second factor concerns the difference in the rural/urban housing situation in Sri Lanka. Although the statistics cited above indicate that rural housing is much worse than urban housing in terms of amenities (water and sanitation) and permanence of structure, some informed observers that the Team talked to (see also Kingsley paper) felt that Sri

Lanka's urban housing problem was the more difficult to deal with and that is where the bulk of the resources for housing should go.

As can be seen from the statistics below, the congestion problem, for instance, is much worse in urban than rural areas.

	Rural	Urban
Population/Occupied Unit	5.53	6.14
Household/Occupied Unit	1.10	1.13
Persons/Room in Overcrowded Units	4.46	5.47

The exception to the above is estate (plantation) housing which, although categorized as rural in most statistics, is a separate problem.

This emphasis on urban housing is not the usual political problem which focuses on housing in cities (because that is where the political clout lies or the problem of pressures by government bureaucrats or state corporations to build in the cities), although there are admittedly some of those pressures. (In fact, many Members of Parliament with rural constituencies exert considerable pressure for government housing.) Rather, there is a recognition that the rural or small village family is better equipped to build, repair or replace its own house and that the reduced land pressures lessen the need for the infrastructure so crucial in the heavily urbanized areas. It is on this basis that the Aided Self-Help Program, which maximizes the self-help concept, is being implemented.

That is, building materials of the type prevalently used in constructing homes of a more temporary nature, e.g., cadjan, wattle and daub, etc. are much more readily available in rural areas. Kabook (lateritic soil) bricks are more easily obtainable and earth floors more acceptable in rural areas (many urban slums in, say, Colombo are on swampy, poorly drained land). In addition, the rural family, often engaged in agriculture, is better equipped to build its own structure. Finally, with densities much lower and land not a problem in terms of congestion, rural families can dig their own well and build a pit latrine. This is not possible in the cities. Thus, although the overall goal should be to improve housing throughout the country, the rural areas are relatively better off at similar income levels.

It is useful at this point to summarize Kingsley's report on the urban/rural sectors relative to housing.

Urban Sector:

Existing conditions indicate that the severity of housing problems for the poor is great particularly in Colombo where estimates show that up to 50% of Colombo's population live in slums and shanties (see more detailed description of slums and shanties below).

a) Congestion: Overall, there averaged 1.13 households per unit; 2.8 persons per room. 50% of population lived in housing with an occupancy rate of 5.5 persons/room. 42% of units had less that 250 ft. of floor area. 32% were one single room.

b) Lack of Amenities: Only 36% of the units had exclusive use of a source of water, 28% of a flush or water seal toilet. 59% did not have access to suitable toilets even on a shared basis. Colombo slums had as little as one water tap per 128 persons and one toilet (usually a bucket latrine) for every 36 persons.

c) Inadequate physical condition: 24% of housing units were semi-permanent (some mixture of temporary and permanent construction materials); 13% were made completely of temporary materials.

Rural Sector:

As stated above, quantitative measurements of the magnitude of the rural housing problem made conditions appear as bad or worse than those of urban housing, but locations and the lower density of rural housing contribute to a reduction in the severity of the situation.

a) Congestion: While population growth exceeded housing production, as it did in urban areas, the conditions in rural areas as of 1978 were not as bad as in urban areas as shown by the statistics cited earlier.

The relative abundance of space in rural areas served as a further factor to reduce the degree to which congestion was a limitation on human activities.

b) Lack of Amenities: The rural sector continued to trail the urban sector with respect to these conditions, but with the important differences resulting from vastly lesser densities than those of urban areas.

c) Inadequate Physical Condition: While the proportion of temporary and semi-permanent rural units was much greater than that of urban areas, the proportion of units considered substandard was less in rural than in urban areas.

Two other subcategories of housing are worth discussing, one urban and one rural, in the context of the poor.

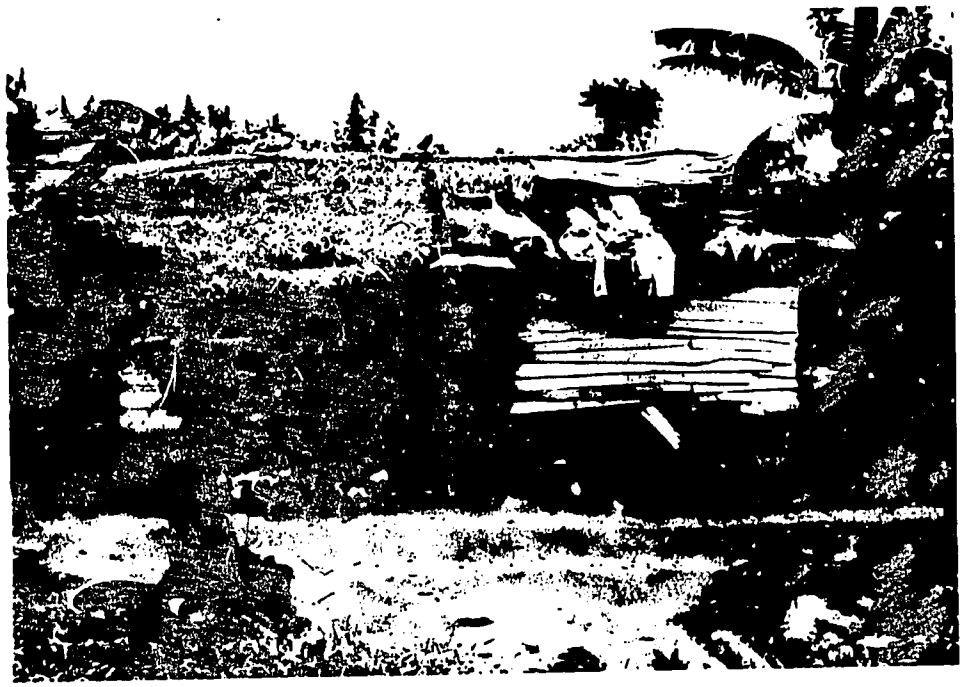
The first is what is known as slum and shanty housing. As pointed out above, it has been estimated that nearly 50% of Colombo's population live in slum and shanty neighborhoods. Although enumerations are not complete yet, the Urban Development Authority has such an exercise underway in cities outside of Colombo. While clearly not of the magnitude of Colombo, other cities such as Kandy and Jaffna do have slum and shanty areas. The Slum and Shanty Unit of UDA estimates there may be more than 40,000 families in this type of housing.

Slum areas are areas of old houses, either in rows called line houses or individual large houses sub-divided into units for separate families. These houses are in existing sections of cities where title rests with someone, i.e., they are not illegal but are in a deteriorated condition with little infrastructure and that of a poor quality. Shanty areas, on the other hand, are areas inhabited by squatters who have moved in illegally and built temporary or semi-permanent structures on marginal (at present) land, often swampy or poorly drained with no infrastructure.

The Slum and Shanty Unit of the Urban Development Authority in a recent policy paper states the following:

> In 1977, the population of Colombo M.C. was 616,000. Almost 50% of these people lived in either decaying and under-serviced slums or squatted illegally in semi-permanent shanties. The crowding of so many of Colombo's population into such areas derived from the lack of affordable alternative

The Slum and Shanty upgrading programs operated by the Urban Development Authority of the MLGHC bring improved infrastructure into such shanty areas as these.



This dwelling is typical of many that are located in rural areas throughout Sri Lanka. The construction materials--principally wattle-and-daub and thatching--are plentiful in rural areas and can be had at little or no cost to the families involved.

This is an example of a relatively good rural house. It is located in the area of the Mahaweli project, and the owner, a long-time resident of the area, has been given his parcel of land in the Mahaweli irrigated zone.

> accommodation. In this respect, Colombo conforms to the experience of numerous other urban areas of the developing world. Typically the situation of physical blight co-exists with other aspects of poverty and underdevelopment. Accordingly, the residents of Colombo's slums/shanties generally compose those with the lowest income level. Such communities also manifest high rates of unemployment/ underemployment and a proportionately greater incidence of malnutrition and disease than other communities. In short, their numbers constitute Columbo's urban poor - a stratum of society that both governments of developing countries and international aid donor agencies currently recognize should receive more attention and a greater allocation of resources.
>
> The average population density in the Slums and Shanties [in Colombo] is estimated at 60 families/acre and on this basis the area covered by them is about 600 acres out of a total of about 4,300 acres covered by residential areas. Most of the areas covered by shanties in particular are low lying lands or lands only marginally suitable for housing.

The second sub-category of housing is estate housing. This is housing furnished to workers on plantations, mostly tea and rubber, located in remote hill areas. Estate housing is the responsibility of the estate management and, although the estates are now nationalized, does not come under the Ministry of Local Government, Housing and Construction. It did, however, constitute some 10% of the total housing stock in Sri Lanka in 1971 in terms of units, and should be around this same percentage today. For the most part, it is laid out in "line units" i.e., rows of one room units, similar to the slum areas in the cities.

The units fall into the definition of semi-permanent housing, usually with earth floors but, for the most part, with walls and roofs of permanent materials. There usually is pipe-borne water, sewage disposal systems and electric generators. However, most of the houses were built in the period 1921-45 and their physical condition is very poor. Most of these one room units have crowded into them very large families, or more than one family, with no heat in the damp and cold climate of the plantation areas - a situation characterized by a Marga Institute researcher interviewed by the Team as one of the most pressing housing problems facing Sri Lanka.

The very poor drainage conditions which are seen in these photos characterize some of Sri Lanka's urban shanty areas. Upgrading programs for such areas will need to give high priority to infrastructure improvements.

Although they are constructed of provisional materials and leave much to be desired in terms of space and amenities, these shanty units are an important portion of the urban shelter available to low-income Sri Lankans. Current plans do not call for the demolition of shanties except when the land where they are located is not susceptible to improvement, or is urgently needed for alternate purposes. Slum and shanty upgrading programs are expected to become an increasingly important part of Sri Lanka's shelter policy.

Nevertheless, with the estate housing problem primarily that of a separate ministry, the SSA Team did not analyze the situation in depth. A field visit did include a stop at a plantation which corroborated the housing situation outlined above.

In summary, housing conditions for the lower income people are poor in most parts of the country and no sector - urban, rural or estate - is free from numerous problems. Table IV -1 below gives a summary of some of the indices.

Table IV - 1
SHORTCOMINGS IN HOUSING FACILITIES BY SECTOR

	Urban	Rural	Estate
One-roomed houses	11.60%	10.20%	30.57%
Overcrowding (room-wise)	35.0%	37.0%	75.0%
Housing without cement floors	26.32%	57 24%	90.0%
Without tiled or asbestos roof	48.98%	55.99%	82.45%
Without latrines	39.1%	43.6%	29.4%
Without pipe-borne water inside or outside house	51.9%	96.0%	12.4%

Source: USAID Annual Budget Submission, FY 1980, Sri Lanka. Colombo: Department of State, May 1978, Annex A, p. 48 (cited in World Health Organization, Op. Cit., p. 83).

According to Kingsley, the increase in Sri Lanka's urban population from 3.8 million in 1978 to 5.8 million by 2001 will require more than doubling the current housing stock in urban areas (to eliminate congestion, provide for population growth, and provide a suitable vacancy ratio). This represents an increase from approximately 500,000 units to 1.2 million units or an average of 39 thousand units per year, including allowance for replacing units withdrawn from service. (See Annex VI, Tables 12 and 13)

The period 1961-1971 registered an annual production of only 16,000 units per year in urban areas of which only 8,000 were permanent. Production during the years after 1971 cannot be accurately determined but is known to have been low, and the estimated rate as of 1976 was well below

the 16,000 units per year of 1961-1971. Only a total of 4,800 units were completed under public sector programs during 1971-1977 and 20,000 loans made from the National Housing Fund during that period, many of which were home improvement loans and not new construction. Thus it can be seen that there was a large gap in production of housing, in light of the magnitude of the need, and it is this gap that provided the impetus of the new Government's program for housing.

While the total need in absolute terms is higher in rural than in urban areas, the level of production needed to meet that need is lower on a per capita basis. The production rate of 79 thousand rural units per year from 1963 to 1971 is equivalent to 80% of the projected 1978 - 2001 requirement for rural areas, in contrast to a respective urban proportion of 41% of the projected need for the same period. As can be seen and has been discussed above, the rural population is better equipped to provide for its housing and, in fact, through the Aided Self-Help Program has the basis for doing so.

C. Land Analysis

1. General

One of the principal factors affecting the production of housing is the availability and cost of suitable land. Where land shortages exist, congestion or high land values become major obstacles to orderly urban development. While land is considered to be somewhat of a constraint to development of housing in Colombo and to a lesser degree in other urban areas of Sri Lanka, the problem is not a classic case of land shortage. By comparison with other Asian cities, Colombo in fact has a low density of population. An article in the April 1980 issue of Economic Review attributes this to the even rural-urban balance in Sri Lanka which has prevented mass migration to the capital city as has been experienced in so many other countries. A recent study published by the Marga Institute identifies the forces leading to that rural-urban balance as lack of marked income disparities between urban and rural families, colonization schemes that relocated large numbers of people from the densely population Wet Zone to the more sparsely populated Dry Zone, the small size of the country and relatively good network of roads which permitted short term as compared with permanent migration, the comparatively limited industrialization and the fact that such industrial expansion as has come has not been confined to Colombo.

Land use planning and management is not a highly coordinated or organized function within the GSL. The following is a summary of the Government ministries and departments that play an active role on a regular basis in land use planning administration functions:

GOVERNMENT AGENCIES WITH LAND USE PLANNING RESPONSIBILITIES

Ministry of Land and Land Development

- Survey Dept:	Topographic and engineering surveys, land demarcation surveys, town surveys which include water supply and drainage schemes, and land capability surveys.
- Forest Dept:	Management and protection of all natural forests in Sri Lanka, and reforestation programs.
- Water Resources Board:	Groundwater exploration and development over the entire country, and a special project of provision of tree seedlings for firewood production.
- Irrigation Dept:	Plan implementation of irrigation projects.
- Colombo District Reclamation and Development Board:	Working on land reclamation, drainage and flood protection (activities).

Ministry of Plan Implementation

Currently developing integrated district plans.

Ministry of Mahaweli Development

Has total jurisdiction over the Mahaweli Development scheme, and its resettlement of approximately 140,000 families is to be administered through the Mahaweli Development Authority.

Department of Agrarian Services (within Ministry of Agricultural Development and Research)

Charged with administering agricultural land.

National Agricultural Diversification and Settlement Authority

Concerned with increasing the variety of crops, including re-use of marginal tea lands for a more suitable plant for that type of land.

Ministry of Industries and Scientific Affairs

Contains a specialized land-use organization, the Geological Survey Department. Its mission is to explore for and develop the mineral resources of the country. It also has complete geological mapping of the entire country at a scale of one inch to the mile.

Ministry of Fisheries

Includes the Coast Conservation Division, which has a branch entitled Coastal Resource Development. This planning branch is attempting to author and to obtain legislative approval for a Coastal Zone Management Plan, but progress so far has been slow.

Ministry of Local Government Housing and Construction

Has evolved into a significant land-use planning organization. As mentioned earlier in the SSA, the UDA and NHDA are accruing major responsibilities for housing and urban development. In addition, the UDA has received authority for coastal land use up to the ocean's high water mark.

2. Availability

Considerable vacant land exists even in the central area of Colombo. In addition, much of the developed land is underutilized. Overall densities are about 70 persons per acre and residential densities average about 140 per acre. This is less than half the density found in Central Calcutta, and far less than Singapore or Hong Kong. According to the article in Economic Review, these densities are largely the result of inefficient land use and could easily be raised. Until recently there was a regulation in effect requiring a minimum plot size of 15 perches (1 perch = 272.5 sq. ft.), equivalent to only about 6-8 dwellings per acre. While this regulation is no longer in effect, it did establish a low density pattern of development throughout much of the predominantly residential area around Colombo. (See Table IV-2).

TABLE IV-2

DENSITIES IN THE COLOMBO METROPOLITAN REGION

	Zone	Area (Sq. Mi.)	1971 Population (Thousands)	Population density People/acre
1.	Colombo Mun. ---	14.4	562.4	61
2.	Inner Ring ---	54.55	643.8	18
3.	Suburban Ring ---	217.45	757.1	5
4.	Outer Ring ---	1,125.85	1,438.6	3
	Total CMR	1,412.26	3,401.9	3.8

Source: Economic Review, April 1980.

The major factor limiting the supply of land for development in Colombo is a physical one. Much of the undeveloped land is subject to flooding, as are many of the areas now housing shanty settlements. With only a few feet rise in the water level of the Kelani River, a large portion of the city takes on the appearance of a number of peninsulas and islands as the marshes and low lying areas absorb the overflow. While land reclamation schemes including filling as well as diking have been undertaken, the operation is expensive and further aggravates the flooding problem when undertaken on a massive scale.

The other principal factor affecting land availability is a social and political one. The land tenure system and inheritance laws in Sri Lanka have resulted in fragmentation of interest to undivided property. The result is that a single parcel may have hundreds or even thousands of part-owners. Reaching a settlement with all claimants may take years of court battles. Thus the lack of clear title removes much of the undeveloped land from the category of available.

3. Values

One consequence of the factors limiting availability of land for development has been a marked increase in land costs within recent years. Particularly during 1978, land values increased dramatically, generally by a factor of five but in some cases by as much as ten fold, as the figures in Table IV-3 indicate. At these prices the cost of land generally accounts for more than half the total cost of a new house. Even in the Colombo suburbs of Dehiwela a 4 perch plot would cost Rs. 28,000, about the equivalent of the material value of a modest ASH house. According to the Chief Government Valuer, the previous peak in land values occurred in 1969, after which the market contracted. The factors responsible for the present percipitous rise are the current Government proposals for massive building programs and optimism in private business. In order to cool the resultant speculative fever, much new land must be made available either by Government intervention to clear title questions or by land reclamation projects which are now economically feasible given the high land values.

TABLE IV-3

LANDS VALUES IN COLOMBO AREA

Area		April 1979 Price (Rs '000) per perch	Previous peak (Rs. '000) per perch
Fort	---	150 - 300	100
Pettah	---	200 - 500	125
Cinnamon Gardens	---	50 - 60	5 - 6
Hulftsdorp	---	20	4
Dehiwela	---	7	1

Source: Chief Government Valuer, quoted in the Ceylon Daily News of April 1979.

Perch = 272.5 square feet

4. Current Ownership

The Common Land Ordinance of 1835 gave the Government control of vast areas of undeveloped land. GSL holdings were further increased by the National Lands Reform Act of 1973-74 which restricted private ownership of land to a maximum of 50 acres per household. Large plantations and other major land holdings were transferred to the Land Reform Commission or to either the State Plantation Corporation or the Estate Development Board. Land held by these latter two bodies are for the most part developed for productive agricultural use.

As a result of these historical events the GSL has major land holdings in every part of the country, including most urban areas. In addition, private lands can be taken by an governmental body under a condemnation procedure. While this procedure may require several years to complete, actual possession can be accelerated significantly. As soon as an initial investigation is completed, a 2 to 3 month process, the government can take possession if condemnation is shown to have no direct effect on the livelihood of the land owner. Valuation and compensation follow in due course. The Ministry of Lands and Land Development is responsible for administering the process once it is initiated by the agency wishing to acquire the land. Judicious use of this authority to provide developable land with clear title is perhaps the only way that land for new development can be made available, tenure provided to residents of shanty settlements and the rising costs of land checked.

A study of Problems of Land Ownership in Relation to Land Development in Sri Lanka was completed in August 1978 by S. Berugoda, who has since that time become Deputy Surveyor General. The study concludes that the problems connected with land ownership center around land tenure and land laws, succession and the maintenance of records of right in land. Much of the country has not even been properly surveyed and records of ownership either do not exist or are hopelessly inadequate for purposes of establishing title. The complex land tenure system has resulted in a significant amount of land being held in undivided shares. This is due to the laws of intestate succession and the common practice of not leaving wills. In such cases the holdings of an individual get divided among the children and grandchildren (as they come of age) and their children, etc. There is no body which controls

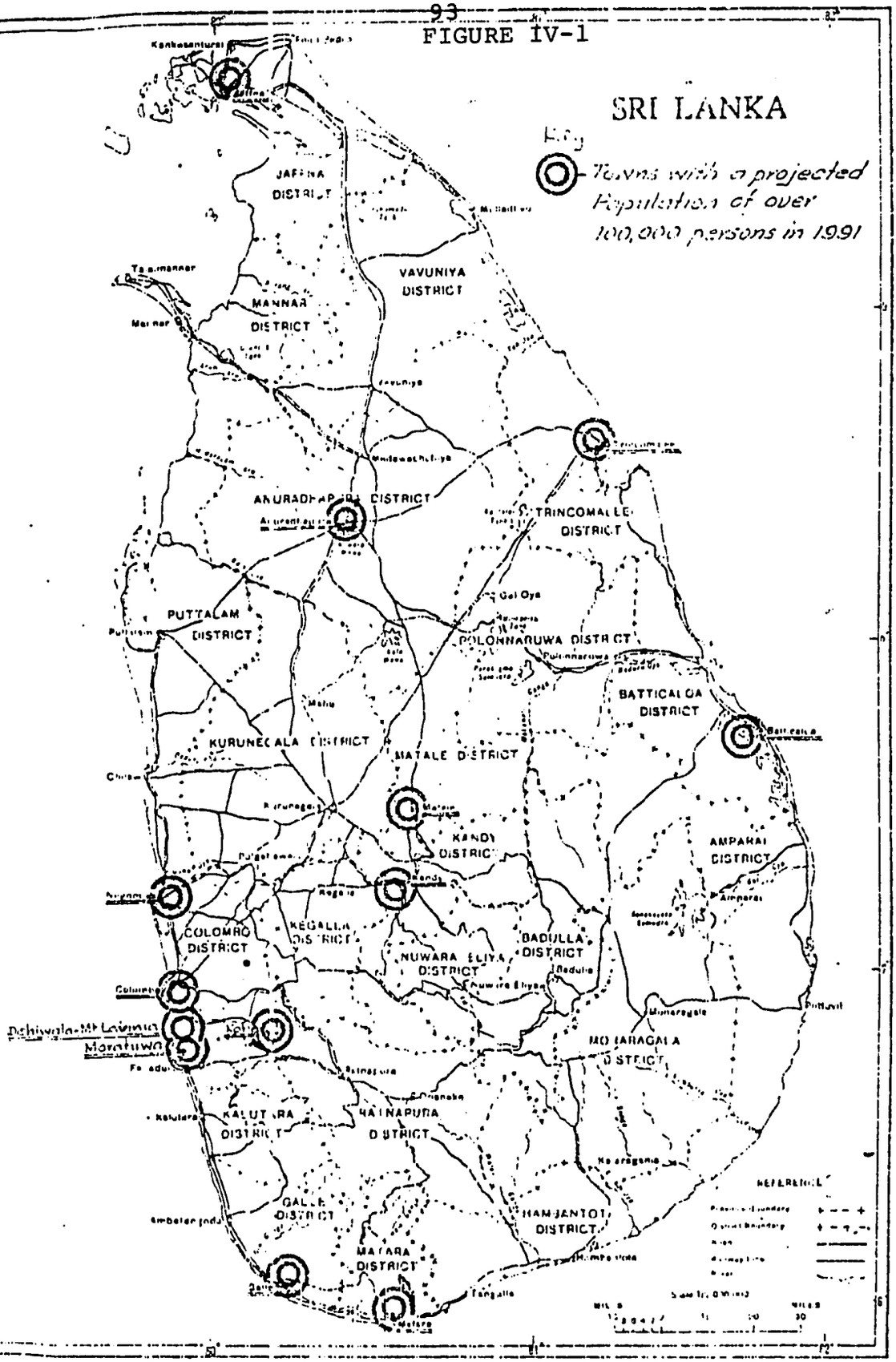
such fragmentation and apportions the holdings or even limits the continuing fragmentation which occurs with each new generation. As a result, several generations after the death of the original owner, a particular parcel may have hundreds or even thousands of individuals with hereditary claims to the property. While the Berugoda study proposes solutions to these problems, many years will be required even to complete the basic survey work and the questions of settling claims will require decades. Meanwhile, there is no immediate solution except government intervention when land is needed for development.

5. Land Use Planning

Formal land use planning is not a new concept in Sri Lanka. In the 1920's the eminent British new town planner, Sir Patrick Geddes, developed a plan for Colombo based on the garden city concept which he had popularized in England at that time. In 1940 Clifford Holliday prepared another plan for the city which incorporated a green belt, the satellite town concept and functional zoning for different land uses. Neither of these early plans had much apparent impact on the city's growth patterns. In 1950 a plan prepared by Sir Patrick Abercrombie incorporated many of the earlier concepts. This plan has been legally in force since 1961 although it also has had little effect on the nature or extent of Colombo's development. By the mid 1970's the concept of planning had changed. A U. N. team of consultants was appointed and began the process of national, regional and metropolitan level analysis which led to alternative strategies for development and eventually to a master plan for Colombo. While no final document has been prepared, some of the recommendations are presently being implemented through Special Commissions and the newly formed Urban Development Authority. The functions of this organization are described in more detail in Section IV, D., 1. on institutional analysis.

UDA is an agency charged with planning and developmental activities for the urban areas of Sri Lanka (see Figure IV-1). This responsibility includes drafting a new zoning ordinance and building codes as well as developing physical plans and proposing programs. The draft zoning Ordinance has taken the recommendations of Thomas Kingsley as the basis for regulations affecting plot sizes and density. In this manner the issue of underutilization of land is partially addressed. Further measures may also be

FIGURE IV-1



Source: National Project, M.Sc.(T&CP) Students' Architecture Compass, 1977/78 University of Sri Lanka

required such as taxes on unused land, betterment values or land sales. Alternatively the GSL may need to invest actively in the market in order to remedy the principal problem associated with land-inflated values. Table IV-4 provides a comparison of unit costs for housing using different planning options. Densities of 200 people per acre are easily achieved with any of the house types, yet per unit costs vary dramatically. The independent effects of land costs are also evident. Thus it is clear that land planning options and land costs as well as house types can affect the ability to provide low cost housing.

D. Institutional Analysis

1. Government and Parastatal Institutions and Programs

(a) Institutions

(1) Introduction - Sri Lanka has a well-developed bureaucracy dealing with housing and construction related activities. The major thrust of the Government's planning and implementation of its housing programs is through a single ministry, the Ministry for Local Government, Housing and Construction (MLGHC). Except for the housing portion of development efforts related to the Mahaweli development and tea and rubber estate rejuvenation, all major central government housing programs are developed and administered by departments and authorities coming under this ministry.

(2) The Ministry of Local Government, Housing and Construction - In 1977, when the current government assumed power, housing was identified as one of three top priority areas for Government action. In any developing country the provision of housing has a high visibility and priority. MLGHC, however, occupies a unique position of importance because the Prime Minister also serves as head of this Ministry and plays an active role in the formulation and administration of housing policy. In 1978 he mobilized his administration's housing efforts by publicly committing to provide 100,000 new housing units. The personal attention and efforts of the Prime Minister have provided the MLGHC with influence and resources far beyond what was available during the previous administration. The result has been a significant increase in the production of housing and a dedication throughout the Ministry and its various components to meeting the housing goals of the country.

A COMPARISON OF UNIT COSTS FOR ALTERNATIVE HOUSING FORMS

(400 Sq. Ft. Dwellings on a 5 acre site)

Scheme	Total Number of Dwellings	Density (People per acre)	Construction & Infrastructure Costs per Unit (Rs.)	Total Unit Cost (rs.) Including Land at		
				Rs.10,000 per perch	Rs.20,000 per perch	Rs.40,000 per perch
1. 4-Story Balcony access flats	408	486	134,000	153,500	173,000	212,000
2. 5-Story Cruciform blocks	520	624	118,000	133,000	148,000	178,000
3. 2-Story row houses	250	300	69,500	101,000	133,500	197,500
4. 1-Story row houses	298	360	25,000	52,000	79,000	133,000
5. 1-Story Court houses	206	246	22,500	61,500	100,500	178,500

TABLE IV-4

In 1977, the MLGHC, itself recently created from the separate Ministries of Housing and Local Government, consisted of ten separate entities, eight devoted to housing, construction or development and the remaining two concerned with local government. These organizations were involved in a wide variety of activities from rent control to sacred area planning to major construction projects.

As part of the development of the Public Investment Plan, the MLGHC was reorganized to focus more specifically on the problems associated with increasing the housing stock of the country (see following organization outline). Two new organizations were formed which consolidated the housing and development responsibilities that were previously spread among several existing departments. These new organizations, the National Housing Development Authority (NHDA) and the Urban Development Authority (UDA), were established as independent government authorities in order to minimize red tape and provide access to non-governmental funding. Both of these organizations have the power to raise funds through the sale of debentures or sale of such assets as land, and enter into joint ventures with private corporations. Ultimately, they are expected to be more or less self-sustaining by recapturing the cost of their investment.

To oversee and support these components, the MLGHC has a staff supervised by Additional Secretaries. Most of the housing activity is supervised by the Additional Secretary for Development which has two divisions: Projects and Planning and Programs. The Projects and Planning Division formulates initial policies, develops the strategies for achieving them, and establishes mid-term objectives to guide the responsible department or authority. The Program Division is charged with monitoring the actual implementation of the projects.

However, in preparing this report, the Shelter Sector Team encountered difficulties within MLGHC learning what programs were in progress and future plans for implementation of housing policy. The information was generally available if the proper official was questioned, but it was obvious that, once initiated, programs were delegated to the implementing authority without regular monitoring by the Ministry. By

the same token, the efficiency or effectiveness of the efforts by all housing-related agencies were not reviewed as a whole to determine if the Government's objectives for this nation were being met as effectively as possible by the individual programs.

Each of the departments or corporations within the MLGHC has a charter assigning it specific areas of responsibility. However, as could be expected, the rapid growth in activity and programs during the past two years has resulted in some organizational inconsistencies. The Ministry has concentrated on producing new housing units as quickly as possible which has often meant that superficial attention has been given to the more mundane administrative and planning functions. Some departments appear to be absorbing more administrative and financial resources than current activities justify whereas others have been expanded beyond their capacity. So far, these organizational problems have been minimal, and because all of these functions are within the same Ministry, adjustment and accommodation have been relatively painless. The current organization is, however, in reality only two years old and at least another five years of rapid expansion is planned. During these next five years some organizational realignment will be required to maintain the Ministry's current momentum and record of accomplishment.

(3) Ministry Departments:

(a) Town and Country Planning Department - This department is concerned with planning for sacred areas and also prepares maps and plans for rural and semi-rural areas. In 1979, T & C's staff of 35 did 65 plans of land use developed from aerial surveys. At one time, the department did the urban planning for the country. However, with the creation of the Urban Development Authority, most of its functions have now gone to that agency.

(b) The National Housing Department - The NHD is responsible for administration and rent collection for approximately 6,000 government-owned apartments, administration of the Rent Control Act, and enforcement of the Ceiling on Housing Property Act of 1973.

Currently, and of significance in this analysis, it manages the Government's Housing Loan Program through the National Housing Fund. In 1981, the Housing Loan Program is to be transferred to the National Housing Development Authority for the reasons outlined below.

The NHF has been administered by the National Housing Department since its inception in 1954. The primary NHF functions for which the National Housing Department is responsible are the following:

- Borrow money from the Treasury (@ 8%, 20 years in 1979);
- Solicit loan applications and conduct credit reviews;
- Disburse money to borrowers and in the case of installment loans, inspect work completed to date as a condition for the next loan installment;
- Make scheduled collections on loans including maintenance of accurate, up-to-date accounts of the loan's status and pursuit of delinquent accounts;
- Conduct periodic in-house audits of the Fund's portfolio and operations in coordination with Auditor General's annual audits.

The overall finding is that the management of the NHF portfolio has been inadequate dating back to the early 1960's. The Fund's problems have been seriously compounded to the point of almost being irreperable due to the lengthy period during which the management has been allowed to slip. To gain a clear understanding of what was involved, an analysis of a number of functions is presented below:

Treasury Borrowing: Despite a certain level of loan commitments, the National Housing Department on occasions couldn't borrow the amount that it wanted or on the schedule that it expected. In 1980, for instance, the Fund didn't receive any of the Rs 100 million for which it applied, thereby resulting in the Fund's new loan activities being suspended in March, 1980 when its Rs 140 million of 1979 was fully committed.

Credit Review: The credit review procedures are well defined: for each applicant, a look at the capacity to repay the loan based on income data over the past few years, other loans outstanding, and record of employment. The monthly installment of the loan cannot exceed 25% of monthly income and, combined with installments on other loans outstanding, cannot exceed 40% of monthly income. A judgement is made regarding whether or not the applicant's employment appears stable enough to qualify for a loan. In addition, the applicant must provide documentation showing clear title for the land/property for which a loan is to be made. This credit review process has frequently been bypassed particularly in repair and extension loan applications and a loan automatically made on the recommendations of a Member of Parliament. These "political" type loans are known to be among the most critically overdue.

Disbursement/Inspections: Disbursements to borrowers have been efficient. Inspections of work completed that are required for the borrower to receive the next loan installment have been reasonably efficient. No regular inspection is done of the minor (Rs 4000) repair and extension work done with loans. Spot checks, however, have revealed that in a large number of cases, the work for which a loan was to be used was never actually done.

Collections: The collection procedures are well-defined. Mortgage payments and rents are due at the beginning of every month. Once a mortgage or rent is three months in arrears, a notice or reminder is mailed. Once a mortgage or rent is 12 months in arrears, the Housing Commissioner (head of the National Housing Development) has the authority to take legal action (foreclosure prosecution).

This process has been ignored by the National Housing Department, as a result of some political pressures which it received. Frequently, when a delinquent account was pursued, interventions would be made requesting that the delinquent party be given more time on account of "financial difficulties".

With such political interventions becoming commomplace, the National Housing Department staff administering the Fund's portfolio has become indifferent about collection responsibilities. This problem has been compounded by a public perception that, in actuality, National Housing Fund loans either do not have to paid on schedule or at all. These trends are further compounded by the attrition of the National Housng Fund Staff. A detailed tabulation of the current staffing, is presented in Table IV - 5.

Audit/Accounting: The internal audit function is not being performed. The portfolio accounting system is not current as a result of the following conditions:

- Many loan files are missing.
- Most loan files are not current or physically not located in a file in which they can be quickly found.
- No standardized record keeping system was ever implemented to track contingent liability, collections and disbursements. With little accounting staff supervision when transactions are recorded, they are not being posted with any technical or format consistency.

(c) The Building Department - The Building Department is responsible for providing construction services for public buildings. The Department provides architectural, engineering, and construction support to other ministries and local governments. It concentrates its efforts on individual buildings such as schools, town halls, etc. leaving the very large projects and housing construction to the State Engineering Corporation.

(4) The Centre for Housing, Planning and Building: With funding assistance provided by the Government of the Netherlands, the CHPB is a training center for construction administrators. Although originally conceived as a workshop for government employees, private corporations have requested admission

TABLE IV - 5

NATIONAL HOUSING DEPARTMENT

STAFF ASSIGNED TO ADMINISTRATION OF THE NATIONAL HOUSING FUND (1980)

1	Assistant Commissioner in Charge
122	General Clerks (Full time)
31	General Clerks (Part time)
1	Legal Assistant
2	Administrative Assistnats (Part time)
8	Valuations Officers (Part time)
1	Collector
8	Accounting Clerks
13	Overseers
97	General Staff, Full time (typists, guards, office peons, stenographers, receptionists, drivers, etc.)
285	Employees distributed in 10 regional offices. Many of these offices are responsible for administering that component of the Fund's portfolio covering up to 7 Administrative Districts.

Note: Loan/Rent payments most commonly made in person by Borrower. Option available (rarely used): rent or loan amount deducted from Borrower's paycheck by employer.

for their employees. The Centre now has several tuition-paying members from private firms in each session. The center operates three courses:

(a) For architects and engineers, there is a three-week course on scheduling and planning construction projects. In September, 1980, there were 15 people participating in this course.

(b) For individuals with some technical training and experience with construction, there is an eight week course that concentrates on the problems and techniques of project management. In September there were 25 individuals enrolled in this course.

(c) There is a course to train supervisors which is geared to high school graduates with some construction experience. This is an eleven week course which recently had 35 students enrolled.

(5) Boards and Authorities:

(a) Common Amenities Board - The Common Amenities Board (CAB) was formed in 1973 to serve as property manager of the approximately 11,000 housing units the Government took control of that year (subsequently all units with rents of less than Rs 25 per month were turned over to the tenants). It has continued to perform this function but, in addition, when the UDA initiated the slum and shanty up-grading program in 1979, the CAB assumed infrastructure implementation responsibility on UDA's behalf.

The CAB operates in Kandy, Galle, Trincomalee, and Jaffna in addition to Colombo. The bulk of its efforts are concentrated in Colombo where its offices and staff of 70 people are located.

The CAB has four primary areas of interest:

1. It handles maintenance and repairs for 29 public housing developments with 6,000 dwelling units.

2. It provides basic amenities (sewage, standpipe, garbage, paths and lighting) in private, owner-occupied housing in slum areas.

3. It provides basic amenities to the slum areas owned by the municipality of Colombo.

4. It takes on special projects for UDA as requested. In September, 1980, four upgrading projects were underway involving home improvements as well as amenities.

The CAB recently introduced legislation to broaden its powers to include the generation of private and voluntary funding and to permit construction projects beyond the scope of basic amenities.

(b) The National Housing Development Authority - The NHDA has the responsibility for implementing the Government's program for public housing. Operating as a statutory authority under the MLGHC, the NHDA is the focal point for housing development in Sri Lanka. Established in 1979, the Authority's objectives were spelled out as:

- To directly engage itself in the construction of flats, houses and other living accommodations or buildings;

- To formulate schemes to establish housing development projects in order to alleviate the housing shortage;

- To cause the clearance of slum and shanty areas and the redevelopment of such areas;

- To promote housing development;

- To develop or redevelop land for the carrying out of any of the objectives of the Authority;

- To make land available to any person for housing development;

- To provide financial or other assistance to persons engaged in any activity which is similar to any of the objectives of the Authority; and

- To conduct, promote and coordinate activities in relation to all aspects of housing development.

To carry out this charter, NHDA has organized into four major functional areas, each headed by a Deputy General Manager. (See Annex VII for detailed organization chart).

1. The Building and Development Division is responsible for the implementation of the Direct Construction Program.

2. The Rural Housing Division is responsible for the construction of housing units under the Aided Self-Help Program. In addition, now that the Aided Self-Help approach has been expanded, the Department is also overseeing the Model Villages, Electoral and Fisherman Housing Programs. To effectively manage the extensive building being done through this division, implementation has been decentralized and most day-to-day operating decision are handled by District Managers in the 24 Districts. (See the detailed discussion of this implementation of the Aided Self-Help Program under Government Housing Programs in Section IV, D., 1, b.) Even though this is the Rural Housing Division, its responsibility includes development in urban or semi-urban areas for any program using aided self-help techniques.

3. The Finance Division is responsible for the development of financial policy for the individual programs and the administration of the NHDA. This division is concerned with disbursement and generation of funds as well as general financial management.

4. The Administration Division is in charge of the administration of the NHDA and the management of large housing developments.

The total staff strength of the NHDA as of September 1980 was 2,300 made up of 86 senior manager, 190 mid-level employees and 2,024 supporting and clerical staff members.

The housing program administered by NHDA as outlined in the latest Public Investment Plan calls for the construction of 108,000 housing units between 1980 and 1984. It is the Authority's stated policy to distribute these houses among all income groups with emphasis placed on low-income families. The allocation of NHDA housing is to be 80% for the low-income group, 15% for lower middle income families, and 5% for members of the upper middle income group. It should be pointed out that there is no clear definition of what constitutes the "low income group" and attempts to pin this down were not successful.

To achieve its housing goals, NHDA receives funds from the Government in the form of a direct allocation as part of the Government's capital budget. These funds are then supplemented by the Authority through long term repayment by the recipients of housing, the cash sale of housing units, and the sale of land to builders.

Recently, under a new revenue raising program, NHDA has advertised for proposals from builders to form joint ventures with NHDA for housing development. NHDA would contribute prime Government-owned building sites as its share of the equity, the developer would provide financing and expertise. After completion the project could be sold and the profits divided.

In the latest five year Public Investment Plan the housing sector has been allocated Rs 6.4 billion of which Rs 5.4 billion is to be received as a direct capital allocation for NHDA programs from the Government. An additional amount will be raised by NHDA through

its own efforts. The proposed NHDA budget for 1980 is approximately Rs 1,488 million. The bulk of that amount, Rs 1,000 million, has been allocated by the Government for a direct grant. Most of the remainder, Rs 443 million, will come through internal sources while Rs 45 million will be a Treasury loan for housing loan programs (See following Table IV-6).

The National Housing Development Authority is a dynamic organization which has achieved remarkable success in less than two years of existence. As of September 1980, seventeen thousand homes had been completed under a variety of programs and another 40,000 unit were under construction or commited.

There appear to have been fewer false starts and administrative mishaps in the NHDA's programs than would usually be encountered in an undertaking of this magnitude. Perhaps the major criticism of NHDA's performance to date would be in the area of cost control. In the first year of the Authority, plans were drawn up, contractors hired, and building materials purchased with the objective of providing the maximum number of houses in the shortest possible time. This approach did not allow time for competitive bidding or consideration of alternative plans. Inevitably, per unit costs rose drastically, especially under the Direct Construction Program where outside contractors were used. Today, NHDA is reevaluating its building programs with the objective of creating reasonably priced housing units which will be affordable by the people for whom the housing is intended.

Another longer term problem which NHDA faces is a shortage of adequate professional and managerial staff to implement its programs. Although procedures appear well developed, administrative personnel at both the headquarters and district offices are insufficient to meet the demands as the number of housing units and ongoing activities expand. Recruiting drives may not solve the problem because of the basic discrepancy between Government and private enterprise salary levels. Instead,

TABLE IV - 6

NATIONAL HOUSING DEVELOPMENT AUTHORITY
INVESTMENT PROGRAM - 1981

Projects	Estimated Total Cost (million rupees)
1. Housing Construction	
1. Aided Self-Help Housing	239.100
2. Urban Housing	890.800
3. Public Servants' Quarters	50.000
4. Electoral Housing Projects	144.000
5. Land & Contingencies	48.388
SUB TOTAL :	1,426.288
2. Housing Loans Repayment	45.000
3. Capital Expenditure	17.000
TOTAL INVESTMENTS:	1,488.288
FINANCED AS FOLLOWS	
1. Treasury Grant	1,000.000
2. Treasury Loan (5%, 15 years to repay)	45.000
3. Internal Generation (Direct sale of houses and land, downpayments on houses, repayments of loans)	443.288
TOTAL:	1,488.288

even more carefully designed procedures that can be followed by less highly skilled administrators may be needed. Also, the use and distribution of key administrators may have to be reexamined in order to increase their effeciency.

Finally, as a result of the unsatisfactory performance of the National Housing Department as administrator of the National Housing Fund, it is planned that NHDA will assume administrative responsibility (development of new loans, disbursements, credit review, construction inspection, collections) of all NHF loans disbursed starting in January, 1981.

The National Housing Department will continue to administer the existing NHF portfolio. As explained previously, from an accounting perspective this portfolio is so disorganized and incomplete that the National Housing Department has been unable to contract with a local accounting firm willing to reassemble the portfolio. NHDA is therefore not willing to assume any administrative responsibility for the existing portfolio.

NHDA has apparently done a good job of administering the new ASH Program to date, although experience is limited. It expects that the administration of the Housing Fund will be more difficult initially as a result of the lenient reputation that NHF loans have acquired. Although no specific procedures have yet been developed, NHDA expects to administer this program more efficiently by focusing its effort on the following areas which were the weakest performance areas of the National Housing Department:

- Strict, well-defined collection and delinquency procedures that will be enforced, including the authority which it has been granted for NHF loans to automatically repossess the house of any mortgager or rentor with over 3 months of arrears.

- Adequate staffing, with an office in every district.

- Development and use of a standardized accounting system, with a comprehensive, complete and up-to-date set of records for each loan.

While the NHDA has managed the ASH Direct Contruction loans well to date, MLGHC is unsure whether this performance can continue once these programs balloon into many more loans. Some MLGHC staff have suggested that NHDA, with its forte being housing development, should in the future be relieved of its loan/mortgage servicing responsibilities. In addition, general skepticism was expressed regarding the muscle that is required to induce large numbers of borrowers out of the long term habit (since the early 1960's) of ignoring NHF and other Government housing debt obligations.

(c) Urban Development Authority - The UDA was established in October 1978, with a wide ranging charter to plan and develop projects for urban areas in Sri Lanka. The UDA is to a large extent made up of personnel from the former Colombo Master Plan Bureau. It has also taken over most of the functions of the Town and Country Planning Department, which was responsible for urban development in the previous administration.

UDA's responsibilities can be divided into the following areas of interest:

1. Industrial development;
2. Colombo Central Area Redevelopment;
3. The Parliamentary Complex at Kotte, the new Capital;
4. The Free Trade Zone;
5. Slum and shanty upgrading;
6. Training programs in urban development; and
7. Urban planning outside Colombo.

The UDA is committed to involvement in planning, construction, and development activities in all urban areas including not only Colombo, but each of the 24 district capitals. UDA's charter describes the Authority as a development agency engaged in activities that must be commercially and economically viable. It is also expected to meet its expenses from revenues generated from operations.

The 1980-83 corporate plan for the Urban Development Authority calls for development expenditure of Rs 2,646 million for the four year period. On these projects, UDA hopes to earn a profit of Rs 245 million.

The planned distribution of projects is:

	1980	1980-84
Administrative complexes	578	1,401
Commercial complexes	385	882
Industrial complexes	19	39
Integrated Development	22	275
Educational Social and Cultural	2	7
Slum and Shanty	10	42
TOTAL	1,026	2,646

The administrative complexes will be developed for the use of state ministries, departments and corporations who will receive leases from UDA. All other projects (except slum and shanty upgrading) are to be commercially oriented. The current plans also call for these projects to be leased rather than sold.

UDA receives its funds from several sources depending upon the nature of the project and beneficiaries. The 1980-84 plan identifies the following sources of funds:

	(Rs Millions)	
	1980	1980-84
Funds voted by Parliament for Specific Projects	438	752
Foreign Aid	-	8
Funds from Local Authorities	6	90
UDA Capital	80	-
Revenue from UDA Projects	40	1,403
Sale of Debentures	420	920
Annual Cash Surplus	46	625
Totals	1,031	3,198

If UDA is to follow its plan for project development the next four years, it must raise capital through the sale of debentures. Without that capital, projects will be delayed, creating a shortfall in expected lease revenues thus compounding slippage against the plan.

In September, 1980, UDA issued its first Rs 100 million in debentures for sale. As of October, 1980 none of the debentures had been purchased. The National Savings Bank who with the Employees Provident Fund are virtually the only investors in Government debt or debentures did not plan to purchase UDA debentures in October or November. Members of the Central Bank informally expressed skepticism about the UDA's ability to raise the Rs 420 million needed in 1980. Unless the debentures are sold, UDA's goals for 1980-81 may have to be reduced to a level more compatible with the capital available or funds may have to be shifted from other Government projects.

The slum and shanty project, on the other hand, is a social program which UDA expects to fund through direct grants from the Government or assistance from foreign aid donors. This program was begun under the Colombo Master Plan Bureau to upgrade infrastructure services, improve housing and develop social programs for low income slum and shanty dwellers in Colombo. Although several pilot programs are underway, the program remains a small portion of the work done by UDA, and is its only involvement in supplying low cost housing needs.

Within the Urban Development Authority, the Slum and Shanty upgrading Unit is responsible for the upgrading program. The unit has a staff of 24 composed of architects, sociologists, and planners working on projects in Colombo and three other areas. They have 16 projects currently underway or identified and others being explored in most of the major urban centers.

The Slum and Shanty Unit is essentially a planning and coordinating organization. Its major functions are:

- Enumeration and Socio-economic data collection,
- Development of standards and norms for low cost living,
- Clarification of legal and regulation of slum and shanty problems,
- Development of repayment schemes,
- Identification and supervision of upgrading projects.

For identified projects the Slum and Shanty Unit prepares detailed drawings and plans. The actual execution of the project is entrusted to either local volunteer organizations or the Common Amenities Board. There are slum and shanty projects underway by Redd Barna (Save the Children - Norway), Save the Children - USA, and UNICEF. Four pilot projects financed by the Government of the Netherlands are being implemented by the Common Amenities Board.

The Slum and Shanty Unit has the opportunity to make a significant impact on the nation's substandard housing conditions. During the last two years, however, only one 58 site project has been completed, whereas, during the same period NHDA has completed over 17,000 housing units. The problem seems to be caused by UDA's (and the Slum and Shanty Unit's) orientation as a planning rather than implementing organization. Many of the projects initiated by the Slum and Shanty Unit proceed smoothly through the identification and planning stage, but falter in execution. The implementation activities of the unit do not appear to receive the attention deserved. In fact, the entire unit has an unusual position in the UDA because in spite of being administratively a part of UDA, the Slum and Shanty Upgrading Program is actually funded by the NHDA. Before the Unit can make progress toward meeting its goals additional resources and administrative support must be provided.

(d) State Engineering Corporation - The State Engineering Corporation (SEC) is a large Government corporation which has both a building design and construction capacity and works almost exclusively on Government projects. There are two operating divisions within the Corporation. The consulting division specializes in project design and is composed of 16 architects and 80 engineers with a capability in mechanical, electrical and civil engineering. The construction division has 8,000 skilled and unskilled employees. Each division operates separately so that on some projects the SEC has a consultancy role but does not participate in construction.

In the past, the SEC worked primarily on state-owned manufacturing plants and office buildings. The amount of work in those areas, however, has declined significantly with the result that the SEC has shifted its focus toward housing. Today, 80% of the SEC contracts are for housing projects sponsored by the National Housing Development Authority. There are 55 housing sites under construction ranging in size from a few units to as many as 2,000. Recently the SEC has begun a

Rs 1.5 million slum upgrading project in Jaffna for the Urban Development Authority. SEC did not really want this project but took it in order to keep some of its labor force employed.

As the SEC enters the Government's housing programs it brings with it an administrative overhead and engineering techniques that do not appear compatible with low cost housing. If it is to contribute effectively the SEC will need to consider establishing another division with greater awareness of costs and engineering practices for low cost housing.

(e) Building Materials Corporation - - The Building Materials Corporation (BMC) was established in 1972 as a state operated corporation with monopoly powers to regulate the price and availability of building materials. The BMC acts as the distributor of a wide range of building materials through a network of retail outlets located in various parts of the country. In 1977, the restrictions on competition among building materials was lifted. In spite of the increase in competition, the BMC has maintained its position as the largest building materials distributor and dramatically increased its profits during the last two years. Many observers believe that BMC is an extremely efficient corporation which would succeed in most countries. More importantly, its effectiveness as a supplier has been instrumental in supporting the construction boom which Sri Lanka has been experiencing.

(f) National Water Supply and Drainage Board - The Board was formed in 1974 to:

1. Develop, provide and control public water supplies;

2. Establish, operate and control a sewage system; and

3. Assume control of local water supply systems voluntarily transferred.

It has concentrated its efforts on locating and providing potable water, especially in the drier northern section of the country. There were 148 potable water projects in process during September, 1980.

(6) Local Government (Colombo Municipal Council)

For the most part, local governments work with the central government agencies to carry out their housing programs. However, in the case of the Colombo Municipal Council (CMC) there is some direct involvement in housing. The following summarizes the number of CMC staff directly involved in housing.

1. Low income housing schemes (planning, architecture, construction management - actual construction work contracted out):	10
2. Slum and Shanty Upgrading (all part time)	150
3. Water/sewerage facilities	
° Waterworks Department	350
° Sewerage Drainage Dept.	140

The CMC's primary responsibilities in terms of budget magnitude are construction/maintenance of roads, sewers, waterworks, public health facilities, playground/open space and public facilities (libraries, schools, etc.) Its other primary activities are such traditional municipal government responsibilities as zoning, public assistance, street lighting, and building plan reviews.

Recent (past two years) housing developments of the CMC are the following:

1. Ownership of 1200 units that the CMC was renting out at 25 Rs/month/unit were transferred to the tenants free of charge because of the high irrecoverable expense of building maintenance, given the nominal rents being charged.

2. Tenants renting 750 units with rentals slightly greater than 25 Rs/Month were given rent/purchase options.

3. The CMC made 5 acres of land within the Colombo city limits available to NHDA. What NHDA will pay for this land is not finalized.

These developments reflect the trend of municipal government disengaging as much as possible from housing program involvement. Given the heavy subsidies required by housing programs and the rapid escalation in construction costs, the consensus is that housing programs should not be attempted by local government but, instead, left to the more appropriately funded Central Government agencies responsible for housing.

An organization chart of CMC is given in Annex VII.

(b) Government Housing Programs

(1) Background - The 1977 paper on housing prepared by the Ministry of Local Government, Housing and Construction mentioned earlier in the discussion of government institutions also identified the housing needs and the Government's policy for meeting those needs. The programs proposed then have formed the basis for the number of units and approach being planned through 1984.

The Government estimated in 1977 that during the following five years 690,000 housing units would be needed to satisfy housing requirements. The 690,000 was composed of a backlog of 440,000 substandard units in addition to 200,000 new units and 50,000 replacement units needed during the period. For the 1978-82 period the Government established a goal of 500,000 new housing units with 100,000 to be constructed under public sector and programs 400,000 coming from the private sector.

The private construction was to be encouraged through tax incentives, better institutional facilities, and relaxation of legislation that inhibited private construction. Because of many factors covered in other sections of this report, the private sector housing has not developed according to the 1977 plan. The public sector, on the other hand, has made a dramatic effort to achieve its goal of improving the housing stock.

Housing is being created by the Government under a variety of programs, but this report concentrates on the provision of the 100,000 units (now officially designated as 108,051 for the period 1980-84) which apply to the broadest segment of the low income target group. These programs are administered by the NHDA and the UDA. However, major settlement programs exist for settlers under the Mahaweli Program and workers on plantations under the estate redevelopment programs as well as minor programs administered by various ministries for their employees.

To meet the original goal of 100,000 housing units the MLGHC decided to concentrate its efforts on three existing programs, which were to produce the following:

- Direct Construction - 36,000 units
- Aided Self-Help - 50,000 units
- Home Loans - 14,000 units

Although these had been existing programs during the previous six years the output had been very low and the Government decided to set specific goals.

The Direct Construction Program is defined by the Ministry (and throughout this report) as a Government program constructed by either force account or private contractor, usually in urban or suburban areas, and usually walk-up apartments. However, up until 1981, it has included the Electral Housing Program and some Model Villages (see description following). Between 1970 and 1977 the Government had constructed only 3,472 units of this type.

Under Aided Self-Help, first introduced in 1974, the Government meets the cost of minimal land development and building materials for infrastructure and house while the allottee provides the labor. The building materials are covered by a 30 year loan at no interest, and the land is leased on a long term nominal ground rent basis. Although this program was judged very successful, by 1977 only 1,307 units had been completed.

The Home Loan Program has been providing middle income property owners with mortgage funds since 1954. Even though it was designated to be a traditional loan program, by 1977 there were many serious problems which reduced its effectiveness.

In two years changes in the Government's overall housing program have been made, most notably, the number of units has been increased to 108,051 under the Government's "rolling plan" concept, the most recent of which covers 1980-84. There has also been a shifting of units from Direct Construction to Aided Self-Help, because of costs, and the institution of several new programs. Shown below are the projections for housing units from the 1980-84 Public Investment Plan. (See also the table on the following page taken from the Public Investment Plan and which reflects the capital allocation.)

Urban Housing	18,011
Aided Self-help (ASH)	50,000
Electoral Program (ASH)	20,160
Electoral Program (Direct Const.)	5,880
Housing Loans	14,000
	108,051

Overall, the housing program as instituted by the new Government has been remarkably successful at producing new units in a very short time. Table IV-7 summarizes the status of the Government's housing program as of August 1980 approximately three years after the initial goals were set.

(2) Current Programs

(a) The Urban Housing Program - This is a Direct Construction Program which emphasizes two- to four-story apartment houses for low income city dwellers,originally a rental program but now a sales program. Rapidly rising costs and budgetary constraints have forced a reduction in the size of this program from the original goal of 36,000 units to a new total of 18,000 programmed for the 1980-84 period.

As of August, 1980 a total of 10,400 units had been completed with an additional 10,800 units under construction. The units being built generally range from 400-500 square feet of floor space with two or three bedrooms, living area, cooking area, and individual toilet and bath facilities. Densities in projects average approximately 180 persons (30 units) per acre.

Although originally planned to cost about Rs 25,000 per unit, current estimates of the cost on units to be completed range from Rs 100,000 to Rs 200,000 net of land. These homes are intended for "low income" families, but only the top 10% of the population could afford the units at the present cost levels. Therefore, this type of housing requires substantial subsidy (estimated by some to run as high as 80-95%) by the Government in order for the target income group to take possession (target group

TABLE IV-7

SUMMARY OF HOUSING PROGRAMS UNDER THE MINISTRY OF LGH&C AS OF AUGUST 1980

Program	Units Com pleted	Units in progress	Additional Units Planned	Total
Direct Construction (Urban Housing)	10,353	10,769	-	21,122
Electoral Housing	5,880	333	15,120	21,333
Aided Self-help	6,286	18,592	21,640	46,518
Model Self-help	(3,722)	(2,950)	(10,140)	(16,812)
Fishermen's Housing	(64)	(959)	(1,000)	(2,023)
Slum & Shanty Upgrading	58	4,034	-	4,092
TOTAL:	22,577	33,728	36,760	93,065

	Loans made since 1978
Home Loan Program 1/	30,559 (No additional loans planned - see National Housing Fund text)

Source: NHDA, UDA, MLGHC

1/ Not additive because home loan category includes repair & extension loans, land purchase loans, house purchase loans, new construction loans. Breakdown of loans into these six categories n/a due to incomplete state of housing fund accounts.

being defined as "low income" but this, in turn, is not clearly defined).

In spite of these costs to the Government there is pressure for Direct Construction to continue. Members of Parliament who select the families to occupy houses in their district prefer to bestow completed housing rather than simple building materials provided under Aided Self-help. There are also a large number of planners and administrators who believe that to achieve required density, multi-story construction is necessary. Several studies have shown this not to be the case in Colombo or other urban areas of Sri Lanka, but the belief persists.

Regardless of the pressures and preferences, Direct Construction in the urban areas cannot be continued in its present form. The total cost projections for the 10,800 units that are now under construction are staggering. At Rs 150,000 per unit (the current average cost estimate per unit) for completing the projected 18,000 units under the Plan (15% of the total 108,000 units planned), the Direct Construction Program would consume approximately 40% of the budgeted funds.

The SSA team was informed there would be no new starts in Direct Construction after 1980.

(b) The Aided Self-Help Program - Introduction - The concept behind the aided self-help approach to housing is, as the name implies, to provide material and technical assistance for families to build their own homes. This program will be described in considerable detail since it is the cornerstone of the Government's current programs. The particular attraction of the Aided Self-help Program (ASH) to the GSL is the dramatic reduction in per unit cost by reducing infrastructure development to a minimum and eliminating outside contractors and labor costs. By adopting this approach, the cost to the GSL of providing a housing unit has been reduced from over Rs 100,000 under Direct

Construction to less that Rs 25,000 (these costs do not include land but do include materials cost for a septic tank and well).

As of August, 1980, 7,150 ASH units had been completed since 1978 and 18,600 were under construction. The ASH projects have been constructed mostly in rural areas to date. Organizationally the program is administered by the Rural Housing Division of the NHDA. Beginning in 1981 the Model Villages, Fisherman's and Electoral Housing Programs will use the aided self-help mechanism and only the latter will be funded as a separate line item in the budget. Descriptions of the sub-programs will follow the overall description of Aided Self-Help.

·ASH Loan Program Description - The ASH program is divided into "low income" and "middle income" sub-programs. The income of the beneficiaries must be 250-550 Rs/month for them to qualify for the low income sub-program and 550-1100 Rs/month for them to qualify for the middle income sub-program. The middle income sub-program builds units averaging 570 square feet and the low income sub-program's units average 392 square feet. The focus of this investigation is on the low income sub-program, since it constitutes some 94% of the program.

ASH loans are made by the NHDA to a group of families who have formed a "building society" to implement an ASH plan. Each individual ASH loan is allocated for the following purposes:

1. Building materials for an individual house (the bulk of the loan);

2. Building materials, if any are required, for infrastructure.

Included in "infrastructure" is the construction of internal access roads through the ASH development and the construction of 1 well per 7 units. Frequently, electricity is included but is separately funded by local government development grants and installed by government contractors.

Development of the ASH-funded infrastructure requires almost exclusively manual labor provided entirely by the ASH beneficiaries (including tools required; no machinery used), with NHDA technical supervision. Where building materials are required, they are usually for the following infrastructure work that supplements the primary labor-based infrastructure work just mentioned: small culverts or retaining walls where necessary, masonry work on the wells, 1 or 2 hume pipes for surface draining. The infrastructure component of each beneficiary loan is one equal part of the entire ASH development loan. For example, if 50 families form the building society organization required to implement an ASH project, included in each family's loan will be one fiftieth of the infrastructure building materials loan received by the building society. All units in a given ASH development are built to the same design and, therefore, the infrastructure cost charged per unit is constant, regardless of family size.

The Building Materials Corporation (in which the GSL maintains a controlling interest) is the supplier of all ASH building materials.

The two main categories of ASH projects are ASH and ASH/Model Villages (MV). ASH projects are directed at the rural areas (and some urban areas) and are limited to loans to beneficiaries for house and infrastructure building materials. ASH/Model Villages Projects (a separate description of Model Villages follows) are directed at the less developed rural areas and consist of the standard ASH housing and basic infrastructure construction materials loans, combined with various non-ASH funded "higher level" infrastructure and community development projects - e.g., running water, electricity, school, community center (which can include health clinic, preschool, postal center and/or marketing facilities).

·<u>ASH Project Development Process</u> - This process is summarized on the following page.

ASH PROJECT DEVELOPMENT PROCESS

1. Member of Parliament (MP) identifies a group of potential ASH beneficiaries.

↓

2. MP, in collaboration with Central Government district representative, identifies land to be used for ASH scheme.

↓

3. NHDA screens potential ASH beneficiaries proposed by MP (e.g., must already permanently reside within 3 miles of proposed ASH site, cannot already own a house, cannot be over 50 years old, must earn for low income ASH program between 250-550 Rs/month.)

↓

4. NHDA assists qualified beneficiaries in formation of a building society, whose primary purpose is to implement, in collaboration with NHDA the ASH project when approved.

↓

5. NHDA regional office determines ASH/MV needs, conducts feasibility studies and determines fund availability. With the concurrence of the building society, final ASH or ASH/MV proposal is assembled (this NHDA process decentralized in 7/79). Required building materials order is immediately placed with Building Materials Corporation representative in NHDA district office assembling proposal.

↓

6. MLGHC arranges a meeting at or near proposed ASH site between building society, NHDA and the local AGA (Assistant Government Agent) whose inputs are required in terms of land acquisition and MV projects (electricity, school, health clinic, etc.). At meeting, final decisions made regarding amenities to be provided and funding/implementation responsibilities alloted.

↓

7. NHDA District Manager, in conjunction with District AGA, coordinates, schedules, administers and monitors implementation of ASH or ASH/MV project. Voluntary organizations such as SARVODAYA, SEDEC are active in financially or technically assisting those beneficiaries unable to provide required labor inputs.

The responsibilities of the primary ASH program participants are summarized below:

1. MP's provide the initial list of potential beneficiaries who, pending NHDA screening, are eligible to be part of an ASH or ASH/MV scheme.

2. AGA's (one per division; average of 8 divisions per administrative district), in collaboration with MP's, identify government land where the ASH scheme can be built. Source of much of the government land came from the 1972 Land Reform Act in which a 50 acre/family land ownership ceiling was imposed, with the land in excess of 50 acres being turned over to the central Government. In ASH/MV schemes, AGA's obtain and coordinate financial, technical and implementation resources of those government agencies responsible for the provision of the MV public service or works projects planned (e.g., electricity, health clinic, school, market place, etc.)

3. NHDA make loans for the building materials to the beneficiaries for house and internal access road/well infrastructure construction. It also provides all technical assistance as well as government interfacing and administration/coordination required, from the planning to the implementation from the building loan collection stages of ASH schemes. Included is the building materials ordering from the Building Materials Corporation.

4. The Beneficiaries - provide all labor required in the construction of the housing units and internal access roads/well infrastructure. They are also responsible for paying back NHDA for the building materials.

5. Voluntary Organizations (e.g., SECEC, SARVODAYA) provide labor or financing to contract the required labor to those beneficiaries who are unable to meet the labor requirements of the ASH program.

6. Government Agencies under the direction of the AGA and ANDA District Manager, provide the public works or services specified by an ASH/MV plan, from planning to implementation to maintenance. Which government agency gets involved depends on the final ASH/MV specifications regarding public facilities and services.

· Physical Description of ASH Projects - On average, ASH and ASH/MV projects are 40 and 50 units respectively, although they can be as large as 100 units. The largest ASH developments are 100 units - Ambalangoda in the Galle district, Kimbulapitiya in the Gampah district. The largest ASH/MV development is 325 housing units, located in the Badulla district. An ASH or ASH/MV project, once it has been approved, takes from three months to one year to be completed.

Of the 168 electorates, all but the following electorates have ASH projects:

1. Colombo Administrative District.

   - Colombo North
   - Colombo Central
   - Colombo East
   - Colombo West
   - Borella
   - Dehiwela
   - Ratmalana

2. Gampah Administrative District.

   - Attanagala

3. Galle Administrative District

   - Galle

4. Kandy Administrative District

   - Kandy

These electorates are the most urbanized.

There are no MV projects in the Colombo Metropolitan area. The MV project closest to Colombo is Pahangama, located in the Panadura electorate 16 miles southwest of the Colombo city limits.

The physical plan of ASH and ASH/MV projects takes one of two forms:

1) A parcel of land within or adjacent to an existing village is obtained from the Central Government. Within this parcel, the housing units and MV facilities are constructed, with roads connecting the parcel to the existing village. In the first ASH/MV projects, a grid or row housing configuration was employed, setting the development apart from the more haphazard housing configuration of the existing village. The most recent projects do not follow a rigid grid pattern but are more haphazardly planned in order to blend in with the existing village and the surrounding contours of the land/natural landscape. This more recent type of development ensures that the project is not physically or socially isolated from the neighbouring village or community.

2) Several parcels of land interspersed within an existing village are obtained from Central Government on which the planned ASH/MV units and facilities are constructed. This plan of many land parcels intermixed among village housing/building units further ensures that the ASH beneficiaries are well-integrated into the physical/social network of an existing village. This physical planning lay-out has become increasingly common and is favoured by NHDA for future ASH projects over the preceding one parcel plan.

· Current Status of ASH Projects (9/30/80)

	Units Completed	Units where work in progress
ASH (middle income)	339	1,258
ASH (low income)	5947	17,334
TOTAL:	6286	18,592

The total expenditure to date on this work is 248,649,229 Rs. (Expenditure information is not available in terms of expenditure incurred by the middle and low income components.) The Building Materials Corporation bills from which this figure is derived do not indicate whether the amounts are incurred by a low or middle income scheme, although NHDA is capable of deriving such a breakdown.

The middle income ASH sub-program is expected to be revised in the near future and, therefore, no additional units are being planned. 1981 funding is exclusively for units with work already in progress. NHDA is finding that many of its middle income beneficiaries are capable of constructing their house without government help and, therefore, do not require the assistance of NHDA's ASH program.

- ASH Loan Terms and Magnitude

The following are current 12/80 estimates of the ASH-funded components of 40-50 unit projects:

Building Materials	Unit Loan Magnitude
• Home	Rs 22,000 (15-11,000 Rs during most of 1980)
• Infrastructure (internal access roads, water wells)	Rs 2,200 (usually 10% of home building materials)
	Rs 24,200

An experimental ASH project in Matugama in which "traditional" building materials (i.e. bricks, cement) are being used instead of kiln burned bricks and imported cement has cost only Rs 18,000/unit. Only the northwestern and northeastern areas of Sri Lanka lack the local materials from which bricks and cement are made (laterite rocks, cinvaram, sand cement, kabook) and the NHDA will explore the wider application of traditional building materials.

The loan terms are supposedly 30 years but there is currently a maximum monthly payment of Rs 50 with no interest, down payment or collateral requirements. An initial deposit of Rs 50 per beneficiary is required - deducted from the initial loan payments made by the beneficiary. Given the average building materials cost per unit and the Rs 50/month ceiling, the payback period would actually extend to some 40 years. The middle income ASH sub-program terms differ in that a 6% interest rate is charged and there is no ceiling on the amount of monthly payment.

The land on which the unit is constructed is leased from NHDA for a nominal Rs 12/per year (ground fee) for a 33 year period, with the option to renew available to the beneficiary.

To qualify for an ASH program, a family cannot already own a house, must be of the appropriate income/age category and must show proof of receiving a regular form of income. NHDA reviews each application using these criteria.

- ASH Implementation - The ASH Program has been decentralized in the past year, meaning that the NHDA's central office will not be involved in the planning and implementation of individual ASH projects. The NHDA central office functions have therefore been limited to the following program-wide functions:

  - Policy, finance and budget, overall planning, progress control, overall technical supervision, overall design, payments to B.M.C., training at central level, staff and appointments, research, publicity formulation of systems, all aspects of foreign aid and overall supervision.

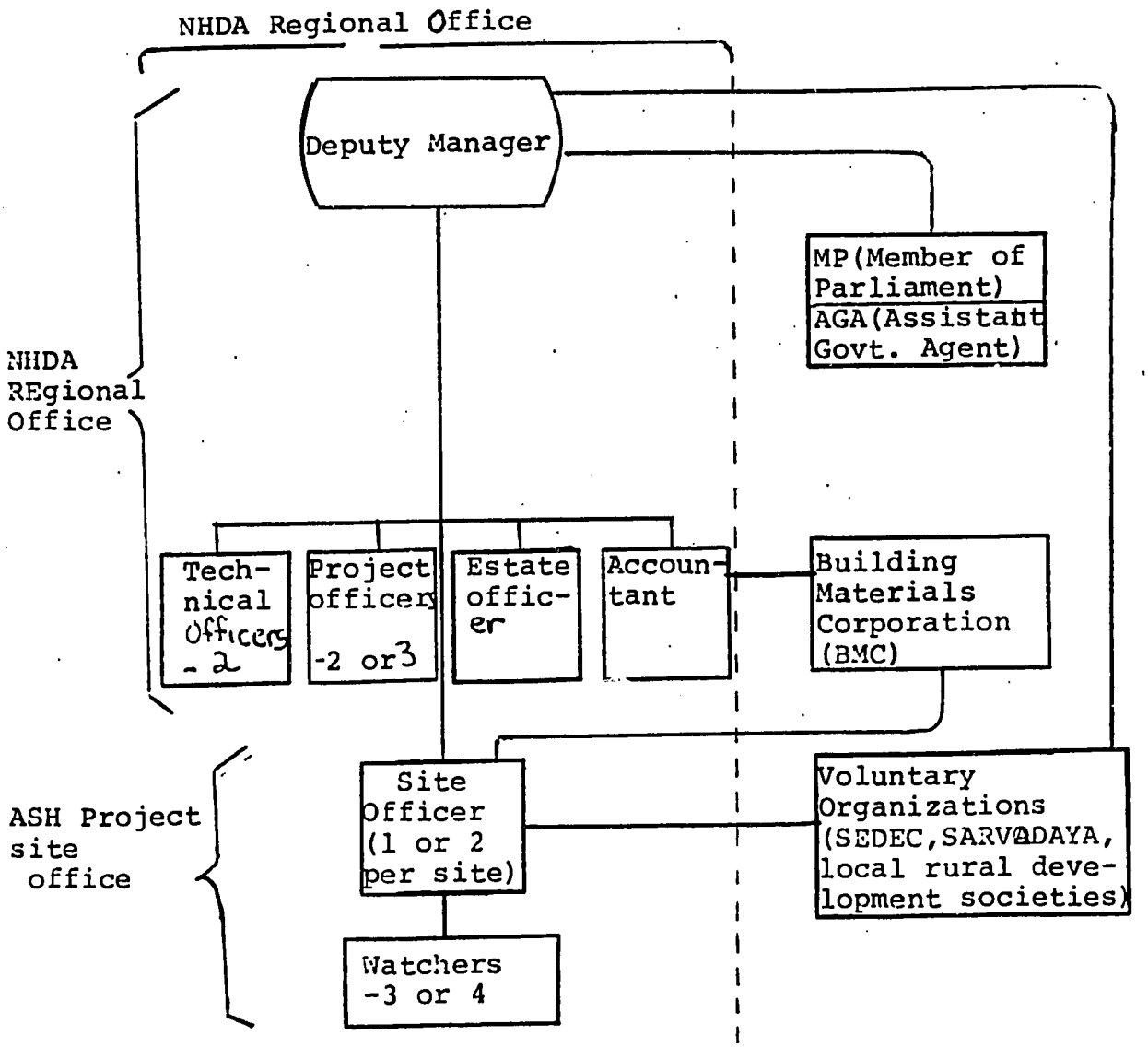
  - Regarding individual ASH schemes, the Central Office only participates in land acquisition, takes over land from State agencies, orders and supplies the plaque, pays staff and pays for material supply.

The ASH program is implemented by the 24 regional NHDA offices. The NHDA regional office, in collaboration with several non-

NHDA parties, is organized as shown in Figure IV-2 as far as administration of ASH projects is concerned:

Figure IV-2

Regional Organization of the ASH Program



The following is a summary of the responsibilities of the regional NHDA officers who are involved in ASH projects:

- Deputy Manager: Responsible for overall ASH project administration including final decisions regarding ASH project plan, schedule, building materials to be ordered and beneficiaries. In collaboration with the MP and AGA, defines the preliminary ASH project, housing unit design selection, infrastructure, site, beneficiaries, model villages (MV) facilities, if any. He then focuses on project implementation within his office and interfacing with other government agencies through the regional AGA regarding non-ASH funded facilities to be incorporated into the ASH scheme. He also orchestrates the involvement of voluntary organizations in the construction of housing units, when beneficiaries cannot adequately provide labor input requirements.

- Technical Officers supervise the site officers, keeping the Deputy Manager up-to-date on project status and problems, if any. They also make weekly inspections of the ASH site and, during these site visits, are responsible for resolving all technical problems of the site officers.

- Project Officers serve as the Deputy Manager's administrative assistants. They concentrate on construction logistics and scheduling, attending building society meetings, attending to land and building problems of an administrative or management nature and integrating voluntary organizations/MV inputs into the ASH project. They also conduct site visits with the Deputy Manager once every two weeks.

- Accountant is responsible for all financial matters: budget, loan servicing, bank account operations, budget preparation and project cost control monitoring, building materials inventory, financial reporting.

- Estate Officer: once the housing units have been completed, is responsible for getting the tenancy agreements signed (see Annex for prototype, tenancy agreement), giving several informal seminars regarding proper maintenance of the housing units as well as the community areas, and making monthly visits to the ASH site to make loan collections, sub-

sequently transferring these collections to the Accountant for deposit/recording.

- Site Officers are in charge of the ASH project site office, are the technical advisors to the beneficiaries constructing the housing units or whomever is constructing the housing units, whether it be voluntary organizations or individuals contracting out by the beneficieries. They make sure that each housing unit's design and construction work is being performed to specification, including proper amount, composition, mixture, and application of building materials. They also notify the Deputy Manager of all upcoming building material needs, based on the construction progress of the beneficiaries. They also direct their staff or watchers to monitor and distribute the appropriate increments of building materials. Also within their responsibility is maintenance of the construction progress of all housing units at approximately the same level. This responsibility involves constant"motivation" meetings with the building society and individual beneficiaries to the point of providing food or money to individuals for work that they will miss because of their ASH construction obligation in order to stay close to the set construction schedule. They also interface/coordinate with designated government agencies responsible for non-ASH funded construction work (i.e., MV) on site.

- Watchers receive building materials from the BMC and guard the building materials inventory, distributing them to the beneficiaries on instructions from the Site Officer. Watchers allocate building materials incrementally pending completion and approval of work completed for the preceding construction phase.

· ASH Housing Design and Construction Process - Every specific workstep involved in an ASH scheme is chronologically identified below:

Phase I - Pre-Construction

1. Identifying land (request/proposal).
2. M.P.'s approval.
3. Investigating feasibility.
4. Approval/rejection of scheme.
5. Fixing tentative target dates for starting and completion.
6. Informing M.P. of approval/rejection.
7. Take over/acquisition of land.
8. Survey.
9. Advance notice to B.M.C.
10. Preparing Layout Plan.
11. Selection of house-builders.
12. Deciding on Type Plan.
13. Handing material list to B.M.C.
14. Paying advance to B.M.C.
15. Distributing application forms to selectees.
16. Appointing S. Overseer.
17. Appointing watchers.
18. S.O.'s specimen signature to B.M.C.
19. Receive affidavit/application form.
20. Collect Deposit.
21. Forming housing society and motivating builders.
22. Fixing firm targets for starting/completing.
23. Progress reporting to Head Office.
24. Making temporary store.
25. Pegging-out lots.
26. Handing over lots to Builders.

Phase II - Construction Phase.

27. Starting work on community wells/internal roads.
28. Starting work on houses.
29. Controlling material supply and continuous dialogue with B.M.C.
30. Support of District Minister/M.P.
31. Support of G.A./A.G.A.
32. Dialogue with house-builders.
33. Motivating the stragglers.
34. Filling vacancies, if any.
35. Solving on-site problems.
36. Regular field inspections.
37. Progress reporting - from site to D.M.
38. Progress reporting - from site to D.M.to H. Office.
39. Feedback from H. Office.

40. Fixing date for opening (when 95% of work is over).
41. Interim Payments to B.M.C.
42. Plaque wording to H. Office.
43. Completing all work (e.g. latrines).
44. Handing over houses.
45. Signing agreements.
46. Ordering plaque.
47. Despatching plaque to D.M.
48. Organizing opening ceremony.
49. Landscaping, site clearing, erecting plaque.
50. Opening ceremony.

Phase III - Post-Construction.

51. Fixing boundary stones.
52. Closing books regarding stores.
53. Auctioning empties.
54. Collection of first rents.
55. Completing householders' ledger.
56. Final payments to B.M.C.
57. Payment of compensation.
58. Closing of site report to H. Office.

A more analytical form of the main steps is presented on the following page.

MP presents to NHDA Deputy Manager an ASH project proposal: beneficiaries, land (AGA involved if land acquisition involved), MV community facilities, if any.

↓

Beneficiary list screened and finalized. Beneficiaries sign affidavid stating that the qualifying data provided is correct. Otherwise, beneficiaries play no role in housing unit design of plan.

|

NHDA regional office, in collaboration with MP, determines prototype house plan to be employed based on climate, cost, site conditions, preceived tastes of beneficiaries, prototype plans developed to accommodate varying climatic, ethnic and environmental conditions. Units of project funded by ASH must be physically identical. Beneficiaries, with own resources, permitted to make modifications upon completion of construction of ASH project.

↓

Site officers allot land parcels to beneficiaries. Land parcel allotment done on a lottery basis. Site officers then stake out each housing unit parcel.

|

Work begins with first BMC delivery of materials and subsequent allotment of materials to beneficiaries. BMC, with Deputy Manager's direction, makes deliveries to the ASH project site incrementally throughout the construction period of the project.

↓

Beneficiaries provided building materials/construction advice by Site Officer. Site Officer regularly conducts "motivation" meetings with beneficiaries through the building society - resolution of problems, with emphasis on staying on schedule.

|

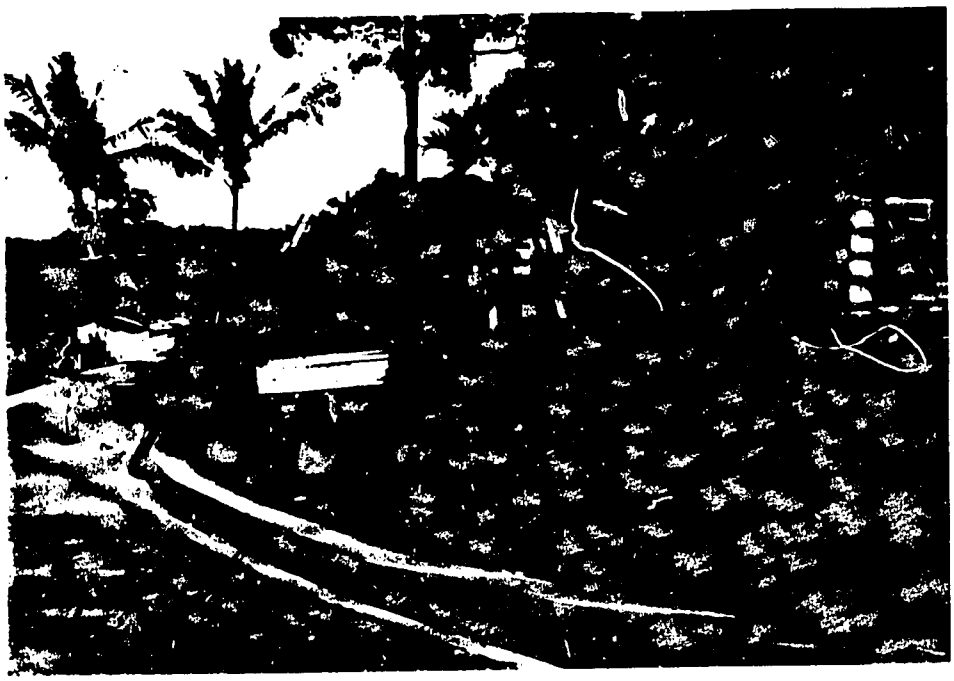
Volunteer organizations, under direction of Deputy Manager/Site Officer, used to assist beneficiaries having the greatest difficulty in providing labor inputs on schedule. In most difficult cases, food or money provided by Site Officer as incentive for completing constructions work on schedule.

↓

Upon termination of most of units and MV community facilities (if any), ASH project office on site closed. Tenancy agreements signed and beneficiaries officially move into houses (although they frequently set-up on-site squatter type quarters while construction work in progress). Frequently MP inaugurates ASH project site.

|

Building Society becomes defunct with Building Society office bearers frequently assuming directorships of ASH community facilities and development organization or, if no such organization formed, principal Building Society office bearers incorporated into ASH village council and community development organization in village in which ASH project located or in adjacent village. Such organizations are responsible for maintenance of community areas and infrastructure (wells, roads, lights) and cultural/social activity planning-management.



These dwelling units are being constructed under the NHDA Aided Self-Help program. They are located in the Kollonawa shanty in the Colombo area, and will replace the provisional shelters which the squatters have built (visible in the backgrou

- Operational Problems - Only two problems have regularly prevailed:

Beneficiary motivation in construction: The beneficiaries tend to fall behind schedule in their construction responsibilities, despite continuous prodding, monitoring and occasional provision of food/financial incentives by the ASH Site Officers. The beneficiaries initially overestimate the time that they will have available to build their ASH houses. Employment and other commitments usually cut into the time initially agreed upon for housing construction. Consequently, the Site Officers, in collaboration with the building society leadership, spend considerable time in "motivating" those allottees most behind schedule to bring their building work current.

Building Material un-availability: As a result of extensive public works and construction activity in progress throughout Sri Lanka, the BMC has not been able to assure a regular supply of the local building materials used in ASH construction in all subprojects. Demand for these local supplier-produced materials (much less costly than imported materials) frequently exceeds supply, resulting in the BMC not being able to acquire required ASH materials in sufficient quantities on schedule. This problem has been most common with timber, titles and window and door frames.

These constraints have resulted in longer than expected ASH project implementation and some cost overruns on some projects. ASH projects estimated to take 6 to 9 months can take 12 to 18 months with associated cost overruns.

° NHDA's Outlook on ASH - The ASH program has been considered primarily a rural program since its inception in 1974.

First of all, the GSL (Land Reforms Commission) ownership of land is more limited in Colombo and other urban areas, and there is more competition for it. Acquiring land for government use, while relatively simple, still has its problems. Secondly, there are still widely held views that single unit use of land in Colombo is wasteful, given the high demand for land in Colombo, and since multi-story structures are not technically feasible for an ASH scheme the program cannot be used in urban areas.

Despite counter arguments that well-planned ASH schemes can achieve sufficient densities, there are currently no existing or planned ASH projects located within the Colombo municipal limits, although some ASH projects are located within the Colombo metropolitan area. NHDA is, however, interested in developing a greater percent of its ASH projects in all urban areas except within the Colombo city limits, areas in whch multi-story structures are, as yet, not required.

The preferred strategy for Colombo is to develop ASH projects on a minor, low-keyed scale, directed exclusively toward the existing low income population in Colombo in such a way as to not encourage immigration.

(c) The Model Villages Program

As described above, housing is one of several aspects of the Model Villages Program, also known as Village Reawakening, a broad scale social and economic upgrading program for rural villages while retaining traditional values. The cost of the housing component is not specifically identified under the Government's housing budget in the 1980-84 plan but is included under Aided Self-Help. Villages

chosen for the program are given upgraded electrical, sewage, water and health services. Community centers are constructed and small entrepreneurial activities designed to generate employment, are encouraged to start. Those non-housing activities are grant-funded, constructed and administered by the appropriate government agency, e.g. a school is the responsibility of the Ministry of Education, a health clinic the responsibility of the Ministry of Health, etc. In conjunction with these activities NHDA establishes an Aided Self-Help housing project to provide new houses in the village.

As of August, 1980, sixty-two villages with a total of 3,700 houses had been completed under this two-year-old program. Sixty villages containing another 3,000 homes were under construction. Current plans call for 100 villages to be completed each year during the next three years. Estimates are that as many as 30,000 housing units may be needed in these villages.

Ultimately, this program is scheduled to have its own budget allocation, but, today, housing costs for the Model Village Program are covered by the overall Aided Self-Help budget allocation. Therefore, most tabulations of housing units by program include the Model Village within the ASH program (for consistency, the ASH section in this report includes the Model Village Program figures on completions and work in progress).

Villages which are to be rebuilt under the Model Village Program are selected by the local Member of Parliament who submits his recommendation through the MLGHC to NHDA. Upon receiving the recommendation, the NHDA notifies its District Officer. The District Officer meets with the District Government Agent and the District Government Coordinating committee to begin the process. This group serves as a coordinating body for the non-housing services supplied by the various ministries and departments with an interest in the village upgrading.

The beneficiary families under this program receive standard aided self-help house designs. They are assigned a site supervisor by NHDA whose responsibilities are identical to those

he performs for the regular ASH program. When construction is complete, families are expected to begin repaying building material costs over thirty years. Land is also leased rather than sold for the Model Village Program.

The Model Village Program, although similar to the regular ASH program in many respects, does not require even the same scrutiny of the applicant's income obtained under ASH. When a village is chosen for the program all families are eligible for a new home. Beneficiaries receive houses because of their membership in a community rather than individual need. It is true that there are few residents of rural villages who do not have need for improved housing, and where a subsidy would be useful. However, as this program expands the large number of houses constructed will certainly result in some inequities.

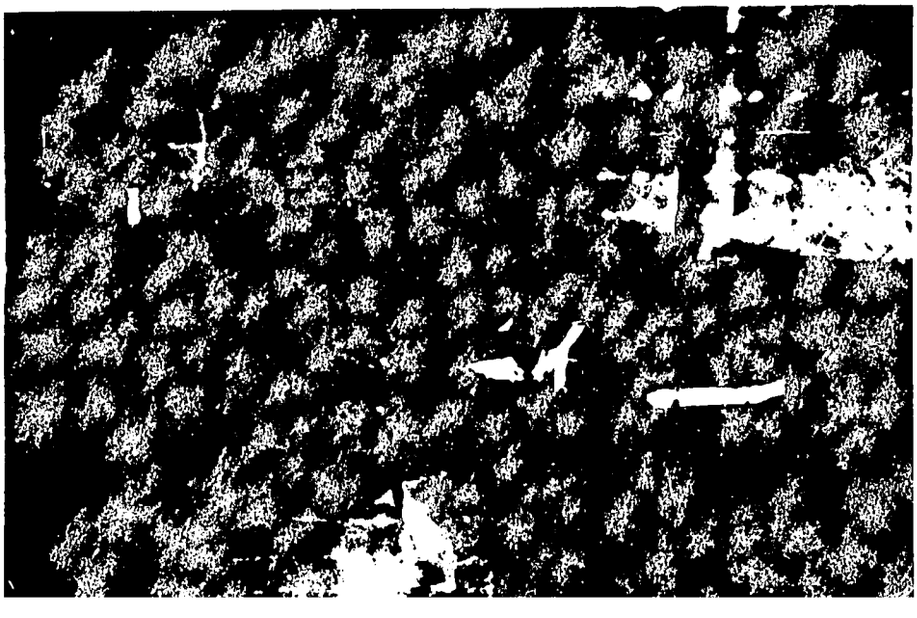
A more selective approach to upgrading an existing village would leave some of the better quality houses standing. They would be available for families who did not qualify for a new Model Village house but who have a need for improved housing.

In a short field trip the team visited one Model Village project and passed several others. The quality of housing was very high and suggested contractor-built housing. Furthermore, in at least one case, the occupants had been in their home for over six months and no one had been around to make arrangements for collecting payments, although the family clearly understood that they would be expected to pay. In fact, they had borrowed money from a bank to have electricity installed and were repaying that loan at monthly payments of Rs 25 on a regular basis. While there is no way of saying how prevalent this type of situation is, it points up the need for much better administration.

(d) Fishermen's Housing Program

This is a joint effort of the Ministry of Local Government, Housing and Construction with the Ministry of Fisheries. Existing dilapidated housing not susceptible to upgrading is replaced with new housing, but additional

This dwelling is located in the Model Village of Weeragama. The main dwelling and the latrine on the right are provided by the Model Village program; the family has constructed the kitchen (center) to accomodate the practice of cooking over an open fire. Fuel is palm frond bases.



community services are not provided.

The villages which participate are selected by the Ministry of Fisheries working with Members of Parliament. The National Housing Development Authority supplies the land and financing. The Fisheries Harbor Corporation, a government-owned company under the Ministry, subcontracts the actual construction and supervises the subcontractor. This is a direct construction type of program which, like the Model Village Program, is not a separate budgetary program. It has been funded through the Aided Self-Help Program, even though it has been direct construction. As of 1981, the program is to become part of the Aided Self-Help Program.

As of September 1980, 64 units had been completed under this program and work had started on an additional 960 units. Ultimately, 2000 units are to be built. The cost of these units, in spite of the use of direct construction techniques, has been held down to the level of the ASH units. Generally, construction has been contracted by the Fisheries Harbor Corporation for a fixed price of Rs 20,000. All evidence indicates that the FHC has been able to profit on these contracts and provide the agreed upon housing.

The houses constructed under this program are small - approximately 20' x 10'. Each unit has two rooms and latrine facilities. Water is usually taken from a communal well. Lot sizes are much smaller than those provided under the ASH Program.

This program has provision for recapturing some costs through charges to the recipients, but a large subsidy is usually provided by the Government. The land is not transferred to the beneficiary; it is leased by the NHDA for a nominal sum.

(e) <u>The Electoral Housing Program</u>

Through the Electoral program the Government plans to construct over 26,000 houses. The Electoral Housing Program is concerned with erecting a given number of houses annually in

the parliamentary district of each of 171 members of Parliament. The number of houses to be built each year follows a predetermined schedule:

1978	5 houses per electoral district
1979	10 houses per electoral district
1980	20 houses per electoral district
1981	30 houses per electoral district
1982	40 houses per electoral district
1983	50 houses per electoral district

The houses are to be completed for dedication on the 21st of July each year (the anniversary of the coming to power of the present administration).

Through the 1980 allotment, 5,880 houses had been completed under this program using direct construction. Although final costs were not available, the units had been projected at an average cost of 44,000 over the three year period exclusive of land. Beginning with the units to be completed in 1981, however, the Government has stated that houses will be built by the beneficiaries under the Aided Self-Help guidelines.

The houses will follow the basic Aided Self-Help design with between 3-400 sq. ft. of floor space, pit latrine, and hand-dug wells in the rural areas (about 80% of the homes). The design for the urban units under this program has not been finalized; in the past, multi-story housing has been built so some action must be taken soon to meet the July 21 deadline.

The Electoral Program to date has been an expensive and inefficient approach to relieving the housing shortage. The expenses have been due primarily to the direct construction contracting and building techniques which have often resulted in the cost of labor or materials being inflated by excessive profits. The recent decision by the MLGHC to discontinue direct construction and begin aided self-help should reduce costs next year.

These dwellings are the houses currently in use in the fishing village of Mankuliya in Negombo. They are now being replaced by some new houses being built jointly by the Ministry of Local Government, Housing and Construction, and the Ministry of Fisheries.

Skilled laborer working on the new houses being built in Mankuliya fishing village. These houses are to replace the ones pictured earlier.

The inefficiencies in the Electoral Housing Program result, first, from the arbitrary method of allocating homes by electoral district rather than according to a hierarchy of need. Secondly, within the electoral district the location of the homes and beneficiaries are at the discretion of the local M.P. It is not that this method has delivered homes to families who do not have a need, but this technique may eventually generate serious inequities nationally. Inadequate housing in not equally distributed among electoral districts; therefore, as the program progresses some districts will make great strides in solving their worst housing problems while others which receive the same number of units will continue to fall behind as the number of deteriorating units grows faster than their allocation.

(f) The Home Loan Program

The home loan program was begun in 1954 to provide loans to middle and working class families who owned land for home construction. Along with Aided Self-Help and Direct Construction it is one of the three major components of the Government's housing program. It has been administered since 1954 by the National Housing Department through the National Housing Fund (NHF). It is planned that the program will be transferred to the National Housing Development Authority for administration in January 1981.

The NHF was a major factor in the nation's housing industry between 1959 and 1970. During the last ten years, however, the National Housing Fund has suffered from unsound lending policies and inadequate collection efforts. The resulting high rate of loan defaults and administrative problems has seriously weakened the effectiveness of the program.

Through the National Housing Fund four types of loans are provided:

- New construction loans to borrowers for new residential unit construction work arranged by the borrower - mostly urban to date since not many rural loan applications have been filed).

- Land purchase loans.
- House purchase loans.
- Repairs and extension loans.

The NHF is fiscally different from the other housing program components. The other program components receive annual capital allocations from the Treasury. When down payments, loan repayments or rents are collected under the Direct Construction and Aided Self-Help Programs, the revenue is not returned to the Treasury but is used as capital for additional programs. In theory and overtime this should reduce the program components' reliance on Treasury grants, and eventually become financially self-sufficient.

The NHF, on the other hand, while receiving some grant money, borrows most of its funds from Treasury (as of 1979: 8% interest for 20 yrs. The NHF was initially planned to be a "revolving Fund" where additional capital would be generated by: 1) the spread between the interest rate to the borrower from the Fund and the interest rate to the Fund from Treasury and 2) occasional grants from Treasury.

In order to pay back principal and 8% interest over 20 years, the NHF established fixed 20 year loan schedules to borrowers. In the case of home loans, in 1978 and 1979 for instance (maximum loan: Rs 50,000), Rs 21,000 - 50,000 loans were 9%, Rs 10,000 - 20,000 loans were 7% and under Rs 10,000 loans were 6%. The 6% loans were directed to "low income" families whose housing loan needs were not expected to exceed 10,000 rupees.

In order that the Fund initiate "a revolving fund", most of the money borrowed from the Treasury was to be loaned out at the 9% level. This scheme would enable the Fund to collect more than it was obligated to return, thereby generating a capital base for the "revolving fund". As evident in Table IV-8, this plan never was implemented. Instead, the reverse trend occurred - the bulk of the money borrowed from Treasury @ 8% was loaned out at 6%, thereby decapitalizing the Fund (providing no capital for any sort of revolving fund).

TABLE IV-8

NATIONAL HOUSING FUND LOANS
1978 - 1980

Year	Interest	No. of Loans	Value (Rs.)
1978	6%	8231	34,544,550
	7%	617	8,695,800
	9%	1136	29,723,800
	TOTAL	9984	72,964,150
1979	6%	15,191	73,438,800
	7%	704	10,349,200
	8%	1979	56,490,100
	TOTAL	17,874	140,278,100
1980	6%	2352	17,381,800
	7%	67	974,500
	9%	282	8,779,500
	TOTAL	2,701	27,135,800

With the National Housing Department falling far behind on scheduled collections (discussed in more detail previously), not receiving a significant amount of Treasury Grants and the negative interest spread not generating the capital for a "revolving fund", the "revolving fund" never became operational - i.e., actual collections couldn't even cover the Fund's debt obligations to Treasury.

The Housing Fund new loan activity is at present in a state of unofficial suspension. It did not receive from Treasury any of the Rs 100 million which were applied for to cover 1980. By March, 1980, the Rs 140 million 1979 money which it had received was fully committed. The collections being made on the outstanding portfolio are not being reinvested, but used to pay back the Treasury debt obligations which are far behind schedule. The reason given for no 1980 budget is "financial constraints" at Treasury, which are likely to continue into at least 1981. This is why the proposed reorganization of the Fund's administration might be academic at least for the next year.

For an accounting of the geographic distribution of Housing Fund loans made in 1978 and 1980, see Table IV-9.

(g) Slum and Shanty Upgrading Program

The Slum and Shanty Upgrading Program begun in 1978 is managed by the Slum and Shanty Unit of the Urban Development Authority.

As the terms are used in Sri Lanka, slums and shanties are two different types of housing. Slums are generally single family row houses (or large converted residences) constructed of permanent materials which are legally occupied by the tenants. Shanties, on the other hand, are temporary structures occupied by squatters.

There are estimated to be approximately 250,000 people living in slum and shanty units in the Colombo municipality. Outside the municipality but in the Colombo Metropolitan Area there are estimated to be another 100,000 people, with yet another 250,000 in the rest

TABLE IV-9

DISTRIBUTION OF NATIONAL HOUSING FUND LOANS: 1978, 1980

YEAR	Regional Office	Units	Rupees (Millions)
1978	Colombo	3984	29.3
	Kandy	995	8.9
	Kalutara	730	4.4
	Galle	1516	7.9
	Jaffna	1429	15.3
	Anuradhapura	1128	5.7
	Kalmunai	294	1.3
		9986	72.8
1980	Colombo	358	3.9
	Kandy	157	2.1
	Kalutara	208	1.7
	Galle	478	3.8
	Jaffna	150	2.4
	Anuradhapura	133	2.2
	Batticaloa	109	6.6
	Kalmunai	92	7.5
	Gampaha	937	8.6
	Kurunegala	83	8.2
		2705	47.0

of the urban areas of the island. Most of the projects in the Slum and Shanty Program are limited to improving the sites and services of these communities. Usually upgrading involves the following:

1. Supplying potable water using communal taps;

2. Providing either individual or communal toilet and sewage facilities;

3. Grading streets, paving common areas, and improving drainage;

4. Lighting public areas; and,

5. In shanty areas, granting security of tenure whenever possible.

Two pilot projects will test methods to include improvement of housing units as part of the upgrading effort. Now, in slum and shanty projects, improvement of structures is generally entirely in the hands of the occupant.

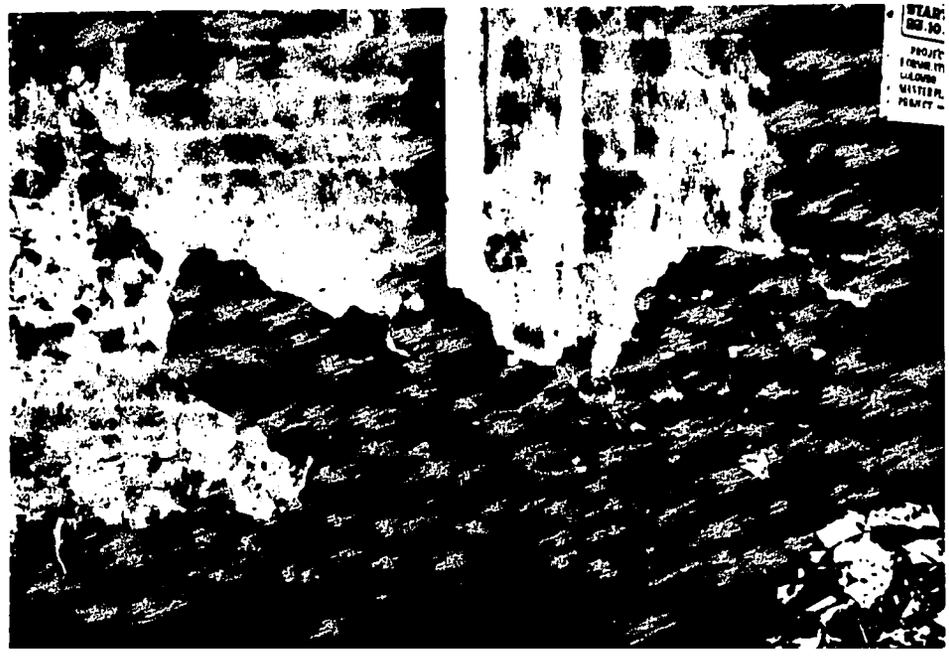
A detailed listing of proposed standards for upgrading is contained in Annex IX.

The following organizations play important roles in relation to the activities of the Slum and Shanty Program:

Common Amenities Board: The Common Amenities Board, within the MLGHC, provides common amenities in the slum tenement gardens and looks after the maintenance of public housing. It undertakes the provision of toilets, watertaps, and paving as part of a program operated in conjunction with UNICEF.

Colombo Municipal Council: This local Authority (for the municipality of Colombo) contributes to the program though the functions of its Public Health Department. The Department, jointly with the UNICEF, is establishing Community Development Councils in slum tenement areas and provides public health education. For this purpose UNICEF is assisting the C.M.C. to recruit health wardens who attend to preventive health care needs. With the UNICEF funds the

Toilet blocks such as the one being repaired above are upgraded in slum areas under the UDA Slum and Shanty upgrading program. Locally-available laterite soil makes very good bricks (seen in wall below) which do not require firing and can make good, permanent construction at low cost.



Public Health Department is converting all the bucket latrines in the city.

In addition, UNICEF and several international voluntary agencies and aid donors are assisting in pilot projects which are described in somewhat more detail in subsequent sections.

The Slum and Shanty Program is widely acknowledged as a necessary program to avoid a long-term housing crisis in urban areas. In spite of the importance of the work being done, the program is progressing slowly.

Per unit costs vary significantly among projects. For instance, one pilot slum upgrading project in Colombo which does include extensive home improvement is expected to average Rs 11,000 per unit (this project is almost complete). On the other hand, the projected per unit cost for another project is roughly Rs 23,000. This particular project includes site development, infrastructure and amenities, house improvements and some core housing. These are, however, pilot projects looking to provide experience. The Slum and Shanty Upgrading Unit is now using Rs 10,000 per unit for its 1981 program projections.

There are many factors which can affect the cost and time required to complete an upgrading project. The Slum and Shanty Program appears to suffer most from the lack of clear assignment of responsibility for implementation of the projects. Although the Slum and Shanty Unit in UDA has responsibility for the planning and identification of areas to be upgraded, the supervision of contractors which perform the work in a number of projects is delegated to the Common Amenities Board. Three different volunteer organizations, Save the Children - U. S. A., Redd Barna (Save the Children - Norway) and UNICEF, are funding and managing separate pilot upgrading projects which are described below. The result of this approach has been that schedules and costs are often secondary to the goals of the implementing organizations, which has caused the total program to lack unity. The people and organizations involved in this program are dedicated and enthusiastic; however, without proper controls and supervision, the large-scale projects planned will

not be completed within the time schedule or budget. Annex X provides a detailed chart of processing steps.

As of September 1980, sixteen projects were in different stages of planning and execution. These projects are scheduled for completion over the next three years. A summary of the program is shown below

TABLE IV - 10

Type	Projects	Units	Families	Est. Cost
Slum	10	1,764	2,381	Rs 7,787,000
Shanty	6	2,328	2,979	Rs 27,807,000
TOTALS:	16	4,092	5,360	Rs 35,594,000

The Projections of new activities through 1984 are as follows:

	1981	1982	1983	1984
Units	5,000	7,500	12,500	20,000
Families	6,500	9,750	16,250	26,000
Cost/Unit	10,000 Rs	12,000 Rs	14,400 Rs	17,280 Rs
Investment	50 M Rs	90 M Rs	180 M Rs	345.6 M Rs

Assumptions:

Costs per unit increase 20% each year.

Average of 1.3 families per unit.

This represents a total of 45,000 units upgraded over 4 years or 45% of the estimated 100,000 slum and shanty units in Sri Lanka.

(h) The Mahaweli Housing Program

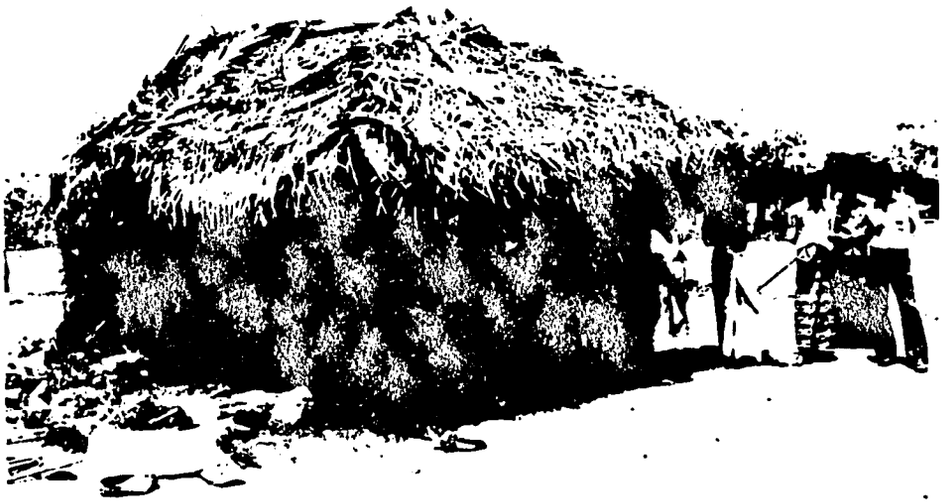
The Mahaweli Development Project involves a capital investment of more than Rs 20 billion over a period of five years including construction of dams and reservoirs and the development of 350,000 acres of irrigated land. The project however, is more than a massive hydro/irrigation

scheme; the plans also call for the resettling of over 140,000 families within the area. Housing the settlers in the Mahaweli area is the responsibility of the Mahaweli Development Authority (MDA) and not any of the organizations under the MLGHC.

The MDA must establish community centers and towns, as well as housing plots because the areas to be settled are now virtually deserted. The settlements are being organized according to a loosely defined hierarchy by size. The basic unit is the farmer and his family. The families are further organized into "turnout groups" which are people who share a common irrigation turnout from the main irrigation channel. Groups of 70-100 families form a hamlet, and two hamlets make up a management unit. The management unit is the equivalent of a village in which will be located an elementary school, a few shops, and a room for a visiting nurse. Seven or eight management units will be organized as a block which will have a post office and secondary school. Finally, for every five or six blocks, a township will be established with banks, bus stop, police department and a whole assortment of other services.

First priority for participation in the settlements will be given to families displaced by the project itself. The remaining land will be allocated to volunteers. Each settler will receive 2 1/2 acres of land for farming and 1/2 to 1 acre for his home. The housing assistance is limited to only the basic necessities, Each family will receive a small cash grant (approximately $100) for supplies necessary to construct his home and food for the first nine months in the new location. A tank wagon or community well will provide water until each family can dig a well. The family is expected to buy or build for themselves anything beyond these basics.

To date, this approach to housing the settlers has worked rather well. In the future, though, as the larger areas are opened up for settlement, the number of families involved may necessitate additional support for construction training, and community organization



These owner-built houses are located in the Mahaweli Irrigation Scheme area. They are constructed entirely from locally-obtained materials by the families that inhabit them, and are increased in size and level of finish over time.

will probably be required to ensure that the settlers are not overwhelmed by the day-to-day problems of establishing a new home.

(i) Colombo Municipal Council Housing Activities

The CMC's current activities that are most directly involved with housing are limited to the following areas:

1. Two low income multi-story housing schemes:

   Abeyrama (16 units of a 64 unit plan are completed) and Barber Street (16 units of a 32 unit plan are completed). These schemes are intended to rehouse families occupying shanties whose incomes are estimated to be 5000-6000 Rs /year. The rent on these units is a nominal 40-60 Rs /month an indicator of heavy subsidization. The funding source for the projects was a Central Government Decentralized Budget grant sponsored by an MP (Member of Parliament).

2. In the Slum and Shanty Upgrading Program in Colombo (operated by UDA), the CMC is responsible for certain technical assistance aspects of the public health improvement component of this program, i.e., working with the community development councils to identify public health problems and design feasible solutions; instruct beneficiaries properly to maintain public health facilities provided them through this program.

3. Connection, where applicable, of NHDA/UDA housing schemes to the Colombo waste disposal and water systems.

(c) Foreign Government Assistance

Only a very small amount of the foreign aid either committed or disbursed to Sri Lanka has been earmarked for housing. Active programs in the urban development and housing sector amount to commitments of less than $5.5 million for a wide variety of programs covering the time period 1978-1983. As of August 1980, there were six on-going programs sponsored or supported in part by grants from foreign governments.

United Kingdom: The Aided Self-Help Program has been granted £ 410,000 (approximately US$ 1 million) for building materials. This program, begun in 1979, also includes the services of a three man technical assistance team assigned to the NHDA for two years on technical/ design matters.

Netherlands: A grant of 1 million guilders (approximately US$ 500,000) was made in 1979 to support the Slum and Shanty Upgrading Program in Colombo. The objective is to develop four pilot projects to explore possible techniques for use in future slum and shanty improvement efforts. As of October, 1980, a review mission from Holland has made an evaluation of progress. Recommendations have been made to (a) overcome delays in implementation, (b) avoid lack of coordination, (c) avoid inconsistent policies, (d) set up a repayment mechanism for the project improvements, and (e) organize and equip the slum and shanty division to undertake the program more efficiently. Further commitment by the Dutch Government will be considered after a review of progress in January, 1981.

Netherlands: A 1 million guilder grant was provided in 1980 for design and technical assistance to the Plantation sector housing improvement program.

Netherlands: The Centre for Housing Planning and Building, a construction management training institution within the MLGHC, received a grant of 1.44 million guilders in 1978. The funds were to supply equipment and technical assistance through 1980.

United Nations Development Program: A three year of technical assistance primarily in urban planning and directed at the Urban Development Authority was funded in 1979 for US$ 1.8 million. This continued earlier assistance for development of the Colombo Master Plan. Technical assistance under this program is provided by eight expert personnel supplemented by consultants and training abroad. Current indications are that this program will be extended until the end of 1983.

UNICEF: In 1975 a grant of US$ 900,000 was awarded for improving physical and social conditions in slum and shanty communities. In addition to upgrading water and sewage facilities, UNICEF has hired 100 workers to focus on health care and community development. UNICEF is working through the Common Amenities Board and the Colombo Municipal Council to develop 250 Community Development Councils in the slum and shanty areas.

2. Private Housing Activities

(a) Private Sector: In 1978 when the GSL intiatiated its program to produce 100,000 housing units it assumed that during the same five year period the private sector would be able to build 400,000 units. It is evident that this forecast was extremely optimistic. While there are no precise figures on the increase in the housing stock during the last two years, a report on the housing loans issued by the eight largest lenders in Sri Lanka disclosed that only 26,865 new home loans were granted in 1978 and 1979. Even if a generous allowance is made for apartment units and privately financed homes the results fall far short of the expectations.

To create a private housing industry capable of producing 75-100,000 housing units per year will require not only incentives and new sources of financing, but also extensive changes to government organizations, procedures and attitudes. These changes can not be made quickly or easily. Even if the changes do take place, the private sector's perception of the housing situation, which is based on past experience, must be overcome before significant progress can be made.

As of now, however, the formal private sector's involvement in housing production is small, poorly capitalized, and not well organized. The private builders that do exist concentrate their efforts on building individual homes under contracts for middle and upper income buyers. The nongovernmental low income housing effort is left to volunteer organizations and the efforts of poor families themselves which most often take the form of shanty areas.

The growth of a private housing development industry has been inhibited by several factors. First, the lack of financing for either construction or mortgage loans has made it difficult for a developer to build even one house at a time except under contract to a borrower who has been prequalified by a lender

for a loan. Secondly, the complications and risks inherent with assembling a parcel of land under the land laws of Sri Lanka have discouraged builders of single family homes. Restrictive Government policies in the past have also convinced builders that other forms of construction are more rewarding.

Several specific government actions have inhibited the private housing sectors. One of the most devasating of these has been the Rent Control Act passed in 1973. This act imposed severe limitations on the powers of landlords and provided tenants with broad protection from rent increase and eviction. The act froze all rentals at the levels which prevailed in 1968 while making eviction virtually impossible except when:

- the tenant is over three months behind in rent payments;
- the property is sublet;
- the landlord requires the property for business use or as his sole residence.

As a final safeguard for the tenant and his family, tenancy rights can be inherited by another family member if the head of the household dies.

In conjunction with rent control, an act was passed which limited the number of housing units that could be owned by a family. This legislation restricted each family to no more than two houses for the head of the family and one house for each of the children under eighteen years old. Houses in excess of this ceiling were taken over by the Government (11,200 housing units were acquired through this act).

During the last eight years these two acts have caused hardships for both tenants and landlords and in the process have shifted the demand for housing and housing finance. Very low rents have made it impossible for landlords to maintain their property or to earn a decent return on their investment. Therefore, the existing housing stock has deteriorated while new rental housing has not been built.

Rent control has reduced the availability of rental housing, but it has also reduced the demand for new houses. In many cases, rents are so low that regardless of maintenance problems people will not consider buying a home of their own. The cost differential is too great.

In the process of preparing this report, the Team interviewed one of the few individuals who has attempted a private housing development project during the past decade. His experiences illustrate many of the problems faced by private builders. This businessman decided to

develop lots on a tract of land outside Colombo in the mid 1970s for sale to individuals who wanted to build their own homes. The acquisition of clear title, zoning changes and other regulatory clearances necessary to begin the project consumed more than four years. He was finally granted permission to proceed as an experiment, not a precedent for future projects. Roads, sewage, and water were provided by the developer, in addition to landscaping and other amenities. When the lots were advertised for sale the response was very good, but sales were very slow because potential buyers could not obtain financing. During the next year, he was informed that the Government would not assume responsibility for the maintenance of the roads, water, or sewage in the development. What was worse was that maintenance would be regarded as a perpetual responsibility of the developer even after the lots were sold. At this point, he sold the property to another businessman and, in definace of the Government, turned responsibility for the public services over the the homeowners. After six years, he realized a net loss of Rs 4 million on the project. This businessman is today involved in building luxury apartments; he says that he would return to developing housing if there were a reliable source of construction and mortgage financing and if he had assurances that Government regulations would not hinder builders.

(b) Private Voluntary Organizations: As mentioned above, the only private institutions involved in low income housing programs are Sri Lankan and foreign private voluntary organizations (PVO's). The nature of these organizations tends to result in small programs with an emphasis on community development and social change; even so, the major PVO's in Sri Lanka have created innovative programs in housing production. There are only four volunteer groups which have major programs affecting the housing siutation in the country today. Two of these are affiliated with the international Save the Children Foundation and two are island-wide public service organizations.

(1) Redd Barna: (Save the Children Foundation of Norway) Redd Barna, with 23 staff members, is working with UDA on slum and shanty upgrading. It currently has two projects (one underway) in which its activities include improvement of both individual units and community facilities. The Foundation is providing the materials and technical assistance to the Communities and, to supplement the physical improvements, conducts training classes in various handicrafts.

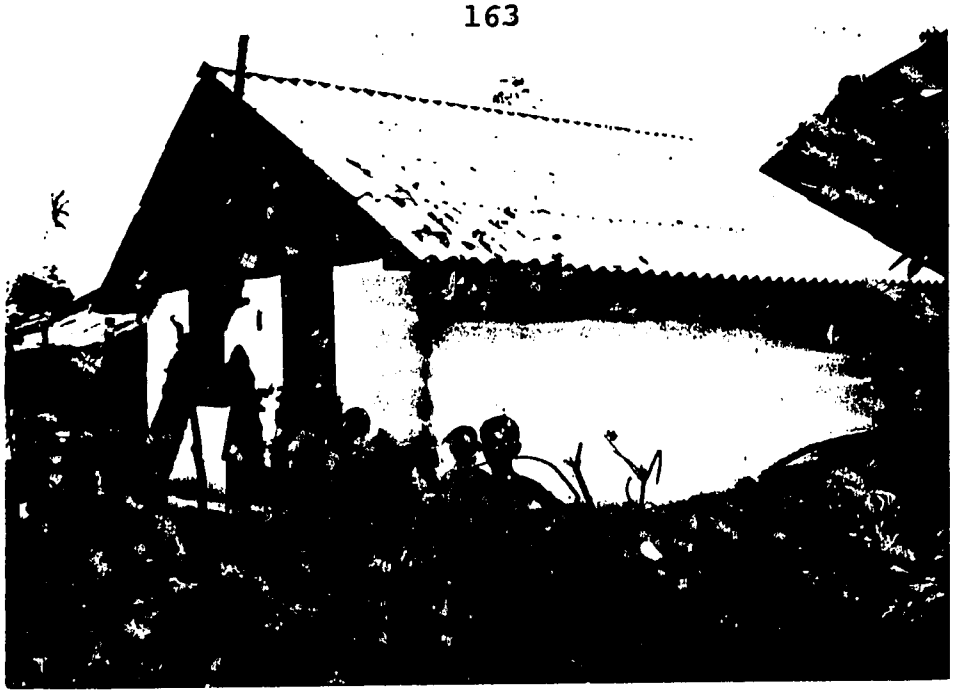
The beneficiaries of the program will be expected to pay back the cost of the materials used in their houses. The cost is to be paid back over a period, as yet undetermined, to an organization to be established in the future. Cost recovery is not considered a major factor in this program.

(2) Save the Children Foundation (US): The Save the Children (SCF) Foundation in 1979 began an integrated development program with a 300 unit shanty community. SCF has a large staff of professionals who are engaged in activities that include social development, health care and employment training as well as improving the quality of housing infrastructure. The plan for the upgrading of the physical condition include extensive improvements to the water supply sewage system and drainage (especially important because the site is a marsh). In conjunction with the site improvements, SCF plans to supervise the construction of 300 aided self-help homes for the residents.

The project is unique, because it is the first private housing program for low income families which will require the recipients to pay for their housing. Working with the Peoples Bank, SCF plans to establish a revolving housing fund which will lend funds for building materials, and be replenished as the loans are repaid. Although the plan will not recapture all of the costs (terms are 15 years at 3% interest) it is seen as a valuable testing ground for the development of low income lending techniques in Sri Lanka.

(3) Sarvodaya: Sarvodaya is a Buddhist-based public service organization active in over 3,000 villages in Sri Lanka. The name means "awakening" and the philosophy emphasizes self-discipline. Members are expected to live a life that includes at least six hours of manual labor and three hours of education per day. When necessary, Sarvodaya may request members to leave their village to assist with a project in another part of Sri Lanka for several weeks at a time.

After the cyclone in 1978 many workers were trained by Sarvodaya to rebuild the housing damaged by the storm. As a result of this effort, Sarvodaya has developed a large numbers of members skilled in construction and the organization has become more deeply involved in housing activities.



Two experimental houses built of locally-produced materials by U.S. Save the Children in the shanty area Kirillapone in Colombo. The roofing is made of cement sheets reinforced with coconut fibers (the process was pioneered by the Intermediate Technology Development Group of London) produced in the Save the Children production center. The walls are of local unfired bricks plastered with a waterproofing coating.

Sarvodaya has piloted low cost housing on an experimental basis that has emphasized the use of aided self-help techniques and local materials. The German Friedrich Neumann Foundation has agreed to provide aid to the Model Village Program for community facilities on the condition that the use of the land is coordinated and supervised by Sarvodaya.

Sarvodaya is generally recognized as an organization which can effectively mobilize its members to accomplish a specific goal. The large network of members and chapters in many parts of Sri Lanka makes it unique among organizations of this type in Sri Lanka. If Sarvodaya can carry out the Model Village Program it would emerge as an important institution in helping to meet the long term human settlements problems of the country.

(4) SEDEC: The Social and Economic Development Centre (SEDEC) is a development organization working within the Roman Catholic Church in Sri Lanka. SEDEC has a central office in Colombo and an office in each of the five Dioceses of the country. To date, SEDEC has participated in approximately 8 housing programs sponsored by the MLGHC, emphasizing community organization, skills training, construction supervision and consciousness-raising. In addition, SEDEC has made donations of materials and equipment to employment generation facilities located in a number of the MLGHC projects. Numerically, SEDEC counts approximately eighty people on its staff.

3. Housing Finance

(a) Background: There is no established overall system for financing homes in Sri Lanka. The programs available to the average citizen for purchase or construction of a home, other than the Governments Aided Self-Help and Direct Construction programs, are small scale financing plans through the National Housing Fund or a limited number of government-owned banks such as the National Savings Bank and the State Mortgage and Investment Bank. The private sector financial institutions are not actively involved in home lending. Building societies, credit unions, and home-owner cooperatives which often provide a method for financing houses through savings in other countries do not exist in Sri Lanka. It is, to a large extent, not only the current lack of home loans, but also the historical failure of the lending institutions (as shown in Table IV-11) which has necessitated the massive program currently being undertaken by the Government.

There is no doubt that with the urgent need for housing only the Government was capable of mobilizing resources quickly in 1977. Like many emergency programs, however, there were solutions implemented which in retrospect can be seen as the causes of new problems today. Some of these actions have fostered behavior patterns and attitudes which could have a negative effect on the government housing program in general, but specifically on the development of an overall housing finance system in Sri Lanka.

In the rush to provide housing, many homes were constructed which were turned over to families at no cost or at such a substantial subsidy that virutally no payment was required. There are families in Sri Lanka whose incomes are such that a substanial subsidy is necessary to house them adequately. In many programs, however, income was not a consideration for receiving a housing unit. Examples of this problem abound, but perhaps the most obvious are those units constructed under the Model Village and Electoral Housing Programs. In both these programs, income of the recipient is a secondary concern to the geographic location of the family.

The drawback to this approach to pricing houses is not that the subsidy system is not equally applied. Rather, the problem is that individuals develop a misconception as to the real cost of housing, because to most families the cost of a house is the amount of the monthly payment. If housing is regarded as very inexpensive or easily obtainable from the Government, regardless of income level, families will not save to purchase

Table IV-11

HOUSING LOANS

Year	Construction of New Houses		Repairs and extensions		Total	
	No. of Loans	Amount in Rs. M.	No. of Loans	Amount in Rs. M.	No. of Loans	Amount in Rs. M.
1970	2113	31.4	2515	5.3	4628	36.7
1971	2896	36.5	4048	9.0	6944	45.5
1972	3031	36.6	3679	8.9	6710	45.5
1973	5985	54.2	5789	13.2	11774	67.4
1974	7030	58.7	10000	33.0	17030	91.7
1975	6060	37.7	9902	29.6	15962	67.3
1976	7805	47.8	8837	28.4	16642	76.3
1977	3349	49.5	6138	29.4	9487	78.9
1978	5425	64.9	19126	70.9	24551	135.8
1979****	21440	193.25	15551	80.25	36991	273.50

The above figures represent loans given by the following institutions --

1. National Housing Department
2. National Savings Bank
3. Loan Board (only first quarter included)
4. People's Bank
5. Insurance Corporation of Sri Lanka
6. Bank of Ceylon
7. Public Service Mutual Provident Association
8. State Mortgage Bank

Loans offered by the National Savings Bank and Loan Board are not included. Bank of Ceylon only 1-2 quarters are included.

Loans given by the People's Bank (2nd, 3rd, 4th quarters) ann by the Bank of Ceylon (4th quarter) not included.

****Loan Board did not offer any loans.

a home in the future. Without substantial savings by the persons seeking housing, the capital base and lending programs will not develop to relieve the Government of its current responsibility as supplier of housing for the nation.

Of more direct concern to lenders is the precedent established by the Government's failure to collect required payments from borrowers. Government loan programs in Sri Lanka have historically failed to collect or have forgiven outstanding debts. A similar pattern of behavior is developing in the housing program. If it continues, non-government lenders will hesitate to enter the housing finance market because the collection problems on housing loans will be excessive.

In the past, the failure to collect Government loans has driven private lenders out of certain markets. The most notable example in Sri Lanka is the agricultural loan program under which lenders have experienced default rates in excess of 75%. These defaults have been, according to most experts, the result of inconsistent Government policies on collection. Housing programs are more recent and thus, few examples exist; the National Housing Fund, however, a loan program administered to date by the National Housing Department of the MLGHC, has become widely known for failing to collect payments and pursue defaulters. Some of the new housing projects are showing signs of similar problems. There are Model Villages in which residents have not been asked to make a payment (or even told what amount the payment will be) after living in the units for six to nine months. After six months of not making payments, most families have become accustomed to spending all of their weekly budget for consumption items - there is no money available for housing. Even if collections are begun, the back payments may have to be waived, which can establish a precedent which will not be forgotten by the family if they fall behind in the future.

The Government has begun action to alleviate some of these problems. There are amendments before the Cabinet to modify the Rent Control Act which, if passed, will remove rent controls for new construction and provide some methodology to relieve restrictions on existing structures. The subsidies on housing are being reevaluated, and efforts are being made to include some cost recovery in all future housing projects. In addition, payment collection procedures are being studied and changes instituted (e.g., the National Housing Fund is being shifted from NHD to NHDA).

Lending institutions, in the meantime, have many attractive alternatives to home loans. They can be expected to continue with their present programs unless

radical changes take place in the availability of capital, the structure of financial institutions, or competition for lending opportunities.

(b) Institutions:

(1) Commercial Banks - Commercial banks in Sri Lanka, like banks in most countries, are not deeply involved in housing. Banks lend money for industrial and commercial purposes at higher rates and for shorter terms than can be obtained from housing loans. The shortage of loanable funds and the lack of competition among banks makes this especially true in Sri Lanka.

In Sri Lanka, the banking industry is dominated by two nationally controlled banks, the Bank of Ceylon and the Peoples Bank. There are four other banks which have had offices in the country for many years, but they are relatively small and do not constitute a major part of the nation's banking.

Until 1979 when the banking laws were liberalized, no foreign-owned banks had opened for a decade. Since the liberalization, there have been twelve banking applications granted. Although these new banks have provided a boost to the capital market, they are restricted to operating in Colombo and the free trade zone, and are not expected to become involved in housing.

Of all the banks in Sri Lanka, Peoples Bank has the only aggressive, although limited, program for housing finance. Fifty-one per cent of the stock of Peoples Bank is owned by the Government. In 1978, the bank's total assets were in excess of Rs 14 billion which, with its 250 branch offices, make it unquestionably the largest bank on the island.

Peoples Bank offers two types of housing finance as part of their standard lending program. They also are entering into an experimental low-income housing program with the American Save the Children Foundation. The Save the Children program involves approximately 300 low-income families in a shanty upgrading project being funded by the Foundation. The Peoples Bank Branch in the vicinity of the project has established a program to evaluate loan applications, collect payments, and provide financial counseling to the residents. The financing is being provided through a grant from the Foundation and a sort of revolving or participating fund will be set up. Peoples

Bank's responsibility is administrative only, for which it will collect a 2% fee. Costs to the bank for this program are estimated to be approximately 3 1/2%; the shortfall is regarded as a public relations cost.

Each applicant for a housing loan will be reviewed for three basic criteria:

- He must not have been blacklisted for loans from Peoples Bank in the past.
- He must be a citizen.
- He must be over 21 years old.

Each applicant will then be required to open a savings account and attend meetings in which the need for repaying the loan and maintaining the houses will be discussed. Bank officials expect to remain involved with this community after granting loans because they believe personal contact is necessary to achieve a reasonable rate of repayment. Similar loan programs in the past (with rural housing and street vendors) have had mixed success, but it is felt that the tight-knit community, the assistance of Save the Children, and close supervision by the bank personnel should yield a repayment ratio of about 85%.

Normal lending programs offered by the bank are for either home improvement or home construction/purchase. The repairs and extensions program (home improvement) is a short-term loan for a maximum of five years which carries an interest rate of 20%. Applicants are evaluated based on income and employment verification from their employers. Each loan is secured by a recorded lien against the property.

The housing finance loans center around what is termed the Investment Savings Account (ISA) Scheme, essentially a contract savings plan. This plan is not large; there are approximately 10,000 loans in the portfolio with perhaps 2,500 active savings contracts. The program has been popular, but, to conserve the limited funds available, the bank has set high credit and income standards for applicants.

The maximum loan amount under this plan is Rs 150,000, or 60% of the value of the property, whichever is less. The interest rate is 15% on the mortgage and 11% on the savings account.

The ISA contract is for five years with the length of time a saver actually participates determining the term of the mortgage. The amount of the mortgage is based on the maximum monthly payment allowable,which is ten times the monthly ISA contract payment. The longer the participation in the ISA contract, the longer the term of the resulting mortgage and the lower the monthly payment per Rs 1,000, thus the longer the mortgage that can be granted. The schedule for the ISA contract is:

Duration of ISA	Maximum Period of Repayment
12-18 months	8 years
19-24 months	10 years
25-36 months	12 years
37-48 months	14 years
over 48 monhts	15 years

Participants are encouraged to continue saving for the full five-year contract even if they exercise their claim on a mortgage earlier. The bank offers savers who live up to their contract have the right to exercise the unused portion for another loan to extend or modify their home. Even so, most savers drop out when they receive their mortgage.

At this time, this is the largest housing finance program offered by an commercial bank in Sri Lanka. Obviously, it does not go far toward meeting the shortage. Hopefully, as more commercial banks enter the financial sector, competition will force expansion of their housing finance activity.

(2) The National Savings Bank (NSB) is the only institution devoted to savings in Sri Lanka. Established in 1971, NSB is made up of three state-run savings institutions that existed prior to 1971. The Ceylon Savings Bank, Post Office Savings Bank and National Savings Bank With 39 branches and over 3,000 Post Office outlets where deposits are taken, the NSB has the most thorough coverage of any financial institution in Sri Lanka. In 1978, the National Savings Bank had deposits of over Rs 3.3 billion representing more than 6.5 million individual accounts with an average balance of Rs 516. Its total deposits made up over 40% of all savings in Sri Lanka.

In order to attract and retain depositors, the NSB has several unique benefits it can offer. First, and perhaps most important, interest income to NSB depositors is tax free up to Rs 2000 per year. Thirty-three and one-third percent of

the interest paid above Rs 2000 is also exempt from taxes. Only the National Savings Bank can offer this inducement, and it has proven to be a major factor in its ability to hold onto accounts.

Secondly, the NSB offers depositors a Government guarantee that deposits and interest will be repaid. There is no other deposit insurance plan available to the commercial banks or finance companies in Sri Lanka.

Lastly, NSB uses a patriotic appeal to the citizens for deposits. By law, at least 60% of NSB deposits must be invested in government securities. Thus, it advertises that depositors are supporting the development of the country.

Financing of the country is, in fact, an extremely important part of the National Savings Bank's charter. Because of that, housing plays a very small role in the bank's lending program. In 1978, only about Rs 13.5 million was loaned for housing construction or purchase, which was insignificant compared to the 722.5 million invested in other securities. Exact figures were not available, but it was estimated that in September 1980 more than 90% of the National Savings Bank's portfolio was invested in either Sri Lanka government securities, treasury bills, or debentures issued by national corporations.

It was also estimated that the portfolio was yielding approximately 9.5-10.5%. The low yield on the portfolio is particularly significant when compared to the bank's current programs for savers which pay considerably higher rates. These rates are:

ordinary savings -	12%
fixed deposits -	
6 months	15%
12 months	20%

Slightly lower yields are offered savers who receive monthly payment of interest rather than waiting for the end of their agreed-upon term. It can be seen that the Bank is experiencing a significant negative interest spread on its investment. The average rate paid to depositors is estimated to be 14%. Thus, a loss of about 4-5% is experienced on the portfolio.

The current Government lending rate is 15% for three years, which in time will increase the yield on the portfolio. The Treasury changed its rate on Government debt in April of 1980 at the same time the savings rate was increased. It will take until at least 1983 for the portfolio to turn over and bring the yield up to 16%. On the other hand, by April of 1981, all of the low-yielding deposits will have come due, and the NSB's average cost of funds will probably exceed 16%.

A certain amount of negative interest rate spread has existed for years and is routinely covered by a direct grant from the government as a budgetary item each year. In 1978, this subsidy amounted to Rs 122.9 million after which the NSB was able to report a net profit before income tax of Rs 26 million.

Of more immediate concern than negative interest spreads is disintermediation, withdrawals exceeding deposits. NSB is the primary investor in Government securities, and a significant reduction in deposits could inhibit the Government's ability to borrow. Two recent developments have accelerated the outflow of deposits. During 1979, Government employees earning over Rs 750 were granted an exemption from income tax. This was perhaps necessary to retain employees, but for Government employees it weakened one of NSB's major drawing cards for deposits - the tax exemption on interest. As a result, Government employees have been steadily withdrawing funds from NSB for redeposit in commercial banks or finance companies where higher interest (up to 30%) and overdraft accounts are available.

A similar change in the tax structure for provident funds (pension funds) makes it easier for them to receive tax-free status and move their deposits to competitive institutions. In August and September of 1980, many large time deposits held by provident funds came due, and NSB lost over Rs 35 million in this type of deposit.

The projected level of Government borrowings for the next five years will absorb most of the National Savings Bank's deposits. Therefore, it does not appear the NSB will expand its role in housing finance. In fact, the importance of mobilizing savings to support the Government may be a strong deterrent to the establishment of a building society or alternative housing bank, which would compete for the deposits of many of the NSB savers.

(3) State Mortgage and Investment Bank: The State Mortgage and Investment Bank (SMIB) was formed in January 1979 through the merger of the Ceylon State Mortgage Bank and the Agricultural and Industrial Credit Corporation of Ceylon. The new organization has assets of Rs 140 million, of which approximately Rs 105 million represents the outstanding balance on the loan portfolio.

SMIB makes loans for:

- new housing construction
- major additions to existing houses
- acquisition of land for home construction
- agricultural development

The bulk of the loan portfolio (about Rs 80 million) is home loans. The lending philosophy is to concentrate in housing rather than agriculture with emphasis placed on lending which contributes to the growth of the housing stock. Therefore, loans for new construction and major additions receive preferential treatment through interest rate concession.

Loans for the construction of single-family homes are made up to maximum of Rs 250,000 at an interest rate of 11-15% depending on the loan amount (up to Rs 50,000 are 11%, for 50,000 to 100,000 interest is 13%; over 100,000 the rate is 15%). Construction loans are made in two parts: up to Rs 50,000 or 75% of the value can be borrowed for the purchase of land; then a second loan up to 200,000 may be obtained for the actual construction of the house. Loans to purchase existing homes are limited to Rs 200,000 and carry a minimum interest rate of 16%.

In order to qualify for a loan, the applicant must be able to prove his ability to repay through certification from his employer or independent verification if he is self-employed. He must have at least a 35% down payment based on the lower of an independent appraisal of the property and construction plans, or the sale price. Finally, he must have a title insurance policy guaranteeing clear title to the property.

Upon loan approval, after evidence that the borrower has advanced his 25% down payment, the land loan and 50% of the construction loan are disbursed. Subsequent advances are made as con-

struction progresses. In the Colombo area inspections of homes under construction are performed by employees of SMIB; outside of the city SMIB hires independent inspectors. Five percent of the construction loan is held back on completion and not advanced until the borrower obtains a certificate of completion from the municipality. During construction the borrower pays interest on the outstanding balance each six months. Upon finishing construction, he has the option of either semi-annual or monthly payments under a normal loan amortization schedule.

SMIB has access to three sources of funds - repayments on loans in the portfolio, the sale of debentures for long-term funds, and a revolving credit line at the Bank of Ceylon to meet short-term cash requirements. As of December 1978, Rs 32 million was outstanding in Government debentures, whereas Rs 41 million had been borrowed from the Bank of Ceylon. The last sale of debenture was in January 1980 when Rs 10 million with a 10% interest rate was sold.

The loan origination function of taking applications, reviewing building plans, evaluating credit, and approving loans is performed centrally in Colombo. SMIB has three offices in the Colombo metropolitan area; applicants in other parts of the island must either visit Colombo or apply through the mail. This procedure adds to the time required to process an application and discourages participation by borrowers outside Colombo. In addition, the application review process has been very methodical and slow moving with many exchanges between the SMIB and the borrower concerning income, construction plans, and material requirements. SMIB has not in the past, as the State Mortgage Bank, closed a large volume of loans, and the average processing time for a loan has been in excess of six months.

During 1980 the management at SMIB has taken several steps to improve the loan processing procedures. Additional loan officers have been hired, and plans are under way to open an office outside the Colombo area. With these changes in procedures and manpower, SMIB expects to process between 600-700 applications this year; and a goal of 1,200 loans has been set for 1981. This is an ambitious plan for an organization which processed only 300 loans in 1978.

Payment processing is also done centrally in Colombo. Loan payments are made at local branches of the Bank of Ceylon. The Bank of Ceylon then accumulates the payment records from its branches and provides SMIB with a deposit record and individual payment information on each account every three days. From this information, the payment records of individual borrowers are updated by SMIB.

All posting and reporting is done manually for the approximately 10,000 loans in the SMIB portfolio. Recently, the Board of Directors had approved automating the loan servicing function. Discussions concerning shared computer and programmer services have been held with another large national corporation; the management of SMIB, however, has delayed making any change until they feel more comfortable with the methods of computer processing.

SMIB's experience with payment collections and defaults has been very good. Their record keeping combined with possession of clear title gives them the ability to move quickly to bring delinquent borrowers up to date or to threaten effectively eviction. In foreclosure proceedings, SMIB has broad powers which circumvent the need for court action. After letters have been written to the delinquent mortgager and a public notice published, SMIB may auction the property.

(c) The Tax Effect on Housing Finance

Sri Lanka has established a system of personal and corporate taxes which is designed to encourage housing development by rewarding the developer, the financier or the investor. Brief summaries of the relevant portions of tax code are given below.

- Individuals who construct their own homes are allowed to deduct the down payment or their cost contribution from their income over a five-year period. Both the interest and principal payment for a mortgage are also deductible from an individual's taxable income.
- A total exemption on capital gains arises from the first sale of a newly constructed house by an individual. "Where any individual has for the first time sold a house on or after April, 1978 he will be exempt from capital gains irrespective of whether the house sold was constructed, purchased, or inherited by him."

- For private housing developers the "entirety of profits and income arising from the sale of houses are exempt from income tax in respect to housing units with a floor area less than 500 square feet. In housing units with a floor area of over 500 sq. ft. but not exceeding 1,250 sq. ft. the tax exemption is 75% and in the case of larger housing units the exemption limit is 50%.
- Money expended on housing by an employer for his employees is classified as "qualifying payment" and thus deductible from his assessable income. To qualify, houses constructed must be less than 1,500 sq. ft. If sold to employees, sale proceeds are taxable as capital gains since the cost of construction was allowed as a deduction.
- Companies engaged solely in property development projects recommended by the UDA are entitled to a ten-year tax holiday. Dividends declared out of exempt profits will also be exempt and investment in shares of such companies will be treated as "qualifying payments" enabling the investor to claim relief from his assessable income.

(d) Informal Financing

Statistics are difficult to obtain on the magnitude, terms, conditions or methods of the informal sector that are used to finance homes in Sri Lanka. The informal financing techniques identified by the team were, for the most part, similar to those found in many countries where the formal institutions are inadequate to meet the housing needs of the citizens.

One informal financing mechanism which plays a major role in many countries does not appear in Sri Lanka. The Team found no evidence of informal arrangements such as volunteer credit societies. In many developing countries associations formed by neighbors or relatives to pool their money for housing finance are common. Currently these groups operate in a way similar to the savings and loan concept in the U.S., with members required to contribute a predetermined amount to the pool of funds which can be drawn down by the members as loans for the construction or purchase of housing. The absence of any type of organization such as this reduces the size of the informal financing sector and the amount of funds that are available for housing.

For middle class urban dwellers employed by major corporations (national and private) or financial institutes, there are special employee home purchasing plans. These arrangements vary by institution, but generally middle management employees such as department heads,

branch managers, or top salesmen are eligible for assistance or for free housing. Loans given are usually at concessionary interest rates. Quite often, the maximum loan amount for the loan-to-value ratio permitted for employee mortgages is more attractive than that offered by commercial banks (this is true even to employees within the commercial bank itself). The term of the loans granted by employers are generally similar to those of private institutions. As prices have increased in the urban areas and the demand for professionals grows, more organizations have begun to offer assistance to employees purchasing homes.

In the rural areas the shop keeper has always served as money lender and banker. Even though there has been an effort to break down this traditional system (especially by Peoples Bank and the National Savings Bank) many small farmers and agricultural workers still prefer the casual relationship with the local shop owner to financial institutions. This attitude is not easily changed, particularly when the formal institutions emphasize savings much more than lending. The small farmer must be able to borrow small amounts between crops; in the past, these loans have come from either the store owner, who is immediately available, or the Government which has seldom demanded repayment. As long as banks continue to require applications and security for loans, as well as repayment, farmers will be reluctant customers.

The rural family's requirements for housing finance is much lower than that of the city family. For Rs 8,000 a family can build a rudimentary structure or modify a home and create living space which is adequate. Loans of this size are, of course, not as profitable for commercial lenders as the Rs 75,000 housing loan in the city or even the Rs 20,000 agricultural loan. For that reason, banks have not pursued housing finance in the rural areas.

Because of its gem trade and, until recently, very restrictive import policies, Sri Lanka has had a relatively active smuggling trade. Black money, funds from illegal business operations, is understood to be a fairly significant capital sum. In fact, between November 1978 and April 1979 the Minister of Finance offered tax amnesty to individuals who deposited unreported funds in the National Savings Bank in an effort to draw the black money into the banking system. Some of this money may be used for housing (especially those built by smugglers) but it is not widely acknowledged as a factor in the national housing market.

Although the practice is less widespread today than in years past, a large number of brides continue to bring a dowry to the marriage. In some cases, the cash or material goods involved is enough for a new home and quite often dowries will include a plot of land for a home.

Other methods of raising downpayments or money for acquisition of land involve pawnbroking, barter, and loans from relatives. These are seldom used to finance the full cost of a home, but they are often a decisive factor in whether a family can afford a home.

(e) The Future of Housing Finance

Today, lending institutions in Sri Lanka do not regard home finance as economically sound from the lender's viewpoint. Currently, commercial banks are paying from 20% to 24% for deposits while finance companies are forced to offer 22% to 30% to attract savings. When funds cost this much, only consumer loans or short-term business loans provide the opportunity for profit - certainly 16% home mortgages for 30 years are not competitive.

Before the existing lending institutions will enter home finance they must believe it will be a profitable enterprise. In the future, as the competition for loanable funds becomes more severe, lenders will be forced to explore methods other than interest rates to attract savings. A natural development of this search could be a contract loan plan similar to the ISA scheme employed by Peoples Bank. Savers in this type of plan are willing to accept a much lower rate of interest and leave their funds on deposit longer than other depositors. It is possible, therefore, that the pressures for commercial and consumer borrowing will force institutions to make available more housing finance in some form.

As this report is being prepared, a committee has been formed under the leadership of the Ministry of Local Government, Housing and Construction and the Ministry of Finance and Planning to consider the establishment of a Housing Finance Bank. Discussions have been held concerning such an institution with the International Finance Corporation (IFC) as a method for mobilizing savings and initiating a housing finance system. No decision to go ahead with the project has been made, however; it will be up to the committee to make recommendations to the Government.

The institution envisioned is based on a similar Housing Bank IFC sponsored in Bombay. Initial capitalization required would be about Rs 100 million with the IFC contribution proposed at up to 15% and the remainder to be put up by the Government of Sri Lanka and private business in the country.

The bank would be a private lending institution limited to housing loans. Savings accounts would probably be established for potential borrowers, although to what extent this would be a savings bank has not yet determined. Accounts might be limited to contract savings plans specifically tried to the accumulation of sufficient down payment to meet mortgage requirements. The gestation period to plan, organize, and capitalize a housing finance bank is estimated by the IFC to require at least two years. On that basis, if the idea is approved, the bank would not be established before 1983.

The use of housing finance bank and contract savings through existing institutions both appear to be logical techniques for increasing private sector involvement in housing finance. On the other hand, there are many more basic aspects of finance that must be encouraged to grow or be established before the Government can expect private financing to effectively provide mortgages.

There are technical constraints which serve to make mortgage lending in Sri Lanka unnecessarily cumbersome and discourage the entry of new lenders into the market. For instance, there are no uniform standards for qualifying borrowers for mortgages. Without at least general guidelines for lending, each mortgage application is a unique experience which slows processing and limits the number of people qualified to assist the lender. From the homebuyer's point of view it is difficult to assess the size of the home they can afford or the amount of savings required unless income, employment, and property requirements are known in advance.

The establishment of uniform standards and perhaps a type of Government-supported insurance is necessary before private or institutional investors will invest in mortgages originated by another institution. The potential for increasing mortgage funds through a secondary market formed by investors is particularly great in Sri Lanka because alternative investments of this type are very limited. There is no established bond or stock market to compete for investment funds.

Regardless of the new programs which could be established, the private and national corporations now making loans should not be ignored. The importance of nuturing and protecting the efforts now being made cannot be overstated because no country can afford sufficient Government resources to house its total population without assistance from the private sector and through an established housing finance system which will generate the resources.

4. Community Organization

As pointed out in Section, III, D., 8, "Community Structure", there is little organization in low-income communities in the sense of structure relating to social services or housing, either in connection with government-sponsored programs such as those described earlier or in connection with housing constructed by individuals, the last being the largest source of housing constructed in both rural and urban low-income areas.

However, it has been noted that, while there is very little government-sanctioned type of organization directed to support the creation of private sector housing for low-income families, the strong demand for shelter in low-income communities has given rise to an informal and extra-legal landlord system. Since the passage in 1973 of the Rent Control Act, private ownership of low-cost rental housing has been officially proscribed and rentals of remaining units frozen at 1968 levels. The acute demand for low-cost housing, however, has created a group of families willing to rent informally any affordable shelter made available to them, and a group of slum and shanty landlords willing to supply such housing. The nature of these housing transactions has restricted the extent of their recognition and study, but they are reported to be quite widespread by representatives of private, public-interest development organizations intimately familiar with many of the characteristics of the informal community.

To the degree that Government policy in Sri Lanka supports shelter programs through which housing units are built for and delivered to low-income families with little or no requirement for these families' participation in the planning, construction, maintenance and payment for such housing (and any related facilities such as roads, pathways, community amenities, etc.) the absence of effective community organizations in low-income areas will not represent a significant impediment to program development. It does not require a very effective or representative mechanism to give away housing or community facilities. This is not true of the follow-on maintenance and upkeep of the community. And, to the degree that Sri Lankan housing and community development programs propose to involve their intended beneficiaries in the development and payment for shelter programs such as the Aided Self-Help and Model Villages programs, effective community development and organization components must be built into and supported as an important part of those programs.

The Government recognizes the importance of community-based development components; recent papers prepared by the MLGHC show an increasing awareness of the need to address community organization as an integral part of housing policy. At the present time, however, there exist no adequate mechanisms to design and administer community development initiatives on a large scale, or to coordinate those activities carried out by other groups operating independently or in collaboration with Government-supported housing programs.

It has been noted that a number of nongovernment organizations are today involved with housing activities, and it should be observed that community organization components are important characteristics of several of these efforts. Sarvodaya, a public service organization that is active in thousands of villages in Sri Lanka, has included housing as a significant element in its program, especially since the cyclone which in 1978 damaged and destroyed many low-income Sri Lankans' homes. Sarvodaya is generally recognized as an organization which can respond effectively to the needs of low-income groups, helping them to mobilize their own human and physical resources and complementing these with material and cash assistance where needed. Saravodaya's recognized skill in community organization work, however, does not address the questions of cost recovery from the beneficiaries of its work.

Redd Barna (Norwegian Save the Children) is working with two upgrading projects in several of the slum and shanty areas administered by the MLGHC and in addition to the housing and community facility upgrading components of the Redd Barna efforts, there are other important characteristics such as employment generation, literacy programs, and social development elements which should be considered in upgrading activities. Even within this otherwise well-integrated community development approach, however, relatively little attention has been given to the recovery of costs of housing and community improvement inputs from the project beneficiaries.

The Sri Lankan chapter of the U. S. Save the Children Foundation is now engaged in one upgrading project for a shanty settlement in Colombo. This upgrading project is comprehensive in scope and represents a well-conceived integrated community development effort encompassing infrastructure improvements, employment generation and job placement, health services, and home improvement loans. Limited but specific and formal cost recovery is contemplated in the project.

Other community organization efforts, such as the extensive health maintenance program supported by UNICEF and operated in conjunction with the Common Amenities Board and the Colombo Municipal Council, touch on a number of areas that should be integrated with Government upgrading programs. For the most part, however, these programs are of a nature that deal essentially with transmission of information on sanitation and health care, and cost recovery would not be a concern as it would be in programs involving capital inputs.

The Shelter Sector Assessment Team was able to visit several Sri Lankan communities in which community organization initiatives were underway. A high level of enthusiasm was noted, and it is felt that participation in community organization activities would be widespread and productive, if such activities were more broadly integrated with housing programs through a formal mechanism. A characteristic often observed in Sri Lankan communities - both urban and rural - is the readiness of their members to pool their resources and efforts in the solution of a shared problem. This characteristic is consonant with the high regard accorded self-sufficiency and independence and reflects long-standing traditions, but is not suitably supported in policies to carry out Government-sponsored housing and upgrading activities.

Thus, from the perspective of operating large-scale low-cost housing and upgrading programs in Sri Lanka, there are severe shortcomings in the current orientation and scope of both formal and informal community organizations. The crucial role played by community organization and development in the successful implementation of self-sustaining, replicable low-cost housing efforts requires that careful examination be made of the technical and capital requirements for designing and making operational a suitable community development component to complement other program elements. The importance of community organization components in low-cost housing programs cannot be overemphasized. Ongoing training and orientation activities are essential to the creation of viable, self-sufficient communities, and will become all the more important if, as expected, Sri Lanka's housing initiatives begin to lean more heavily on aided self-help and sites-and-services approaches. Organization and orientation activities are essential, not only as vehicles through which to deliver technical assistance inputs which will be needed to assist individual families in the construction of their houses,

but also in catalyzing the ongoing development efforts which will be needed to make complete communities of new housing areas: construction and maintenance of common facilities such as health clinics, schools, neighborhood commercial and industrial areas, etc. Finally, community organization activities will be indispensable in helping to create an interface between the official sponsors and developers of the low cost housing, and the families that live in them. This will be most important from the point of view of cost recuperations, as a strong community organization will greatly facilitate collections of monthly payments, and will help to maintain a sense of responsibility for the upkeep of the communities on the part of the residents.

In summary, with few exceptions, official programs operated in Sri Lanka are quite weak with respect to community development/organization components. While there are a number of isolated instances of community development work, there is no overall scheme to plan and coordinate community development work and to integrate it with the long-range objectives and purposes of the national housing programs. Recognition on the part of the GSL of the importance of giving much greater emphasis to programs which maximize the self-help contributions which people can make to solve their own shelter needs (prime examples being the Slum and Shanty Upgrading efforts and the urban Aided Self-Help housing projects) implies endorsement of a commitment to stronger community organization components in government shelter programs.

E. Construction Sector Technical Analysis

1. Background

A report entitled A Review of Sri Lanka's Housing Problems and Policies prepared by Thomas Kingsley in August 1978 indicates that only sixteen thousand new urban housing units were built per year in the 1960's and that only half of these were permanent units. While no estimates exist for overall production since 1971, most observers, including Kingsley, agree that rent control and other legislation enacted at that time seriously undermined any private sector investment in housing. It would appear that very few new permanent urban housing units were built between 1971 and 1977.

The average unit cost was around Rs 30,000 for units built under the Direct Construction program. Efforts were made to involve the private sector through incentives such as lower interest rates for house construction with a sliding rate to futher encourage lower cost solutions. While the volume of housing loans increased steadily during this period, the greater impact came from rent restrictions and sections of the Ceiling on Property Law which became a positive barrier to the expansion of housing stock.

With a view to relieving the resultant housing shortage, the present government has proposed to provide a wider range of incentives designed to increase private housing construction activity.

2. Formal Sector

In order to plan and implement its ambitious program, the GSL established two new authorities: the NHA and the UDA. Both are described in the previous section on institutions. Within fifteen months, an impressive array of projects was underway.

The very success of getting so many new projects underway may well have contributed to the financial crisis now facing Sri Lanka's housing programs. With unprecedented levels of construction activity in all sectors, the cost of construction has risen dramatically in the past two years. Unit costs of Rs 50,000 up to Rs 200,000 are now commonplace in the direct construction programs, making units produced in this way unaffordable to the families for whom they were intended.

With regard to the Aided Self-Help program, each unit includes materials for a 370-400 sq. ft. house including latrines, roads and well at Rs. 20-25,000 per unit. An experimental component of this program will virtually eliminate the use of cement by substituting local materials and traditional building technology. The expected cost is Rs 15-18,000 per unit for all materials, with labor provided by the beneficiaries themselves. With such a marked differential in per unit cost, it is obvious why more emphasis must be given to ASH and less to Direct Construction if the targets for new housing units are to be met within the projected resources.

(a) Direct Construction - A more detailed assessment follows of the Direct Construction program; by way of example, a number of projects are summarized below to indicate what has been done or is under way.

Maligawatte:

An urban housing project located east of central Colombo on a reclaimed site. The project was begun in the early 1970's and has been built in phases since that time. It includes blocks of flats of three to eight stories high. The latest phase, stage 4 is estimated to cost (prior to construction beginning) Rs 70 million for 574 units of 400 square feet each, or approximately Rs 120,000/unit. The State Engineering Corporation (SEC) serves as the consultant and the contractor for the Ministry (this project preceeds NHDA, and thus is being implemented directly, not through NHDA). Actual costs are expected to be much higher than projected.

Wickremasinghe Pura:

A suburban location about six miles east of central Colombo. The first phase includes 702 dwellings being built in groups of two and four story flats. Most of the units are in two story structures. The site is located on well-drained rolling hills which have been stripped of all vegetation. Construction costs were estimated (prior to construction) at Rs 78 million for the 702 units including water mains; and 560 units of 400 square feet. Costs are running above the estimates at somewhere between Rs 150 and 200,000 per unit. NHDA is the client. The consultant is a private architect, Surat Wickremasinghe and the contractor is Walkers, also a private firm.

Rukmale Estates:

A suburban location several miles east of central Colombo. The project is all single story detached houses built of prefabricated panels and concrete roof trusses, a special system developed by the French contracting firm, SBTP, which is building the project. The client is NHDA, the consultant is SEC. Although the original SEC house designs were changed to fit the prefabricated system, the site plan and infrastructure remain as designed. Each unit is about 400 square feet and sits on a concrete foundation. In addition, each is surrounded by a concrete drainage ditch which connects to a concrete-covered storm drainage system alongside the road. Each house also has a concrete septic tank which is connected by an underground waste pipe to the toilet and to the storm drainage system, i.e., the infrastructure in this project is a bit overdone. The 501 unit project was estimated to cost

57 Million Rs including the infrastructure, or about Rs 110 - 120,000 per unit. This cost seems to be holding as the French firm is absorbing the increases but it is apparently losing money and the prefab system has proven somewhat less than satisfactory. Again, the site was totally cleared of vegetation.

Mattagoda Estate:

A suburban location near the new administrative center at Kotte, several miles east of Colombo. This is a very large scheme consisting of some 1201 dwelling units built in two to four story blocks. Concrete block is being used for the walls with reinforced concrete floor slabs. The cost estimate was Rs 214 million not including the infrastructure which is about Rs 160-170,000 per unit. The actual costs are running much higher. This site is solid laterite clay of the type suitable for building,yet no apparent recognition was given to this fact. Foundation trenches are being excavated several feet below the ground floor of each unit. These trenches are then filled with concrete which is basically no firmer than the laterite which it replaces. In siting the blocks, little attention has been paid to the considerable change in elevation of the site, with a result that foundation walls are in some cases six to eight feet above grade at one end of a block in order to maintain the same floor level even though there is no apparent need to have done so. NHDA is the client, the consultant was Design Group 5, a private firm, and the contractor is NAVALOKA, a local private firm. Although some palm trees have been left on the site, most have been removed.

Everyone seems quite concerned about the high costs of the Direct Construction Program. While units are being built, there is a serious question as to their affordability by lower income families who were the stated target group. In actuality, it appears that the designs are more appropriate for middle income families. Certainly the construction standards are quite high and the infrastructure costs totally beyond the level affordable by low-income families if any type of substantial cost recovery is carried out. The SEC has made some effort to reduce costs. At Slave Island, the second phase of the Wekanda Housing scheme was redesigned after completing the first phase of five story blocks. A two story scheme was developed at the same overall density reducing the costs by about one-third. The costs are still

expected to be about Rs 150,000 per unit. This gives further support to the idea that only single story solutions are really low cost and emphasizes the need to substitute locally produced building materials for manufactured ones and the need to reduce construction and infrastructure standards.

To date, the Building Material Research division of SEC has had little or no impact on the actual work being done by SEC. Even the research underway seems unlikely to significantly lower costs as it emphasizes high technology solutions such as reduction of reinforcing steel needed for pre-stressed concrete floor panels. In low cost housing the need for research is not really so great as the need to adapt well known traditional materials and techniques. The problem appears to be primarily one of professional orientation and the absence of controls.

The engineers and architects responsible for designing the projects under the Direct Construction Program simply have not been given an ultimatum to design low cost units and they apparently do not have the professional interest in the approaches necessary to develop such solutions. They have no experience working with the cost constraints necessary for truly low cost housing solutions. Apparently there have never really been strict budget controls with projects rejected when the bill of quantities indicated they would exceed the budget. Now the total program is in jeopardy due to excessive cost.

(b) Aided Self-Help - Within the Colombo District, which does not include the Colombo Municipality, there are some forty housing projects underway including direct construction and aided self-help housing. The following ASH projects are summarized to illustrate the types of activities included in the program and the potential for its use in urban and semi-urban areas as well as rural areas.

Malwatte:

This site is located in Kohuwela. The project has taken somewhat longer to complete than NHDA considers normal (i.e., three to four months) due to the fact that the families are employed in Colombo and can work only after five o'clock and on weekends. Yet the project has been underway only five months and appears very nearly complete. There is an on-site superintendent in charge of seeing that materials arrive when needed and that the plans are followed. The units

are somewhat larger in this scheme than in some (about 350 square feet including two rooms and a kitchen). The cost of material is about Rs 20,000 per unit.

Aluwala Kumburua:

Located in Kolonnawa, the community includes about 350 dwellings. The first phase (about 30 units) of ASH units are nearing completion. The next group will begin as soon as the present ones are finished, freeing up the temporary quarters presently occupied by the families who are building their houses. The plan in this case is about 320 square feet in area and is a semi-detached plan. The house building materials for each pair of houses cost about Rs 18,500; thus the per unit cost is less than Rs 10,000. Incomes in this area are apparently lower than in Malwatte, thus the choice of a smaller plan. It does not appear that demolition of all existing structures is really necessary; rather, smaller loans to rebuild or expand existing dwellings should be, but are presently not being considered.

Malwatta Road, Kohuwala:

Located in Dehiwala, this project included twenty-eight units. The inhabitants received building materials and, with the assistance of an on-site superintendent, had completed their houses in about six months, including flower gardens and individual decorative treatment of the front facades. It should be noted that almost every household had added a kitchen at the rear of their unit, indicating some dissatisfaction with the original plan which included an inside kitchen. All units were completed but no work had been done on the common areas: roads, drainage, etc. Seepage from the septic tanks flowed into open surface streams which made their way to the tank from which drinking water was drawn. While the general appearance of this "garden" indicated a considerable pride of ownership, the environmental conditions were not greatly improved. Apparently, the community will begin work on a drainage scheme shortly. The experience of this community suggests a considerable potential for urban self-help in Sri Lanka. Apparently, five of the families could not afford the cost of the few days of skilled labor required to complete their houses and, therefore, the neighbors all contributed to assist them and all houses were completed. The District Manager also got involved by helping find jobs for the heads of these five families. It would appear that

mutual assistance is a social reality and the ASH does work in urban slum and shanty areas.

The District Manager for the Colombo area (not including the city itself) has a staff of eighteen, including estate officers and accountants in addition to field personnel. The field superintendents are given three month training courses prior to their first assignment. They are primarily responsible for assisting the residents in locating the required skilled labor and in seeing that the materials arrive on site as needed. They also see that the selected plan is followed.

The District Manager showed an efficient and positive attitude towards the type of self-help construction seen in these projects. The site superintendents appeared to be in control of their sites, and, to the extent it was possible to make a judgement of this, the participant families seemed pleased with the involvement, with the level of NHDA support provided, and with their new homes. Workmanship appeared to be quite good, although the construction standards and the level of infrastructure were modest compared with the direct construction sites visited.

While these projects are not really unusual in the manner in which they are operated, they are atypical in that they are urban or semi-urban areas whereas most ASH projects are located in rural areas. In addition to the general ASH program and the Model Village Program which uses a similar approach, there is a special program known as Electoral Housing. 1981 will be the first year in which this program will use the ASH approach. Three types of plans have been prepared, including an urban model which is planned to be built on 1200 sq. ft. plots. This makes 50 plots per acre, a feasible planning alternative to high rise solutions. Incentives have been developed to encourage the use of sun-dried brick or laterite block which can be locally produced. Cost per unit is estimated at Rs 19-20,000, of which brick and cement is about Rs 5000. Progress payments are made in Rs 3000 installments as work advances. This is to purchase materials. Owners pay a skilled brick mason for about 20 days at Rs 30/day (about Rs 600). The owner does all other work in including mining mortar, building roofs, digging foundations, etc. When mud brick is used, the owner is paid Rs 30 per block (about Rs 900). Government saves Rs 4000 on materials and owner gets an extra Rs 900 to pay for labor plus a lower total loan. This is meant to

be an incentive for choosing unfired mud brick (modagadol) over kiln-fired brick. It is expected that as many as 50% of the owners will take advantage of this option.

Estate Housing, Mahaweli and other public sector programs:

Direct construction methods are being used by several major employers and public agencies to provide low cost housing for employees. The Mahaweli Valley Development scheme will include a network of settlements and supportive service centers. At the present time, it is not clear what standards will be used nor what the per unit costs are likely to be. The situation with respect to Estate Housing is somewhat clearer. While many of the estates continue to house their workers in miserable conditions and housing is a responsibility of the estate management, the NHDA has developed plans and bills of quantity for construction of decent low cost units. These plans are now being used by a number of the estates. In some instances, the estate managers are contracting directly with local contractors at about Rs 35,000 per two unit structure. The National Agricultural Diversification and Settlement Authority of the Ministry of Agriculture is also building estate housing using a variation on this approach. Materials valued at Rs 12,500 are provided and a local contractor is paid a fee of Rs 4000 for labor. Thus, units are being built at a cost of about Rs 16,500 by Direct Construction.

3. Informal Sector

Activity in this sector includes the middle and upper income housing being built by private individuals and contractors, as well as the slum and shanty settlements built by landlords or by the residents themselves and most housing built in rural areas. It is a diverse sector but not, in fact, a very active one in Sri Lanka at present. As discussed earlier, private sector housing investement virtually came to a standstill between 1971 and 1977. It really has not revived to date. While some private homes are being built, the numbers are quite small. Most are done by small private contractors for individual clients or by individuals who hire masons and carpenters on a daily basis. Using this approach, a modest house of 500-600 square feet can be built for Rs 120-140,000 exclusive of land or interest costs. With appropriate credit terms and some assistance in getting land with clear title, the private sector

should be able to fill the need for middle class and upper income housing through this approach. Tract builders would probably reappear though none are in evidence at the present time.

At the lower income levels, housing is provided primarily by one of two methods: the subdivision of large older buildings or the construction of makeshift shanties. Subdivision is usually done by landlords employing hourly or daily workers known as "slims."

The worst of these areas, or shanties, are generally built by the residents themselves on land belonging to the Government or to a private landowner. Shanty dwellers are composed in part of recent arrivals from rural areas and continue to live in the city with virtually no urban services. In Colombo, many shanty areas are subject to flooding.

4. Slum and Shanty Upgrading

Out of the Colombo Master Plan effort within UDA which was first to identify and then to enumerate all slum and shanty areas in Sri Lanka, grew the slum and shanty upgrading program. A Slum and Shanty Unit (SSU) was created to administer the program. This effort of Government to intervene in the informal sector has so far been on a pilot basis, but some positive results have been achieved. To determine its potential, several projects are examined below:

Stewart Street: An urban slum consisting of some 140 families living in 110 units in what was the first upgrading project. It is not typical of current Government activities. It is being financed as one of four pilot projects by the Dutch Government. The Common Amenities Board is the executing agency for the physical improvements.

Lack of control by the SSU or even contact with project progress was evident. Improvements are being undertaken by formal contracting procedures employing private contractors. No self-help efforts are involved and families are mildly upset because they would like more improvements than they are getting. Costs are expected to average some Rs 11,000 per unit for infrastructure, including community water taps, common toilet blocks and house improvements. Project costs appear reasonable and the improvements appropriate. It is possible that an ASH approach

would have produced a more cooperative attitude. Cost recovery mechanisms would make the project replicable. (Photos IV-1 to IV-4)

Summitpura: This is a squatter settlement in a low-lying flooded area where UDA is doing infrastructure improvements including land reclamation and roads which are being built to currently inaccessible housing units. There are no piped water or sanitary facilities in the low-lying portion of the area.

The National Youth Service Council is working on the filling activities. Local youth working on the project are paid Rs 5 per day. A number of families will be relocated within the project site, and most houses will be torn down and re-built, utilizing the same materials after the land fill is complete. A vocational training activity is also planned for this community. (See photos IV-5 to IV-8).

Kolonnawa: This area is in a semi-urban setting and consists of 310 families. UDA is installing infrastructure improvements, common standpipes and toilet blocks. Although this is technically a shanty area, the structures appear reasonably sound. The Kolonnawa Urban Council is introducing the NHDA ASH program here as well, but there is no apparent coordination between the two efforts.

Kirillapone: This is a shanty area of 400-500 families on government-owned land south of Colombo city. The project is being run by a private volunteer agency, Save the Children, which provides a full-time staff and rather substantial technical and financial assistance. It offers some lessons particularly in the operation of a revolving loan fund for home improvements, in community organization and in the use of locally produced building materials, but the approach is not really replicable on a large scale due to the enormous input of technical and administrative resources (see Photos IV-9 to IV-13).

It is widely accepted that nearly 50% of Colombo's population live in overcrowded slums or in squalid shanty areas. If this is indeed the case, then the present efforts to upgrade these areas are woefully inadequate. Much higher priority must be given to this program and substantially increased resources devoted to its support. One prerequisite would appear to be an institutional restructuring to align the SSU with NHDA, an implementation agency, rather than UDA, a planning agency.

Photo IV-1 Colombo Slum Area - Stewart Street

Photo IV-2 Direct Construction - Slum Upgrading

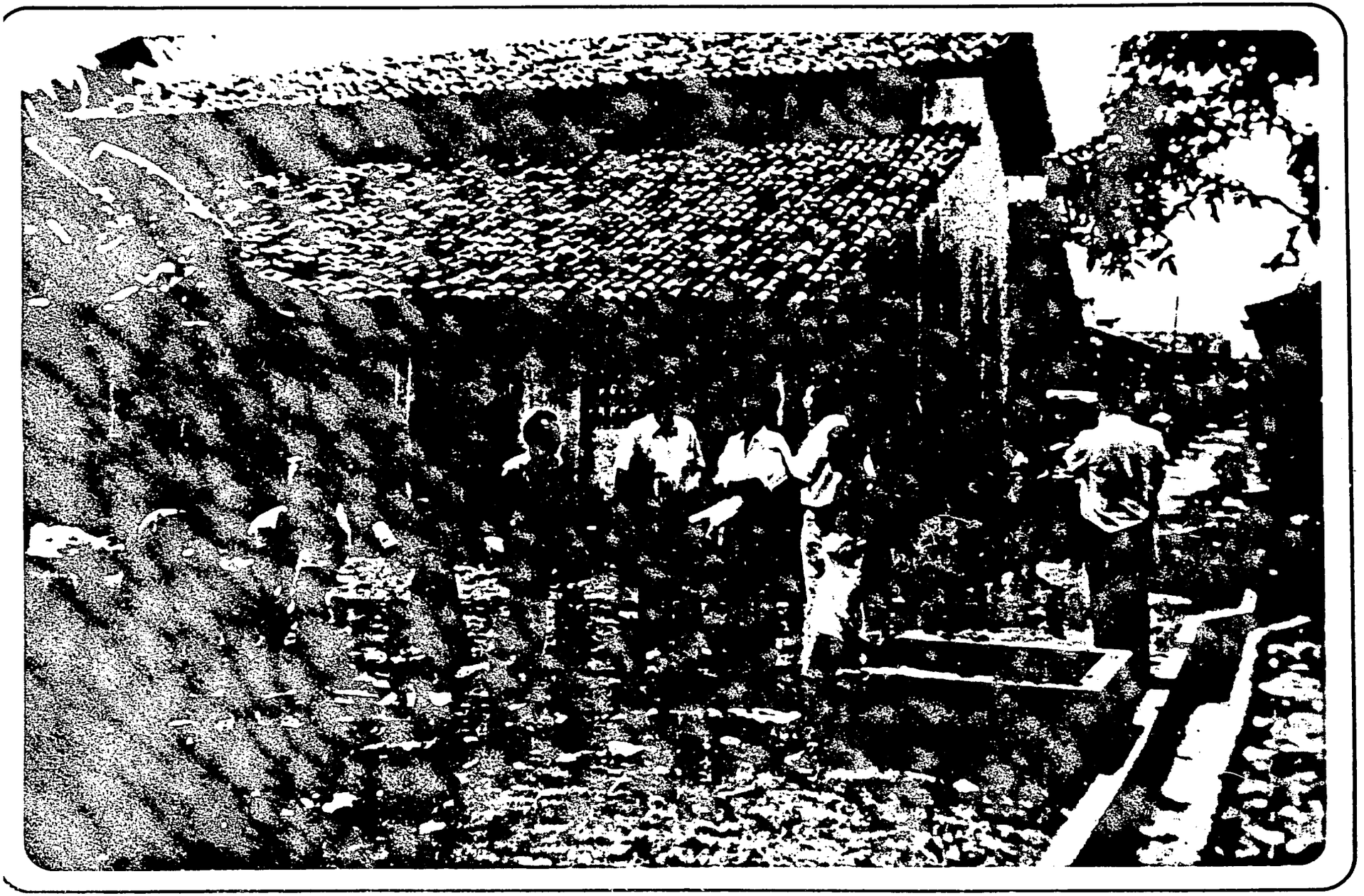


Photo IV-3 Newly Completed Row Houses and Drainage - Colombo Slum Area

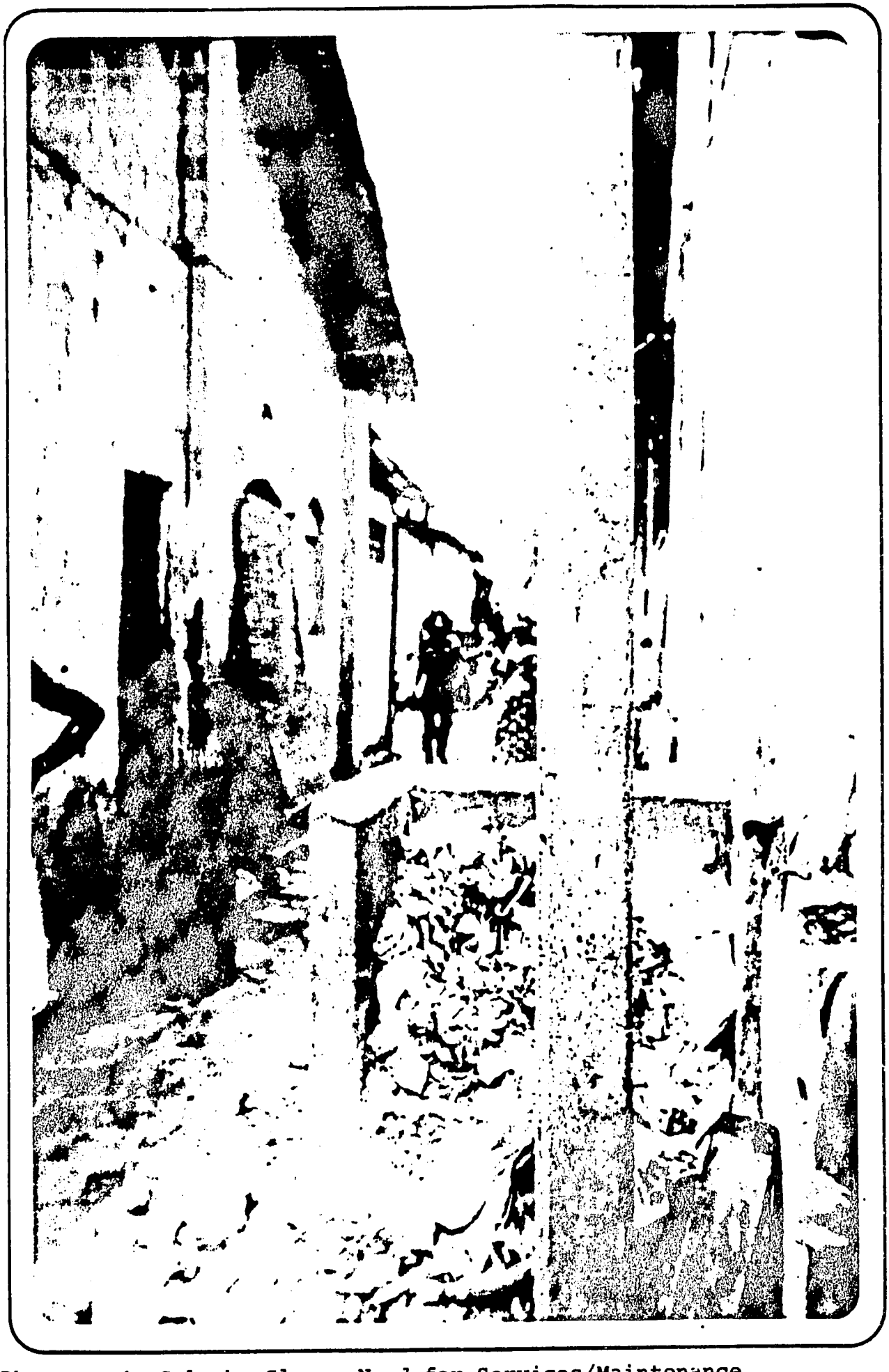


Photo IV-4 Colombo Slum - Need for Services/Maintenance

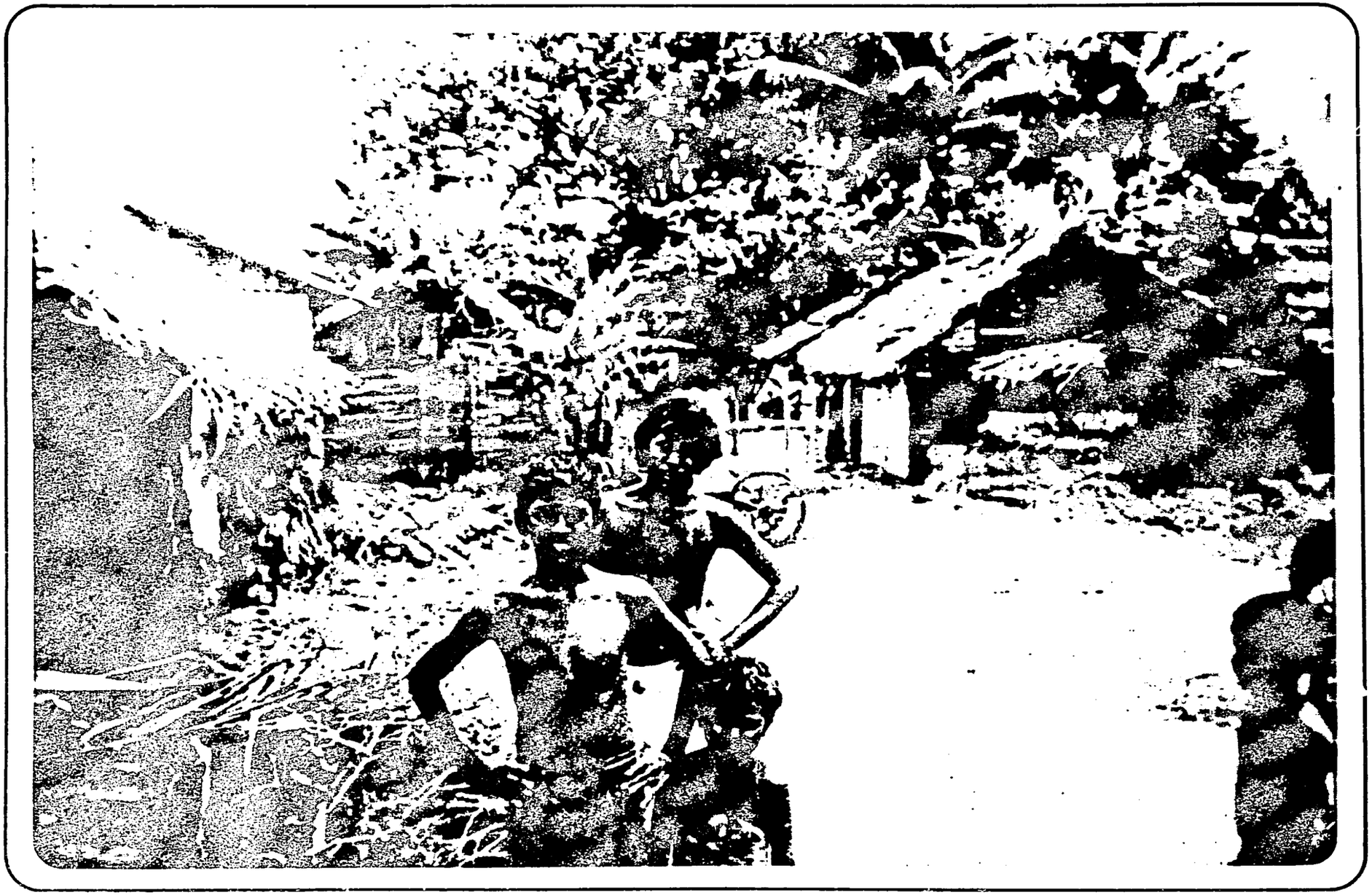


Photo IV-5 Informal Housing Settlement Outside Colombo - Summitpura

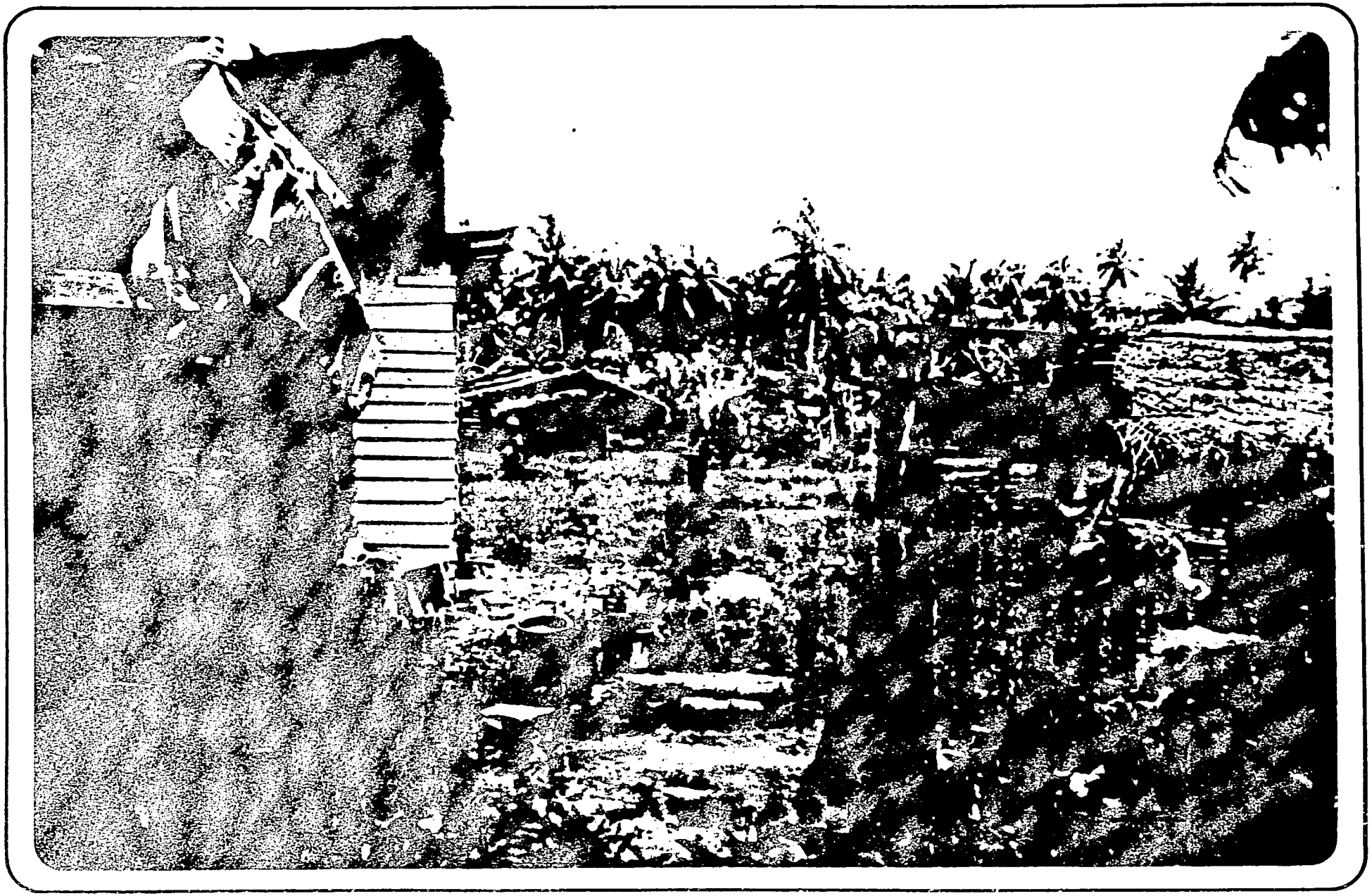


Photo IV-6 Squatter Settlement in low-lying area near Colombo.

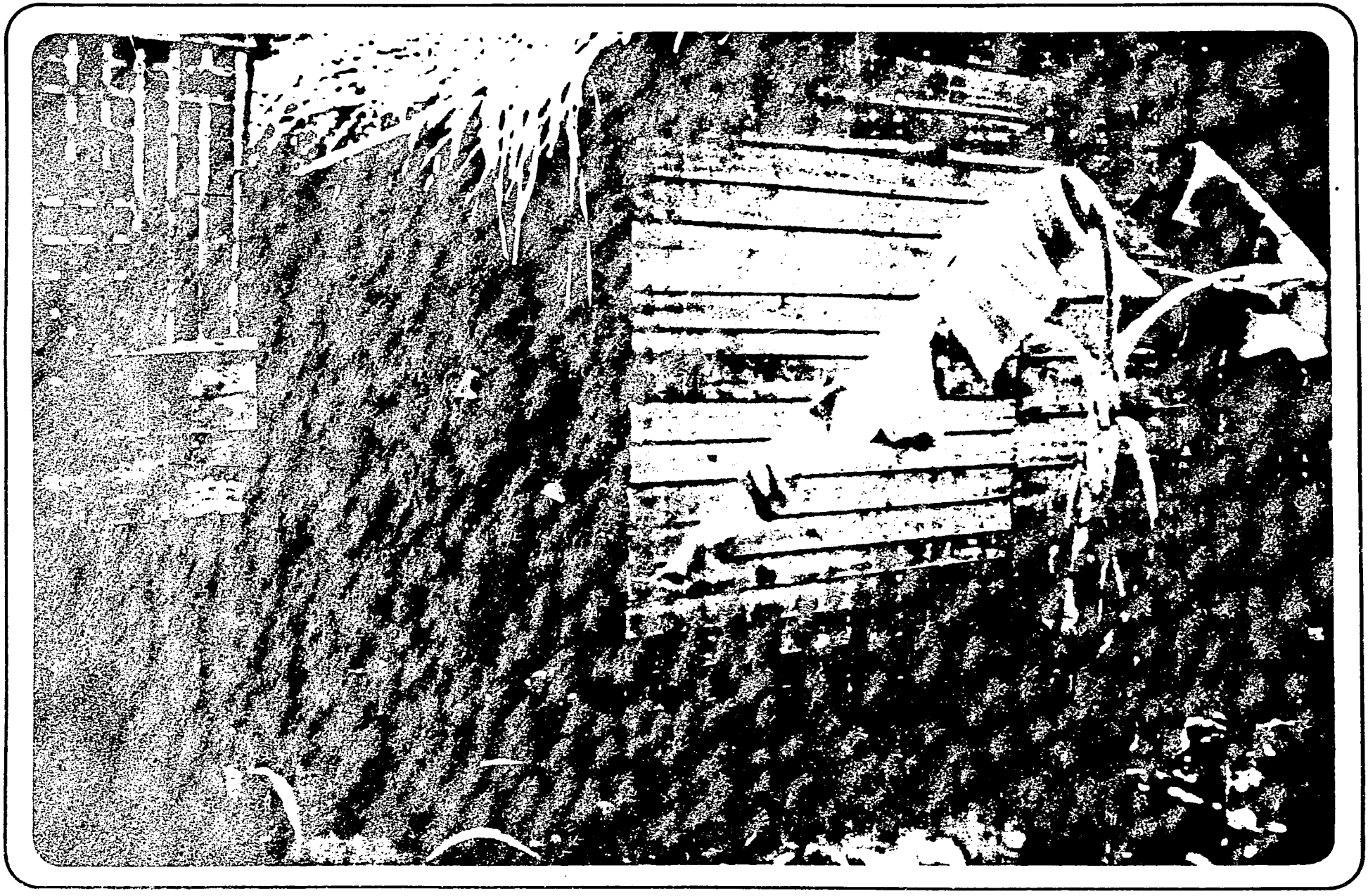


Photo IV-7 Shanty area of Colombo.

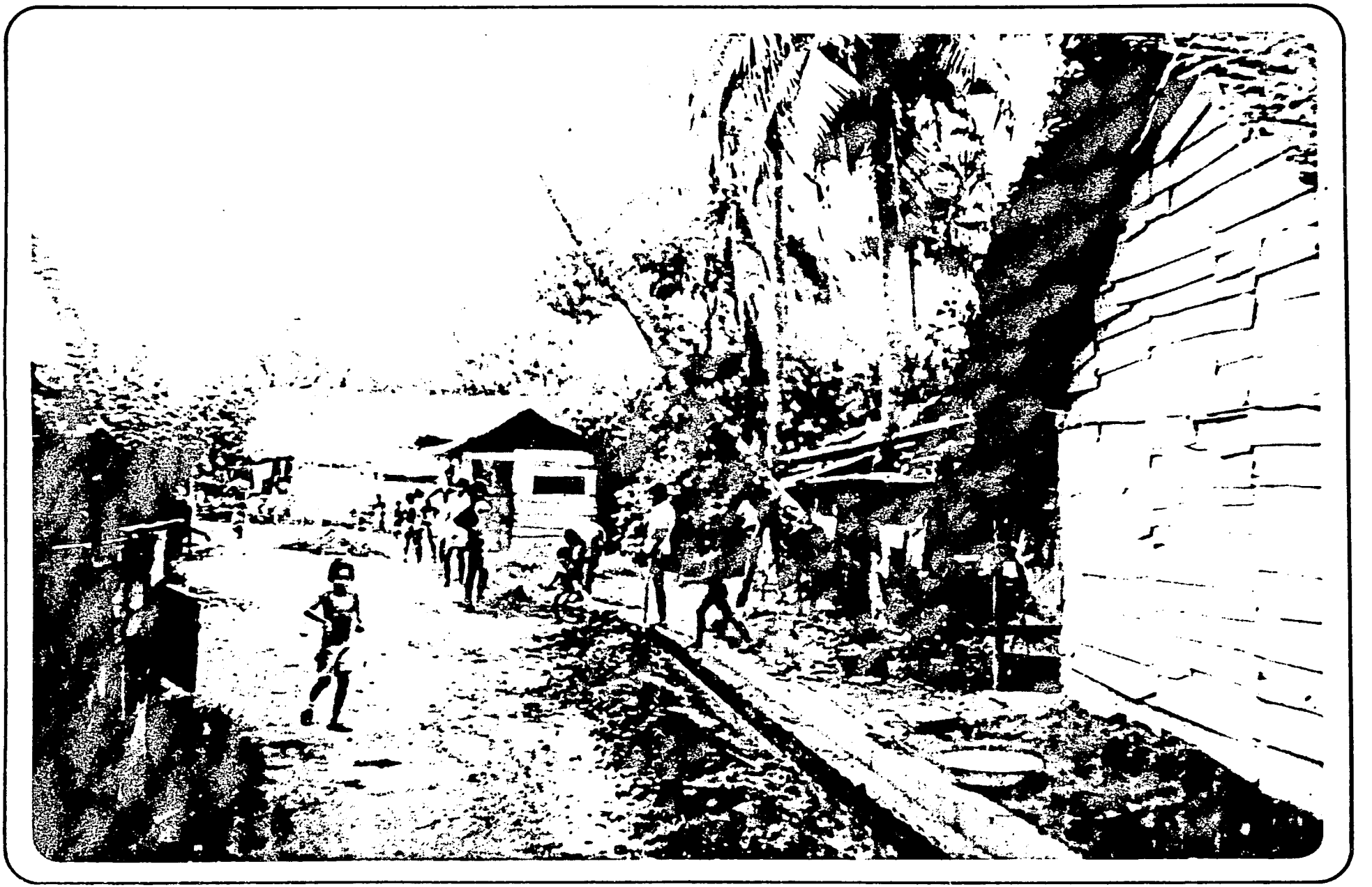


Photo IV-8 Self-Help Infrastructure Upgrading.

Photo IV-9 Local Production of Fiber-cement roofing sheets.

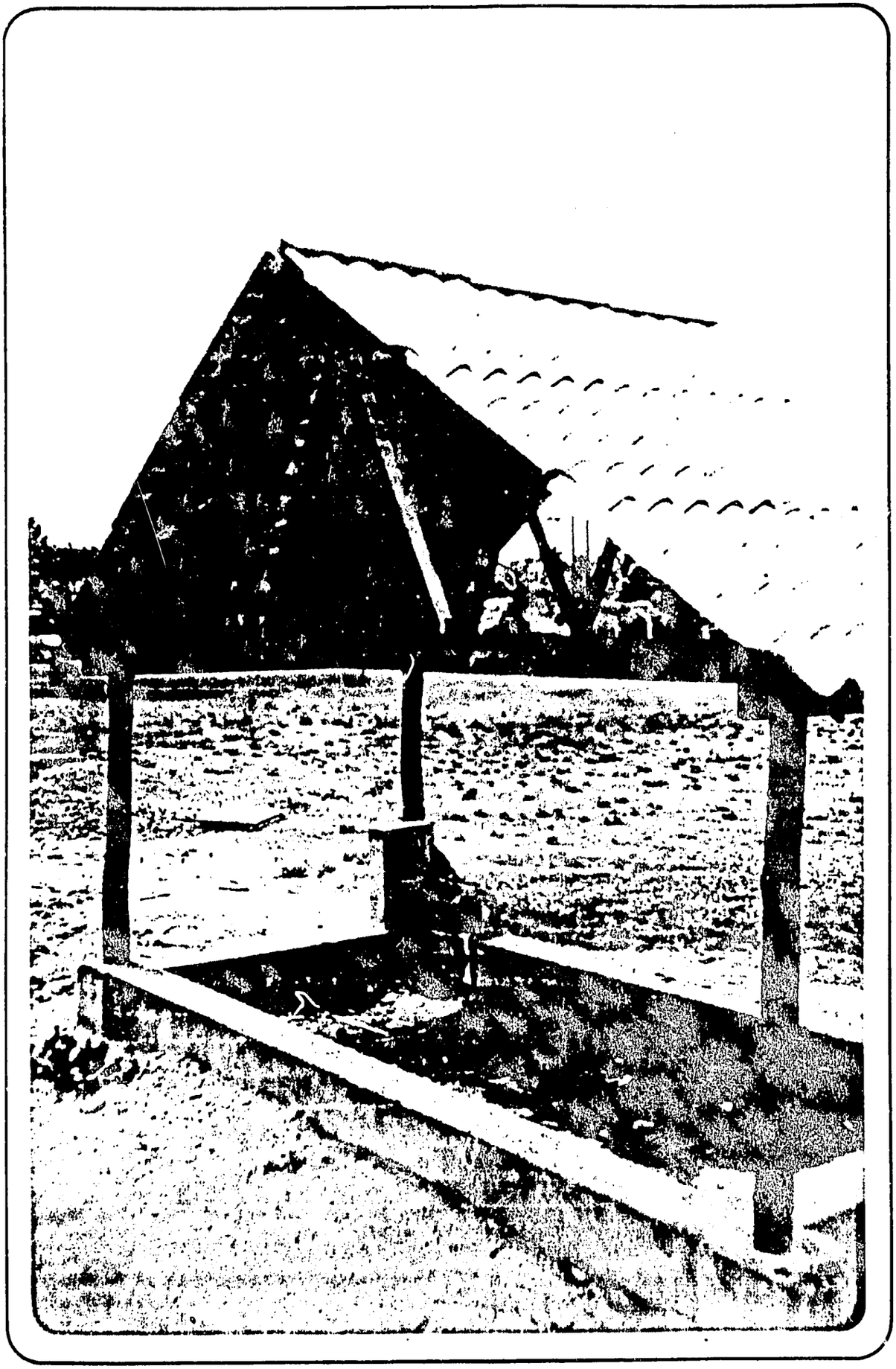


Photo IV-10 Demonstration of use of fiber-cement sheets for roofing

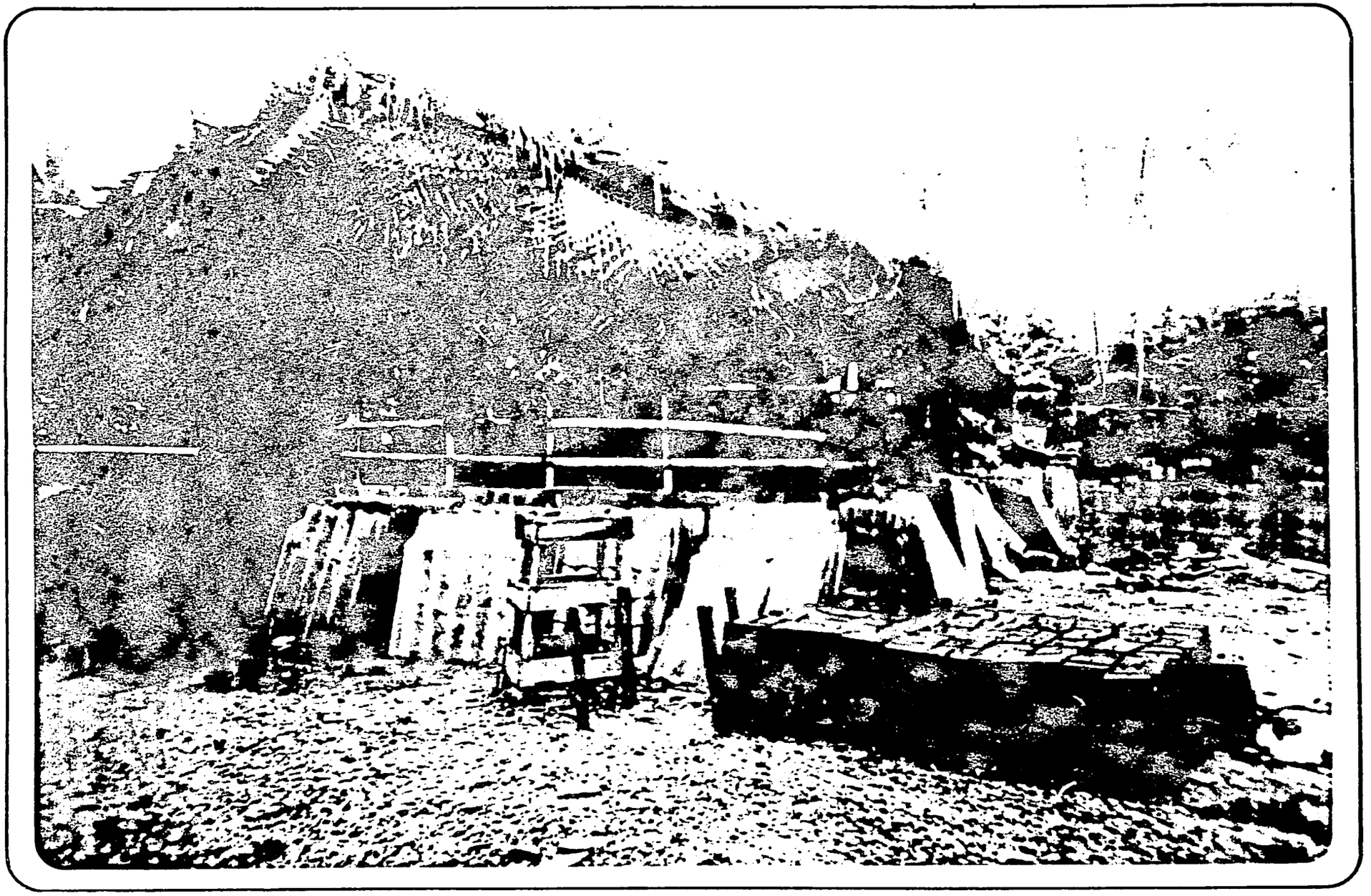


Photo IV-11 A community effort to produce materials for home improvement.

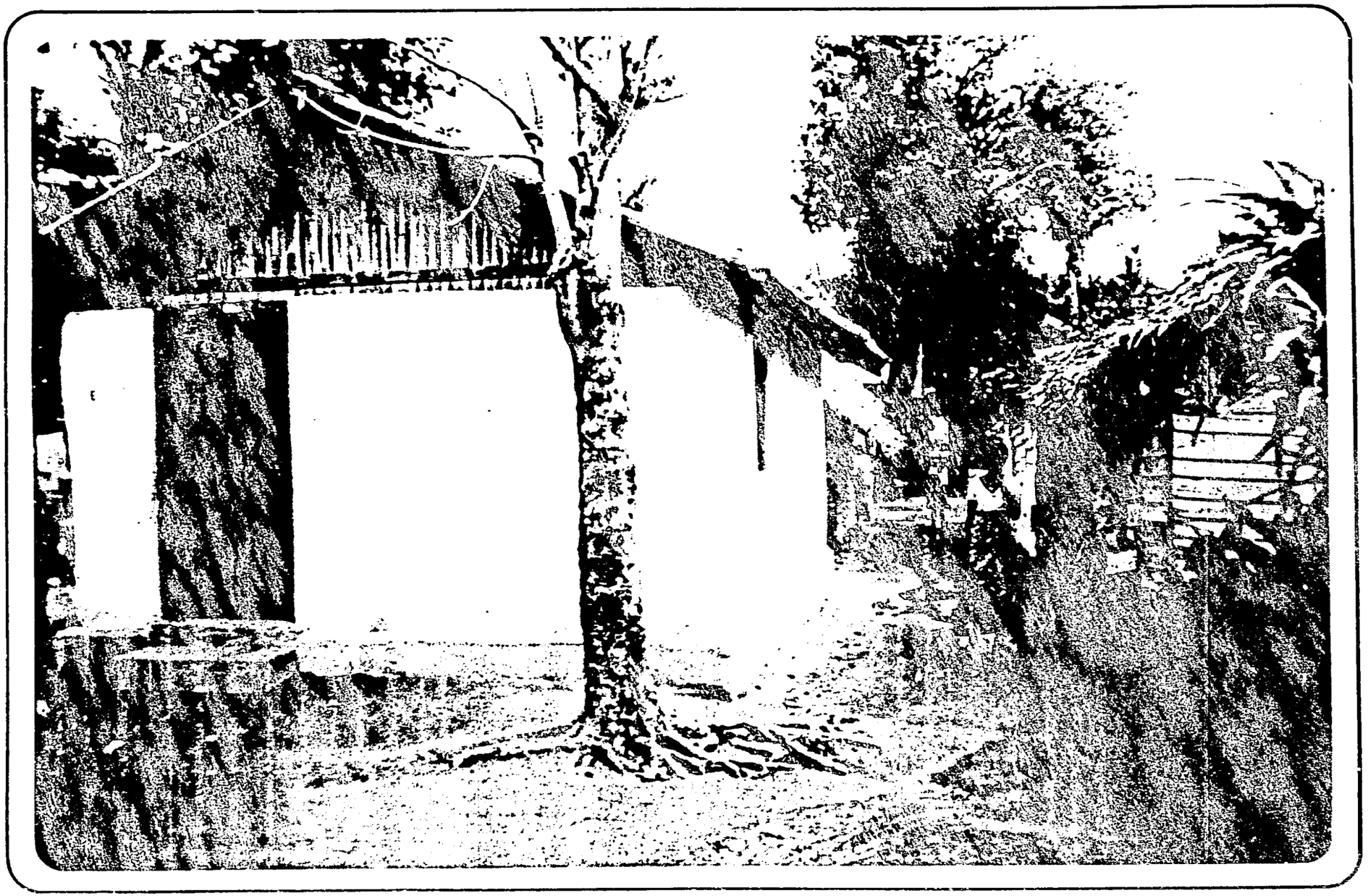


Photo IV - 12 Newly completed unit of locally produced materials.

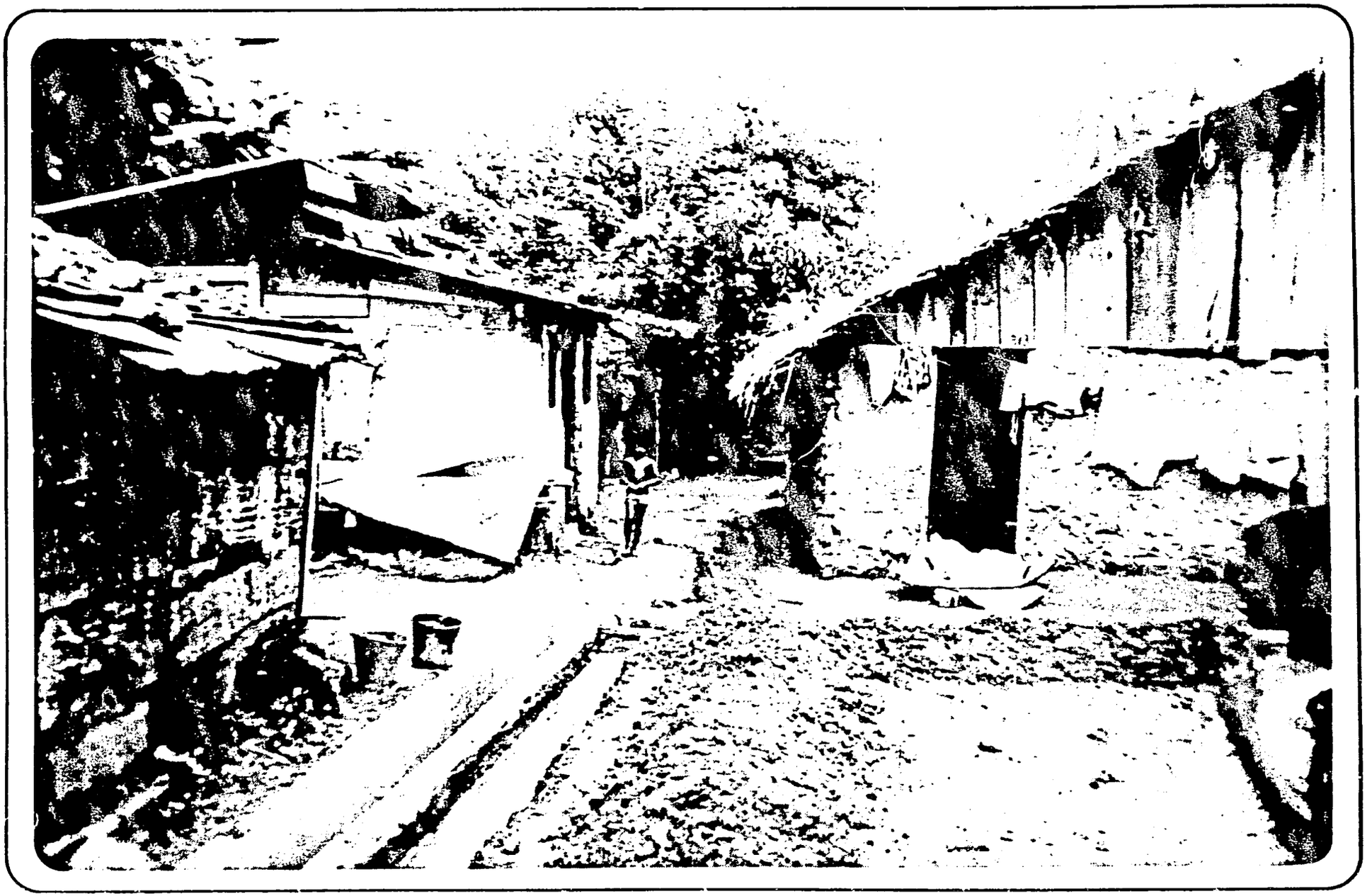


Figure IV-E-13 Self-Help Infrastructure Improvement.

5. Building and Land Development: Standards and Codes

In many countries the existence of rigid and outmoded building codes are a major obstacle to construction of low-income housing. This is not the case in Sri Lanka, as the present codes are relatively innocuous, and the new ones being drafted specifically recognize reality by defining three distinct categories of structures: those subject to moderate controls, the standard housing and low-rise development; those requiring special regulations including high-rise structures and certain special uses; and a third category, low-income housing, where minimal governmental regulations are appropriate in order not to preclude upgrading of existing slum and shanty areas. Although the revised zoning and building regulations do not appear to present an obstacle to low-cost housing, design standards are causing problems. The real constraint, thus, appears to be acceptable norms for design of infrastructure and buildings. While no regulations force the use of these standards, common practice, the attitudes of design professionals, and the prejudices of officials serve to raise the cost of projects far beyond minimal standards required for health and safety. The most conspicuous case is over-design of one and two story structural masonry walls and foundations as well as the excessive use of portland cement for mortar and surface coating when lesser grades would serve equally well. The level of infrastructure included in the direct construction projects is also grossly over-designed for low-cost housing schemes. Some are excessive even if the residents were likely to own automobiles, washing machines and refrigerators. At the opposite end are examples of low-level infrastructure upgrading where lack of maintenance or inappropriate initial design resulted in total dysfunction within a few months of completion. There are also ASH programs where housing is being built to a relatively high standard in areas with virtually no infrastructure or services. A better match is needed between building design and anticipated demand for supportive infrastructure and services.

6. Building Materials

A survey of the building industry in Sri Lanka was conducted in the mid-1970's and published in the July 1976 issue of the journal, Engineer. This study found that building materials, excluding trade and transport, accounted for nearly 45% of the value of construction

output. Almost all building materials at that time were locally produced. Cement, steel products, and asbestos-cement products were produced in modern industrial factories. Items such as paints, varnish, roofing tiles, and electrical fittings were produced in modern medium-scale production units, mostly in the Colombo District. They numbered about 200 at that time.

Indigenous building materials were produced in traditional small-scale units. The total number of such establishments was around 5,000 in 1971. The largest groups were bricks (3,000), timber saw mills (650), lime kilns (600), brassware (300), and roofing tiles (250). Using value as an indicator, almost 45% of the building materials consumed were provided by the modern industrial sector, while the traditional sector provided around 35%. The balance was provided by the medium and small-scale modern units.

The building material sector was estimated to provide 3-4% of all employment in the country with the bulk of this employment (nearly 70%) being within the traditional sector. Different building materials absorb different resources in their production. These are shown in Table IV-12 from the article in Engineer.

Wide differences are noticeable in labor employed, in machinery and tools used per worker, in foreign exchange content, etc. Figure IV-13 from the same article illustrates the significant relationship between labor and absorption in production and foreign exchange utilization. Generally, the higher the foreign exchange content, the lower the labor requirement in production. Almost a quarter of the cost of production of building materials at that time was in foreign exchange. While this percentage is undoubtedly higher at the present time due to the dramatic increase in construction activity since 1977 and the need for imported materials to supplement local production, it should be noted that most materials used in low-cost housing construction such as bricks, sand, country tiles and lime have no foreign exchange content.

An update of the 1976 study would probably not reveal a major increase in local building material production but would certainly give a different perspective on local versus imported materials and on the foreign exchange drain caused by this shift. Cement provides a good indicator of what has happened to construction activity since 1977 and the lag in local building material production. In 1978 Sri Lanka was self-

TABLE IV-12

Table I — Labour, capital and foreign exchange resources used in production of selected building materials (1973)

		No. of establishments surveyed	Employment (direct) in Rs. 1 m worth of production (No. of persons) (1)	Total employment in Rs. 1 m. production (No. of persons) (2)	Gross capital assets per worker (market value) Rs.	Machinery and tools per worker (market value) Rs.	Foreign exchange content in production cost (3) %	Capacity utilization %
	Traditional and small-scale units							
1.	Bricks	37	1,120	1,220	700	10	0	67
2.	Sand	13	850	980	400	13	0	44
3.	Country tiles	4	850	960	500	6	0	63
4.	Cadjan (thatch)	5	800	1,140	400	1	0	44
5.	Aggregate							
	(a) Manual quarry	2	560	—	1,300	110	10	81
	(b) Mechanical crusher	6	110	440	8,400	4,000		14
6.	Lime	17	240	530	1,600	40	0	50
7.	Brassware	19	140	210	1,400	700	25	53
8.	Flat tiles	5	140	500	6,400	2,500	10	65
9.	Drainage fittings	15	100	n.a.	7,300	3,700	40	65
	Modern Industrial Units							
10.	Paint, varnish, distemper, etc. ...	9	14	n.a.	26,000	14,000	60	31
11.	Steel	1	16	22	59,000	29,000	55	41
12.	Asbestos cement products	2	16	23	12,000	5,500	40	68
13.	Cement	1	26	29	93,000	46,000	204	67
14.	Hardware (modern industrial sector) ...	1	100	n.a.	25,000	20,000	50	35

1. Includes seasonal and temporary labour in the case of traditional materials. Only employment in the building material production unit is included.

2. Covers employment (permanent, seasonal and temporary) in—

   (a) production and supply of raw materials and other services to (b), and
   (b) building materials production units.

   These estimates are very crude, as they are based on a few establishments only in each case.

3. Approximate.

4. For the year 1974, foreign exchange (without fees) in furnace oil contributes most. This percentage would have gone up in 1975, with further increases in price of furnace oil in late 1974 and in 1975.

Note: Most of the data were obtained from a Survey of the Building Materials Industry in the Colombo district in 1973. This survey was organised by the Programming Division of the Ministry of Housing and Construction, and financed by the Building Materials Corporation.

Source: Engineer, 1976.

Figure IV-13

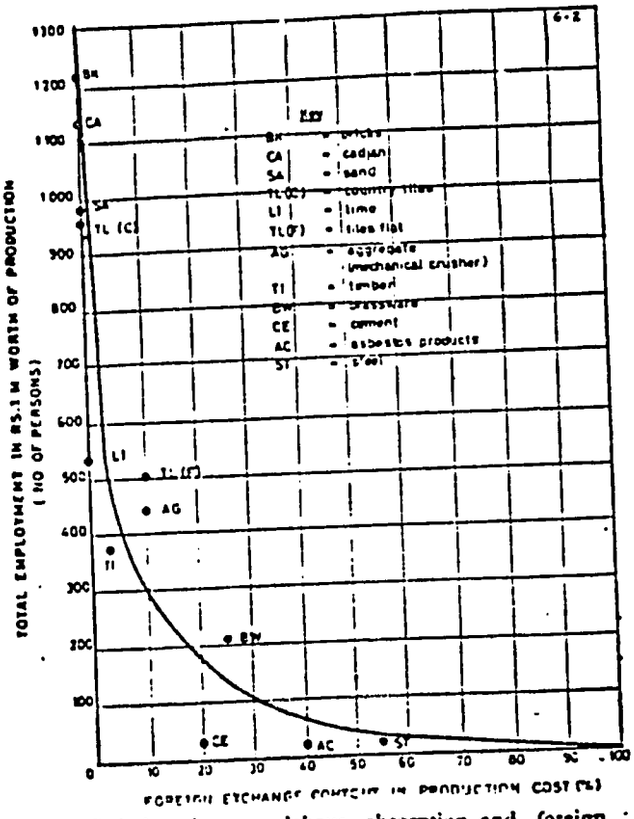


Fig. Relation between labour absorption and foreign exchange utilisation

Source: Engineer, 1976.

sufficient in cement with 45,000 tons per month, now 200,000 tons per month must be imported to meet current demands. The Building Materials Corporation is charged with filling this gap and is doing an admirable job. Materials are not in short supply due to an aggressive management policy and effective leadership at BMC. Since 1978 the costs of building materials have soared, however, primarily due to greater importation. Table IV-14 indicates the extent of this escalation for selected materials. Cement prices, for example, nearly doubled between 1978 and 1980. This occurred when the price of domestically produced cement was raised to match the cost of imported cement, a measure intended to stimulate local production.

The dramatic increases in construction costs experienced in the past two years have caused a near crisis at the MLGHC as the goal of 100,000 new housing units seems to be in jeopardy unless cost inceases can be restrained and lower cost solutions developed.

Technical modifications to design and building standards could enable lower cost solutions, but other measures are required to restrain increases in the cost of materials. The principal method is to increase local production and reduce imports. A committee was established to recommend specific actions. In February 1980 the committee issued an Interim Report on Construction Materials (see Annex XI) which project needs for certain materials and suggests methods of meeting these needs. The GSL has mobilized its response to this interim report by assigning responsibility for implementing specific recommendations to appropriate Governmental agencies. For example, the Ministry of Agriculture has been assigned the responsibility of providing specified quantities of sand needed for construction.

The Building Materials Development Corporation (BMDC) also offers a vehicle for stimulating local production. The BMDC has established several small plants, but at the present time, with only Rs 10 million, lacks sufficient capital to have a major impact on production.

The institutional vehicle does exist, however, and the man heading it, who also heads BMC, is both an aggressive and creative manager. With sufficient resources and a mandate to stimulate local production, particularly of traditional labor-intensive building

TABLE IV-14

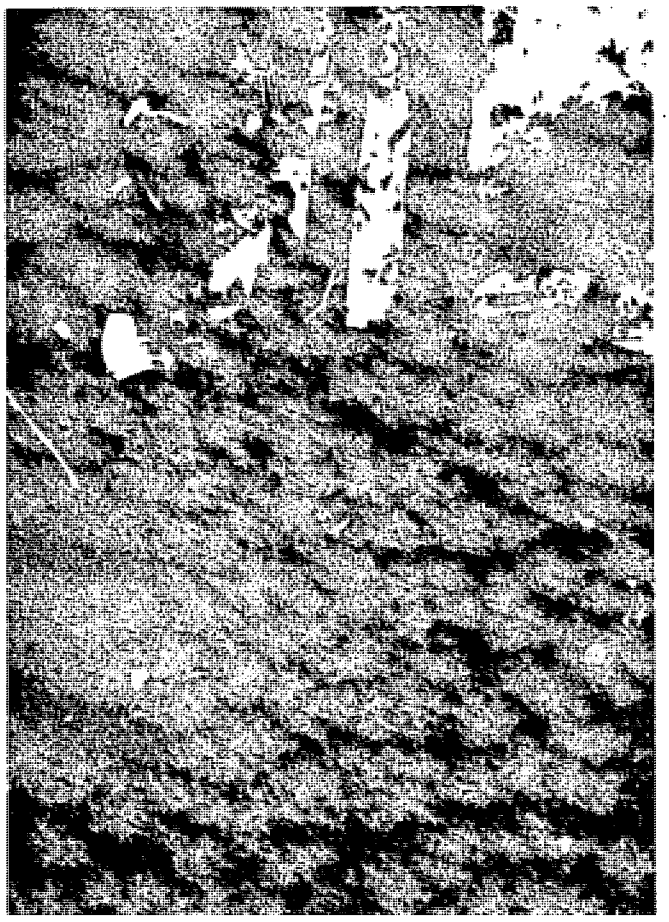
COST INDICES FOR SELECTED BUILDING MATERIALS

1969 = 100

No.	Item	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980 Jan-June
1.	Cement	100.0	100.0	100.0	111.1	164.4	164.4	164.4	164.4	199.1	291.7	592.0
2.	Steel (M. S. Bars)	106.3	116.8	138.8	161.4	279.5	261.1	261.1	255.1	273.6	458.1	484.5
3.	Bricks (Hand moulded)	94.4	88.9	88.9	124.4	155.6	155.6	155.6	155.6	268.2	285.0	396.2
4.	Asbestos Sheet Corrugated	112.5	108.8	111.3	143.8	212.6	253.8	295.1	286.3	326.9	411.3	570.0
5.	Timber (Sawn)	100.0	100.0	100.0	101.2	129.0	129.0	129.0	129.0	216.7	377.6	634.4
6.	Metal (3/4")	100.0	100.0	100.0	100.0	120.0	124.0	148.0	168.5	338.3	533.2	593.3
7.	P.V.C. Pipes (3/4")	113.7	121.9	153.4	227.4	267.1	237.0	237.0	284.1	362.3	459.5	520.5

Source: Statistical Bulletin on Housing and Construction, Program Division, Ministry of Local Government, Housing and Construction. Vol. 8, No. 1, 1980.

Small-scale local industries are engaged in the production of building materials in Sri Lanka. Here, "2X4's" for roofing are split from palm logs, and dried prior to sale.



materials, BMDC could undoubtedly slow the spiraling costs of construction materials in a period of a few years.

Transportation is increasingly a factor in the cost of building materials. Again, this is due primarily to dependence on imported materials or on standardized materials manufactured in Colombo rather than locally produced, traditional materials. The use of concrete block walls and cement asbestos roofing is increasing in all government programs, wheras local clay throughout much of the country is well suited for making brick and roofing tile, laterite soils suitable for building blocks are commonly found and rammed earth blocks can be made in almost any region with a Cinva-Ram block machine or by adding a small amount of cement. The basic answer to rising costs of construction materials is to be found in greater diversification.

7. Construction Manpower

There is apparent agreement among governmental agencies and private contractors that a shortage exists of carpenters, masons, bar benders, earth moving machinery operators and other skilled workers needed for the expanded construction program now under way in Sri Lanka. No one seems to know the present number of people involved in any of these trades, but projections have been made of required numbers based on the level of construction activity projected. Table 1 on page 7 of the Study of Construction Agencies Interim Report dated February 1980 (See Annex XII) lists manpower projections for the period 1978 through 1982. It is reasonable to assume that the numbers of tradesmen projected for 1980 actually exist, as the projected level of construction activity has certainly been achieved. In addition, despite continual references to shortage of skilled tradesmen and the continuous departure of all levels of construction manpower for high paying jobs in the Middle East, new job sites seem to find sufficient manpower at the present time, albeit at an increased cost. Despite some skepticisms as to the severity of manpower shortage, it is undoubtedly wise to initiate efforts to train tradesmen, including the establishment of a training institute and a required apprenticeship program such as is proposed in the Interim Report as the need for such tradesmen will continue to rise for the forseeable future. Sections 2 and 3 in the report (see Annex XII) outline recommendations to meet these needs.

8. Contractors

It has been estimated that prior to 1970, between a quarter and a third of all construction was handled by public sector organizations. Some idea of the diversity of private sector firms can be obtained by reviewing the figures of those who were registered with the Public Works Department in 1970. Any contractor registered with a capacity above Rs 450,000 was required to have a qualified engineer on the staff.

Contract Capacity	Number of Firms
Below Rs 450,000	328
Rs 450,000 to Rs 800,000	17
Rs 800,000 to Rs 1.5 m	10
Above Rs 1.5 m	12
	367

In addition, there were 15,000-20,000 labor contractors doing private housing work. During the 1970's most construction was done by the direct labor system through public sector agencies. In 1978 there were 40 contractors registered with the Building Department. While this number is increasing, no concerted effort has been made to register contractors or to assist in rebuilding the private sector construction industry. Section 4 of the Interim Report on Construction Agencies (see Annex XII) outlines the need for technical help to private contractors. Section 5 recommends a systematic registration and classification program. Section 6 deals with problems associated with bonding and credit, while Section 7 recommends changes in the tendering and contracting system. Section 8 outlines the need for assistance with obtaining costly construction equipment, and Section 9 discusses problems associated with the use of foreign contractors. While there are other sections in this report, the ones referenced here should be read and considered a part of this analysis of the construction sector.

F. Environment

1. Environmental Issues

(a) Natural hazards - Flooding and drought occur in the tropical island because it has a climate which alternates between monsoons and dry seasons. Cyclonic storms, which reoccur on the average of one major storm every fifteen years, have historically struck the east coast and moved across the northern

area. Beach erosion is a continual process which affects the narrow coastline strip. Dissolved limestone rock formations in the Jaffna region are potentially hazardous because of unstable ground conditions.

(b) Man-made environment - The urban environment of the low-income population is characterized by high population densities, low-quality shelter, deficient infrastructure and community services, and dangerously unhealthy conditions. These factors, when added together, compel the conclusion that the human environment exhibits critical needs for its reconstruction and restoration to a superior level.

The rural environment has a different set of problems, less severe in intensity than that of the urban environment. In particular distinction with the urban setting, population density and shelter usage/quality factors are less significant preoccupations in the rural environment.

2. Environmental Legislation and Institutions.

(a) Existing and Pending Policy - A new environmental bill has recently been passed. For the first time, the Government is to create a Central Environmental Authority (CEA). This Authority is to be an advisory committee attached directly to the Prime Minister's office. An Environmental Council, with members from every Ministry, is to be appointed by the Prime Minister to become the functional part of the CEA. This council would likewise be an advisory body.

The line Ministries of the government will continue to exercise operational authority over implementation of any advisory opinions issued by the new environmental organizations.

At the current time, environmental and scientific concerns are distributed among a number of organizations and agencies. Mapping, meteorology, geology, soils, forestry and wildlife all are covered by their own agencies. Confrontations with development-oriented projects do occur, and are frequently resolved primarily on development grounds. The National Science Council provides limited financial support for research and advises at the national level on science and technology.

It is presently unclear exactly what the CEA would do, but the enabling legislation has mapped out an ambitious and comprehensive environmental organization. Each district of the country is to have a District Environmental Agency, in order to carry out the policies and programs of the CEA. High on the priorities of the CEA is a land use scheme for inventory, classification and proposals for land and resource utilization. This scheme would be prepared with the assistance of the Ministry of lands and Land Development, thereby indicating the prominent role this Ministry is to play.

(b) Current Regulations - The new environmental bill is very general in that no standards (or how standards should be achieved and implemented) are mentioned. This bill does not refer to housing specifically, but generally describes what aspects of the environment should be controlled. It is expected that in 1981, the CEA will develop specific compliance criteria. One of its responsibilities will be the specification of environmental compliance requirements for housing.

All regulatory agencies are currently contained within existing ministries. Environmental standards are still based on older legislation and procedures which are fragmentary. Manpower and centralized administration are lacking, so that monitoring and enforcement are performed on a small scale. In addition, environmental factors have not formed a very weighty part of public or private project execution and evaluation.

ANNEXES

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- Table 2 — Major Urban Areas of Sri Lanka
- Table 3 — Population of Sri Lanka by Age Groups
- Table 4 — Family Information by Income Groups
- Table 5 — Income Receivers - Distribution by Sectors
- Table 6 — Income Distribution, 1973
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Annex II — Tables extracted from 1973 Survey of Sri Lanka's Consumer Finances

- Table 1 — Sampled Households, Spending Units, and Income Receivers by Size of Household
- Table 2 — Income Receivers - Distribution of Total and Average Income, All Island
- Table 3 — Income Receivers - Distribution of Total Income by Sectors
- Table 4a — Income Receivers - Distribution of Money Income, Income in Kind, and Total Income by Sectors and All Island
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Annex III — Excerpt from Sri Lanka Gazette relating to Ministry of Local Government, Housing and Construction Functions

Annex IV — Excerpt from Government of Sri Lanka Public Investment Plan, 1980-84

Annex V — Excerpt from Government of Sri Lanka Project Proposals for the Sri Lanka Aid Group Meeting, July 1980.

Annex VI — Tables extracted from A Review of Sri Lanka's Housing Problems and Policies, by G. T. Kingsley, Aug., 1970; and from the Marga Institute's, Housing in Sri Lanka.

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- Table 2 — Families, Households and Floor Space
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Annex VII — Organizational Charts

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2. National Housing Development Authority
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Annex XI — Study of Selected Building Materials, Urban Development Authority, July, 1980

Annex XII — Study of Construction Agencies, UDA, February 1980

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Annex XIV Sample Serviced Plot Layouts

ANNEX I

Population, Income, and Employment Tables

Table 1.....Population of Declared Urban Areas
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Table 1

POPULATION OF DECLARED URBAN AREAS

(000's)

Colombo	1,300.0
Kandy	93.3
Kurunegula	24.4
Galle	71.3
Kalutara	28.6
Jaffna	107.2
Ratnapura	14.4
Badulla	35.5
Kegalle	13.3
Matara	36.6
Nuwara-Eliya	17.3
Anuradhapura	34.7
Puttalam	18.2
Hambantota	6.9
Matale	30.1
Kalmunai	19.2
Batticaloa	36.7
Trincomalee	40.6
Polonnaruwa	9.7
Mulaitiwa	4.9
Mannar	11.1
Monaragala	5.1

Source: Urban Development Authority, undated brochure.

TABLE 2

MAJOR URBAN AREAS IN SRI LANKA

	1946	1971	Population increase	Index of growth rate (1946=100)
Colombo	362,074	562,160	200,086	155.3
Dehiwela-Mt.Lavinia	56,881	154,785	97,904	272.1
Jaffna	62,543	107,668	45,125	172.1
Moratuwa	50,698	96,489	45,791	190.3
Kandy	51,266	93,602	42,336	182.5
Kotte	40,218	92,042	51,824	228.8
Galle	49,009	72,721	23,712	148.3
Negombo	32,479	57,115	24,636	175.8
Trincomalee	32,507	41,784	9,277	128.5
Batticaloa	13,037	36,761	23,724	281.9

Source: United Nation Development Programme: Colombo Metropolitan Region, Regional Structure Plan, April, 1978, page 21.

TABLE 3

POPULATION OF SRI LANKA

in thousands

Item	1972		1973		1974		1975		1976		1977		1978		1979*	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1.1 Age Groups																
0 — 4	857	830	872	846	885	858	900	871	914	886	929	900	945	918	964	936
5 — 9	859	835	874	850	886	863	901	876	915	891	930	905	947	922	965	941
10 — 14	832	799	847	813	859	825	874	838	887	852	902	866	917	882	935	900
15 — 19	698	680	711	692	721	703	733	713	744	726	757	737	769	751	784	766
20 — 24	648	640	660	651	669	661	681	671	692	682	703	693	714	707	729	721
25 — 29	485	482	494	490	501	497	510	505	518	514	526	522	535	532	545	542
30 — 34	383	357	390	363	395	369	402	374	408	380	415	387	422	394	430	402
35 — 39	372	363	378	370	384	375	390	381	397	387	403	394	410	402	418	410
40 — 44	318	276	324	281	329	285	335	290	340	294	345	299	351	304	358	310
45 — 49	293	259	299	263	305	265	308	271	313	276	318	280	323	286	330	292
50 — 54	230	194	234	197	238	200	242	203	245	206	249	210	254	214	259	218
55 — 59	195	159	198	162	201	165	204	167	208	170	211	173	215	176	219	180
60 — 64	153	119	155	121	158	123	160	125	163	127	165	129	169	132	172	134
65 — 69	123	101	125	103	127	104	129	105	131	107	133	109	136	111	138	113
70 — 74	91	71	93	72	94	74	95	75	97	76	99	77	99	79	102	80
75 — 79	39	37	40	37	41	37	41	38	42	39	44	40	43	39	44	40
80 — 84	25	22	25	23	25	24	26	24	26	24	27	25	27	25	28	25
85 and over	18	18	19	19	19	19	19	19	20	20	20	20	20	20	21	20
1.2 Total	6,619	6,242	6,738	6,353	6,837	6,447	6,950	6,546	7,060	6,657	7,176	6,766	7,296	6,894	7,441	7,030
1.3 Total Population (Mid Year)	12,861		13,091		13,284		13,496		13,717		13,942		14,190		14,471	

* Provisional
M = Male
F = Female

Source: Central Bank of Ceylon, Statistics Department: Economic and Social Statistics of Sri Lanka, Vol. II, No. 2, December, 1979, page 16.

FAMILIES AND MEMBERS PER HOUSEHOLD, MEMBERS PER FAMILY, AVERAGE FAMILY SIZE, URBAN/RURAL
1973

Household Income per Month		Avg. # of Families per Household	Avg. # of Members per Household	Avg. # of Members per Family	% of Urban Sample	% of Rural Sample	Weighted Share of Average (Urban)	Weighted Share of Average (Rural)
							Relative to Members per Family	
Under Rs.200	U	1.19	5.34	4.49	29.61		1.33	
	R	1.20	5.02	4.18		43.60		1.82
Rs. 200-399	U	1.30	6.63	5.10	42.41		2.16	
	R	1.14	6.48	5.68		39.36		2.24
Rs. 400-599	U	1.16	7.59	6.54	15.03		0.98	
	R	1.18	7.88	6.68		10.24		0.68
Rs. 600 +	U	1.21	6.29	5.20	12.95		0.67	
	R	1.20	4.76	3.96		6.70		0.27
							5.14	5.01

SOURCE: Compiled from data in Housing in Sri Lanka, Marga Institute, Colombo, 1976 pages 205 and 211.

TABLE 4

TABLE 5

Distribution of Income Receivers by Monthly Income - 1978

(1978 - last quarter data)

Income Receivers - Distribution of Total Income for One Month
By Sectors

Income Group of Income Receivers (Rs. for 1 month)	URBAN No.	URBAN Income (Rs.)	RURAL No.	RURAL Income (Rs.)	ESTATE No.	ESTATE Income (Rs.)	ALL ISLAND No.	ALL ISLAND Income (Rs.)
0 - 25		25		200		45		270
26 - 50	5	54	38	1466	3	100	46	1620
51 - 75	13	866	46	3022	8	513	67	4401
76 - 100	17	652	71	6425	15	1357	93	8434
101 - 125	17	1930	54	6137	23	2633	94	10700
126 - 150	18	2508	89	12467	34	4648	141	19623
151 - 175	13	2118	88	14357	32	5244	133	21719
176 - 200	21	3962	84	15855	36	6720	141	26537
201 - 250	40	8974	126	28591	72	16079	238	53644
251 - 300	36	9812	121	33343	59	16263	216	59418
301 - 350	29	9459	116	37916	38	12310	183	69685
351 - 400	42	15936	134	50619	16	5946	192	72501
401 - 450	44	18651	100	42349	10	4200	154	65200
451 - 500	21	12792	101	48036	13	6089	141	66922
501 - 600	62	43297	190	104378	10	5543	262	144218
601 - 700	55	35462	131	85122	3	1959	189	122543
701 - 800	42	31305	106	79307	3	2139	151	112751
801 - 900	26	22144	48	40889	2	1652	76	64685
901 - 1000	32	30318	39	37110	2	1909	73	69337
1001 - 1200	30	32859	63	69060	1	1052	94	102971
1201 - 1400	21	27300	41	52361	1	1226	63	80887
1401 - 1600	16	23839	26	38242			42	62081
1601 - 1800	17	28213	12	20556			29	48769
1801 - 2000	9	17304	16	30349			25	47653
2001 - 2500	11	25002	9	20176			20	45178
2501 - 3000	3	8394	10	27251			13	35645
Over - 3000	22	146970	14	117771			36	264741
TOTAL	658	551151	1873	1023355	381	97627	2912	1672133

Source: Central Bank of Ceylon (see explanatory note in text)

TABLE 6

PERCENTAGED DISTRIBUTION OF SPENDING UNITS
BY MONTHLY INCOME, 1973

	Total Sri Lanka	Urban
Rs. 0 - 100	6.9	6.3
Rs. 101 - 200	27.3	18.1
Rs. 201 - 300	29.0	23.2
Rs. 301 - 400	16.5	19.1
Rs. 401 - 500	8.4	11.1
Rs. 501 - 600	4.4	7.6
Rs. 601 - 700	2.5	4.2
Rs. 701 - 800	1.4	2.4
Rs. 801 - 900	1.0	2.0
Rs. 901 - 1,000	0.6	1.4
Rs. 1,001 - 1,250	0.8	1.5
Rs. 1,251 - 1,500	0.4	1.0
Rs.1,501 and above	0.8	2.1
Total	100.0	100.0

Source: Kingsley, G. Thomas : A Review of Sri Lanka's Housing Problems and Policies August 1978, page 46.

TABLE 7

EMPLOYMENT STATUS AND NATURE OF EMPLOYMENT OF HOUSEHOLD MEMBERS

Nature of employment		Income Class								Totals
		Under Rs.200		Rs.200-Rs.399		Rs.400-Rs.599		Rs.600 & over		
		U	R	U	R	U	R	U	R	
Total Number of occupants		1063	1862	1890	2170	767	693	547	272	9264
Total Number of employed occupants		201	497	397	589	187	194	152	126	2343
Percentage of employed occupants		18.91	26.69	21.01	27.14	24.38	27.79	27.79	46.32	25.29
Executive	No.	-	-	-	-	2	4	8	4	18
	%	-	-	-	-	1.07	2.06	5.26	3.18	0.77
Service employment	No.	12	18	45	79	39	56	58	53	360
	%	5.97	3.62	11.34	13.41	20.86	28.87	38.16	42.06	15.37
Clerical	No.	7	1	36	16	24	12	35	4	135
	%	3.48	0.20	9.07	2.72	12.84	6.19	23.03	3.18	5.76
Manual Workers	No.	134	293	213	220	85	41	21	11	1018
	%	66.67	58.95	53.65	37.35	45.46	21.13	13.82	8.73	43.45
Agricultural	No.	6	117	30	167	12	59	6	33	430
	%	2.99	23.54	7.56	28.35	6.42	30.41	3.95	26.19	18.35
Other self-employed	No.	42	68	73	107	25	22	24	21	382
	%	20.90	13.68	18.39	18.17	13.37	11.34	15.79	16.67	16.30

Source: MARGA Institute: Housing in Sri Lanka, Colombo, 1976, page 207.

TABLE 8

COMPOSITION OF HOUSEHOLD INCOMES

Sources of Income of Households	Income Group							
	Rs. 200		Rs.200-Rs.399		Rs.400-Rs.599		Rs.600 & over	
	U	R	U	R	U	R	U	R
Salaries & Wages	73.63	75.37	77.50	61.20	86.20	65.18	81.32	67.28
Pension/Charity Allowance	1.11	0.98	4.04	2.07	3.75	2.30	2.68	2.54
Rents	2.06	0.56	1.19	0.30	1.00	1.46	0.55	3.68
Trade & Vending	5.00	8.05	1.09	4.93	0.85	0.51	0.34	3.57
Private business other than Trade or Vending	-	0.20	3.06	0.93	4.59	3.35	5.09	1.23
Cottage Industries	0.92	0.25	0.29	0.27	1.07	-	-	-
Agricultural Activities	1.34	7.56	4.69	22.44	0.92	19.24	2.63	17.20
Livestock Farming	0.07	0.71	0.51	1.91	0.16	0.58	6.30	0.81
Unspecified incomes	9.95	1.85	3.20	1.81	1.14	3.68	4.22	1.95
Non-monetary incomes	5.15	4.27	3.83	4.11	0.24	3.66	1.95	3.66
TOTAL	100	100	100	100	100	100	100	100

SOURCE: From Marga Institute: Housing in Sri Lanka, Colombo, 1976 page 208.

ANNEX II

Tables extracted from 1973 Survey of Sri Lanka's Consumer Finances

Table 1.....Sampled Households, Spending Units, and Income Receivers by Size of Household
Table 2.....Income Receivers - Distribution of Total and Average Income, All Island
Table 3.....Income Receivers - Distribution of Total Income by Sectors
Table 4a....Income Receivers - Distribution of Money Income, Income in Kind, and Total Income by Sectors and All Island
Table 4b....Income Receivers - Distribution of Money Income, Income in Kind, and Total Income by Sector and All Island
Table 5.....Income Receivers - Income by Type of Industry, Property Income, Transfers, etc., by Sector and All Island
Table 6.....Income Receivers - Distribution of Income by Type of Income, All Island
Table 7.....Spending Units - Distribution of Total Income by All Island
Table 8.....Average Expenditures on Selected Items, by Income Groups and All Island

TABLE 1

Sampled Households, Spending Units and Income Receivers by Size of Household – By Sectors, All Island

Size of Household	URBAN			RURAL			ESTATE			ALL ISLAND		
No. of Persons	No. of Households	No. of Spending Units	No. of Income Receivers	No. of Households	No. of Spending Units	No. of Income Receivers	No. of Households	No. of Spending Units	No. of Income Receivers	No. of Households	No. of Spending Units	No. of Income Receivers
1	32	32	32	176	176	176	20	20	20	228	228	228
2	71	72	80	251	258	279	42	42	65	364	372	424
3	91	96	113	374	379	439	78	81	140	543	556	692
4	146	155	180	522	534	627	98	99	205	766	788	1,012
5	130	133	168	524	542	659	79	79	185	733	754	1,012
6	106	119	142	489	507	669	62	63	156	657	689	966
7	119	134	175	428	460	590	59	59	169	606	653	934
8	83	96	131	330	353	478	32	33	111	445	492	720
9	64	72	99	238	251	357	22	23	78	324	346	534
10	40	49	66	151	163	215	17	17	73	208	229	354
11	23	31	45	77	91	132	13	13	55	113	135	232
12	12	16	22	40	52	76	6	6	28	58	74	126
13	8	11	20	14	23	27	—	—	—	22	34	47
14	5	6	8	7	8	13	2	2	10	14	16	31
15	—	—	—	4	4	5	—	—	—	4	4	5
16	—	—	—	1	1	4	—	—	—	1	1	4
17	1	1	4	—	—	—	—	—	—	1	1	4
19	—	—	—	1	1	1	—	—	—	1	1	1
Total	931	1,023	1,285	3,627	3,803	4,746	530	537	1,295	5,088	5,363	7,326

TABLE 2

Income Receivers – Distribution of Total and Average Income for Two Months – All Island

Income Group of Income Receivers (Rs for 2 months)	Number of Income Receivers	Total Income for 2 months (Rs)	Average Income for 2 months (Rs)	Number of Income Receivers		Income of Income Receiver	
				As percent of Total	Cumulative percent	As percent of Total	Cumulativ percent
0 – 25	33	536	16·24	0·45	0·45	0·02	0·02
26 – 50	98	3,982	40·63	1·34	1·79	0·12	0·14
51 – 75	132	8,516	64·52	1·80	3·59	0·26	0·40
76 – 100	273	24,460	89·60	3·73	7·32	0·73	1·13
101 – 125	300	34,607	115·36	4·10	11·42	1·04	2·17
126 – 150	397	55,721	140·36	5·42	16·84	1·67	3·84
151 – 175	336	54,953	163 55	4·59	21·43	1·65	5·49
176 – 200	355	66,996	188·72	4·85	26·28	2·01	7 50
201 – 250	544	124,156	228·23	7·43	33·71	3·72	11·22
251 – 300	608	168,966	277·90	8·30	42·01	5·07	16·29
301 – 350	484	157,250	324·90	6·61	48·62	4·72	21·01
351 – 400	517	194,778	376·75	7·06	5[illegible]·68	5·84	26·85
401 – 450	487	207,593	426·27	6·65	62·33	6·23	33·08
451 – 500	402	191,866	477·28	5·49	67·82	5·76	38·84
501 – 600	689	376,856	546·96	9·40	77·22	11·31	50·15
601 – 700	481	311,911	648·46	6·57	83·79	9·36	59·51
701 – 800	357	266,781	747·29	4·87	88·66	8·00	67·51
801 – 900	223	188,995	847·51	3·04	91·70	5·67	73·18
901 – 1000	141	133,161	944·40	1·92	93·62	3·99	77·17
1001 – 1200	195	212,058	1,087·48	2·66	96·28	6·36	83·53
1201 – 1400	96	124,539	1,297·28	1·31	97·59	3·74	87·27
1401 – 1600	44	66,108	1,502·45	0·60	98·19	1·98	89·25
1601 – 1800	31	52,697	1,699·90	0·42	98·61	1·58	90·83
1801 – 2000	23	43,477	1,890·30	0·31	98·92	1·30	92·13
2001 – 2500	35	78,884	2,253·83	0·48	99·40	2·37	94·50
2501 – 3000	15	41,235	2,749·00	0·20	99·60	1·24	95·74
Over 3000	30	142,383	4,746·10	0·41	100·01	4·27	100·01
Total	7,326	3,333,465	455·02	100·01		100·01	

TABLE 3

Income Receivers – Distribution of Total Income for Two Months – By Sectors

Income Group of Income Receivers (Rs for 2 months)	URBAN		RURAL		ESTATE	
	No.	Income (Rs.)	No.	Income (Rs.)	No.	Income (Rs.)
0 – 25	5	80	19	294	9	162
26 – 50	12	450	65	2,696	21	836
51 – 75	10	629	85	5,599	37	2,288
76 – 100	31	2,787	153	13,729	89	7,944
101 – 125	24	2,769	142	16,521	134	15,317
126 – 150	34	4,914	175	24,902	188	25,905
151 – 175	19	3,129	148	24,234	169	27,590
176 – 200	45	8,497	188	35,679	122	22,820
201 – 250	65	14,926	311	71,353	168	37,877
251 – 300	79	21,987	402	112,065	127	34,914
301 – 350	64	20,832	339	110,425	81	25,993
351 – 400	77	28,987	390	147,015	50	18,776
401 – 450	89	38,056	373	158,954	2[illegible]	10,583
451 – 500	74	35,459	310	147,905	18	8,502
501 – 600	143	78,541	529	288,859	17	9,456
601 – 700	127	82,113	343	222,574	11	7,224
701 – 800	101	75,548	252	188,197	4	3,036
801 – 900	64	54,407	156	132,065	3	2,523
901 – 1000	48	45,411	89	83,973	4	3,777
1001 – 1200	61	67,346	130	140,335	4	4,377
1201 – 1400	41	53,288	52	67,256	3	3,965
1401 – 1600	11	16,662	29	43,648	4	5,798
1601 – 1800	16	27,102	15	25,595	0	0
1801 – 2000	11	20,710	11	20,827	1	1,440
2001 – 2500	12	26,081	20	45,757	3	7,048
2501 – 3000	6	16,619	8	21,657	1	2,929
Over 3000	16	65,660	12	61,721	2	15,002
Total	1,285	812,990	4,746	2,213,895	1,295	306,550

TABLE 4a

Income Receivers – Distribution of Money Income, Income in Kind and Total Income – Sectors and All Island

Income Group of Income Receivers (Rs. for 2 months)	URBAN				RURAL			
	No.	Money Income (Rs.)	Income in kind (Rs.)	Total Income (Rs.)	No.	Money Income (Rs.)	Income in kind (Rs.)	Total Income (Rs.)
0 – 25	5	60	20	80	19	287	7	294
26 – 50	12	450	—	450	65	2,598	98	2,696
51 – 75	10	585	44	629	85	4,610	959	5,569
76 – 100	31	2,368	419	2,787	153	12,047	1,682	13,729
101 – 125	24	2,102	667	2,769	142	13,637	2,884	16,521
126 – 150	34	3,781	1,133	4,914	175	20,392	4,510	24,902
151 – 175	19	2,155	974	3,129	148	17,472	6,762	24,234
176 – 200	45	6,383	2,114	8,497	188	27,062	8,617	35,679
201 – 250	65	11,456	3,470	14,926	311	48,586	22,767	71,353
251 – 300	79	87,418	4,569	21,987	402	77,607	34,458	112,065
301 – 350	64	17,275	3,557	20,832	339	71,244	39,181	110,425
351 – 400	77	23,955	5,032	28,987	390	101,586	45,429	147,015
401 – 450	89	32,071	5,985	38,056	373	110,355	48,599	158,954
451 – 500	74	30,002	5,457	35,459	310	101,783	46,122	147,905
501 – 600	143	65,985	12,556	78,541	529	198,023	90,836	288,859
601 – 700	127	71,076	11,037	82,113	343	160,870	61,704	222,574
701 – 800	101	64,247	11,301	75,548	252	131,473	56,724	188,197
801 – 900	64	47,445	6,962	54,407	156	97,768	34,297	132,065
901 – 1,000	48	40,429	4,982	45,411	89	62,421	21,552	83,973
1,001 – 1,200	61	55,670	11,676	67,346	130	102,391	37,944	140,335
1,201 – 1,400	41	46,265	7,023	53,288	52	52,036	15,250	67,286
1,401 – 1,600	11	14,127	2,535	16,662	29	35,611	8,037	43,648
1,601 – 1,800	16	24,391	2,711	27,102	15	19,937	5,658	25,595
1,801 – 2,000	11	17,743	2,967	20,710	11	16,578	4,249	20,827
2,001 – 2,500	12	23,657	2,424	26,081	20	37,516	8,241	45,757
2,501 – 3,000	6	15,550	1,069	16,619	8	18,501	3,186	21,687
Over 3,000	16	57,556	8,104	65,660	12	49,398	12,323	61,721
Total	1,285	694,202	118,788	812,990	4,746	1,591,789	622,106	2,213,895

TABLE 4b

Income Receivers – Distribution of Money Income, Income in Kind and Total Income for Two Months –Sectors and All Island

Income Group of Income Receivers (Rs. for 2 Months)	ESTATE				ALL ISLAND			
	No.	Money Income (Rs.)	Income in Kind (Rs.)	Total Income (Rs.)	No.	Money Income (Rs.)	Income in Kind (Rs.)	Total Income (Rs.)
0 – 25	9	158	4	162	33	505	31	536
26 – 50	21	787	49	836	98	3,835	147	3,982
51 – 75	37	2,197	91	2,288	132	7,392	1,124	8,516
76 – 100	89	7,527	417	7,944	273	21,942	2,518	24,460
101 – 125	134	14,552	765	15,317	300	30,291	4,316	34,607
126 – 150	185	25,233	672	25,905	397	49,406	6,315	55,721
151 – 175	169	25,760	1,830	27,590	336	45,387	9,566	54,953
176 – 200	122	20,094	2,726	22,820	355	53,539	13,457	66,996
201 – 250	168	28,054	9,823	37,877	544	88,096	36,060	124,156
251 – 300	127	23,984	10,930	34,914	603	119,009	49,957	168,966
301 – 350	81	17,383	8,610	25,993	484	105,902	51,348	157,250
351 – 400	50	12,554	6,222	18,776	517	138,095	56,683	194,778
401 – 450	25	7,287	3,296	10,583	487	149,713	57,880	207,593
451 – 500	18	6,425	2,077	8,502	402	138,210	53,656	191,866
501 – 600	17	7,045	2,411	9,456	659	271,053	105,803	376,856
601 – 700	11	5,996	1,228	7,224	451	237,942	73,969	311,911
701 – 800	4	2,588	448	3,036	357	198,108	68,473	265,581
801 – 900	3	2,151	372	2,523	223	147,364	41,631	188,995
901 – 1,000	4	2,712	1,065	3,777	141	105,562	27,599	133,161
1,001 – 1,200	4	3,495	882	4,377	195	161,556	50,502	212,058
1,201 – 1,400	3	3,344	621	3,965	96	101,645	22,894	124,539
1,401 – 1,600	4	5,039	759	5,798	44	54,827	11,281	66,108
1,601 – 1,800	–	–	–	–	31	44,328	8,369	52,697
1,801 – 2,000	1	1,700	240	1,940	23	35,021	7,456	42,477
2,001 – 2,500	3	5,972	1,074	7,046	35	67,145	11,739	78,884
2,501 – 3,000	1	2,650	279	2,929	15	36,701	4,334	41,035
Over 3,000	2	12,381	2,621	15,002	50	119,335	23,048	142,383
Total	1,285	247,118	59,462	306,580	7,324	2,533,103	[illegible]	[illegible]

TABLE 5

Income Receivers – Income for Two Months by Type of Industry, Property Income, Transfers, Etc. – By Sectors and All Island

(Rupees)

MAIN SOURCE	URBAN		RURAL		ESTATE		TOTAL	
	No.	Income	No.	Income	No.	Income	No.	Income
Agriculture	71	44,556	2376	1,034,770	1235	284,588	3682	1,363,914
Forestry and Logging	—	—	8	3,555	—	—	8	3,555
Fishing	41	20,601	34	18,578	—	—	75	39,179
Plumbago Mining	—	—	12	3,280	—	—	12	3,280
Stone Quarrying, Clay and Sand Pits	1	564	3	816	—	—	4	1,380
Non-Metallic Mining and Quarrying	—	—	8	2,301	—	—	[illegible]	2,301
Food Manufacturing Industries	3	1,507	12	8,210	1	387	16	10,104
Beverage Industries	6	6,447	30	12,740	2	642	38	19,829
Tobacco Manufactures	—	—	34	8,708	—	—	34	8,708
Manufacture of Textiles	26	7,323	73	23,298	—	—	99	30,621
Manufacture of Foot Wear	17	6,939	19	7,227	—	—	36	14,166
Manufacture of Wood and Cork	—	—	26	10,589	1	627	27	11,216
Manufacture of Furniture and Fixtures	23	11,444	86	39,090	1	310	110	50,844
Manufacture of Paper and Paper Products	1	480	—	—	—	—	1	480
Printing, Publishing, etc.	13	12,732	4	2,489	—	—	17	15,221
Manufacture of Rubber Products	—	—	1	150	—	—	1	150
Manufacture of Chemicals	—	—	1	406	—	—	1	406
Manufacture of Products of Petroleum	3	1,380	1	516	—	—	4	1,896
Manufacture of Non-Metallic	2	1,290	32	10,531	—	—	34	11,821
Basic Metal Industries	2	1,088	5	2,194	—	—	7	3,282
Manufacture of Metal Products	1	672	—	—	—	—	1	672
Manufacture of Machinary	—	—	2	720	1	1,039	3	1,759
Manufacture of Electrical Machinary	3	1,440	10	5,941	1	250	14	7,631
Manufacture of Transport Equipment	21	12,613	27	16,384	—	—	48	28,997
Miscellaneous Manufacturing Industries	62	35,554	78	36,451	1	466	141	72,471
Construction	27	13,029	97	39,623	—	—	124	52,652
Electricity, Gas and Steam	11	8,537	3	2,122	—	—	14	10,659
Water and Sanitary Services	5	2,966	3	762	1	286	9	4,014
Wholesale and Retail Trade	192	132,538	284	198,448	7	2,987	483	333,973
Banks and Other Financial Institutions	10	9,770	6	5,475	—	—	16	15,245
Insurance	4	4,398	—	—	—	—	4	4,398
Real Estate	—	—	1	600	—	—	1	600
Transport	100	71,753	171	109,599	5	1,745	276	183,097
Storage and Warehousing	2	1,482	1	450	—	—	3	1,932
Communication	6	3,557	10	7,348	—	—	16	10,905
Government Services	147	128,692	256	159,449	3	3,871	406	292,012
Community Services	104	91,624	219	158,302	2	953	325	250,879
Business Services	30	40,836	22	14,837	—	—	52	55,673
Recreation Services	9	3,129	3	1,712	—	—	12	4,841
Personal Services	204	75,310	504	165,837	15	5,846	723	246,993
Activities not Adequately Described	16	3,219	4	1,232	—	—	20	4,451
Rents	6	2,453	2	669	—	—	8	3,122
Profits and Dividends	2	1,540	27	11,494	—	—	29	13,034
Interest	—	—	1	292	—	—	1	292
Transfer Payments	56	17,967	210	63,378	7	1,440	273	82,785
Pension	50	30,860	40	23,073	12	1,143	102	55,076
Home Consumed own Garden Products	—	—	3	779	—	—	3	779
Other Income	3	1,070	2	1,100	—	—	5	2,170
Total	1,280	811,360	4,751	2,215,525	1,295	306,580	7,326	3,333,465

TABLE 6

Income Receivers – Distribution of Income for Two Months by Type of Income – All Island

(Rupees)

Income Group (Rs. for 2 Months)	No. of Income Receivers	Main Occupation	Sub Occupation I	Sub Occupation II	Rent	Dividends	Interest	Gifts	Pensions	Home consumed own Garden products	Other	Total Income
0 – 25	33	316	—	—	—	—	—	160	60	—	—	536
26 – 50	98	3,140	—	—	3	—	—	720	104	15	—	3,982
51 – 75	132	6,950	59	—	216	52	—	861	62	308	8	8,516
76 – 100	273	21,211	91	6	276	—	—	2,314	74	428	60	24,460
101 – 125	300	29,430	285	10	580	170	—	3,059	39	1,002	32	34,607
126 – 150	397	47,959	455	4	780	110	—	4,826	126	1,401	60	55,721
151 – 175	336	44,043	955	—	1,499	107	—	5,707	170	2,267	205	54,953
176 – 200	355	49,894	2,358	—	1,823	30	99	8,326	634	3,316	16	66,096
201 – 250	544	82,716	4,981	33	4,723	343	40	19,319	733	10,513	255	124,156
251 – 300	608	107,878	6,910	394	7,583	885	160	26,385	3,857	14,362	551	168,966
301 – 350	484	92,545	8,724	468	8,087	713	—	27,237	2,535	16,169	772	157,250
351 – 400	517	118,094	12,935	764	10,660	1,072	—	30,609	2,050	17,558	846	194,778
401 – 450	487	128,348	12,127	684	11,746	1,580	—	31,750	3,840	16,839	679	207,593
451 – 500	402	121,592	13,795	1,452	9,999	881	290	25,471	1,741	15,670	975	191,866
501 – 600	689	240,746	27,912	1,439	20,366	3,724	133	46,896	3,975	29,061	2,604	376,856
601 – 700	481	210,399	16,045	1,842	15,977	4,729	48	38,000	4,132	18,638	2,100	311,911
701 – 800	357	178,719	15,553	1,380	15,978	3,085	90	30,151	2,950	17,640	1,235	266,781
801 – 900	223	127,832	12,060	1,473	9,302	2,293	20	22,410	774	11,209	1,622	188,995
901 – 1,000	141	92,365	6,264	480	6,755	1,600	859	14,203	2,939	6,706	990	133,161
1,001 – 1,200	195	131,900	17,080	1,630	13,383	5,588	25	24,038	3,575	13,119	1,720	212,058
1,201 – 1,400	96	84,113	9,653	—	7,814	1,853	360	11,886	2,488	5,057	1,315	124,539
1,401 – 1,600	44	42,616	5,982	235	5,070	1,730	200	4,711	1,768	2,896	900	66,108
1,601 – 1,800	31	34,371	2,172	—	3,410	1,696	—	5,465	2,396	2,118	1,069	52,697
1,801 – 2,000	23	25,145	3,924	225	3,100	800	—	5,030	2,444	1,883	926	43,477
2,001 – 2,500	35	51,898	7,660	39	5,090	2,650	148	5,411	2,345	2,422	1,201	78,584
2,501 – 3,000	15	28,492	1,470	—	1,450	350	—	5,832	—	1,321	2,320	41,235
Over 3,000	30	89,809	13,912	1,400	10,088	3,800	400	13,991	5,101	2,182	1,700	142,383
Total ..	7,326	2,192,511	203,383	13,958	175,758	39,841	2,872	415,968	50,912	214,101	24,161	3,333,465

TABLE 7

Spending Units – Distribution of Total Income for Two Months

All Island

Income Group of Spending Unit (Rs. for 2 Months)	No. of Spending Units	No. of Income Receivers	No. of Persons	TWO MONTHS		
				Money Income	Income in Kind	Total Income
0 – 25	2	2	7	20	20	40
26 – 50	4	4	4	64	81	165
51 – 75	14	14	25	301	632	933
76 – 100	36	36	57	1,642	1,641	3,283
101 – 125	46	47	86	2,728	2,490	5,218
126 – 150	74	78	149	5,620	4,719	10,339
151 – 175	78	82	167	7,490	5,272	12,762
176 – 200	1[illegible]	122	305	13,753	8,112	21,865
201 – 250	277	305	860	41,123	21,918	63,041
251 – 300	358	407	1,427	67,031	31,893	98,924
301 – 350	374	457	1,671	82,077	39,826	121,903
351 – 400	457	584	2,259	122,675	49,341	172,016
401 – 450	462	594	2,406	140,958	56,124	196,982
451 – 500	389	510	2,049	132,099	53,611	185,710
501 – 600	705	941	4,085	274,115	110,017	384,132
601 – 700	504	742	3,104	247,807	79,820	327,627
701 – 800	379	560	2,495	209,184	73,968	283,152
801 – 900	277	462	1,909	181,348	53,661	235,009
901 – 1,000	170	287	1,156	127,172	33,566	160,738
1,001 – 1,200	237	387	1,639	202,365	56,773	259,138
1,201 – 1,400	136	242	933	145,880	30,293	176,173
1,401 – 1,600	73	127	474	94,217	15,643	109,860
1,601 – 1,800	55	95	361	79,139	13,569	92,708
1,801 – 2,000	33	57	226	53,884	8,710	62,594
2,001 – 2,500	42	65	296	78,674	15,141	93,815
2,501 – 3,000	22	41	144	53,042	7,505	60,547
Over 3,000	43	78	293	168,781	26,010	194,791
Total ..	5,363	7,326	28,587	2,533,109	800,356	3,333,465

TABLE 8

Average Expenditure per Spending Unit for Two Months on Selected Items – By Income Groups - All Island

(Rupees)

Item	Overall Average	Income of Spending Unit for 2 Months								
		0–50	51–100	101–201	201–400	401–800	801–1600	1601–2000	2001–3000	Over 3000
Percentage of Spending Unit in Sample	100·00	0·10	0·90	5·90	27·30	45·50	8·30	10·00	1·20	0·80
A. Food										
Rice – Rationed (Free) ..	38·14	3·83	10·15	15·04	31·23	43·40	47·83	32·84	21·71	15·58
Rationed (Paid) ..	25·50	8·05	4·28	7·76	18·48	28·70	35·05	28·76	30·80	27·37
Unrationed ..	28·98	7·27	6·42	7·87	13·94	28·94	47·51	85·41	97·81	124·45
Wheat Flour	13·74	1·24	2·36	4·51	11·67	16·13	14·74	15·94	9·80	11·64
Bread	13·67	1·39	1·64	5·56	9·86	13·85	20·70	23·78	22·36	29·37
Confectionery	4·48	2·83	1·06	1·03	2·23	4·54	6·83	11·48	15·93	27·58
Other Grain	1·63	—	0·68	0·84	1·97	1·61	1·68	0·87	0·50	—
Meat	6·31	6·00	0·50	1·24	1·86	4·58	12·81	33·28	37·86	64·05
Fish .. .	26·72	12·68	3·69	7·10	14·00	26·93	46·09	63·02	65·65	86·25
Eggs	3·70	—	0·03	0·51	1·06	2·97	7·42	19·40	10·21	29·15
Other Starch Food	9·42	5·04	1·92	3·34	6·71	9·51	13·88	19·81	17·98	23·79
Pulses	5·55	1·41	0·70	1·86	3·69	5·94	8·13	10·01	9·34	11·10
Vegetables	26·32	8·44	6·89	9·37	17·19	26·64	41·02	53·25	54·58	66·19
Condiments	48·99	15·72	10·91	17·48	32·01	50·16	75·31	97·02	101·42	116·87
Coconuts	23·29	5·19	7·39	10·01	17·52	24·56	31·99	38·56	35·56	35·07
Cooking Oil	5·83	1·89	1·37	2·40	3·80	6·30	8·04	10·52	11·95	13·44
Milk	9·08	2·80	0·32	1·26	3·72	8·23	27·64	33·46	34·35	42·67
Milk Products	1·08	—	0·06	0·24	0·26	0·55	2·16	3·60	10·05	25·37
Fruits	3·20	3·07	0·09	0·49	1·06	2·51	6·51	12·20	19·50	25·59
Sugar	21·54	7·03	4·80	7·01	13·50	22·32	33·11	43·50	48·49	55·14
Beverages (Non Alcoholic) ..	8·16	2·57	1·45	3·31	5·52	8·01	12·18	16·44	22·85	27·31
Other Food Items	18·08	8·53	8·25	8·60	8·32	16·69	32·33	36·19	61·00	114·85
Sub Total ..	343·41	104·98	74·96	116·83	219·60	353·07	522·96	689·34	749·70	972·83
B. Clothing										
Clothing	43·81	9·50	2·52	7·09	16·63	36·75	84·41	166·32	227·76	320·23
Footwear	3·21	1·50	0·02	0·13	0·66	2·20	7·20	17·11	22·31	33·77
Sub Total ..	47·02	11·00	2·54	7·22	17·29	38·95	91·61	183·43	250·07	354·00
C. Housing										
Rent, Rates and Repairs ..	42·16	11·83	9·08	13·14	21·07	36·51	73·46	134·58	195·52	273·85
D. Medical										
Indigenous	2·65	—	1·14	0·82	1·55	2·74	4·08	5·61	7·20	7·84
Western . ..	5·97	—	0·28	0·97	2·33	5·31	10·58	23·09	26·42	50·88
Ceremonial (Thovil, Bali) ..	1·39	—	0·52	0·07	0·87	1·03	3·37	2·72	1·02	7·84
Sub Total ..	10·01	—	1·94	1·86	4·75	9·08	18·03	31·42	34·64	66·56
E. Other Goods and Services										
Education	13·56	3·33	0·06	1·41	7·43	10·32	29·10	49·25	97·22	129·67
Personal Spending	8·36	1·83	1·46	2·07	4·24	7·86	14·79	19·96	23·98	52·82
Betel	7·66	1·87	3·39	4·03	6·30	8·59	9·20	6·65	6·11	5·66
Tobacco	13·21	3·27	1·17	4·36	7·49	13·25	22·60	25·10	36·93	31·20
Beverages (Alcoholic) ..	8·06	—	3·84	1·94	3·41	8·22	14·84	13·76	22·34	34·37
Recreation & Entertainment ..	5·26	—	0·08	0·65	1·33	3·79	11·74	24·12	25·93	60·30
Transport & Communication ..	21·02	5·84	0·96	2·97	6·81	15·32	36·10	86·33	127·33	378·84
Servants	4·18	—	—	—	0·13	0·42	7·02	33·64	55·22	195·95
Ceremonial	13·52	—	0·92	1·48	3·52	9·20	24·06	42·33	179·92	177·32
Litigation	2·66	—	—	1·15	1·05	2·53	5·43	5·68	7·39	7·58
Laundry	7·31	3·17	1·48	2·53	4·47	6·87	12·11	17·43	24·61	25·79
Gifts	7·99	10·83	0·70	2·94	2·07	6·20	17·65	22·14	48·94	65·53
Fuel and Light	25·99	6·50	6·88	10·36	18·72	26·18	36·97	49·17	57·87	77·74
Sub Total ..	138·78	36·64	20·94	35·89	62·97	128·75	241·61	395·56	714·79	1,242·77
F. Durable Consumer Goods										
Jewellery	3·76	—	—	0·15	0·16	1·74	7·74	34·03	24·09	97·05
Other	33·78	—	0·22	8·11	22·42	22·53	18·70	93·32	911·63	175·90
Sub Total ..	37·54	—	0·22	8·26	22·58	24·27	26·44	127·35	935·72	272·95
G. Taxes (other than Income Tax) ..	2·92	—	—	0·33	1·14	2·69	4·23	7·22	10·92	51·05
H. Interest on Debt	0·60	—	—	0·02	0·12	0·47	0·74	2·22	6·67	13·60
Total ..	622·44	164·45	109·68	183·55	349·51	583·79	979·08	1,571·12	2,897·03	3,247·56

ANNEX III

Excerpt from Sri Lanka Gazette relating to Ministry of Local Government, Housing and Construction Functions

ANNEX 3

Column I *Departments and Statutory Institutions*	*Column II* *Subjects and Functions*
MINISTER OF HIGHER EDUCATION	
University of Colombo University of Peradeniya	University Education Overseas Scholarships
University of Sri Jayawardenapura University of Kelaniya	Grants to Universities Technical Education
University of Moratuwa University of Jaffna Ruhuna University College University Grants Commission	Polytechnics Technical Education and training in fields of Engineering Training of Engineering Students at Technician and Diploma levels Technical Colleges
Buddhasravaka Dharmapeethaya	Senior and Junior Technical Institutes Training of Technical Teachers Training of Bhikkus and Propagation of Dhamma in Sri Lanka and abr Encouragement of development and research in Buddhism
MINISTER OF LOCAL GOVERNMENT, HOUSING AND CONSTRUCTION	
	LOCAL GOVERNMENT
Department of Local Government Service Department of Town and Country Planning Local Loans and Development Fund Department of Janatha Committees	Municipalities Urban Councils Town Councils Village Councils
National Water Supply and Drainage Board Department of Local Government Department of National Housing Department of Buildings State Engineering Corporation of Sri Lanka	Boards of Health Registration of vehicles other than motor vehicles Administration of the Public Performances Ordinance (Chapter 176 excluding Section 6) Destruction of stray dogs
Building Materials Corporation Common Amenities Board Building Materials Manufacturing Corporation The Govt. Owned Business Undertaking of Colombo Commercial Co. (Engineers) Ltd. The Govt. Owned Business Undertaking of Heavyquip Ltd. Urban Development Authority of Sri Lanka Local Govt. Service Advisory Board Local Govt. Service Disciplinary Board	Sections 3 and 9 of the Small Tenements Ordinance Auctioneers and brokers Gas and Gas Meters Public utility service of Local Authorities including water service schemes, drainage, electricity and housing schemes Street Collections Regulations Entertainment Tax Guides Butchers Section 61—Electricity Act (Chapter 205)
National Housing Development Authority	Lighting control Wells and pits Cemeteries and burials Dairies and laundries Administration of the Housing and Town Improvement Ordinance Resthouses (under the control of Local Authorities) Community Centres Housing Schemes and slum clearance schemes carried out by Local Authorities
	Riot Damages Ordinance—Sections 31 (2), 32(2), (3), (4) and (5) and 33(1) Institute of Training and Research in Community Development Functions under the Rating and Valuation Ordinance Section 12 F, 35(3), 39 A(4), 65 A(4), 65 A(5), 65 A(6), 84, 84 D(3), and 85 of the Local Authorities Elections Ordinance, and Section 1(3) of Local Authorities Elections (Amendment) Act. No. 9 of 1963 Slum clearance through Local Authorities
	LOCAL GOVERNMENT SERVICE
	Appointments to posts by competitive examinations and advertisements Promotions and transfers Disciplinary cases and disciplinary inquiries Grading of posts in the service and fixing salaries and allowances and dealing with all other relative matters Payment of extra remuneration Overtime Leave, holiday ticket concessions, etc. Resignations, retirements and appeals regarding salaries, etc. Administration of the Local Government Service Provident Fund, Pensions, Gratuities, etc. Widows' and Orphans' Pensions Fund Health Schemes Debt Redemption Schemes, etc. Training Courses for technical officers Local Government Service Advisory Board Local Government Service Disciplinary Board
	DEPARTMENT OF JANATHA COMMITTEES
	Implementation of the Janatha Committees Act, No. 16 of 1971

Coloumn I *Departments and Statutory Institutions*	*Coloumn II* *Subjects and Functions*
	DEPARTMENT OF TOWN AND COUNTRY PLANNING
	Administration of the Town and Country Planning Ordinance Housing schemes for Local Bodies for which grants are given by the Government Technical assistance and advice for the planned devlopment of urban and rural areas Demarcation and administration of Sacred Areas Plan for Greater Colombo
	WATER SUPPLY AND DRAINAGE
	Investigation, design, construction and maintenance of water supplies and provision of technical services on schemes which are determined by Local Authorities— (a) Municipalities, Urban Councils, Town Councils and Village Councils (b) Major institutions such as Hospitals, Universities and Factories Provision of Public Utility Services on schemes which are determined by Local Authorities Investigation, design, construction of Sewerage and surface drainage on Schemes determined by Local Authorities— (i) Towns and Villages (ii) Hospitals, Universities, Factories, etc.
	HOUSING AND CONSTRUCTIONS
	Planning of Housing Schemes The construction of buildings for residential purposes The construction of buildings for the administration, management or control of buildings and building schemes Slum clearance and resettlement of slum dwellers Provision of essential amenities and services for the inhabitants of any area in which any housing scheme has been carried out or is contemplated to be carried out, and the construction of buildings for such purposes The manufacture importation or supply of materials required for the construction of buildings or for any other purposes connected with, or incidental to it The provision of roads, water, electricity, gas, drainage and sewerage in respect of buildings or building schemes constructed or to be constructed Administration, management, maintenance, control of and additions and improvement to buildings or building schemes The grant of assistance for the purpose of enabling the carrying out of any of the objects above specified by the lending of money in any manner whatsoever or by the undertaking of guarantees or by promoting, effecting, insuring guaranteeing, under-writing, participating in the managing and carrying out of any issue, public or private of Government or other loans or of shares, stock, debenture stock of any body corporate and by the lending of money for the purpose of any such issue The acquisition or receiving by way of grant or otherwise any movable or immovable property, for the purpose of carrying out any housing object The holding, managing, selling, surrendering, exchanging, leasing or other disposition of property acquired by way of gift or otherwise for the purpose of carrying out any housing object The borrowing of money for housing objects The levying of rents or fees for any buildings or for any service provided by the carrying out of any housing object Assistance in the formation and registration of building societies and assistance in the achievement of the objects set out in the Instrument of Association of such building societies Securing for persons entitled to them, exemptions from income tax and wealth tax as provided for by the law in force in that behalf Prosecution of building societies contravening or failing to comply with any provisions of the National Housing Act. The taking over and performance of all the functions and duties of the Housing Loans Board with effect from August ..., 1956 Co-ordination of housing and activities connected therewith Regulation and control of rents and rented premises Protection of tenants by law Condominium property and Common Amenities in housing schemes Regulation of ownership and construction of houses Maligawatte Development Scheme Rendering of technical advice regarding the construction of buildings Designing, construction and maintenance of and additions and improvements to buildings for Government Departments provided in the Annual Estimates Designing and construction of buildings for the Education Department Maintenance of and additions and improvements to public buildings Building Research Entering into contracts and other arrangements as may be necessary or expedient for the purpose of carrying out any of the objects listed above

Coloumn I *Departments and Statutory Institutions*	*Coloumn II* *Subjects and Functions*
	Acquisition under any law for the time being in force of land and property and the development and re-development of land and property for the carrying out of any of the objects listed above Any object reasonably connected with or ancillary to any of the above objects Administration and control of the State Engineering Corporation of Sri Lanka (Ceylon) incorporated under the Industrial Corporations Act. No. 49 of 1957 Administration and control of the Building Materials Corporation incorporated under the Sri Lanka State Trading Corporations Act. No. 33 of 1970 Restoration of the Colombo-Puttalam and Colombo Oruwala Canals Administration and control of the Building Materials Manufacturing Corporation incorporated under the Industrial Corporations Act. No. 49 of 1957. Administration and control of the Government Owned Business Undertaking of Colombo Commercial Co. (Engineers) Ltd. vested in the Government under the Business Undertakings (Acquisition) Act. No. 35 of 1971. Administration and the control of the Government Owned Business Undertaking of Heavyquip Ltd., vested in the Government under the Business Undertakings (Acquisition) Act. No. 35 of 1971. To promote integrated planning and implementation of economic, social and physical development of Urban Development Areas under the Urban Development Law No. 41 of 1978. To excercise, perform or discharge such powers, functions or duties as may be required of Local Government Service Advisory Board under Law No. 16 of 1974 To excercise, perform or discharge such powers, functions or duties as may be required of Local Government Service Disciplinary Board under Law No. 16 of 1974 Acquisition of land for housing Construction of houses for sale, lease rental etc. Management of lands and houses belonging to the Authority. Provide loans to purchase housing property or construct houses. Undertake Slum and shanty clearence and resettlement of persons displaced by such activities. Develop new housing estates and neighbourhoods. Establish aided self-help housing projects.
	MINISTER OF HIGHWAYS
Department of Highways P. W. D. Research Institute	Government Roads Public Roads and Estate Roads Inland Waterways Tolls Boats and Boatmen Thoroguhfares, rservations and encroachments Closing of roads owing to impassability Proclamation of thoroughfares
	MINISTER OF PUBLIC ADMINISTRATION
Department of Pensions, Department of Official Language affairs	Public administration Schemes of Recruitments Grading of Posts Pensionability of Posts Acting pay Overtime Hours of duty Holiday pay Medical facilities Scholarship allowances, Bonds, Passages and leave Rent and rent allowances Travelling allowances Railway warrants Uniforms Combensation to Government employees for losses by fire, theft, riots and floods Reimbursements to Government employees of legal expenses Other allowances Bonuses and honoraria Fees and appropriation of fees, pay, allowances, etc. of Army Navy, and Air Force Incremental credit for previous services and for war service Grant of permanent status to temporary employees Compulsory Public Service Act. No. 70 of 1961 Government quarters Questions relating to fixing Salary Scales of Public Officers Office accommodation Welfare of public Officers Questions of policy relating to administration of the public service Establishments code, interpretation, amendments, etc. Associations of public officers-questions of policy, etc. Administration of the combined services Matters relating to implementation of the language policy of Government Advance of salary to public officers

ANNEX IV

Excerpt from Government of Sri Lanka Public Investment Plan, 1980-84.

ANNEX IV

Public Investment Plan
1980-1984

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(ii) THE HOUSING AND URBAN DEVELOPMENT PROGRAMME

(*a*) *Housing.*—The task of providing adequate housing facilities for a growing population in Sri Lanka continued to be a major challenge ; the expansion of population on the one hand and the scarcity of resources on the other, compounded the problem over a long period of time. The rate of housing construction had been of the order of about 25,000 permanent housing units per annum, mainly by private individuals, during the intercensal period 1963–71 as against a recurrent need of the order of 50,000 units to meet the requirements of population increases alone. As a result, during the 1970s the housing shortage began to manifest itself in the form of over crowding, high rentals and the rapid proliferation of sub-standard dwellings. It is against this backdrop that the Government had decided to launch a programme to construct 100,000 housing units soon after assuming office in July 1977, to supplement private housing construction.

Public sector housing construction achieved remarkable progress during the years 1978 and 1979. As at the end of 1979 around 21,000 housing units were either completed or in different stages of construction under the various direct construction schemes and more than 15,000 aided self help units were also in different stages of construction, making a total of some 36,000 units. In contrast, only about 4,800 units had been completed during the entire seven year period 1970–1977.

Apart from the newly established National Housing Development Authority which is now in charge of all public sector housing construction, there were a number of other factors that contributed to the upsurge of activity in this field. Firstly, procedures in engaging private consultancy services and private contractors were simplified. Secondly, in the case of certain large projects for which local construction capacity was found to be inadequate, the engagement of foreign contractors was allowed. Thirdly, and perhaps more importantly, the liberalization of imports went a long way in facilitating the importation of critical construction materials and machinery. The construction sector had recorded impressive growth rates of 26 per cent in 1978 and 21 per cent in 1979 in real terms.

Although there is a high level of activity in the construction sector at present, as noted earlier, the Government is concerned about the constraints, on financial, material and manpower resources which a fast growing construction sector could impose upon other sectors of the economy, Accordingly, the housing construction programme has been recently modified, firstly, by a marked shift

towards the aided self help type of units and secondly by postponing half of the urban housing programme where the unit costs are relatively high. The housing programme as it now stands consists of :

1.	Urban Housing ..	.. 18,011	units
2.	Aided Self Help (A.S.H.) ..	.. 50,000	units
3.	Electoral Programme (A.S.H.) ..	.. 20,160	units
4.	Electoral Programme—Direct Construction	.. 5,880	units
5.	Housing Loans	.. 14,000	units
	Total	.. 108,051	

The expenditure by Government on the above programme would be limited to about Rs. 5,400 million over the period 1980–84 and would be phased out as shown in Part III.

(*b*) *Water Supply.*—The supply of adequate and safe water is a major factor in improving health, reducing unproductive and tiring family labour, and dramatically raising the standard of living of poor people. Despite considerable advances in related fields as, for example, nutrition and curative health, Sri Lanka's water supply remains poorly developed and distributed, of low quality and unsafe.

However, since 1977, the emphasis placed upon this sector has been greatly increased. Work on Phase I of the World Bank aided South West Coastal Water Supply Scheme, a major project covering Colombo and adjacent coastal areas, has begun and negotiations regarding Phase II and the proposed Colombo Sewerage Project have been concluded with the World Bank and the Saudi Fund for Development. In 1979, some 22 supply schemes were completed and a further 40 new water supply and augmentation schemes were under construction in a number of towns and villages. In rural areas UNICEF is not only assisting piped schemes for villages but also programmes of providing sanitary wells with the use of hard-rock drilling equipment initially in Hambantota.

The Water Supply sector has proved attractive to foreign aid donors, perhaps encouraged by the activities associated with the International Water Supply and Sanitation decade 1981–90. In order to ensure more effective planning and co-ordination an inter-ministerial committee has been set up charged with a number of responsibilities including the drawing up of a comprehensive plan for the sector to cover the period 1981–90. This plan is intended to provide the broad framework within which specific projects would be systematically identified and developed. Assistance for the preparation of such a plan has been negotiated with USAID and WHO. Further assistance is however needed for the identification and development of projects. Taking into account the resources likely to be available for the sector, a target has been set of providing safe water to at least 70 per cent of the population by 1990.

The total investment proposed in this sector for the period 1980–84 would be around Rs. 3,757 million at current prices. This includes several major projects such as, the South West Coastal Water Supply Scheme Phase 1 at a proposed expenditure of Rs. 299 million, Phase II of the same Scheme with an investment of Rs. 434 million, Trincomalee Water Supply Scheme with an investment of Rs.580 million, and the Greater Colombo Sewerage scheme with an investment of Rs. 1,420 million, all at current prices. The total foreign cost of the above investment has been estimated at Rs. 2,633 million of which nearly 86 per cent or Rs. 2,263 million would be financed through foreign assistance.

(c) *Urban Development.*—This Programme is planned and executed by the Urban Development Authority. This institution came into existence in October 1978 and has jurisdiction over all urban areas including not only the Colombo urban area, but also the 24 district capitals.

Work on the new Parliamentary and Administrative Complex in Kotte is in progress. Construction is already underway on the St. John's Market and tenders have already been awarded for the Old Town Hall and Edinburgh Market which constitutes Stages I and II of the Pettah Market Complex. At Peliyagoda, an integrated development project is underway to provide space on reclaimed land for warehouses and industries, some of it relocated from central areas.

In view of the present resource contraints and in recognition of the necessity of allocating scarce resources so as to achieve an inter-sectoral balance in the economy, the urban development programme for the period 1980–84 has been re-phased on the following lines :

(i) The Capital City Development Programme in Kotte will be limited to the construction of the Parliamentary Complex and two Administrative Buildings of 500,000 sq. ft. each ;

(ii) The Echelon Square Development Programme, the Lotus Centre Development Programme as well as other major urban development projects would not be financed out of the public sector expenditure programme. The Urban Development Authority would raise debentures in order to finance the St. John's Fish Market and the Pettah Market complex subject to limits authorised annually by the Treasury. The phased investment programme is set out in Part III.

The two administrative buildings of 500,000 sq. ft. each will also be constructed out of UDA debentures. These buildings would be completed by the end of 1981 or early 1982 at a total estimated cost of Rs. 500 million. The phasing of the total investment for Housing, Water Supply and Urban Development amounting to Rs. 11.6 billion is set out in Part III.

ANNEX V

Excerpt from Government of Sri Lanka Project Proposals for the Sri Lanka Aid Group Meeting, July, 1980.

ANNEX V

Project Proposals for the Sri Lanka Aid Group Meeting
July 1980

As an adjunct to the Public Investment 1980 - 1984 plan, the National Planning Division of MOFP prepared a document titled Project Proposals for the Sri Lanka Aid Group Meeting which was held in July 1980. The purpose was to set forth in three broad categories projects and/or programs for which external financing was still to be finalized or was being sought. Also included was a list of projects and programs where external financing agreements had been signed. The document was based on the large, unfinanced gap in the investment program which was identified in the Public Investment 1980 - 1984 plan. Most of the projects are those that have already been included in the Public Investment Plan and still require foreign financing. But some are new and are not in the investment program as yet.

GROUP A - Programs and Projects For Which Some Financing Agreements Have Been Signed (Up to April 1980)

GROUP B - Projects/Programs For Which Negotiations Have Reached An Advanced Stage, But For Which Agreements Have Yet To Be Signed.

GROUP C - New Projects/Programs Where Relevant Studies Have Been Completed or are In An Advanced Stage of Preparation For Which Financing is Sought for Implementation.

GROUP D - New Projects/Programs Which Are Important In Terms of Overall Development Strategy and For Which Donor TA is Sought For Project Preparation and Design With a View To Financing.

(2)

It is interesting to note that slum and shanty Upgrading is included in Category C in a total amount of Rs. 450 million in increasing amounts over the period 1981-1985 starting at Rs. 50 million in 1981 and reaching Rs. 133 million in 1985.

Category D includes a project for Aided Self-Help to expand that concept by indicating an allocation of Rs. 40.5 million, Rs. 33 million and Rs. 18 million in 1981, 82 and 83 respectively. A second project for Site and Service/ Core Housing in Colombo which allocates Rs. 80 million over the same period is identified. In both cases TA for feasibility studies and project formulation is sought with a stated view to further seek financing. In point of fact the Government has already moved to expand the Aided Self-Help program by shifting resources out of Direct Construction.

C 43.—SLUM AND SHANTY UPGRADING

1. *Project Title* : Slum and Shanty Upgrading.

2. *Executing Agencies* : Urban Development Authorit (U.D.A.) and Common Amenities Board (C.A.B.)

3. *Supervising Ministry* : Ministry of Local Government, Housing and Construction.

4. *Year of* : (*a*) Commencement — 1981
(*b*) Completion — 1985

5. *Present Status*: Two pilot projects are near completion. Two foreign agencies are currently implementing four projects.

6. *Estimated Cost* :

	(Rs. million)
Foreign	157.0
Local	293.0
Total	450.0

7. *Phasing of Investment*:

(Rs. million)

	1981	1982	1983	1984	1985
Foreign	18.0	23.0	31.0	39.0	47.0
Local	32.0	44.0	58.0	72.0	86.0
Total	50.0	67.0	89.0	111.0	133.0

8. *Purpose, Scope and Justification*: The existence of slums and shanties constitutes the major manifestation of the housing shortage in urban Sri Lanka. To date, 44,000 slums and shanties have been enumerated throughout Sri Lanka. The bulk of these, 33,560, are located in the Colombo Municipal Council area, and comprise 16,310 shanties, and 17,250 slums, housing over 43 per cent of the city's population. Ongoing surveys will add to the data bank on island-wide totals, most particularly on the magnitude of such semi-permanent housing on the fringes of the Colombo Urban Area.

The present project proposes to improve the living conditions for this low income target group. The goals to be met by 1985 are—

(*a*) improvement of infrastructural amenities for all enumerated slums and shanties, where this is technically feasible;

(*b*) structural improvements to 25 per cent of the total number of [illegible] technically feasible;

(c) providing new low-cost replacement housing for 25 per cent of all slums and shanties.

These goals are proposed as the least cost solution to the existing problem. Some marginal community development work (e.g. community halls, employment generation) costing Rs. 20 million is also planned under this project.

The socio-economic benefits of this programme include: improved health for the target group and a decrease in pollution, particularly of canals. The target group is expected to repay a minimum of 50 per cent of the costs involved in any improvement in new housing.

D 7.—AIDED SELF-HELP HOUSING

1. *Project Title* : Aided Self-help Housing.

2. *Executing Agency* : National Housing Development Authority.

3. *Supervising Ministry* : Local Government, Housing and Construction.

4. *Year of* : (*a*) Commencement — 1981
(*b*) Completion — 1983

5. *Present Status*: A limited programme is underway in rural areas of all districts. Technical assistance and donor financing is sought to extend the programme.

6. *Estimated Cost*

	(Rs. million)
Foreign	9.2
Local	82.3
Total	91.5

7. *Phasing of Investment*:

	(Rs. million)		
	1981	1982	1983
Local	36.5	29.7	1.8
Foreign	4.0	3.3	16.2
Total	40.5	33.0	18.0

8. *Purpose, Scope and Justification*: The Aided self-help approach to housing in rural areas has proved most successful in Sri Lanka. Under this scheme beneficiaries are provided with a plot of land, building materials and technical assistance, on credit and make repayments over a 30 year period. The management of the programme has been decentralised, with regional offices having been set up in most of the districts. Unit costs of construction under this programme are much lower than for houses built under other schemes, and the use of appropriate materials and technology is being encouraged. The success of the initial programme demonstrates the strength of the scheme and the effectiveness of the strategy. It is necessary to spread the scheme to cover a larger number of house builders, in order to alleviate the prevalent housing shortage in the rural area.

Technical assistance for feasibility study and project formulation with a view to donor financing is sought.

D 8.—SITE AND SERVICE/CORE HOUSING IN COLOMBO

1. *Project Title* : Site and Service/Core Housing in Colombo.

2. *Executing Agency* : National Housing Development Authority.

3. *Supervising Ministry* : Ministry of Local Government, Housing & Construction.

4. *Year of* : (*a*) Commencement — 1980
(*b*) Completion — 1983

5. *Present Status*: Pre-feasibility report is under prepartion. Three possible sites have been identified. Technical assistance and donor financing is sought.

6. *Estimated Cost* :

	(Rs. million)
Foreign	8
Local	72
Total	80

7. *Phasing of Investment*:

(Rs. million)

	1981	1982	1983
Foreign	2.4	2.8	2.8
Local	21.6	25.2	25.2
Total	24.0	28.0	28.0

8. *Purpose, Scope and Justification*: In order to relieve the acute shortage of housing, the government is adopting alternative methods of providing low cost housing in addition to direct construction. Slum and squatter upgrading programmes are under-way in Colombo. The site and service/core housing concept has not yet been tried in Sri Lanka, despite its success in some other countries. The on-going aided self-help housing programme in rural areas is very successful, but would not be suitable in its present form in urban areas.

In Colombo it is difficult to obtain centrally located land for residential development but a large number of small peripheral sites can be found. Under the proposed scheme these would be developed as serviced sites, for middle and high income groups while core housing will be constructed for low income groups on some of the sites. Subject to the experience gained in the first year, when a modest start would be made, the rate of implementation of the programme would increase rapidly. The project would provide means of increasing both the quantity and quality of housing at costs related to the means of lower income groups and allow flexibility in design and major cost reductions compared to direct construction.

Technical assistance for feasibility study and project formulation with a view to donor financing is sought.

ANNEX VI

Tables from paper by G. T. Kingsley, A Review of Sri Lanka's Housing Problems and Policies, Aug., 1970, and Marga Institute's, Housing in Sri Lanka.

Table 1.....Population and the Housing Stock
Table 2.....Families, Households and Floor Space
Table 3.....Rooms and Overcrowding
Table 4.....Distribution of Housing Units by Floor Area Cross-Classfied by Income Groups
Table 5.....Occupied Housing Units Classified by Number of Rooms - 1971
Table 6.....Construction Materials
Table 7.....Housing Units Classified by Structural Type - 1953-71
Table 8.....Housing Units Classified by Type of Housing Unit and Percentage Distribution
Table 9.....Substandard Housing
Table 10....Tenure Status of Households in Sri Lanka - 1953-71
Table 11....Water and Toilet Facilities
Table 12....Estimated Housing Backlog, 1
Table 13....1978-2001 Housing Needs
Table 14....Population, 1946-2001

Source 1: Kingsley, A Review . . .

Source 2: Marga Institute, Housing . . .

TABLE 1

POPULATION AND THE HOUSING STOCK

	CMR Urban	Total Urban	Rural	Total Sri Lanka
HOUSING STOCK 1971				
Total Housing Units (000)	248	440	1,942	2,382
Percent of Sri Lanka Total	10	18	82	100
Number of Units (000)				
Occupied	238	421	1,797	2,218
Vacant	10	19	145	164
Vacant as percent of total	4.0	4.5	7.4	6.9
OCCUPIED HOUSING UNITS, 1963-71				
Units (000)				
1963	177	318	1,654	1,972
1971	238	421	1,797	2,218
Increase 1963-71				
Percent	34	32	9	12
No. (000) per year	7.4	12.5	17.3	29.8
POPULATION, 1963-71				
Population (000)				
1963	1,150	2,016	8,566	10,582
1971	1,631	2,842	9,869	12,711
Increase 1963-71				
Percent	42	41	15	20
No. (000) per year	58.3	100.1	157.9	258.1
POPULATION IN HOUSING UNITS, 1971				
Total Population	1,631	2,842	9,869	12,711
Household Population	1,503	2,583	9,772	12,355
Institutional Population	128	259	97	356
Household Population				
As percent of total	92	91	99	97
Per occupied housing unit	6.32	6.14	5.53	5.57

Source: (1) Page 35

TABLE 2

FAMILIES, HOUSEHOLDS AND FLOOR SPACE

	CMR Urban	Total Urban	Rural	Total Sri Lanka
FAMILIES SHARING UNITS, 1971				
Occupied Units (000)				
0 Families (unrelated persons)	5	8	37	45
1 Family	194	344	1,571	1,915
More than 1 family	39	69	189	258
Total	238	421	1,797	2,218
Percent of units with more than 1 family	16.4	16.4	10.5	11.6
HOUSEHOLDS, 1971				
Households (000)	267	474	1,972	2,446
Persons per household	5.63	5.45	4.96	5.05
Households per Occupied unit	1.12	1.13	1.10	1.10
Additional units needed to provide one unit per household	29	53	175	228
FLOOR SPACE, 1963-71				
Ave Sq. Ft./Unit 1963	n.a	481	391	405
Ave Sq. Ft./Unit 1971	n.a	502	416	432
Ave. Sq. Ft./Occupant 1971	n.a	82	75	78
Units with less than 250 Sq. Ft. of floor space, 1971				
Units (000)	n.a	175	754	929
Percent of Occ. Units	n.a	41.6	42.0	41.9
Units with only one room				
Units (000)	n.a	133	613	746
Percent of Occ. Units	n.a	31.6	34.1	33.6

Source: (1) Page 36

TABLE 3

ROOMS AND OVERCROWDING

	CMR Urban	Total Urban	Rural	Total Sri Lanka
Total Occupied Units, 1971				
Units (000)	238	421	1,797	2218
Occupants (000)	1,503	2,583	9,772	12,355
Rooms (000)	536	922	3,810	4,732
Persons per Room	2.80	2.80	2.56	2.61
Units with 3 or less Persons per room				
Units (000)	147	245	1,133	1,378
Occupants (000)	781	1,302	5,028	6,330
Rooms (000)	13	688	2,746	3,424
Persons per Room	1.89	1.89	1.83	1.84
Units with more than 3 Persons per room				
Units (000)	91	176	664	884
Occupants (000)	722	1.281	4,744	6,025
Rooms (000)	123	234	1,064	1,298
Persons per Room	5.86	5.47	4.46	4.64
Additional rooms needed to provide one for every 3 persons in presently overcrowded units				
Rooms (000)	118	193	517	710
Percent 1971 total rooms	22.0	20.9	13.6	15.0

Source: (1) Page 37

TABLE 4

DISTRIBUTION OF HOUSING UNITS BY FLOOR AREA CROSS-CLASSIFIED BY INCOME GROUPS

Floor Area (Sq.ft.)	*INCOME GROUPS*											
	Below Rs. 200		*Rs. 200–399*		*Rs. 400–599*		*Rs. 600–799*		*Rs. 800–999*		*Rs. 1,000 &over*	
	All Island	%	*All Island*	%	*All Island*	%	*All Island*	%	*All Island*	%	*All Island*	%
Less than 100	21,484	2.4	8,137	1.0	798	0.3	—		—		—	
100–299	377,027	42.3	204,142	25.0	26,910	10.7	3,441	4.0	665	1.9	1,105	2.6
250–499	335,964	37.7	304,296	38.6	85,985	34.3	22,953	26.4	6,212	18.1	2,296	5.9
500-999	139,408	15.6	221,263	28.0	90,031	35.8	37,123	42.7	10,986	32.0	10,642	25.1
1000–1999	16,979	1.9	47,538	6.0	39,394	15.7	19,742	22.7	12,871	37.5	19,781	46.7
2000 & over	1,408	0.1	4,.87	0.6	7,918	3.2	3,654	4.2	3,624	10.5	8,577	20.2
Unspecified	—	—	95	0.1	95	0.0	—	—	—	—	—	—
		100.0		100.0		100.0		100.0		100.0		100.0

Source: Socio-Economic Survey 1969/70

Source: (2) Page 30

TABLE 5

OCCUPIED HOUSING UNITS CLASSIFIED BY NUMBER OF ROOMS — 1971

	Sri Lanka	%	*Urban*	%	*Rural*	%
One room	231,952	10.4	34,047	8.1	197,905	11.0
Two rooms	727,725	32.8	127,885	30.4	599,840	33.4
Three rooms	585,107	26.4	100,500	23.9	484,547	26.9
Four rooms	305,204	13.8	57,362	13.6	247,842	13.8
Five rooms	146,017	6.6	32,426	7.7	113,591	6.3
Six rooms & over	116,325	5.3	32,413	7.7	84,412	4.7
Unspecified	104,648	4.7	36,462	8.6	68,186	3.8
	2,217,478	100	421,155	100	1,796,323	100

Source: (2) Page 65

TABLE 6
CONSTRUCTION MATERIALS

		CMR Urban	Total Urban	Rural	Total Sri Lanka
WALLS, ROOFS AND FLOORS					
Units with temporary walls					
Units (000)	1963	n.a	129	1,091	1,220
	1971	89	167	1,157	1,324
Percent of all units	1963	n.a	38.7	61.0	57.5
	1971	35.9	38.0	59.6	55.6
Units with temporary roofs					
Units (000)	1963	n.a	92	923	1,015
	1971	50	114	915	1,029
Percent of all units	1963	n.a.	27.7	51.6	47.9
	1971	20.0	25.9	47.1	43.2
Units with temporary floors					
Units (000)	1963	n.a.	89	1,182	1,271
	1971	35	91	1,243	1,337
Percent of all units	1963	n.a	26.8	66.1	59.9
	1971	14.3	21.4	64.0	56.1
TOTAL UNIT					
Permanent (all permanent materials)					
Units (000)	1963	126	205	442	647
	1971	168	277	551	828
Percent of all units	1963	68.4	61.6	24.7	30.5
	1971	67.7	63.0	28.4	31.8
Semi-permanent (permanent and temporary materials)					
Units (000)	1963	39	95	1,242	1,337
	1971	64	107	1,270	1,377
Percent of all units	1963	20.9	28.5	69.5	63.0
	1971	26.0	24.4	65.4	57.8
Temporary (all temporary materials)					
Units (000)	1963	20	33	104	137
	1971	16	56	121	177
Percent of all units	1963	10.7	9.9	5.8	6.5
	1971	6.3	12.6	6.2	7.4

Best Available Document

Source: (1) Page 39

TABLE 7

HOUSING UNITS CLASSIFIED BY STRUCTURAL TYPE — 1953—71

	1953			1963			1971		
	Total	*Urban*	*Rural*	*Total*	*Urban*	*Rural*	*Total*	*Urban*	*Rural*
No. of Housing Units	1,523,695	183,336	1,340,359	1,971,740	318,140	1,653,600	2,217,478	421,155	1,796,323
Percentage ..	100	12.03	87.9	100	16.13	83.86	100	18.99	81.0
No. of Permanent Housing Units ..	531,683	116,728	414.955	614,200	195,910	418,290	785,949	264,787	521,162
Percentage ..	34.9	63.6A	30.9B	31.1	61.6A	31.1B	35.5	62.8A	29.0B
No. of Semi-permanent Housing Units ..	890,131	55,973	834,158	1,253,580	89,310	1,144,270	1,271,232	118,368	1,152,864
Percentage ..	58.4	30.53A	62.2B	62.6	28.1A	62.6B	57.3	28.1A	64.1B
No. of Temporary Housing Units ..	101,881	10,635	91,246	123,960	32,920	91,040	160,297	38,000	122,297
Percentage ..	6.7	5.8A	6.8B	6.3	10.3A	6.3B	7.2	9.0A	6.8B

A. Percentage of total urban stock.
B. Percentage of total rural stock.

Source: (2) Page 50

TABLE 8

HOUSING UNITS CLASSIFIED BY TYPE OF HOUSING UNIT AND PERCENTAGE DISTRIBUTION

		TOTAL TYPE OF STRUCTURE								
		Number	*Detached Houses*	*Flat/ Annex*	*Line Room*	*Tenement*	*Impro-vised*	*Under Construction*	*Other*	*Unspe-cified*
SECTORS	..	2,382,001	1,881,669	34.89[illegible]	238,047	104,795	68,483	24,114	18,693	11,305
Urban	..	440,483	316,569	23,797	14,386	61,806	1[illegible]	3,058	5,857	3,283
Rural	..	1,691,071	1,531,110	9,983	14,392	42,040	54,381	20,942	11,254	6,969
Estate	..	250,447	33,990	1,115	209,269	949	2,375	114	1,582	1,033
		PERCENTAGE DISTRIBUTION								
SECTORS	..	100	79.0	1.5	10.0	4.4	2.9	1.0	.8	.5
Urban	..	100	71.9	5.4	3.0	14.0	2.7	.7	1.3	.7
Rural	..	100	90.5	.6	.9	2.5	3.2	1.2	.7	.4
Estate	..	100	13.6	.4	83.6	.4	.9	.0	.6	.4

Source: Housing Census 1971

Source: (2) Page 88

TABLE 9

SUBSTANDARD HOUSING

		CMR Urban	Total Urban	Rural	Total Sri Lanka
SUBSTANDARD - PERMANENT					
Units (000)	1963	23	31	39	70
	1971	30	45	45	90
Percent of total Perm.	1963	18.3	15.1	8.8	10.8
	1971	17.9	16.2	8.2	10.9
SUBSTANDARD - SEMI-PERMANENT					
Units (000)	1963	16	33	332	365
	1971	35	40	399	439
Percent of total Semi-perm.	1963	41.0	34.7	26.7	27.3
	1971	54.7	37.4	31.4	31.9
SUBSTANDARD - TEMPORARY					
Units (000)	1963	20	33	104	137
	1971	16	56	121	177
Percent of total temp.	1963	100.0	100.0	100.0	100.0
	1971	100.0	100.0	100.0	100.0
TOTAL SUBSTANDARD					
Units (000)	1963	59	97	475	572
	1971	81	141	565	706
Percent of total units	1963	31.9	29.1	26.6	27.0
	1971	32.7	32.0	29.1	29.6

Source: (1) Page 40

TABLE 10

TENURE STATUS OF HOUSEHOLDS IN SRI LANKA — 1953—71

	1953			1963			1971		
	Total	*Urban*	*Rural*	*Total*	*Urban*	*Rural*	*Total*	*Urban*	*Rural*
1. Owner occupied	984,129	58,723	925,406	1,226,860	128,130	1,098,730	1,403,411	200,822	1,202,589
Percentag ..	61.06	31.14	65.02	62.22	40.27	66.22	63.3	47.7	66.9
2. Rent or leased	234,602	110,400	124,202	300,870	156,270	144,600	273,934	172,855	101,379
Percentage ..	14.56	58.54	8.73	15.26	49.13	8.74	12.4	41.0	5.6
3. Free of rent but not owned ..	359,322	16,022	343,300	422,460	32,460	390,000	334,463	26,322	308,141
Percentage ..	22.29	8.50	24.12	21.43	10.2	23.58	15.1	6.2	17.2
4. Unspecfied ..	33,754	3,441	30,313	21,550	1,280	20,270	65,669	9,676	55,992
Percentage ..	2.09	1.82	2.13	1.09	0.4	1.23	3.0	2.3	3.1
5. Other ..	—	—	—	—	—	—	140,007	11,480	128,521
Percentage ..	—	—	—	—	—	—	6.3	2.7	7.2
Total	1,611,807	188,586	1,423,221	1,971,740	318,140	1,653,600	2,217,478	421,155	1,796,322

Source: (2) Page 66

TABLE 11

WATER AND TOILET FACILIT

	CMR Urban	Total Urban	Rural	Total Sri Lanka
WATER SUPPLY				
Units (000) 1971				
Piped Water, Total	128	191	253	444
Exclusive Use	n.a	74	45	119
Well Water Total	104	213	1313	1526
Exclusive Use	n.a	79	488	567
Other & Unspecified	6	17	231	248
Total	238	421	1797	2218
Percent of Units 1971				
Piped Water Total	53.8	45.4	14.1	20.0
Exclusive Use	n.a	17.6	2.5	5.4
Well Water Total	43.7	50.6	73.1	68.8
Exclusive Use	n.a	18.8	27.2	25.6
Other and Unspecified	2.5	4.0	12.9	11.2
Total	100.0	100.0	100.0	100.0
Without Exclusive Use of Piped or Well Water				
Units (000) 1963	n.a	210	1221	1431
1971	n.a	268	1264	1532
Percent 1963	n.a	66.0	73.8	72.6
1971	n.a	63.7	70.3	69.1
TOILET FACILITIES				
Units (000) 1971				
Flush Toilet Total	78	96	53	149
Exclusive Use	n.a	63	41	104
Water Seal Total	51	81	234	315
Exclusive Use	n.a	57	153	210
Other and Unspecified	109	244	1510	1754
Total	238	421	1797	2218
Percent of Units 1971				
Flush Toilet Total	32.8	22.8	3.0	6.7
Exclusive Use	n.a	15.0	2.3	4.7
Water Seal Total	21.4	19.2	13.0	14.2
Exclusive Use	n.a	13.5	8.5	9.5
Other and Unspecified	45.8	58.6	84.0	79.1
Total	100.0	100.0	100.0	100.0
Without Exclusive Use of Flush or Water Seal Toilet				
Units (000) 1963	n.a	258	1531	1789
1971	n.a	302	1602	1904
Percent 1963	n.a	81.1	92.6	90.7
1971	n.a	71.7	89.2	85.7

Source: (1) Page 38

TABLE 12

ESTIMATED HOUSING BACKLOG, 1978

	CMR Urban	Total Urban	Rural	Total Sri Lanka
POPULATION, HOUSEHOLD, 1978				
Total population (000)	1,973	3,438	10,771	14,209
Household population (000)	1,815	3,129	10,663	13,792
Persons per household	5.24	5.14	4.79	4.86
Households (000)	346	609	2,226	2,835
HOUSING STOCK, 1978				
Total housing units (000)				
Permanent	199	329	626	955
Semi-permanent	73	113	1,289	1,404
Temporary	21	73	133	206
Total	293	517	2,048	2,565
Substandard units (000)				
Permanent	37	55	49	104
Semi-permanent	39	45	445	490
Temporary	21	73	133	206
Total	97	173	627	800
Occupied units (000)	281	494	1,896	2,390
HOUSING BACKLOG, 1978				
Additional units needed (000)				
To provide sufficient space				
To eliminate overcrowding	65	115	330	443
To provide 5% vacancy rate	6	9	-	9
Sub-total	71	124	330	454
To replace substandard units	97	173	627	800
Total backlog	168	297	957	1,254
As percent of 1978 stock	57.3	57.4	46.7	48.9

Source: (1) Page 41

TABLE 13

1978-2001 HOUSING NEEDS

	CMR Urban	Total Urban	Rural	Total Sri Lanka
ESTIMATED POPULATION 2001				
Total Population (000)	3,326	5,795	13,520	19,315
Increase per year, 1978-2001	58.8	102.5	119.2	222.0
Household population	3,060	5,273	13,385	18,658
Persons per household	4.62	4.53	4.22	4.30
Households (000)	662	1,164	3,172	4,336
Increase per year, 1978-2001	13.7	24.1	41.1	65.2
TARGET HOUSING STOCK, 2001				
Total housing units (000)	697	1,225	3,339	4,564
Occupied units (000)	662	1,164	3,172	4,336
TOTAL NEW UNITS NEEDED 1978-2001 (000)				
To eliminate 1978 overcrowding	65	115	330	445
To provide for new households	316	555	946	1,501
To provide 5% vacancy rate	23	38	15	53
Sub-total	404	708	1,291	1,999
To replace natural losses	100	189	992	1,181
Total	504	897	2,283	3,180

Source: (1) Page 45

TABLE 14

POPULATION, 1946-2001

	CMR Urban	Total Urban	Rural	Total Sri Lanka
POPULATION (000)				
Actual				
1946	629	1,033	5,624	6,657
1953	767	1,239	6,859	8,098
1963	1,150	2,016	8,566	10,582
1971	1,631	2,842	9,869	12,711
Estimated				
1978	1,973	3,438	10,771	14,209
2001	3,326	5,795	13,520	19,315
PERCENT OF TOTAL				
Actual				
1936	9.4	15.5	84.5	100.0
1953	9.5	15.3	84.7	100.0
1963	10.9	13.1	80.9	100 0
1971	12.8	22.4	77.6	100.0
Estimated				
1978	13.9	24.2	75.8	100.0
2001	17.2	30.0	70.0	100.0
NET INCREASE/YEAR (000)				
Actual				
1964-53	19.7	29.4	176.4	205.9
1953-63	37.1	75.2	165.2	240.5
1963-71	58.3	100.1	157.9	258.1
Estimated				
1971-78	48.9	85.1	128.8	214.0
1981-2001	58.8	102.5	119.5	222.0

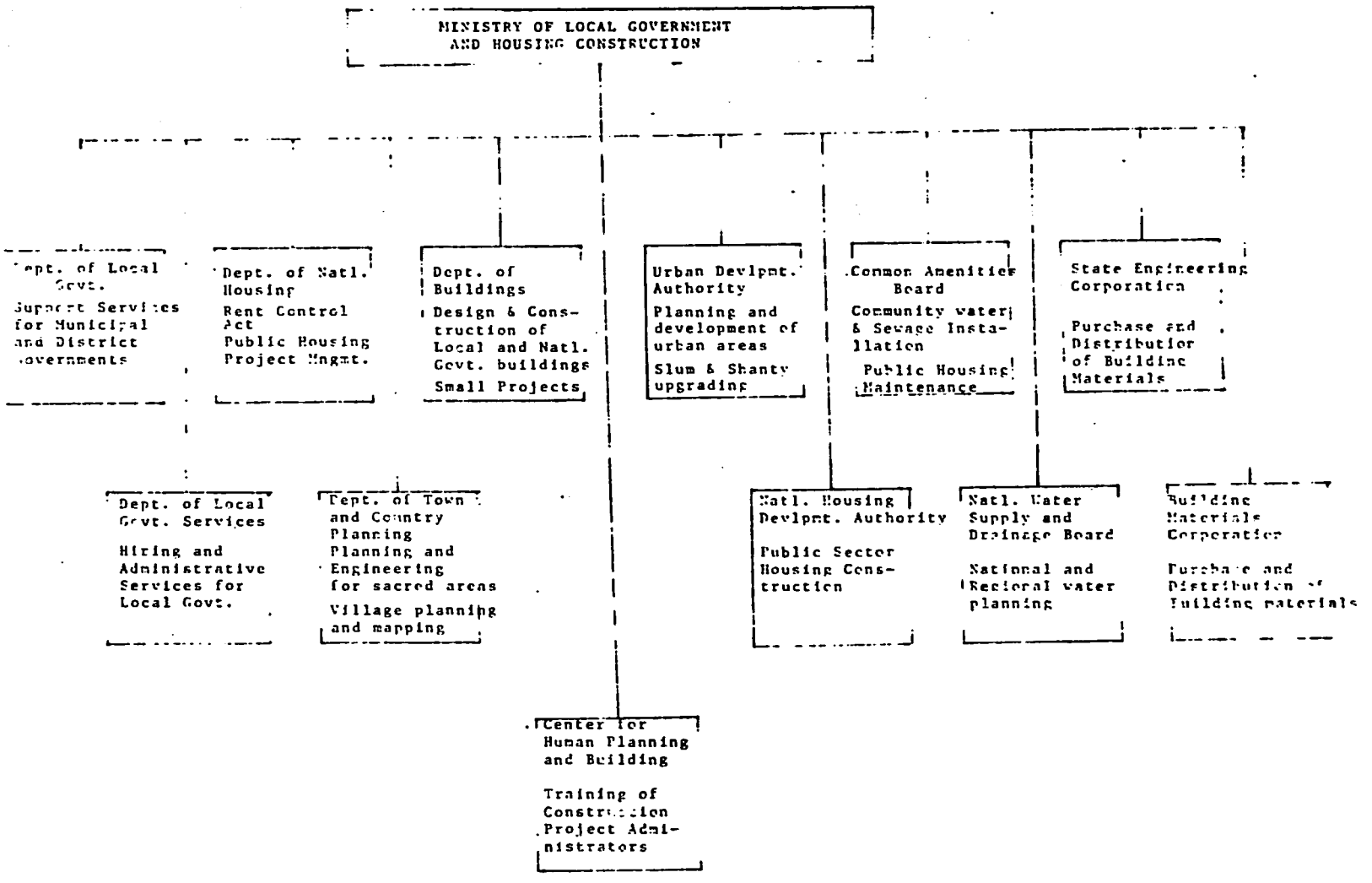
Source: (1) Page 42

ANNEX VII

Organizational Charts

Chart 1 - Ministry of Local Government, Housing and Construction
Chart 2 - National Housing Development Authority
Chart 3 - Slum and Shanty Unit
Chart 4 - Colombo Municipal Council

Chart 1


MINISTRY OF LOCAL GOVERNMENT AND HOUSING CONSTRUCTION
Dept. of Local Govt.
Support Services for Municipal and District Governments
Dept. of Natl. Housing
Rent Control Act
Public Housing Project Mngmt.
Dept. of Buildings
Design & Construction of Local and Natl. Govt. buildings
Small Projects
Urban Devlpmt. Authority
Planning and development of urban areas
Slum & Shanty upgrading
Common Amenities Board
Community water & Sewage Installation
Public Housing Maintenance
State Engineering Corporation
Purchase and Distribution of Building Materials
Dept. of Local Govt. Services
Hiring and Administrative Services for Local Govt.
Dept. of Town and Country Planning
Planning and Engineering for sacred areas
Village planning and mapping
Natl. Housing Devlpmt. Authority
Public Sector Housing Construction
Natl. Water Supply and Drainage Board
National and Regional water planning
Building Materials Corporation
Purchase and Distribution of Building materials
Center for Human Planning and Building
Training of Construction Project Administrators

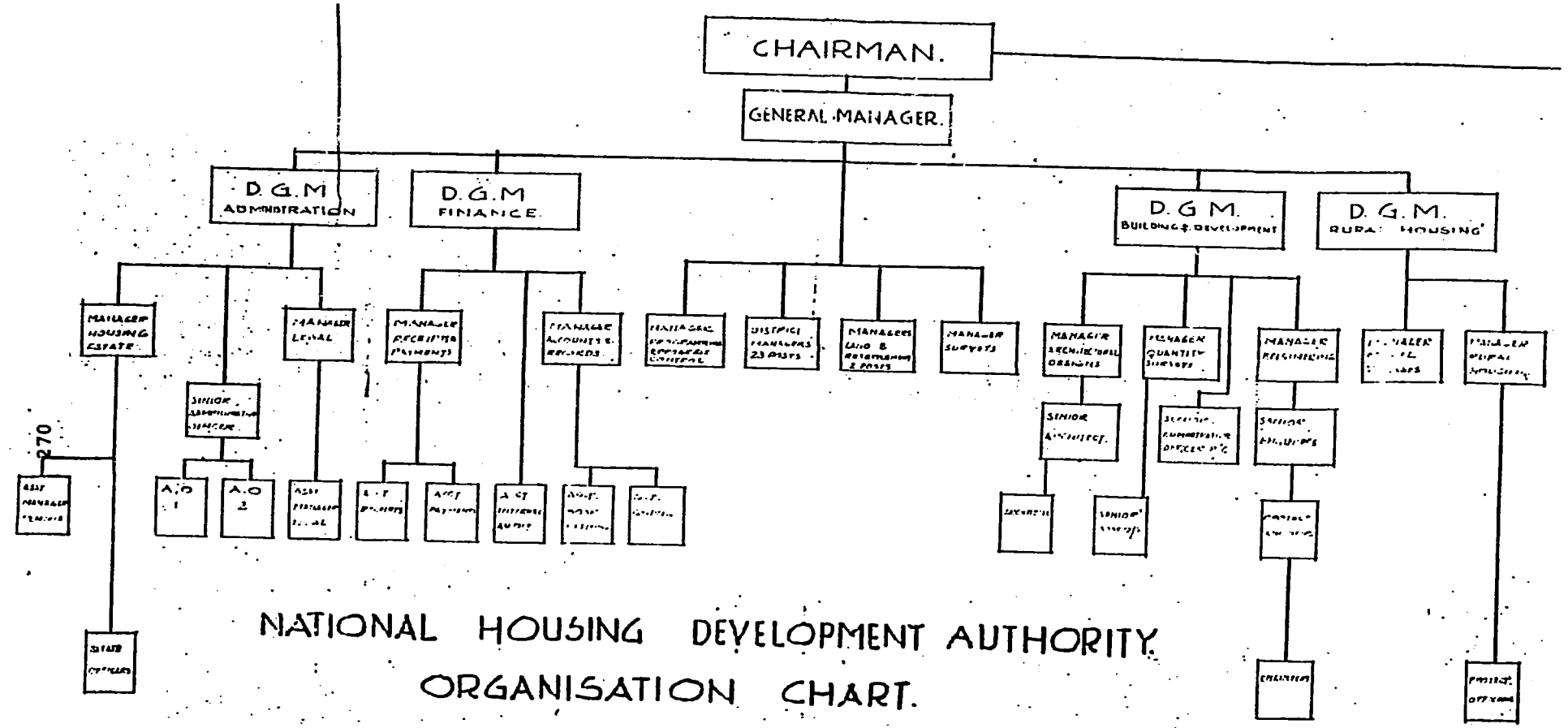
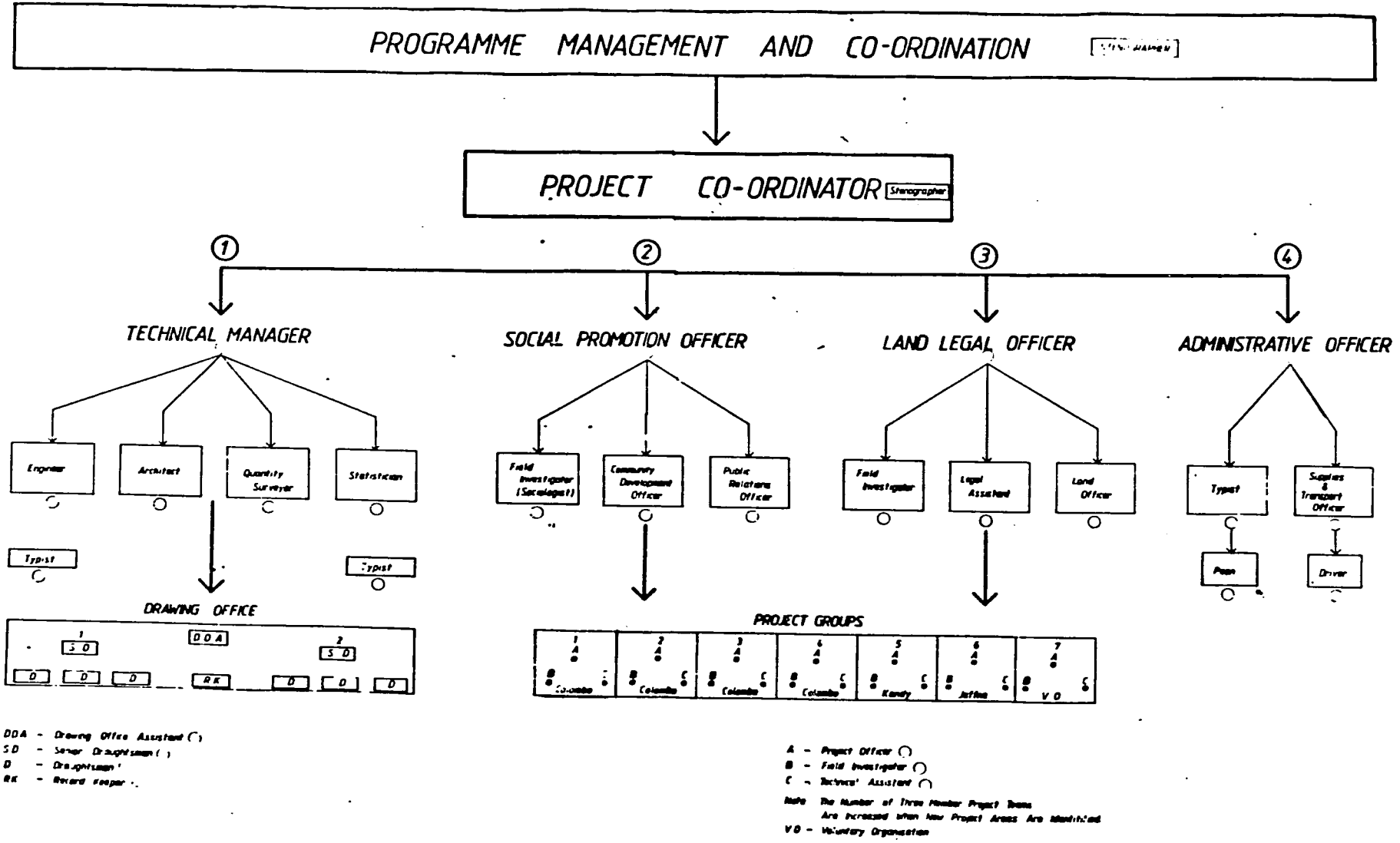

CHAIRMAN.
GENERAL MANAGER.
D.G.M ADMINISTRATION
D.G.M FINANCE.
D.G.M. BUILDING & DEVELOPMENT
D.G.M. RURAL HOUSING
MANAGER HOUSING ESTATE
MANAGER LEGAL
MANAGER RECEIPTS & PAYMENTS
MANAGER ACCOUNTS & RECORDS
DISTRICT MANAGERS 23 POSTS
MANAGERS LAND & RETAINING 2 POSTS
MANAGER SURVEYS
MANAGER ARCHITECTURAL DESIGNS
MANAGER QUANTITY SURVEYS
MANAGER ENGINEERING
SENIOR ARCHITECT
SENIOR ENGINEER
A.O 1
A.O 2
270
NATIONAL HOUSING DEVELOPMENT AUTHORITY.
ORGANISATION CHART.

Chart 2

Chart 3

PROPOSED ORGANISATION OF THE SLUM AND SHANTY UNIT



COLUMBO MUNICIPAL COUNCIL ORGANIZATION CHART

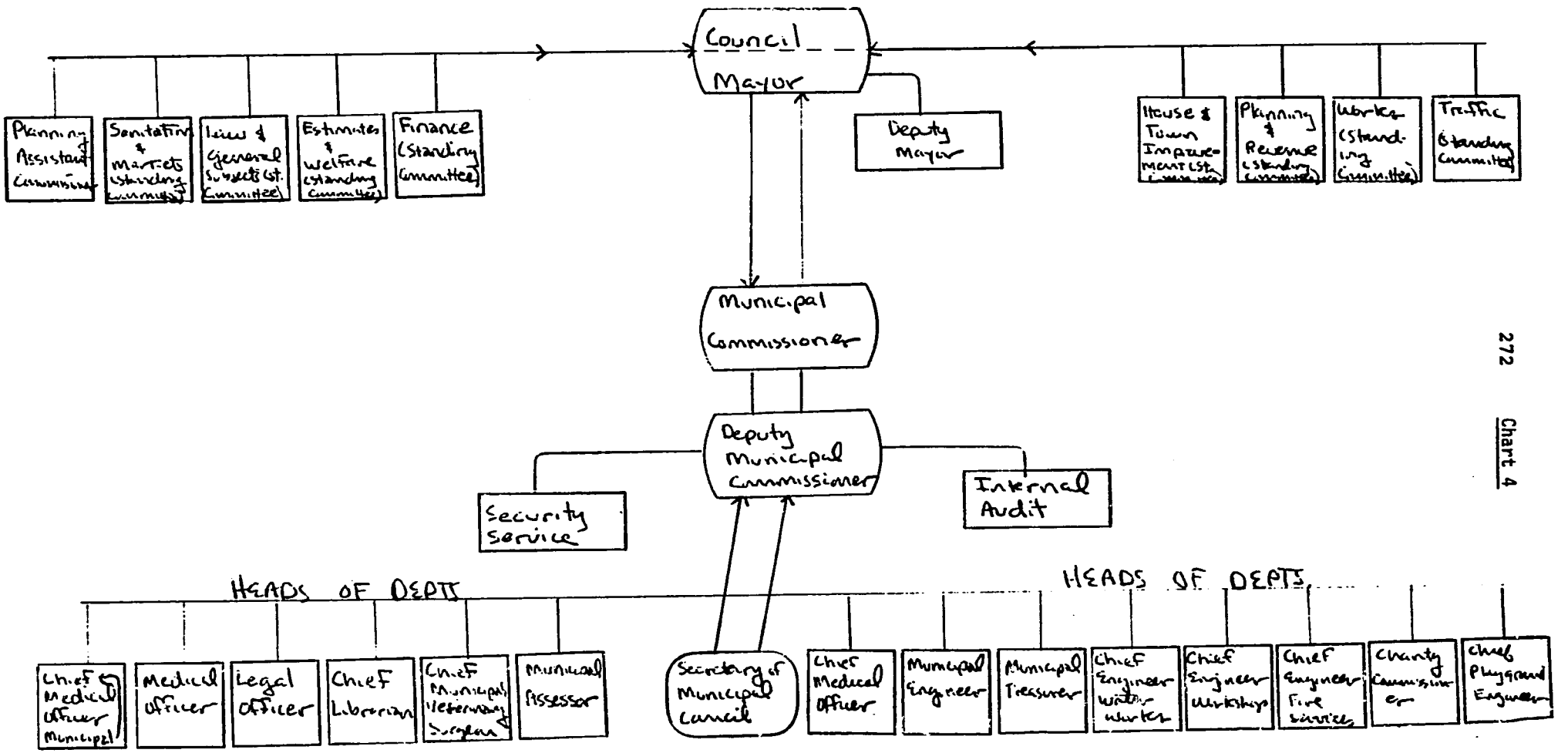


Chart 4

ANNEX VIII

Sample Tenancy Agreement

This Agreement made on this..... day of..... One Thousand Nine Hundred and.....in the Island of Sri Lanka between the Chairman/General Manager of the National Housing Development Authority (Hereinafter referred to as the 'Landlord'' for itself and its successors in the said office for the time .ing acting for and on behalf of the Democratic Socialist Republic of Sri Lanka of the One Part and Mr/Mrs.....
.....
of.....
.....
(hereinafter referred to as the 'tenant') of the other part.....
.....
WHEREAS Mr.,/Mrs.....
of applied to the National Housing Development Authority for a house from the.....
Housing Scheme on rent purchase terms and has been selected as a tenant of the house No.....
.....
of.....
..... Housing Scheme.

AND WHERE.S the said tenant has made a deposit of Rs.....
.....
with the landlord which will be set off against the first instalment of rent payable to the landlord as specified below:-

AND WHER.S the landlord has agreed to grant to the tenant the tenancy of house No.....
of.....
..... Housing Schem as from the
..... day of.....19.....on rent purchase terms, on the following terms and conditions set out hereunder. .

WITNESSETH THAT:-.....
.....

2:1 The landlord hereby lets to the tenant and the tenant agrees to accept on rent from the landlord house No.....
.....of.....
Housing Scheme, on a monthly rental of Rs:.....on rent purchase terms at a monthly rent of Rs:.....
..... commencing from the.....
day of.....19....

deposited by the tenant will be set off against the first instalment of rent payable by the tenant to the landlord.

2:3 The tenant will pay to the landlord the monthly rent due for each month on or before the.....day of that month.

2:4 The tenant shall use the premises only for his residential purpose and shall not use or permit the premises to be used for any illegal or immoral purpose.

2:5 The tenant shall keep and maintain the premises in a clean, sanitary and tenantable condition and shall be responsible for any action or prosecution arising from any insanitary condition of the said premises and not in any way contravene or violate any law or by-law that may be in force from time to time. The tenant shall also maintain any out-house or other building that may hereafter be rented to him/her in clean and sanitary condition at all times until the termination of the said tenancy.

2:6 The landlord hereby reserves the right to terminate the tenancy at any time on his being satisfied that the tenant is not keeping the premises in a good state of repair and in a sanitary and tenantable condition.

2:7 The tenant shall not let or sub-let the house or any part thereof to any person whomsoever nor shall he/she take in any lodgers or accomodate any persons other than those mentioned in his/her application to the Chairman for a house, except, the spouse or children of the applicant or other dependants who in the landlord's discretion may be considered members of his/her family provided that the landlord may premit accommodation by the tenant of any other persons who may become dependant on him/her hereafter.

2:8 The tenant shall maintain in good order the doors windows and walls of the said premises, and shall not drive in any nails or paste any paper or in any manner cause any damage to the said property.

2:9 The tenant shall not without obtaining the prior permission of the landlord effect any partitions, alterations, structural or otherwise to the said house by using any wood or other material. In the event of the tenant effecting any such unauthorised extensions or structural alterations, the landlord shall without any notice, or compensation to the tenant

2:10 The tenant shall keep the demised premises in good and tenantable order in accordance with these presents all the interior of the house, doors, main doors, wooden items, fixtures and fittings in good repair, in order to maintain the orginal condition.

2:11 The tenant shall perm . the landlord and or his agents and other persons authorised in writing by the said landlord at all reasonable time during the day to enter upon the demised premises or any parc thereof to view or inspect the said premises.

2:12 The tenant shall keep and maintain the premises in good and tenantable condition and carry out all repairs on the waste water pipes, and shall keep clean all drains and gutters belonging to the said premises.

2:12A The tenant shall during the period of tenancy carry out all repairs to the house and the lavatory at his own expense.

2:13 The tenant shall provide and maintain a suitable covered container to collect all garbage until it is duly removed by the local authority.

2:14 The tenant shall not erect any building or structure, or enclose any part of the demised premises without the prior consent of the landlord . In the event of the tenant acting in breach of this condition, the landlord doth have the right to terminate the said tenancy.

2:15 The tenant shall keep and maintain in good order all roads common to the said demised premises by means of "Shramadana" once or twice a year failure on the part of the tenant to abide by this condition will result in the termination of the said tenancy by the landlord.

2:16 The tenant shall maintain and keep in good order the common wells and the community centre by means of Shramadana carried out by and together with the tenants of the neighbouring demised premises failure to maintain the community centre and the wells will result in the termination of the said tenancy by the landlord.

2:17 The landlord or the tenant shall terminate the tenancy of the said premises by giving either party one full calendar months notice.

2:18 Failure on the part of the tenant to pay the monthly instalment of rent will permit the landlord to give notice to the tenant in order to terminate the contract of tenancy, in which event the landlord shall select a suitable new tenant to occupy the said premises, with the concurrence of the Government Agent of the District, who is also the representative of the Land Commissioner.

2:19 In the event of the tenant failing to observe any of the aforesaid conditions the landlord reserves the right to terminate the said contract of tenancy. The termination of the tenancy by the landlord for failure to observe any of the above conditions will result in the tenant losing all rights and priviledges accruing to him by the said contract of tenancy. The tenant doth undertake to vacate and handover peaceful possession of the demised premises at the termination of the said tenancy.

Until such time a permanant agreement is entered into this agreement shall prevail.

2:20 The decision of the landlord as to whether the tenant has committed a breach of any condition aforesaid, shall be final.

for Chairman/General Manager
of the National Housing Development Authority.

Signature of tenant
(To be signed on a Rs.1/= stamp)

Witnessess: (1).....

(2).....

ANNEX IX

Proposed Standards for Upgrading Programs

SLUM AND SHANTY DIVISION

Proposed Standards for Upgrading Program

Public Toilets:	Maximum 100 yards from any residential unit. 1 Toilet per 5 units Maximum 20 toilets per block
Storm Water:	Evacuation of storm water on main public streets as a minimum
Garbage Collection:	Maximum 50 yards from housing units. Placed along vehicular access ways
Water Supply:	Maximum 50 yards from housing units Maximum 10 units per tap. Where possible design for future individual connections.
Bathing Facilities:	Maximum 100 yards from housing units. Maximum 10 units per bathing place
Electricity:	Public Street lights - Maximum 50 yards apart or minimum 2 posts per acre. Where possible design for future individual connections.
Access:	Maximum district 100 yards from housing unit to vehicular road of 2 lanes (minimum width 30', 22' paved) to emergency vehicular road (minimum 1 lane, 15' width with 11' paved). Each housing unit accessible by footpath (minimum 5' wide).
Density:	Average Plot: 525 ft. Minimum Plot: 375 ft. Average Unit: 350 ft. Minimum Unit: 250 ft. — existing
	Average Plot: 550 ft. Minimum Plot: 410 ft. — Proposed for upgrading
	50 plots/acre gross residential density (Includes residential plots, roads, footpaths, public toilets, bathing areas, and open spaces. Excludes schools, dispenseries, community centers, etc.

ANNEX X

Procedural Steps for Upgrading Programs

PRE-IMPLEMENTATION

1. Consent plan & rough TEC; project proposal/brief
2. Project proposal to be submitted to Co-ordinating Committee
3. Project brief to be submitted to Director of Finance, UDA.
4. Allocation of funds in UDA budget
5. Decide about executing agency: UDA or CAB
6. Inform Director Engineering Services (A) or Chairman CAB(B) of 4.
   A. Inter-office memo (Finance → Eng.Serv.)
   B. Letter (General Manager UDA → CAB)

ROLE S & S PRE-IMPLEMENTATION	
Prepare	1
See to	2 - 6

DETAILED PLAN, CONSTRUCTION DRAWINGS, BOQ'S, FINAL TEC, BARCHART ETC. PREPARED BY OR THROUGH S&S

* If final TEC differs from rough TEC: correct project brief and put it to Director of Finance.

A. EXECUTING AGENCY UDA

		ROLE S&S A_1 & A_2
(A_1)	Awarded Contract	
1.	Letter of intent (P.S. → con)	- CONSULTANCY
2.	Start work (con)	- SUP. VISION
3.	In [illegible] & participation (con)	- MONITORING [illegible]
4.	Finance [illegible] (Fin → con)	- CO-ORDINATE (con, P.S., P.C, fin.)
5.	Evaluation [illegible] (P.C. → con)*	
6.	[illegible] (P.C. → con.)	- [illegible]
7.	[illegible] (P.C.)	
8.	[illegible] of contract (P.C. → con)	- "PROGRESS MONITORING"
9.	[illegible] (con. & P)	
10.	[illegible] (P.C.)	- SITE [illegible]
11.	[illegible] (fin.)	[illegible]
		CONTRACTOR & [illegible]

* If contractor [illegible] [illegible] for [illegible] with [illegible] by P.C.

(A_2) [illegible]

B. EXECUTING AGENCY CAB

		ROLE S&S A_1 & A_2
(B_1)	Awarded Contract	
	* Letter from Gen. Manager/UDA	- CONSULTANCY
	To Chairman CAB with	- [illegible]
	request for awarded contract procedure.	- [illegible]
	PROCEDURE [illegible] BY CAB:	- "PROGRESS MONITORING"
		[illegible]
(B_2)	[illegible]	[illegible]
	PROCEDURE [illegible] BY CAB	[illegible]

Best Available Document

ANNEX XI

Study of Selected Building Materials, Urban Development Authority, July, 1980

URBAN DEVELOPMENT AUTHORITY

Ministry of Local Government, Housing and Construction
Government of Sri Lanka

in co-operation with
United Nations Development Programme
(Project SRL/78/122)

Date: July, 1980

STUDY OF SELECTED BUILDING MATERIALS

INTERIM REPORT

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CONTENTS

0.	Introduction	0 - 02
1.	Preliminary observations and suggestions on construction costs	03 - 05
2.	Preliminary observations on building materials	05
3.	Recommendations on the supply and usage important building materials	07 - 17

Composition of the Committee:

Mr T.S. Vedagiri	-	UN Consultant, Urban Development Authority	(Convener)
Mr D. Weerapana	-	Deputy Director, Ministry of Local Government, Housing & Construction	(Member)
Mr A.B. Padmaperuma	-	General Manager, Building Materials Corporation	(Member)
Dr Jack Arn	-	Adviser, Ministry of Local Government, Housing & Construction	(Member)
Mr U.N. Gunasekera	-	Contractor and former President of the Institution of Engineers of Sri Lanka	(Member)
Dr A.C. Visvalingam	-	Engineering Consultant	(Member)

0. INTRODUCTION

0.1 The Government is deeply concerned at the rapidly increasing cost of construction in respec tof housing and other major development schemes. There is an urgent need for reducing the cost of construction and increasing at the same time the total output of the construction sector. These two are often contradictory as an increase in construction activity inevitably puts pressure on all resources and leads to further cost increases.

0.2 The present Committee began a study of the Construction Agencies in Sri Lanka with a view to strengthening their capacities and resources, and thereby enabling them to undertake the large number of development projects as well as the increasing number of small construction works all over the country. An INterim Report was produced in this connection. It was intended to write the Final Report after studying the reactions to the Interim Report. Only thereafter was it planned to study the important subject of Building Materials. However, in view of the extremely rapid escalation in the prices of building materials, the Committee of Development Secretaries directed the present Committee to undertake an urgent reconnaissance study of the availability and usage of important building materials in order that some quick steps might be taken to contain spiralling prices.

0.3 The Committee had discussions with the officials of the following organisations:-

1. Messrs. U.N. Gunasekera, Building Contractors
2. Building Materials Corporation
3. Industrial Development Board
4. Building Research Institute of the State Engineering Corporation
5. Building Materials Manufacturing Corporation

0.4 Based on a quick survey, the Committee has arrived at some preliminary recommendations which are set out in the following sections. It is the intention of the Committee to study the problem of some of the materials in depth and formulate recommendations both for short-term and long-term adoption. The Committee will then submit a comprehessive report on the Construction Industry as a whole, which will include its studies on the Construction Agencies as well as selected building materials.

0.5 The Committee wants to place on record its gratitude to the organisations and individuals who helped them in formulating this interim report on building materials in a short time.

1. Preliminary observations and suggestions on construction costs

1.1 Before getting into the question of building materials, their supply and usage, a few comments on other connected issues relating to construction costs may be worthwhile.

1.2 The first of these concerns the idea of dispersing and decentralising construction effort. If the Government were to undertake the construction of houses for all sections of the population, it is inconceivable that it would ever catch up with the demand. To cope with the present rate of increase of population, the Government has to build nearly 60,000 housing units per year which is a collossal job. It is, therefore, essential the the Government limits its efforts in direct construction only to the provision of housing for the economically weaker section of the society. As for other sections, the Government could extend assistance by provision of serviced sires, type designs of houses with bills of quantities, supply of pre-designed materials packages and where appropriate, loans. The Committee's ideas on these are set out in the following paras. The Committee is of the opinion that these ideas when translated into practice would slow down the rate of increase of construction costs and possibly lead to some reduction in consts as a result of dispersion and decentralisation.

1.3 The Government can, through the National Housing Development Authority and the Urban Development Authority, acquire suitable land at different places, provide necessary infrastructural facilities therein and sell plots of land to individuals or co-operatives at reasonable rates. This scheme has been tried at on a big scale in other developing countries with a great measure of success. The National Housing Development Authority and the Urban Development Authority could immediately launch a scheme for the large scale acquisition and development of land. It is possible to arrange a revolving fund for this work. Individuals and

co-operatives will only be too eager to purchase plots of developed land in reasonably good locations. This can provide a good source of income for these Authorities, as some profit can be levied on the sale of developed plots.

1.4 Coupled with the sale of developed land, there is also the need for evolving type designs for houses with fully worked out bills of quantities. Architects in the public and private sectors can be called upon to prepare one plan each for houses with 400/600/800/1200 sq.ft. of built-up area, together with detailed bills of quantities. The plans and sections, along with the bills of quantities, can be printed and sold to all interested. The Municipal and Urban Council authorities can be requested to approve quickly applications for the construction of houses, if they are according to one of the approved type designs. This measure will help the public to a considerable extent and help them in taking up construction work with minimum time and energy spent on preliminary work, which at present is farily involved and time-consuming. It is essential that the bills of quantities are so prepared as to alowo for different specifications according to the availability of local materials in different regions. For example, the supersturucture may be of brickwork in cement mortar or lime-cement mortar, soil-cement blocks, cement-sand blocks, laterite blocks, etc. Similarly, different specifications may be given for flooring, roofing and finishing items as well, so that the individual can select a suitable combination of specifications that would meet his needs.

1.5 The Building Materials Corporation, which has been doing valuable work in making construction materials available, should be requested to prepare materials packages for selected type designs of houses and make these available to the builder in instalments, according to the construction needs. In other words, materials packages can be designed to be supplied in 3 — 4 instalments (the first package for work

up to roof level and the fourth for finishing and internal services) to facilitate construction and to avoid tying up the individual's funds for a longer time, than it is necessary. The Building Materials Corporation should also help in the assembly and supply of these material packages from the nearest depot, with a view to reducing the cost of transport.

1.6 It is also worthwhile to have an exhibition of model buildings with a view to promoting new techniques and materials. The Centre for Housing, Planning and Building can organise such an exhibition and award prizes for the most functionally-designed and economically-constructed houses.

The design as well as the method of construction can be formulated by different individuals and firms but the cost of construction should be met by the Government.

The Centre should also evaluate the livability of such houses and produce reports which will enable the public to appreciate the relevance and applicability of different new materials and types of construction. An exhibition organised in 1975/76 by the National Building Organisation of the Government of India, in New Delhi, created considerable public interest and help popularise new materials and types of construction, which are functionally suitable and economically viable.

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2. Preliminary observations on building materials

2.1 Building materials have increased in cost very rapidly during the last few years. An indication of the scale of increase can be had from Annex I.

These increases are attributable partly to increases in the cost of production and transport and partly to the demand being in excess of supply.

2.2 Transport accounts for a major portion of the cost of building materials. For example, the cost of bricks in Colombo, which is Rs.325/- per thousand at the site, includes Rs.175/- for transport. The prices of many other important building materials like cement, timber etc. are also greatly affected by transport costs. The obvious conclusion is that bulk items used in construction should, where possible, have their origin as close to the point of consumption as possible The production units of building materials can be so designed as to utilise the available raw material resources near the centres of consumption. This will particularly apply to bricks, tiles, sand-cement blocks, soil-cement blocks etc.

3. Recommendations on the supply and usage of Important building materials

3.1 Cement

3.1.1 Observations

(a) Locally manufactured cement is basically cheap but supplies are inadequate.

(b) Imported cement is inevitable more costly.

(c) The obvious answer is to increase the local production as rapidly as possible and institute measures that will reduce the consumption of cement.

3.1.2 Recommendations

(a) The production of the existing plants has to be increased through well-planned replacements, addition of units like precalcinators and general increases in productivity.

(b) The projected construction activity in sectors excluding very heavy construction like the Mahaveli can sustain a production of one million tons per annum. the present capacity is 675,000 per annum whereas the production has, at best, been 550,000 tons per annum. There is, thus, an urgent need for establishing one more unit in order to ensure a production of about 1 million tons per year.

(c) Installation of additional capacity will take 3 - 4 years. Immediate action is, therefore, necessary to decide on the capacity and location of the plant.

(d) Steps should also be taken concurrently to reduce the usage of cement. The following suggestions are offered in this connection:

(i) Residential houses and other public consturction up to 2 - 3 stories in height should be of load-bearing construction using bricks or laterate blocks.

(ii) Standard designs adopted by Government bodies for RCC items like beams, slabs etc. should be revised to fall in line with the latest codes of practice, as many of these are known to the over-designed.

(iii) Masonry cement can be used for a number of non-structural and some selected structural items of work, provided that its minimum strength is assured. The production units can manufacture masonry cement in two grades - Grade A with a minimum assured strength and Grade B without any such stipulation regarding strength and other qualities. Masonry cement Grade A can then be used without reservations for appropriate load bearing components and Grade B can be used for other non-structural purposes.

(iv) Composite cement-lime mortar should be used, where lime is available instead of the normal cement mortar.

(v) On major construction projects, where good control of quality can be exercised, the concrete should be of design mix instead of nominal mix. This will ensure savings in cement.

(vi) At centres of concentrated construction activity, it may be worthwhile to consider the establishment of small batching plants from where ready-mixed concrete can be delivered to work sites. Such a scheme will also reduce the consumption of cement.

(vii) Where it is possible to establish such ready-mix concrete plants, replacement of cement by other pozzolanic materials such as overburnt clay to an extent of 20% can also be tried.

3.2 Steel

3.2.1 Observations

(a) Structural steel is rarely used. Reinforcement steel is locally produced by the public sector, and its price is controlled by production costs.

(b) There is no price increase due to scarcity, though at times there may be spurt in prices for certain sizes which are in short supply.

3.2.2 Recommendations

(a) As in the case of cement, adoption of load-bearing brick or lateriate construction for small houses and public buildings up to three stories in height will reduce the consumption of steel.

(b) The revision of standard designs adopted by Government departments will also lead to reduction in the use of steel.

(c) It is advantageous to use plain reinforcing bars for RCC slabs and other structural elements which are nominally reinforced.

(d) Design offices both in the public and private sectors should follow the lattest codes of practice in the design of RCC members. This will have the effect of reducing steel consumption upto about 15%.

3.3 Bricks

3.3.1 Observations

(a) Supply of local bricks (country bricks) is gradually getting more difficult as major producers have to bring raw clay from distant sources to their kilns. With the depletion of sources of firewood, prices have increased further.

(b) The correct approach here would be to cut down on transport costs and use alternative materials.

3.3.2 Recommendations

(a) A survey should be initiated of available clay deposits suitable for brick-making in the vicinity of construction activity.

(b) Small sites of 2 - 3 acres in extent containing such clay deposits can be acquired by Government and leased to brick-makers.

(c) The Building Materials Manufacturing Corporation can acquire suitable land for brick-making and call tenders for manufacturing bricks. Such a step has given good dividends in Delhi

here brick supply posed a threat to the construction industry a few years ago. Suitable land for brick-making can be acquired only by Government, and such land should be made availabel to the entrepreneurs in order to boost the production of bricks.

(d) Brick manufacture should be actively promoted by the Building Materials Corporation, which can organise a Development Wing to carry on full-scale promotional work not only for bricks but also for other important building materials like stone aggregates, sand etc.

(e) Brick sizes should be standardised and the standard should be insisted upon with a view to improving quality and economising on the use of cement both in mortar and plaster.

(f) Alternative materials like fibre-reinforced soil blocks and soil-cement blocks should be used on a larger scale. The Building Research Institute under the State Engineering Corporation has done valuable work on this. The Institute should be strengthened and brought under the Ministry of Local Government, Housing and Construction, as recommended in Section 14 of the Interim Report on Construction Agencies. This will give the much required boost to the Institute.

(g) The machine developed by the Building Research Institute for producing soil-cement blocks and cement-sand blocks is very good. The Institute should get more of these machines manufactured so that these are available to the public either for purchase or lease.

(h) The Centre for Housing, Planning and Building can give a helping hand to the Institute in popularising new techniques among the different sections of the Construction Industry by conducting short courses, holding seminars etc.

3.4 Wire-cut bricks

3.4.1 Observations

(a) These are at present manufactured by the public sector where productivity has been low and overheads high.

(b) The strength of wire-cut bricks is not fully utilised in current building practice.

3.4.2 Recommendations

(a) Efforts must be made to reduce the cost of wire-cut bricks by increasing productivity and reducing overheads.

(b) It should be possible to adopt 9" thick load-bearing brick wall construction for residential buildings upto 4 stories. This will ensure fuller utilization of the strength of the bricks and also help in reducing the use of critical materials like steel and cement. It is the normal practice at present in Northern India to adopt 9" thick bricks walls for 4 storyed residencial construction. This has resulted in a saving of 15% in construction costs, in addition to savings in the use of cement and steel.

3.5 Stone aggregate

3.5.1 Observations

(a) The costs of explosives, crushsing, loading and transport have increased rapidly.

(b) The price escalation created by scarcity at one time does not show any sign of abatement

Recommendations

(a) The Geological Survey should locate rocky sites suitable for quarrying closer to centres of consumption.

(b) The Building Materials Corporation should promote the establishment of small crushing units at these sites.

(c) The Development Wing of the Building Materials Corpoarion should also arrange for procurement of suitable crushers, preferably of a limited number of make and lease the same to entreoreneurs. This will boost production in the quickest and most satisfactory manner.

(d) As mentioned earlier, the adoption of designs which do not involve the use of reinforced concrete can reduce the demand for stone aggregates, in addition to reducing the cost of construction in general.

3.6 Sand

3.6.1 Observations

(a) The cost of production is very high as a good deal of labour is employed in difficult working conditions to collect sand and load it into vehicles.

(b) Substantial reductions in cost can be achieved by menachanizing the collection and loading operations.

3.6.2 Recommendations

(a) Government should take immediate steps to identify suitable locations for collecting sand with adequate space for stockpiling. These plots of land should be leased out to entrepreneurs.

(b) The Development Wing of the Building Materials Corporation should purchase suitably designed pumps and loading equipment and lease the same to entrepreneurs who can harvest the sand under controlled conditions.

3.7 Timber

3.7.1 Observations

(a) Local timber supplies are inadequate and are of poor quality.

(b) Substantial quantities of timber will have to be imported for some more time.

(c) There is sufficient room for the use of coconut rafters, palmyrah rafters etc. instead of normal scantlings.

3.7.2 Recommendations

(a) Coconut rafters and palmyrah rafters may be used for the frame-work of roofs. These are cheaper than standard roofing timber. Their use will also reduce the pressure on normal sawn timber. In fact, palmyrah rafters are stronger than most other timber and should be increasingly used.

BEST AVAILABLE DOCUMENT

(b) Concrete door and window frames have been developed by the Building Research Institute. These should be standardised and well-publicised.

(c) Door and window sizes should also be standardised and more factories must be set up for producing timber frames for doors and windows. The Building Materials Manufacturing Corporation which has already taken a lead in the matter should develop this further. This will reduce the cost of frames and can help in coping with the shortage of carpenters, which is keenly felt at present.

3.8 Lime

3.8.1 Observations

(a) 60% of lime production comes from mining coral deposits the exploitation of whcih is increasingly restricted.

(b) The lime industry consists of a large number of small scale units.

(c) The cost of lime has gone up to 3 to 4 times in the past two years.

(d) Mechanisation involving the use of diesel-operated kilns will bring about increased production and lower prices.

3.8.2 Recommendations

(a) Extensive deposits of crystalline limestone exist in Matale district. The Building Materials Manufacturing Corporation should proceed with the development of a lime-producing complex at this site.

(b) The Industrial Development Board should accelerate its efforts to design an economically viable diesel-operated kiln and provide the necessary financial and technical facilities for its use by entrepreneurs.

3.9 Asbestos roofing sheets

3.9.1 Observations

(a) The local supply of asbestos sheets is not adequate. Annual imports are about 25,000 tons.

3.9.2 Recommendations

(a) Local production must be increased by accelerating the setting up of an additional unit.

(b) Diversification of specifications for roofing can be of help. In this connection, mention may be made of coir-reinforced cement roofing sheets which are being produced currently. Steps must be taken to popularise and expand this production as they cost less than the asbestos cement sheets.

3.10 Builder's hardware

3.10.1 Observations

(a) The quality of locally-manufactured item is generally poor. Good quality imported items are very expensive.

(b) There is room for improving the quality of local manufacture at prices much below that of imported equivalents.

3.10.2 Recommendations

(a) Immediate efforts must be made to increase production by encouraging small units in the private sector and providing the necessary technical expertise.

(b) The Building Research Institute has developed hardwood substitutes for common hardware items like stays, window latches etc. These are ideal for production at cottage industry level. Action should be taken to standardise these items and get production organised.

(c) Simplified hinges for windows and doors are also being developed by the Building Research Institute. These should be standardisded and production of these by private industry must be encouraged.

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Annex I

No.	Item	Units	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979 (Jan-June)	1979 (July-Dec.)
			Rs.cts.	Rs.cts.	Rs.cts	Rs.cts	Rs.cts	Rs.cts	Rs.cts	Rs.cts	Rs.cts	Rs.cts	Rs.cts	Rs.cts.
1.	Cement	Cwts.	11.25	11.25	11.25	11.25	12.50	18.50	18.50	19.50	18.50	22.40	15.87	59.76
2.	Steel M.S. Bars	Cwts.	80.00	85.00	93.45	111.00	129.15	223.60	208.85	208.85	204.10	219.71	353.81	379.27
3.	Timber Sawn	Cu.ft.	16.55	16.55	16.55	16.55	16.55	19.86	19.86	23.30	23.30	35.86	60.00	65.00
4.	Bricks (Hand moulded)	1000	90.00	85.00	80.00	80.00	85.00	140.00	140.00	140.00	140.00	241.50	223.00	295.00
5.	Roof Tiles, Flat (Average of Cre. A&B)	1000	340.00	365.00	370.00	412.50	442.50	560.00	556.83	538.00	638.50	027.50	852.50	2057.50
6.	Metal (2")	Cubes	125.00	125.00	125.00	125.00	125.00	150.00	155.00	186.00	180.75	422.83	608.00	725.00
7.	Sand	Cubes	30.00	22.50	21.25	22.50	30.00	45.00	46.25	48.50	57.50	104.50	128.00	154.16
8.	Lime	Bushels	3.75	4.00	4.25	4.25	6.50	6.75	6.75	6.80	6.90	12.34	18.00	18.00
9.	Corrugated Asbestos Sheets	Sq.ft.	0.80	0.90	0.90	0.95	1.15	1.70	2.03	2.36	2.23	2.61	2.82	3.76
10.	Paints Emulsion	Gallons	44.65	55.13	57.25	66.25	94.50	139.50	145.00	116.85	106.36	99.50	99.50	120.00
11.	Hardware, Wire Nails	Cwts.	100.00	105.00	125.00	170.00	235.00	325.00	325.00	325.00	344.50	442.25	478.54	491.27
12.	Sanitaryware, Wash-basins, 23"x15" with fittings & 1 tap (coloured)	No.	125.00	112.25	125.75	176.00	186.25	275.00	304.50	306.00	312.00	358.00	300.00	324.83
13.	P.V.C. Pipes	L.ft.	0.73	0.83	0.89	1.12	1.66	1.95	1.73	1.73	2.12	2.64	3.19	3.52
14.	Electrical Wire PVC	100 yds.	30.00	30.00	35.00	35.00	47.50	90.00	78.00	80.00	76.00	83.00	97.25	115.45
15.	Cadjans	100 prs.	14.00	15.00	16.10	17.80	18.00	20.00	20.00	20.50	27.75	40.00	50.00	60.00
16.	Glass plain 3 mm	Sq.ft.	1.50	2.00	2.00	2.00	2.00	2.98	3.28	4.16	3.87	5.85	7.70	7.70
17.	Concrete Mixer Hire	per day	85.00	85.00	90.00	100.00	125.00	150.00	150.00	150.00	150.00	150.00	160.00	160.00
18.	Unskilled Labour	per day	4.84	4.84	4.84	5.00	5.79	7.32	7.68	7.76	7.76	10.97	12.00	12.33
19.	Skilled Labour	per day	7.39	7.39	7.49	7.68	8.30	10.73	2.57	13.26	13.26	14.12	16.59	17.25

ANNEX XII

Study of Construction Agencies, UDA, Feb. 1980

URBAN DEVELOPMENT AUTHORITY

Ministry of Local Government, Housing and Construction
Government of Sri Lanka

in co-operation with
United Nations Development Programme
(Project SRL/78/122)

Date : February, 1980.

STUDY OF CONSTRUCTION AGENCIES

INTERIM REPORT

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INTRODUCTION

0.1 A 'state of art' report on the construction industry was prepared last year by the United Nations. The report dealt with the probable load that would devolve on the construction industry because of the Development Plans and the extent to which the local construction industry could respond. The report brought out in detail the gap between what was planned and what was possible with the available local resources, its nature and magnitude and the measures to combat the same.

0.2 The Government of Sri Lanke as a follow-up measure wanted a more detailed survey to be carried out on the construction industry and the problems faced by it so that adequate steps could be taken to mitigate these and thereby increase the capacity and output of the industry. The Government of Sri Lanka requested the United Nations to assemble a team for undertaking this study keeping the UN Report of 1978 as the starting point. The Resident Representative of the UN and the Chief Adviser, UDA felt that as the author of the 1968 report was in Sri Lanka with the UDA this study should be carried out by him. This proposal was accepted by the Government of Sri Lanka and T.S. Vedagiri, UN Consultant, UDA was requested to take up this study. The Habitat, Nairobi also ratified this arrangement.

0.3 The UN Consultant felt that this study should be carried out in association with local experts, as they would be intimately concerned with the problems and their association would be of help in suggesting practical remedial measures. Accordingly, the UN in consultation with the Ministry of Local Government, Housing and Construction set up the following committee to undertake the study:

T.S. Vedagiri	-	UN Consultant, Urban Development Authority (Convener)
Mr. D. Weerapana	-	Deputy Director, Ministry of Local Government, Housing & Construction (Member)
Dr. Jack Arn	-	Adviser, Ministry of Local Government, Housing & Construction (Member)
Mr. U.N. Gunasekera	-	Contractor and former President of the Institution of Engineers of Sri Lanka (Member)
Dr. A.C. Visvalingam	-	Engineering Consultant (Member)

0.4 The Committee in its initial deliberations in October 1979, considered the United Nations Report on construction industry of 1978 as well as the points on which the Government of Sri Lanka wanted a further study to be undertaken and formulated the following issues for the proposed study:

a) Re-assessment of the extent of gap between the required construction effort and what is possible with local resources.

b) The financial problems of construction agencies.

c) Possibilities of joint ventures and collaboration with foreign agencies.

d) Equipment needs of contractors.

e) Training of labour and site management staff.

f) Technical help required by medium and small construction agencies.

g) The prevalent contracting procedures and the need for streamlining the same.

h) Contract documents, their deficiencies and evolving a unified set of contract documents.

i) Registration of contractors and connected problems.

j) Specifications for building work, control on quality, facilities for soil and material testing etc.

k) Fixing of rates for different items and periodical updating of the same.

l) Payment to contractors, arbitration and other contractual problems.

0.5 The Committee also evolved a questionnaire covering the issues detailed above for the purpose of aiding their discussions with various construction agencies and getting all relevant particulars of the prevailing system, the shortcomings therein the suggestions for improvement.

0.6 The Committee had detailed discussions with a number of contracting firms - big, medium and small. The services of the Centre for Housing, Planning and Building was also utilised for this purpose. The Director of the Centre kindly agreed to prescribe the study of construction agencies as a part of the Project work for the training course on 'Construction Management' which was under way at the Centre during November/December 1979. The participants of the course were briefed by the Committee Members regarding the objectives of the study and they were requested to have discussions with selected construction agencies and get factual data and information on the issues set out in the aide-memoire. A list of agencies with whom discussions were held is given in Annex I. The same Annex also lists the other connected agencies with whom the Committee had discussions.

0.7 Based on these discussions and the study of a number of reports and documents on the subject, the Committee has come to conclusions on some of the issues while some others require further study. Since the Government is anxious to mitigate the difficulties of the construction agencies and thereby enhance their output, the Committee considered it worthwhile to submit an interim report giving their conclusions on some of the issues taken up for study so that the Government could take necessary action. The Committee will continue their study of other issues and submit the final report by the end of May 1980.

0.8 The Committee wishes to place on record their sincere thanks to the various construction agencies and other authorities for the enthusiastic co-operation extended during this study.

SECTION I

FACILITIES FOR PLANNING

1.1 **Findings**

1.1.1 All construction agencies expressed deep concern about the non-availability of adequate facilities for soil investigation and topographic survey which affect planning work adversely.

1.1.2 Construction work taken up without proper soil investigation and topographic survey also gets hampered due to changes in design necessitated by site conditions after start of work. This brings in its wake many contractual complications.

1.1.3 The few firms engaged on soil investigation and topographic survey are heavily booked and are unable to cope with the increasing volume of work. Their output does not meet the demand.

1.1.4 Some foreign firms who can undertake this work are also heavily loaded and take a long time for completing the work. Furthermore, their charges are very high.

1.1.5 It is, however, very encouraging to note that the Ministry of Local Government, Housing and Construction has decided to set up a soil investigation unit with UN assistance under the UDA to serve all the departments/ organisations under the Ministry.

1.2 Recommendations

1.2.1 All efforts must be taken to organise the soil investigation unit under the UDA expeditiously. This should receive priority attention by all concerned.

1.2.2 It is also necessary to have regional units. Entrepreneurs may be encouraged to set up soil investigation work in other regional centres. The continuance of lump-sum depreciation on equipment is an incentive. The Ministry of Local Government, Housing and Construction should take active steps to promote setting up of regional soil investigation units.

1.2.3 Entrepreneurs must be encouraged to take up topographic survey work. The Ministry of Local Government, Housing and Construction should work out a system of providing loans to such entrepreneurs for the purchase of survey equipment.

SECTION 2

TRAINING OF CRAFTSMEN IN THE BUILDING INDUSTRY

2.1 Findings

2.1.1 The Government is already aware of the large number of skilled and semi-skilled workers required for construction work during 1978/82 both in the public and private sectors. Table I gives a rough estimate of the manpower requirements in the building trade.

TABLE I - MANPOWER PROJECTION FOR PERIOD 1978-82

Category	Requirements of manpower for each year				
	1978	1979	1980	1981	1982
Masons	14,155	20,440	25,660	31,770	31,770
Carpenters	9,740	13,820	18,770	21,220	21,220
Fitters	610	900	1,190	1,355	1,355
Welders	920	1,385	1,840	2,095	2,095
Plumbers	935	1,370	1,810	2,040	2,040
Wiremen	930	1,360	1,790	2,050	2,050
Electrician	305	435	560	605	605
Barbenders	1,500	2,480	3,740	4,380	4,380
Painters	470	700	935	1,095	1,095

SOURCE: Report on the Expansion of Technical Training Programmes, Ministry of Youth Affairs & Employment - 1978. (Page 5)

NOTE : These estimates are believed to be on the low side.

2.1.2 There are no dependable statistics on the number of craftsmen available at present. The shortfall in construction capacity in relation to the projected requirements is in some considerable measure due to the shortage of skilled manpower.

2.1.3 All construction agencies emphasised the need for training more skilled workers in all the categories of building trade.

2.1.4 The National Apprenticeship Board (NAB) has long-term schemes for training building craftsmen. Recently however, they have introduced a short-term crash programme for training large numbers of masons, carpenters etc. This scheme has not yet gained momentum due to:-

a) the NAB not having finalised yet the detailed syllabus for short-term training;

b) the NAB not having the necessary facilities for imparting institutional training to a large number of apprentices at a time;

c) the construction agencies both in the private and public sectors not giving adequate attention to the problem of imparting practical training to the apprentices.

2.1.5 The NAB does not get timely intimation about the works awarded by various government agencies. Hence, they are not able to plan the recruitment and placement of trainees on such works.

2.2 Recommendations

2.2.1 The NAB should finalise the syllabus for the short-term courses urgently. Mr. Gunasekera, a member of the Committee has extended his co-operation to the NAB in this respect.

2.2.2 For carrying out a crash programme of this type, the NAB should have its own facilities for imparting institutional training to the apprentices during the first two or three months. The proposal for setting up an Industrial Training Workshop under the NAB, which we understand has been approved in principle, must be put into action on a priority basis.

2.2.3 There is a dearth of vocational instructors for the different construction trades. Government may obtain experienced instructors from other countries who have a pool of experienced persons in different trades. To start with, the following numbers of instructors in different trades may be obtained and assigned to the NAB. More instructors may be engaged as the programme gathers momentum.

Masonry	5
Carpentry	5
Plumbers	2
Electrician	2
Fitters	2
Welders	2

2.2.4 The construction agencies, both in public and private should give adequate attention to training of apprentices. This requires some special incentive. The following suggestions are offered:

(a) There should be a clause in the agreement with contractors, that they would train a specified number of apprentices in different trades on their work sites, depending on the magnitude of the contract, failing which they would be liable to some penalty.

(b) In the rules of registration of local contractors, a provision could be made that proper attention to training would entitle a contractor for some consideration for upgrading (See Section 5), whereas lack of attention would result in demotion. For this purpose, the performance review of contractors should cover the item of training.

2.2.5 Once the system of certification referred in Section 3 has been properly instituted, the NAB should attach apprentices to certificated tradesmen and pay the usual allowances.

2.2.6 The Programme Division of the Ministry of Local Government, Housing and Construction should make arrangements for intimating to the NAB periodically (say monthly) all the works costing over Rs.500,000 awarded by the various departments/organisations under the Ministry, their location, date of start of work, time given for completion and the number of apprentices of different categories that can be assigned to the work etc.

2.2.7 The Programme Division of the Ministry should also arrange for regular monitoring of the placement of apprentices at different work sites and the training imparted to them.

SECTION 3

INTRODUCTION OF A CERTIFICATION SCHEME FOR BUILDING TRADESMEN

3.1 Findings

3.1.1 In the building trade training is mostly acquired on the works.

3.1.2 Many unskilled and semi-skilled workers upgrade themselves on the job and in course of time aspire to semi-skilled and skilled positions.

3.1.3 There is no way of recognising this transformation and giving incentives for more people to upgrade themselves.

3.2 Recommendations

3.2.1 A certification scheme for building trades should be introduced by which certificates of different grades are given to building workers who upgrade themselves and aspire to positions of higher skill. This system will also enable getting necessary statistics about the availability of tradesman in different trades and under different grades in the same trade.

3.2.2 The certification unit may consist of a Deputy Director (Certification) assisted by a few vocational instructors who would be able to conduct the necessary trade tests and grade the applicants. This unit can be placed under the Buildings Department.

3.2.3 The services of a few instructors from other countries can be obtained to start the scheme of trade tests.

3.2.4 Wide publicity should be given to the scheme, so that building workers all over the country can apply and qualify themselves for certification.

SECTION 4

TECHNICAL HELP TO CONSTRUCTION AGENCIES

4.1. Findings

4.1.1 In 1978, there were hardly 40 registered contractors with the Buildings Department and this number has increased recently and many contractors are also getting registered with the various construction departments/ organisations of the government.

4.1.2 Construction is a difficult field for new entrepreneurs. They need advice on various matters such as site management, supply of materials, keeping accounts, training site supervisors etc.

4.1.3 In the United Kingdom, the Building Advisory Services, founded in 1954 as a part of the National Federation of Building Trade Employers, has done valuable work in assisting small and medium sized contractors in improving their work, organisational efficiency, productivity and profitability.

(a) The Construction Division of the Building Advisory Services carries out assignments on the following types of problems at the request of the member construction agency;

i) Staff appraisal;

ii) Financial planning and control;

iii) Accounting and costing procedures;

iv) Estimating and tendering;

v) Planning of the work site;

vi) Construction problems in the field

b) The Safety Division gives advice on construction safety and also trains the supervisors of construction firms in ensuring safety standards at work site.

c) The Training Division conducts courses, seminars etc on topics of interest to contractors and their staff.

d) The Building Advisory Services also provides facilities for recruiting skilled labour. This serves as an employment exchange for construction labour.

4.1.4 In the USA, the Associated General Contractors Inc., a powerful association of contractors, is doing very valuable work in all the fields mentioned above and has helped in no small measure in enhancing the capacity and capability of construction agencies.

4.2 Recommendations

4.2.1 It is advisable to organise a similar agency under the Ministry of Local Government, Housing and Construction. To start with, this function could be taken up as an extension work of the Centre for Housing, Building and Planning and later developed into a separate organisation, if the situation warrants.

4.2.2 This unit which can be called "Building Services Unit" could be under a Deputy Director and can have its own management committee consisting of representatives of the Ministry, consulting engineers, architects and contractors.

4.2.3 Funds for the work can be arranged through seed capital from the Government and contributions from contractors and consultants who want to become members or associates of the "Building Services Unit".

4.2.4 To start with, this unit should assist the construction agencies in the following fields:

a) problems of site management;

b) supply of materials;

c) training of site supervisors.

SECTION 5

REGISTRATION OF CONTRACTORS

5.1 Findings

5.1.1 A system of registration of contractors had been in existence in the past but is now defunct.

5.1.2 However, different construction departments have started their own system of listing contractors.

5.1.3 Registration of building contractors by a central agency is an important step towards the development of construction agencies on healthy lines.

5.1.4 Construction departments in all developed and developing countries have a rigorous system of registration, upgrading, downgrading and blacklisting of contractors.

5.1.6 The registration certificate can be a collateral evidence for contractors in their transactions with banks and other financial institutions.

5.2 Recommendations

5.2.1 Building contractors can be registered under 12 classes enumerated below:

Class	1.	Rs. 0	-	10,000
Class	2	Rs. 10,000	-	25,000
Class	3	Rs. 25,000	-	50,000
Class	4	Rs. 50,000	-	100,000
Class	5	Rs.100,000	-	250,000
Class	6	Rs.250,000	-	500,000
Class	7	Rs.500,000	-	1 Million
Class	8	Rs.1 M	-	2.5 M
Class	9	Rs.2.5 M	-	5 M
Class	10	Rs.5 M	-	10 M
Class	11	Rs.10 M	-	25 M
Class	12	Rs.25 M	-	50 M

6.2.4 The Ministry should persuade the banks and other financial institutions to accept the registration certificate as collateral for extending financial assistance to contractors. The registering authority will send them an updated list of registered contractors every six months.

6.2.5 However, the practice of getting bid bonds and performance bonds should continue in the case of foreign firms. In this connection, particular care should be taken to ensure that bonds and other undertakings given by foreign firms are underwritten by the parent company and not by subsidiaries with insubstantial assets.

SECTION 7

EXISTING CONTRACTING SYSTEM

7.1 Findings

7.1.1 Award of work on the basis of tenders was the prevalent system some time back.

7.1.2 In the late sixties and early seventies, the government found it difficult to get contractors to undertake urgent works particularly in remote areas. The Chamber of Commerce offered to organise contractors, who were its members, to undertake such contracts on the basis of negotiated rates. Many jobs were carried out under this arrangement.

7.1.3 During 1972 - 77 no work was given through the Chamber and the contracting firms were left on their own to get work.

7.1.4 By the middle of 1977 when construction work was stepped up, there was again a dearth of construction agencies and the available agencies were reluctant to take work by tendering. Their reluctance to tender was mainly due to their having run down their inventory of equipment and being severely short of funds and credit facilities. Moreover, because of competition there was the possibility that they would be loaded with jobs at non-workable rates.

7.1.5 The Chamber of Commerce again came forward to get the works done through negotiated contracts distributed among its members. The Special Projects Division of the Chamber of Commerce looked after this work.

7.1.6 The Chamber of Commerce recently, has dissociated itself from this work. The Sri Lanka Construction Consortium was then formed presumably to work under the Federation of Chambers of Commerce of Sri Lanka. Its legal position is not clear.

7.1.7 At present, the Sri Lanka Construction Consortium assigns the work given by government to its members taking into account their capacity and the existing load on them. Thereafter, rates are negotiated by the contracting firms with the Ministry of Local Government, Housing and Construction directly. The service charge (3% of the cost of actual work done) levied by the Consortium is recovered from the bills of contractors and credited to the Consortium. It is understood that two thirds of this service charge goes to the Consortium's consultants while the balance goes towards its operating expenses.

7.1.8 There is a feeling that work can be done quickly under the negotiated contract system. However, in practice, several works have been delayed due to difficulties in the settlement of rates.

7.1.9 With negotiated rates, the element of competition has been eliminated and the cost of works has gone up appreciably.

7.1.10 The Consortium itself feels that there is no better system of getting public work carried out than through open tenders.

7.1.11 The contractors also have their own misgivings about this system of negotiations and they have encountered numerous difficulties in actual performance of work.

7.1.12 Although the system of open tendering is the most cost effective way of getting work done, awarding of work by negotiation is also an accepted practice. But this is resorted to only in exceptional cases, where work has to be done in extremely urgent circumstances, (e.g. clearing of roads of landslides, post disaster work etc) or where work has to be carried out in remote locations, where contractors may not be forthcoming.

7.1.13 When work was taken up on a large scale in 1978 after a very dull period during which the construction agencies were almost wiped out, the recourse to award of work through negotiation was justifiable.

7.1.14 Now that more construction agencies are coming up and existing agencies are expanding, there is need to reconsider whether the well recognised system of tendering should not be revived for the healthy growth of the construction industry.

7.1.15 The Cabinet has recently ruled that all tenders with an estimated value of over Rs. 1 million must be reported to the Cabinet, in view of the apparently unsatisfactory manner in which tenders are processed by the Government Departments and other public sector agencies.

7.1.16 This has not brought about a significant change in the procedure followed in the processing and awarding of tenders other than an upgrading in the rank of officials appointed as members of tender boards. The need to refer all tenders exceeding Rs. 1 Million in value to the Cabinet, has resulted in a further delay in the award of tenders. The Committee feels that the shortcoming referred to by the Cabinet in the existing procedures could be avoided, to a great extent, by proper delegation and streamlining of procedures.

7.2 **Recommendations**

7.2.1 The system of tendering should be adopted for all workers excepting those taken up in emergency situations.

7.2.2 The scheme of registration mentioned in Section 5 will help selective tendering, as only contractors of the appropriate Class and above would be eligible to bid for work of a given magnitude.

7.2.3 The process of examination of tenders and award of work should be simplified.

a) There should be only 3 levels for approval and award of tenders as indicated in Table I.

b) The value of contracts that could be approved at each level should be decided taking into consideration the recent escalation of construction costs. A Head of a Department should be authorised to award works upto Rs. 1 million. Works costing above Rs. 1 million but less than Rs. 10 million should go to the Secretary and only those costing over Rs. 10 million need to be put up to the Cabinet.

c) The procedure presently followed for the selection of members of tender boards needs improvement.

i) A tender board should have a minimum of three members and should consist of an Accountant and at least one Engineer. The Board so constituted should have powers to co-opt members of other disciplines, as required.

ii) The members should be selected at random, from a panel of officials drawn from various public sector agencies, and representing

the different disciplines. It is recommended that a panel be prepared for each discipline and should consist of officers of three distinct levels to enable the selection of officers of appropriate level, in accordance with the value of the tender. These panels could also be made available to the Cabinet to facilitate a wider choice in the selection of members of tender boards.

d) Decision with regard to a tender should be made at three levels, in order to minimise irregular practices in the award of tenders - one for initial scrutiny, the second for recommendation and the third for acceptance. Each level should give reasons for its decision. The recommended procedure is shown in the table below:

Value of Tender	Level of Technical Scrutiny			Level of Recommendation and Approval			
	A	B	C	Supt. Eng./ similar	Head of Dept.	Secre-tary	Cabi-net.
Less than Rs. 1 M	x			R	A		
Rs. 1 M to 10 M		x			R	A	
Above Rs. 10 M			x		R	R	A

The Head of Department may be given authority to delegate powers to decide on works of a lesser value to his subordinate officers.

e) A tender should be decided within three months of receipt. Four to six weeks could be given for the first stage of scrutiny and three weeks each for the second and third stages. A strict adherence to this time table will enable all tenders to be decided upon within three months.

7.2.4 It is also possible to call tenders on the basis of certain percentage above or below the standard schedule of rates for the region. This system of tendering would enable easy decision on tenders and also avoid absurdly high rates and low rates for some items, as can happen in the item/rate contracts. This, however, pre-supposes the existence of up-to-date schedules of rates for different regions. Our recommendation on this is given in a later section.

7.2.5 The Sri Lanka Construction Consortium will still have an important role to play with regard to emergency works and works in remote locations, which require negotiations with contractors.

7.2.6 In the meanwhile, the legal and other problems regarding the Consortium should be settled.

SECTION 8

EQUIPMENT NEEDS

8.1 Findings

8.1.1 In building construction, the cost of utilisation of equipment works out to generally less than 5% of the total cost.

8.1.2 For building works undertaken by government the total cost of equipment required is of the order of Rs.600 to 1000 million.

8.1.3 There are no reliable figures of the availability of equipment with the construction agencies. Computing, however, from the actual volume of work carried out during the last two years, this can be estimated at Rs. 100 million.

8.1.4 It is also pertinent to point out that the available equipment is old or obsolete.

8.1.5 There is an urgent need to provide construction agencies with equipment at least to the extent of Rs. 300 million, to start with.

8.1.6 The construction agencies want long-term loans for purchase of equipment.

8.1.7 There are also items of equipment like lowloaders, small batching plants for concrete, cranes of 3 - 5 tons capacity, dozers etc which are required by construction agencies off and on and which they would like to hire for short periods.

8.1.8 Construction agencies also require good maintenance facilities for their equipment which at present are almost non-existent.

8.1.9 The National Development Bank (NDB) has recently formulated a scheme for refinancing Commercial Banks to enable them to finance purchase of equipment by contractors. The ceiling for this is about Rs. 20 million for 1980. This will not be adequate.

8.1.10 Some overseas firms are interested in forming an equipment leasing company in association with local banking institutions. At present, they contemplate only leasing of equipment on a long-term basis. The equipment has to be purchased by the lessee at the end of the period. In other words, this amounts to hire purchase. This will not meet the needs of the construction industry, as hiring of equipment is not contemplated. Further, for simple leasing work, there is no necessity for foreign collaboration.

8.2 Recommendations

8.2.1 The NDB must refinance commercial banks to the extent of Rs. 100 million during 1980/81 to enable commercial banks to give long-term loans to contractors for purchase of equipment.

8.2.2 Some financial help available from the World Bank can be channelled through the NDB for this purpose.

8.2.3 The need for hiring of equipment has to be met by an equipment hiring company which will perform the following functions:-

a) arrange for hire purchase of equipment by utilising manufacturer's credit, where available;

b) hire equipment to construction agencies on dry basis, i.e. equipment with operator while consumables will be provided by the lessees;

c) organise workshop facilities for overhaul and repair of all types of equipment;

d) train operators for the equipment;

e) arrange for spares for the equipment leased or given on hire purchase.

Foreign collaboration in this case is essential. There are some firms who are interested in setting up a company of this type in association with local financial institutions. The government can, in fact, invite proposals from foreign collaborators for this purpose.

SECTION 9

FOREIGN CONTRACTORS

9.1 Findings

9.1.1 From 1970 onwards, construction firms of Sri Lanka were deprived of the opportunity of growing and building up their capacity.

9.1.2 That they managed to survive the many difficult years that followed was partly due to their basic resilience and partly due to the small amount of work that was given to them by the private sector.

9.1.3 As a consequence of this long lean period, during the initial stage of the present construction boom, they lacked the necessary strength to cope with the increased volume of work. Their main shortcomings were:-

a) loss of experienced personnel due to lack of work in the previous years;

b) outmoded equipment and difficulty in financing their equipment needs;

c) inability to prove that they had done major works so as to be in a position to bid for the larger works under the present boom;

d) erosion of financial resources and their inability to muster funds to undertake larger contracts.

9.1.4 In view of the above, the government had to bring in foreign construction firms to take up major works by giving them substantial tax and other concessions.

9.1.5 On this basis, even works of very simple nature like residential buildings (single and double storeyed) were awarded to foreign contractors. There are cases, where, by proper phasing of work, the job could have been carried out by local firms.

9.1.6 There is a strong feeling among the local construction firms that this will erode their capacity further. There is also a movement of personnel from local employers to foreign contractors who are able to offer better terms on account of the more fabourable contractual conditions enjoyed by them.

9.2. Recommendations

9.2.1 Simple types of construction like residential buildings should be given only to local construction firms - by suitably splitting and phasing the work, if necessary, and distributing the same to more than one agency.

9.2.2 For other jobs, where the outlay at present prices is more than Rs. 50 million or which entail new or complicated techniques, tenders may be invited from Sri Lankan firms, joint ventures and foreign firms instead of assuming a priori that Sri Lankan firms lack the necessary capability.

9.2.3 Encouragement may be given to local firms entering into joint ventures with foreign construction firms with the Sri Lankan firms having a small holding to start with but increasing substantially over a period of time (say 10% equity in the first year, 20% in the second year, 30% in the third year and so on).

9.2.4 The encouragement of joint ventures mentioned above would ensure that:-

a) relatively small Sri Lankan firms could come into a meaningful association with a large foreign firm;

b) a Sri Lankan firm could progressively strengthen its position within a joint venture;

9.2.5 There is no reason for offering special tax concessions to foreign firms for undertaking construction work in Sri Lanka, as such facilities are not available in most countries. The equitable application of tax laws to all firms (foreign, local and joint venture) will encourage the healthy growth of the construction industry.

SECTION 10

SCRUTINIZING OF PROJECTS BEFORE APPROVAL

10.1 Findings

10.1.1 During the study of certain works, it was found that very little scrutiny of the cost-effectiveness, technical soundness and the possibility of recovering cost of the scheme was done before they were approved. A study of some of the on-going projects has brought out the following points:-

a) In a township of 500 odd houses, the cost of roads and drains alone comes to about Rs.11,500/- per unit! A 420 sq.ft. unit may cost over Rs.80,000/-. It is not possible to recover this amount from low income tenants. The element of subsidy will, therefore, be quite high.

b) Planning of the houses leaves much to be desired. A 400 sq.ft. house is planned as a two floor unit with one room in the first and one room in the ground floor with a staircase! It is not only inconvenient but also costly.

c) In another type design, of which nearly 140 units have been constructed, the WC is in the drawing/living room and opens towards the entrance of the house.

d) In a low-cost house, windows alone cost Rs.4,000/- and these are imported ones.

e) In most of the houses in a township, the doors have been made 1¼" thick for the sake of economy, but the locking device is an imported one which can well fit into a five-star hotel.

f) In another low cost house, the bath room/WC which is hardly 4' x 5' is provided with a washbasin, squatting pan and a telephone shower. The incompatibility of the fittings is obvious.

10.1.2 Similar deficiencies were found in the works executed in India under the First and Second Five Year Plans. The National Planning Commission then decided to set up a high powered committee to study the schemes and formulate Norms and Standards for future adoption with a view to achieving economy and efficiency.

10.1.3 The Norms and Standards prescribed by this Committee can well be taken as a starting point for developing our own set of Norms and Standards for different types of construction in Sri Lanka.

10.1.4 A member of the Committee had discussions on this subject with the Secretary, Local Government, Housing and Construction. The Secretary immediately recognised the need for detailed scrutiny of projects before approval and the necessity of laying down Norms and Standards for future adoption. It is gratifying to note that the Secretary has set up a Committee under his chairmanship to scrutinze the plans before approval. The Committee has already formulated Norms and Standards for residential neighbourhoods.

10.2 Recommendations

10.2.1 The setting up of the Committee to scrutinize projects comprehensively before approval is a timely and welcome move. The Committee should formulate norms for other

types of buildings like offices, markets etc and send the same to all departments, as well as to consulting architects and engineers, who are doing the work for government with the norms in all future plans and any deviation therefrom should be approved by the authority sanctioning the scheme.

10.2.2 The Committee should also make sample checks on projects approved on the above basis with a view to seeing that norms are realised in actual practice during the stages of detailed engineering and construction.

10.2.3 Any unauthorised deviation from the norms should be appropriately dealt with.

SECTION 11

REVISION OF SPECIFICATIONS & UPDATING OF SCHEDULE OF RATES FOR BUILDING WORKS

11.1 Findings

11.1.1 There are no uniform specifications for building works. Specifications are drawn for individual works by different departments.

11.1.2 Specifications available with the Buildings Department are quite old and need a complete revision.

11.1.3 The schedule of rates is also old and needs to be updated and correlated with the specifications.

11.1.4 All the construction firms were emphatic about the need for unified specifications which could be adopted for all building works under the government, whether it is under one ministry or another.

11.1.5 They also felt that the lack of a uniform set of specifications gave rise to contractual complications and rendered quality control on works more involved.

11.1.6 The construction agencies were equally emphatic that these should be a standard schedule of rates and that it should be revised periodically and published for the benefit of all engaged in the construction industry.

11.1.7 It was also felt that the schedule of rates for building works should be adjusted for different regions in the country and updated periodically.

11.1.8 Tenders can be invited on a percentage basis above or below the relevant schedule of rates. This method of tendering would expedite the award of work and minimise contractual complications.

11.2 Recommendations

11.2.1 The Buildings Department should be made the focal point for revision of specifications and schedules of rates for building works. The Chief Engineer (Contracts) can be entrusted with this work and must be given suitable technical and clerical staff assistance.

11.2.2 As the specifications and schedule of rates are very much outmoded, considerable effort is necessary in revising these and correlating them properly. It may be advisable in this connection to bring a short-term UN Expert for five to six months to assist the Buildings Department in completing this job within a short period.

11.2.3 When once the specifications and schedule of rates are revised, updating them periodically should pose no problem. Chief Engineer (Contracts) can be charged with this responsibility. In fact, the schedule of rates can be computerised, so that periodical revision is a matter of few hours, when once the revised basic rates are fixed.

11.2.4 Tenders for simple and repetitive works should be invited on a percentage basis above or below the relevant schedule of rates for the region. For any special type of work, it will be necessary to prepare a specific schedule of rates for the work and call tenders on percentage basis.

SECTION 12

QUALITY CONTROL OF WORKS

12.1 Findings

12.1.1 Various construction agencies and engineers in charge of supervision of work brought out the difficulty in ensuring the quality of work and attributed this to two main factors.

a) Absence of a uniform set of specifications for building works ;

b) Inadequacy of testing facilities for materials and finished items of work.

12.1.2 The existence of heterogenous sets of specifications and divergence between those adopted by different departments leads to contractual complications and hold-up of work.

12.1.3 However, it is encouraging to note that the Ministry of Local Government, Housing and Construction has approved the setting up of a material testing laboratory in conjunction with the soil testing laboratory which will be a part of the Soil Investigation Unit proposed to be set up under the UDA.

12.1.4 National standards are not available for many building materials. Even in cases where such standards are available, they are not updated and enforced. Construction agencies and consultants complained about the steady deterioration in the quality of building materials.

12.2 Recommendations

12.2.1 The proposal to set up a material testing laboratory, as mentioned above, is timely. The laboratory should be set up expeditiously.

12.2.2 Testing facilities should be organised in the regional centres also.

12.2.3 In the meanwhile, full advantage should be taken of the material testing facilities available in the universities and technical institutions.

12.2.4 Regarding specifications, we have given our recommendations in Paras 11.2.1 and 11.2.2 above.

12.2.5 The Ministry of Local Government, Housing and Construction should co-ordinate with the Ministries of Industries and Trade to ensure that national standards for building materials are formulated, updated and strictly enforced.

SECTION 13

TECHNICAL AUDIT

13.1 Findings

13.1.1 The country's development plans have generated a wide variety of construction jobs, which have to be completed in a short time.

13.1.2 A number of agencies both from private and public sectors are being engaged in the planning, designing and supervision of construction. As the pace of work is quite fast and there is a host of different types of agencies engaged on these, the possibility of wasteful expenditure, deterioration in quality, violation of procedures etc cannot be ruled out.

13.1.3 If these are not checked well in time, the gulf between the cost incurred and the value of the assets created would go on increasing to the detriment of the overall economy and the healthy growth of the construction industry.

13.1.4 Both developed and developing countries like the United Kingdom and India have accepted the need for a technical audit in addition to the normal financial audit.

13.1.5 The technical audit is conducted on works in progress. The various contractual aspects of the works are looked into and deficiencies notified to the Executive in charge of the work, who takes necessary action to rectify the defect and prevent its recurrence. The technical auditor has no power to give direct instructions to the contractors or consultants. He can report the facts to the client for such action he may deem fit to take.

13.1.6 There has been mixed reaction to the institution of such a scheme both in the UK and in India. However, technical audit has come to stay in these countries.

13.1.7 It cannot be denied that a technical audit conducted without bias will improve, in the long run, the quality of work and help adherence to the standard conditions of contract, the standard specifications and accepted code of practice.

13.1.8 In some cases, the technical audit has helped in modifying and streamlining the procedure to expedite the completion of work.

13.2 Recommendations

13.2.1 The time is ripe to set up a small technical audit unit directly under the Ministry of Local Government, Housing and Construction.

13.2.2 The unit may consist of a Chief Examiner of works of the rank of the Head of a department with three or four technical officers to assist him.

13.2.3 The Secretary of the Ministry may call upon the technical audit unit to carry out an engineering appreciation of specific projects, when required, so that he may initiate remedial measures in time.

SECTION 14

BUILDING RESEARCH AND DISSEMINATION OF RESULTS OF RESEARCH

14.1 Findings

14.1.1 Building work is getting more complicated and varied. The pace of construction has also increased.

14.1.2 It is imperative at this juncture to intensify research work on materials, construction techniques and technical problems encountered in the field.

14.1.3 The housing schemes completed so far cannot be described as low cost ones. There is need for intensifying research on low cost building materials and construction techniques.

14.1.4 There is a Building Research Institution under the State Engineering Corporation.

14.1.5 The fact that this is under a construction corporation restricts, to some extent, its scope of work.

14.1.6 The research institution issues periodical bulletins on the work done. The effort taken for dissemination of the results of research is inadequate.

14.1.7 There is no mechanism in the Ministry utilise effectively the valuable results of research already produced and popularise the same.

14.2 Recommendations

14.2.1 Top priority must be given to research work on buildings.

14.2.2 The research institution should be placed directly under the Secretary, Ministry of Local Government, Housing and Construction, as this would give added status to it and also make the Ministry self-sufficient in planning, research, training etc.

14.2.3 The Director of the Institution should have the status of a Head of Department.

14.2.4 At present, the post of the Head of the Institution is vacant. Placing the institution under the Ministry and upgrading its status would help attract a suitable incumbent.

14.2.5 The Building Research Institution should continue to concentrate its work on practical problems especially those connected with low-cost housing.

14.2.6 The Institution can organise seminars and training programmes through the Centre for Housing, Building and Planning with a view to broadcasting the results of research to wide section of the agencies involved in construction.

14.2.7 The Ministry should have a committee to evaluate the results of research and take such steps that are necessary to translate these into practice quickly and effectively.

EPILOGUE

15.1 As mentioned in the introduction, this is only an interim report. There are many other issues which are being presently studied by the Committee. These include the drawing up of a standard contract document eliminating some of the deficiencies in those currently in vogue, problems of financing construction jobs undertaken by contractors, modifications if any, required in labour laws etc.

It is pertinent to point out that the Committee has not studied in depth the problems concerning materials which are causing considerable constraints in the smooth flow of works. However, the Committee has identified bricks, stone aggregate, sand, timber, sanitary fittings and builders' hardware as items which require detailed study with a view to suggesting measures for improving their availabiltiy. The Committee proposes to undertake the study on these shortly.

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encl.

/ ANNEX I /

LIST OF AUTHORITIES WITH WHOM THE COMMITTEE HAD DISCUSSIONS

Mr. D.G. Athukorale	State Engineering Corporation.
Mr. G. Wickremasinghe	- do -
Mr. Kumar Ranatunge	- do -
Dr. S.M.A. Perera	Ceylon Development Engineering Co.
Mr. E.M.G. de Zylva	- do -
Mr. M. Vamadevan	- do -
Mr. U.N. Gunasekera	
Mr. Peter Samuel	Samuel Sons & Co. Ltd.
Mr. C. Rasiah	- do -
Mr. S.M. Fonseka	D.D. Fonseka & Sons
Mr. T.P. Perera	- do -
Mr. Neville Abeysinghe	- do -
Mr. N.D. Maurice Silva	Walker & Greig Limited
Mr. S.B.J. Seneviratne	- do -
Mr. P.C.K. Fernando	Design Group Five
Mr. G.S. de Silva	- do -
Mr. N. Chinnadurai	Contractor & Material Supplier, Jaffna.
Mr. Mudali Mahesh	- do -
Mr. V. Gandhi	- do -
Mr. I. Ponnudurai	- do -
Mr. K.C. Samaraweera	Director, Buildings Department
Mr. S. Arumainathan	National Housing Development Authority
Mr. A.R. Gnanendran	- do -
Mr. C. Dias	Sri Lanka Construction Consortium
Mr. Anthony Edwards	World Bank
Mr. S. Thriscutt	World Bank
Mr. S.J. Mohideen	National Apprenticeship Board
Mr. V.K. Wickremasinghe	National Development Bank along with senior representatives from - Hatton National Bank Bank of Ceylon Peoples Bank

/ ANNEX II /

RULES REGARDING REGISTRATION OF CONTRACTORS

1. Contractors will be registered in the following classes and shall be eligible to tender for works of the value shown against each.

Class	1	Rs. 0	-	10,000
Class	2	Rs. 10,000	-	25,000
Class	3	Rs. 25,000	-	50,000
Class	4	Rs. 50,000	-	100,000
Class	5	Rs.100,000	-	250,000
Class	6	Rs.250,000	-	500,000
Class	7	Rs.500,000	-	1 Million
Class	8	Rs. 1 Million	-	2.5 M
Class	9	Rs. 2.5 M	-	5 M
Class	10	Rs. 5 M	-	10 M
Class	11	Rs. 10 M	-	25 M
Class	12	Rs. 25 M	-	50 M

2. Contractors of Class 5 and above shall be registered centrally on a country-wide basis by the Registering Authority under the Ministry of Local Government, Housing and Construction. The registration will be done by a committee consisting of the Chief Engineer (Contracts) Buildings Department as Chairman, two Civil Engineers and one Financial Officer drawn from government departments as members.

3. Contractors of other classes will be registered on a regional basis. The registration will be done by a committee consisting of the Superintending Engineer of the Buildings Department in the region as chairman and one Engineer and one Financial Officer drawn from government departments functioning in the region as members.

4. Contractors seeking registration in Classes 10 and above should have a good engineering organisation to deal with planning, designing and execution of works. They should also have necessary plant and equipment for carrying out works and ensuring control on quality. The details of the organisation and the list of plant and equipment available with them should be furnished along with the application for registration.

5. Contractors desiring registration in Classes 8 and 9 should employ a Civil Engineer holding a degree in Civil Engineering to supervise the work at site. They should submit their organisational set-up and the list of plant and equipment available with them along with their application for registration.

6. Those desiring registration in Classes 5, 6 and 7 should employ a Diploma holder Engineer to supervise their works.

7. Applicants desiring registration in any class should have satisfactorily carried out one work of the magnitude prescribed for the next class below. Necessary testimonials to substantiate this should be furnished along with the application.

8. Applicants desiring registration in Class 5 and above can get exemption from submission of bid bonds with every tender, provided they make a lump sum deposit with the Registration Authority, as prescribed below:

CLASS	LUMP SUM DEPOSIT
5	Rs. 5,000/-
6	Rs. 7,500/-
7	Rs. 10,000/-
8	Rs. 15,000/-
9	Rs. 20,000/-
10	Rs. 25,000/-
11	Rs. 50,000/-
12	Rs. 75,000/-

/ ANNEX III /

APPLICATION FOR REGISTRATION OF CONTRACTORS

1. Name of applicant :

2. Nationality :

3. Permanent address:

4. Whether individual, partnership, private or public limited concern (NOTE : attested copies of articles of association to be enclosed) :

5. Person holding power of attorney, his nationality and address:

6. Names of partners, their nationality and address (NOTE : attested copy of the partnership deed to be enclosed) :

7. Place of business :

8. Class in which registration is sought:

9. Whether the applicant desires to make a lump sum deposit with the Registering Authority in order to secure exemption from submission of bid bonds with every tender :

10. List of works executed during the last three years (NOTE : this is to be given in a seperate statement giving the name of each work, place, total cost and the authority under which the work was carried out) :

11. Whether the applicant has an engineering organisation for planning, designing and executing works (for classes 10, 11 and 12) :

12. Whether the applicant is registered with any other authority, if so details :

13. Has the applicant or any of his partners or shareholders been blacklisted of removed from the approved list of contractors or demoted to a lower class or orders passed suspending business with the applicant etc by any government department in the past :

14. Whether the applicant has read the rules of registration and is prepared to abide by them:

I/We Certify that I/we will not get myself/ourselves registered as contractor(s) in the Department under more than one name.

.....
Signature of the Applicant.

PLACE: .....

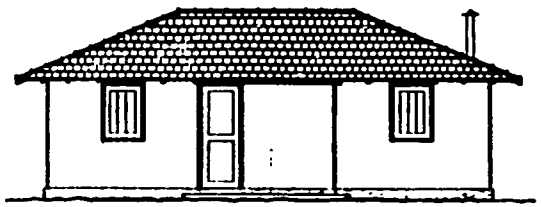
DATE: .....

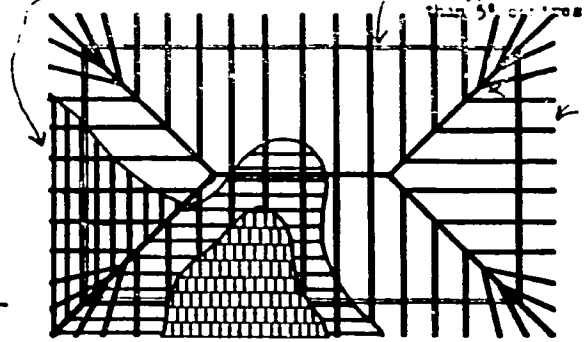
ANNEX XIII

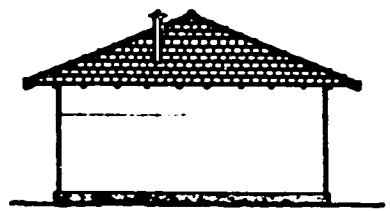
Sample Aided Self-Help House Plans

-ASH House Types

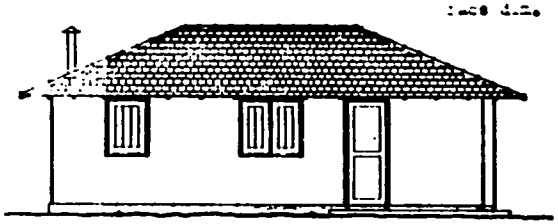
[illegible] wall, ridge and hip plates [illegible] timber, properly [illegible]. [illegible] of unwrought coconut or [illegible]. [illegible] of [illegible] II timber. All timber [illegible] with two coats of black [illegible] [illegible] approved.

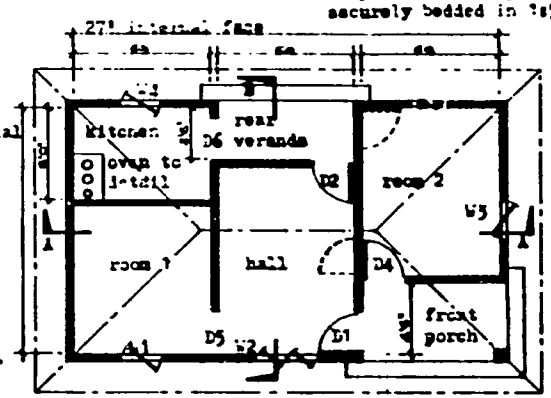




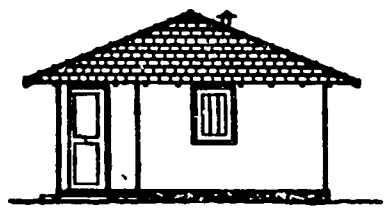


SIDE ELEVATION

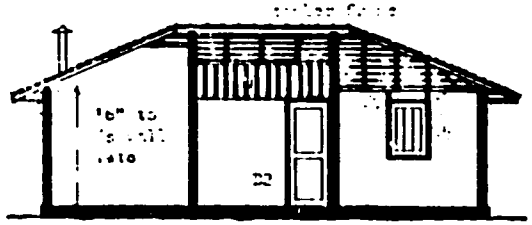


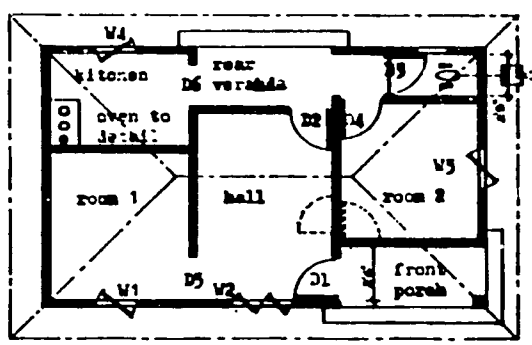


PLAN VARIANT A

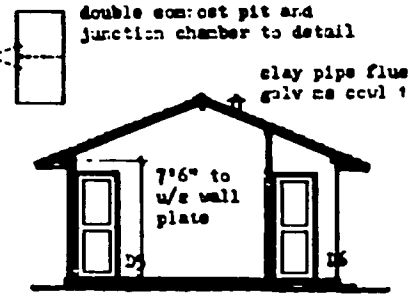


SIDE ELEVATION





PLAN VARIANT B



SECTION B-B

Note D5 and D6 are optional to be supplied by house owner

NOTES

This drawing shows general arrangement only. For details see the relevant 1/4" scale drawing. Dimensions to inside face of external wall are constant. Wall thicknesses will vary according to construction type

Variant A has a detached toilet

Variant B has an in-built toilet and is suitable for up-country and high wind sites. Note that the front porch dimension varies to accommodate the toilet.

Door and window positions can be varied by house owner. Extra doors and windows cannot be supplied. Example: in room 2 the position of D4 can be to the front porch (to suit sinhalese) or to the rear (to suit moslems). D4 can also connect to the hall.

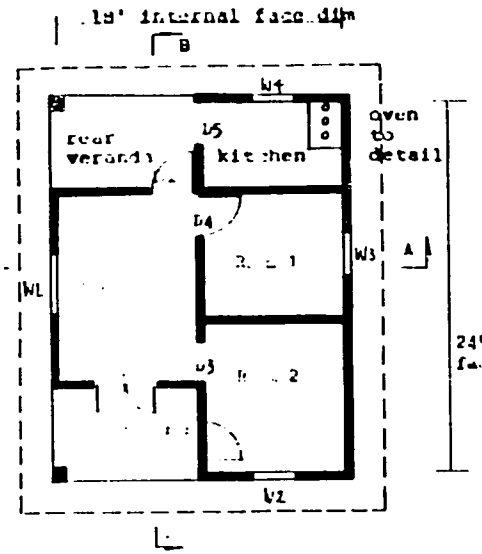
353

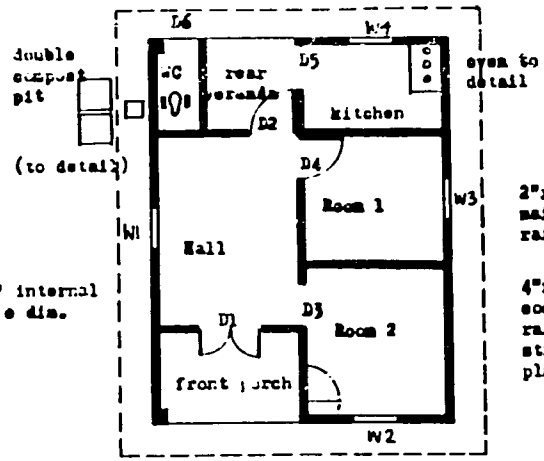
[illegible] floor to [illegible] plate [illegible]

"[illegible] HOUSE PROGRAMME" 1980-81
HOUSE TYPE ASH
GENERAL DRAWING

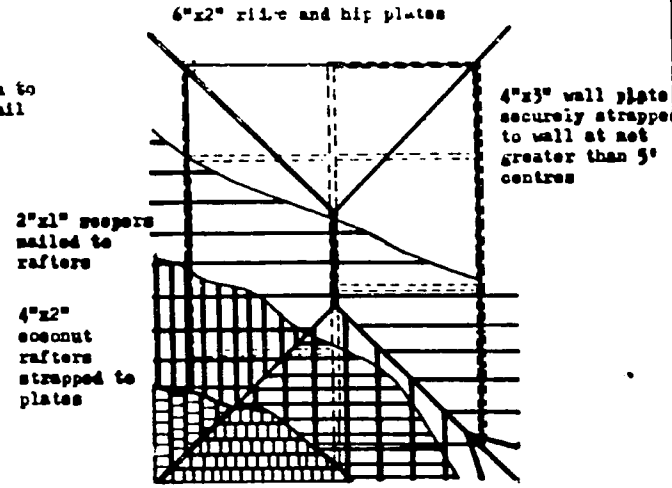
[illegible] HOUSING DEVELOPMENT AUTHORITY
Sir Chittampalam Gardiner Mw.
Colombo 2
tel. 21653

drawn	checked	approved
haroha	dgr	[illegible]
SCALE 1/8"	July 1980	A.11

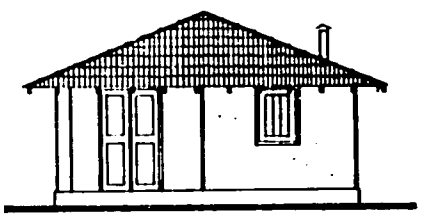


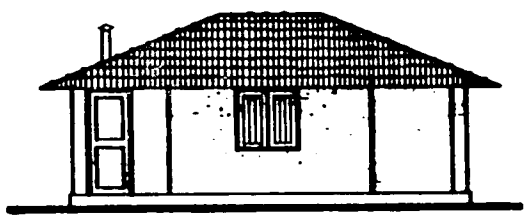


PLAN VARIANT B

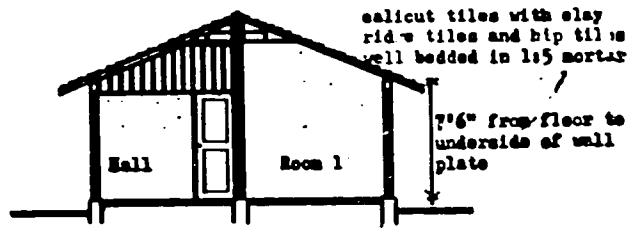


ROOF PLAN

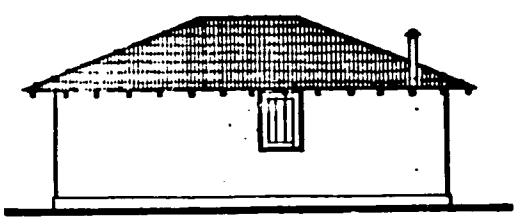




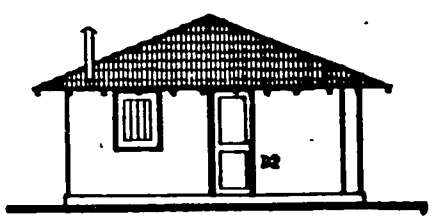
SIDE ELEVATION



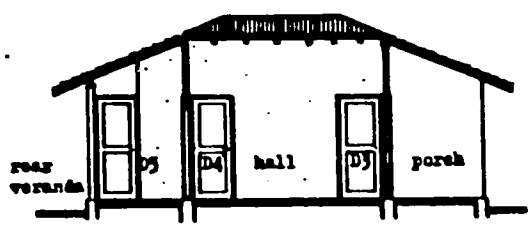
SECTION A-A



SIDE ELEVATION



REAR ELEVATION



SECTION B-B

NOTES

This drawing shows general arrangement only. For Details see relevant 1" scale drawing (A.22 - A.27). Dimensions are given to inside face of external wall and are constant. Wall thicknesses will vary according to method of construction

Variant A will be supplied with a separate toilet

Variant B has an in-built toilet and is suitable for up country and windy sites.

Door and window positions can be varied to suit allottees. Extra doors and windows cannot be supplied.

D3 & D5 are built as openings only. Doors and frames must be supplied by the house owner

Roof Frame wall, ridge and hip plates to be class I timber, properly seasoned. Rafters to be of unwrot coconut or palmyra. Sleepers to be of class II timber. All timber to be treated with two coats of black solignum or similar approved preservative.

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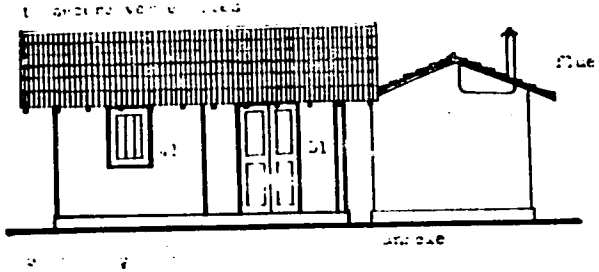
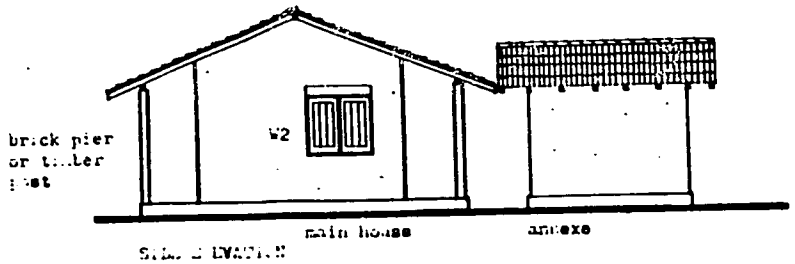
standard heights
floor to us wall plate 7'6"
floor to us ridge pl 11'7"

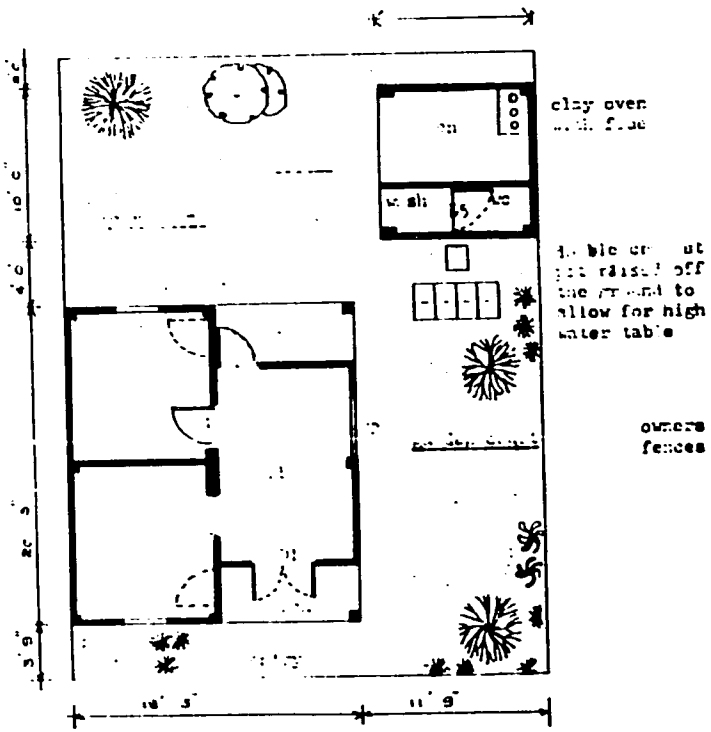
"30 Houses Programme" 1980-81
HOUSETYPE 382
GENERAL DRAWING

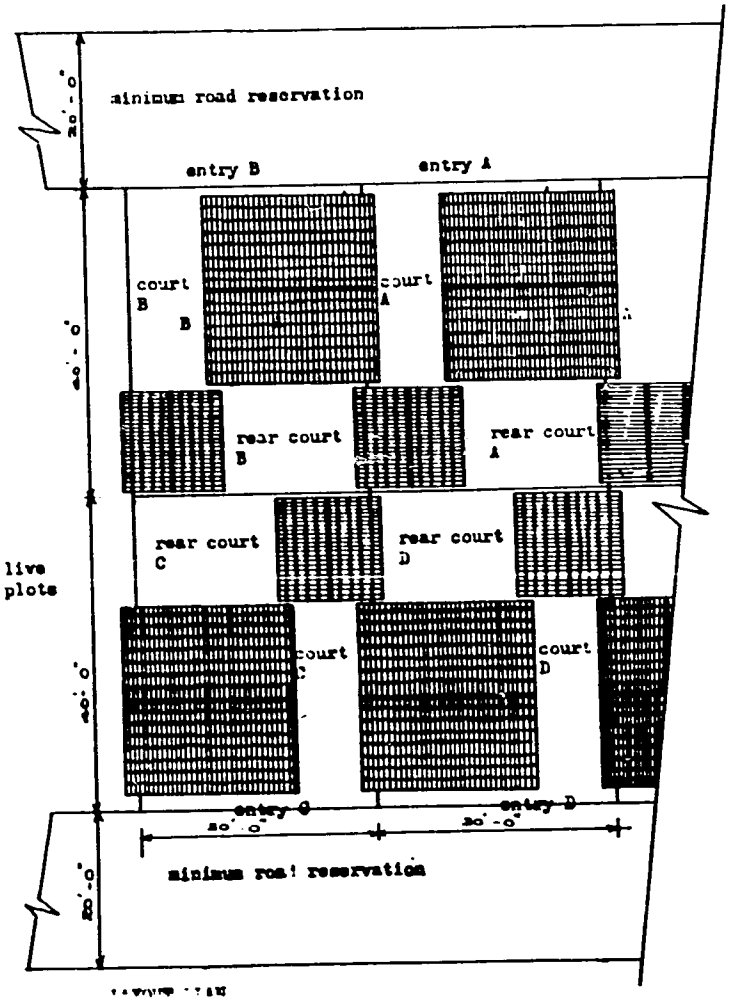
NATIONAL HOUSING DEVELOPMENT AUTHORITY
Sir Chittampalam Gardiner Mw.
Colombo 2
tel. 21653

drawn	checked	approved
pushpa	dgr	[illegible]
scale 1"	July 1980	A.21









owners to grow live
fences between plots

Notes

This drawing shows general arrangement only. For details see drawings A-32, A-33.

EH3 will be built only with burnt brick.

EH3 is intended primarily for urban sites where land is scarce. A minimum of 1 acre is required for 30 houses

Door and window positions can be varied to suit the allottee. Extra doors and windows cannot be supplied.

D2 is an opening only with lintol over. Door and frame to be supplied by owner.

Roof Spec.
wall & ridge plates to be class I timber, properly seasoned. Rafters to be of unwrot cocoanut or palmyra poles. Keepers to be of class II timber. All timber to be treated with two coats of black solignum or similar approved preservative.

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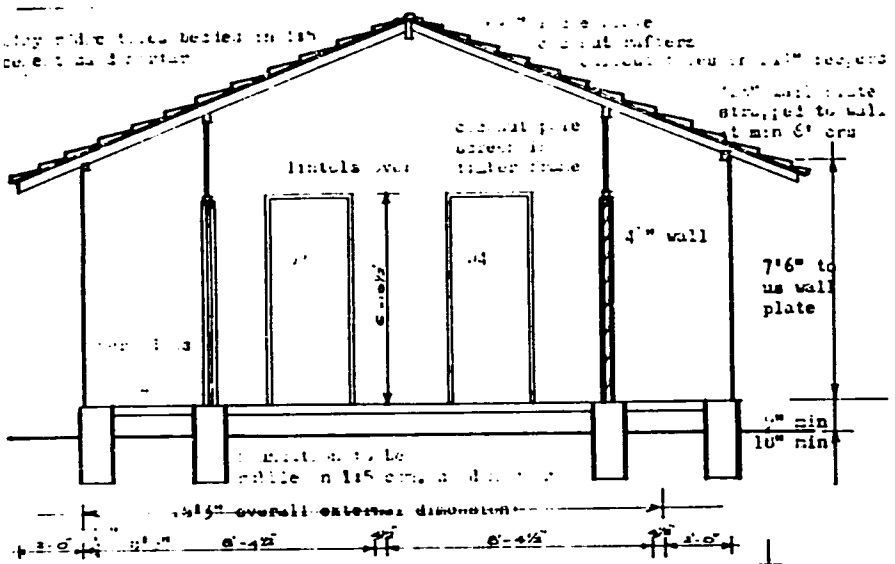
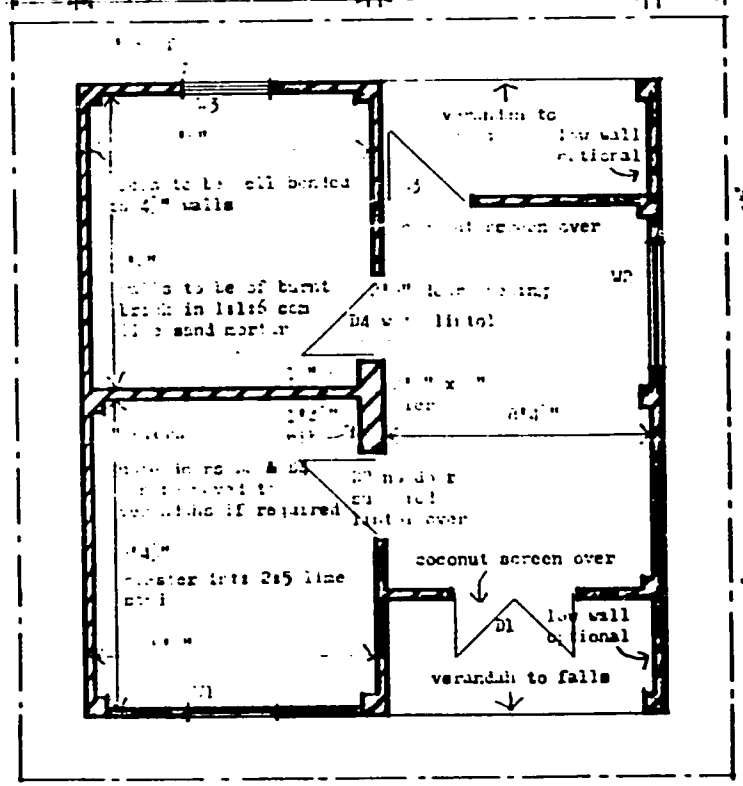
30 Houses Programme, 1980-81
Housetype EH3
For Urban Sites

GENERAL DRAWING

NATIONAL HOUSING DEVELOPMENT AUTHORITY
Sir Chittampalam Gardiner Mw.
Colombo 2
tel 21653

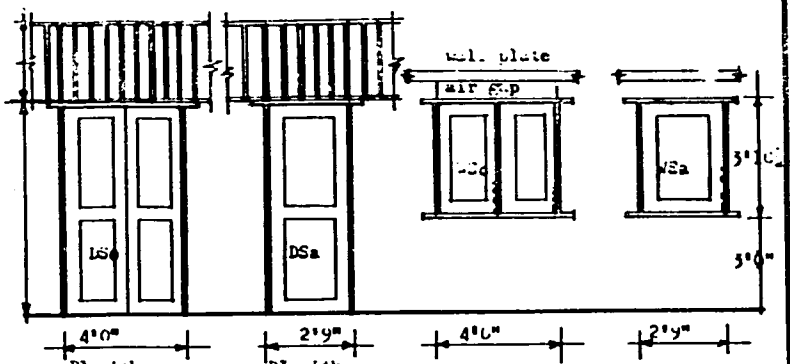
drawn	checked	approved
pushpa	dgr	[illegible]
scale	date	A-31
-	August 80	





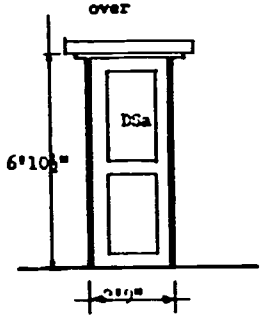
20'3"
Overall ext
dimension

plaster ext to be
1:1:6 cem lime sand
all walls to be
painted with two
coats samara



D1 with
coconut screen
over

D3 with
coconut screen
over



D4 with lintol

floors ½" 1:3 render with neat cement float finish on min 2" rammed hardcore on well compacted base

dpc to be ½" 1:3 render with 2 coats of tar

found to be selected rubble in 1:5 cement sand mortar built off clean bottom with layer of river sand.
founds to be min 9" above ground and min 18" below ground, and to be 1'" wide.

wall plates to be 4x3" timber strapped to masonry wall using 1" 24 g galv straps side nailed to plate using 2" flat headed galv nails. Straps to extend min 9" below top of wall and to be built 4" into wall.

Notes
This drawing to be read with drawings A31 & A33

This drawing shows main house only

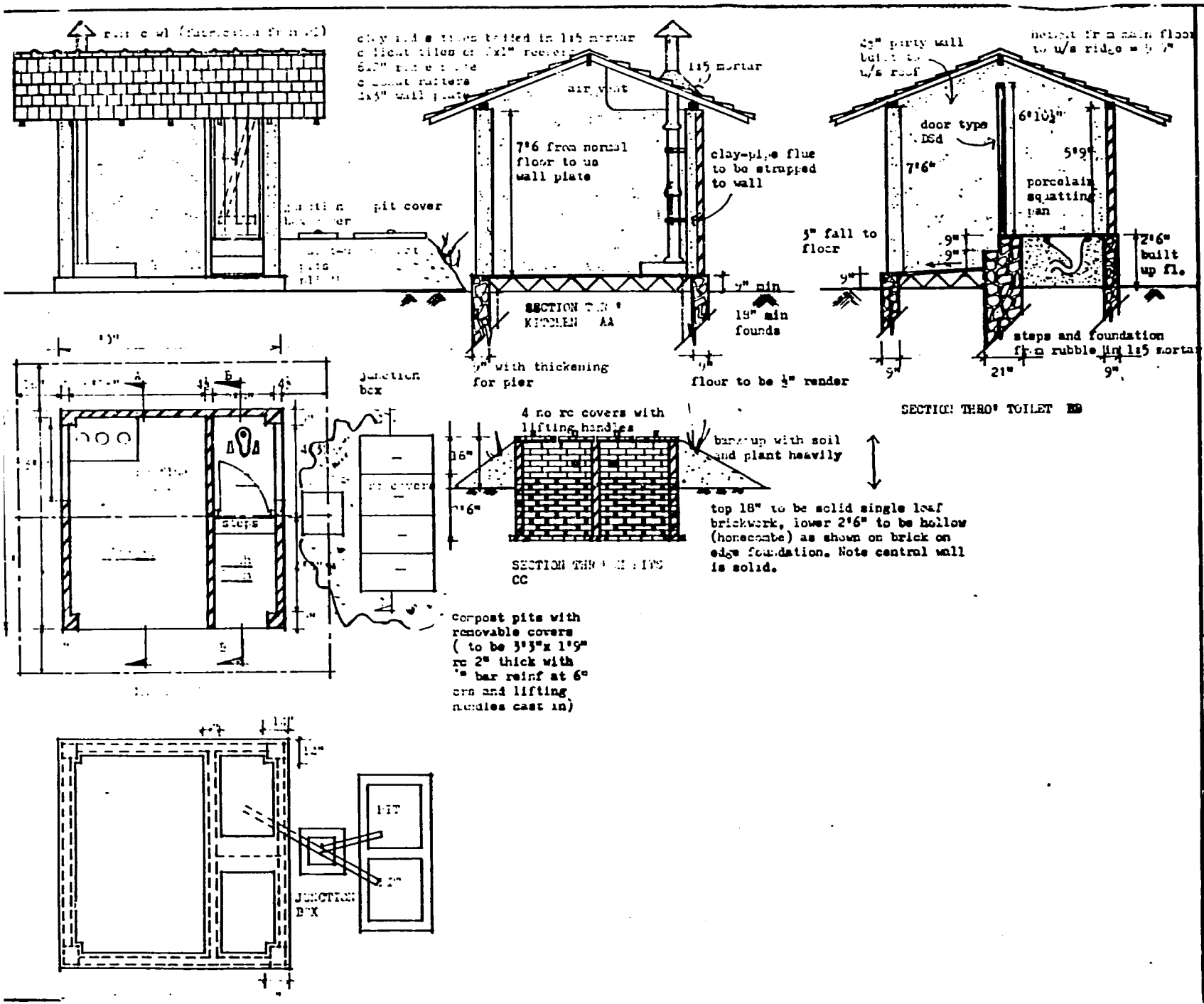
Type EH3 is intended for urban sites only, where sites of about 1 acre are available

30 HOUSES ELECTORAL PROGRAMME 1980
Type EH3 Urban Housetype

Details of main house

NATIONAL HOUSING DEVELOPMENT AUTHORITY
Sir Chitampalam Gardiner Mw
Colombo2

drawn	checked	approved
siva	dgr	Dam (RM)
scale 1:20	date aug 80	A.32



Notes

For details of pit and junction box see drawing B.21

The height of the toilet floor has been raised to allow for high water table. The pits are therfore built partly out of the ground. Some adjustment of levels may be necessary on site.

note for detailed specification consult drawing A.32
this drawing to be read with A.31 & A32

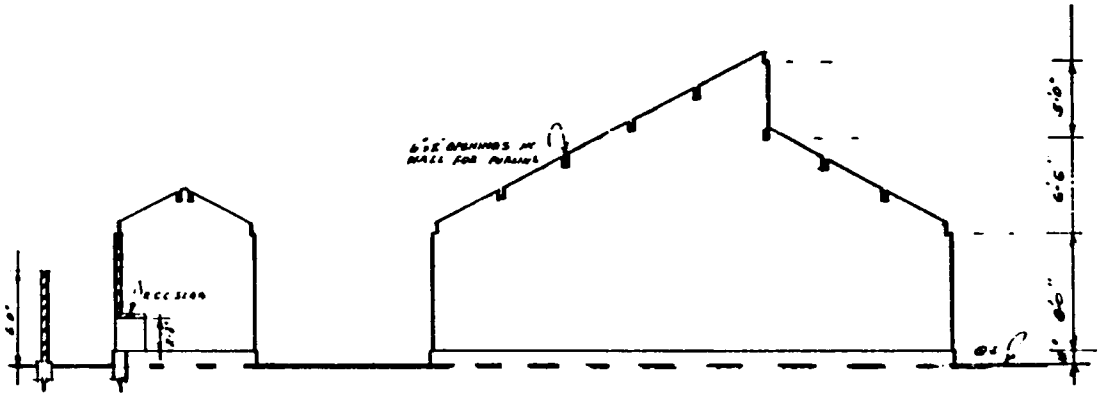
30 E USES ELECTRICAL TECHNIQUE 1981

Kitchen/Toilet Annexe for use with housetype and (urban type)

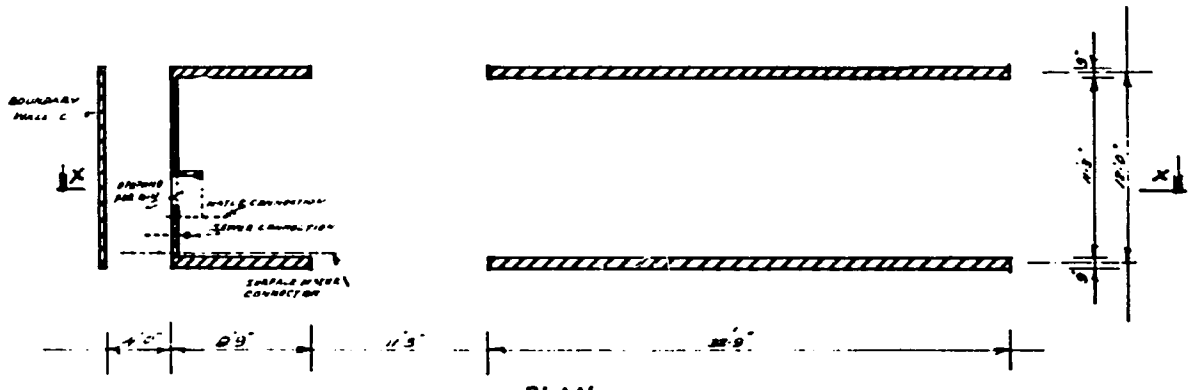
NATIONAL HOUSING DEVELOPMENT AUTHORITY
Sir Chitampalam Gardiner Mw.
Colombo 2

drawn	checked	approved
siva	dgr	
scale ½"	date aug 80	A.33

357



SECTION X-X



PLAN

358

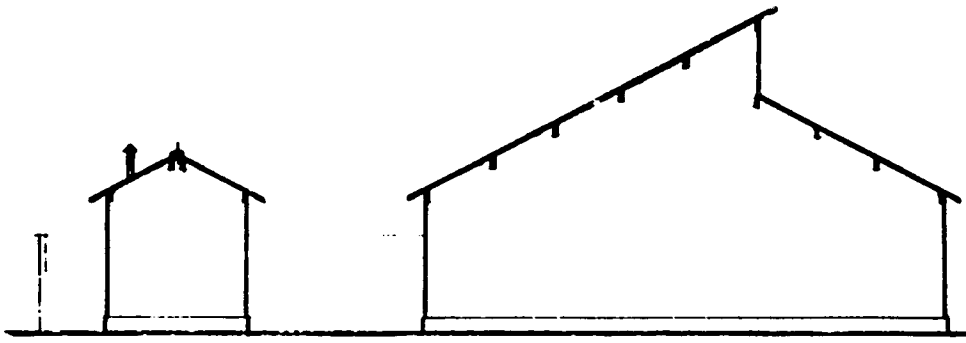
URBAN CORE HOUSE
ON DIRECT CONSTRUCTIO

PLAN & SECTION

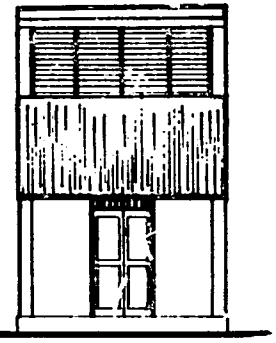
NATIONAL HOUSING DEVELOPMENT AUTHORITY
SIR CHITTAMPALAM GARDINER MAWATHA
COLOMBO 2

DRAWN	CHECKED	APPROVED
SCALE	DATE	NO.
1"=8'-0"	20.8.80	714

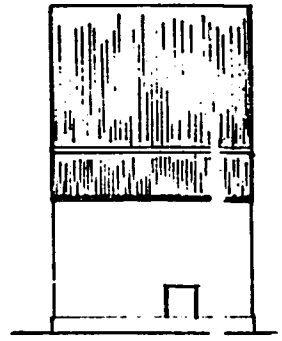
NOTES:-
1 STAGE I SHOWN THUS
2 STAGE II SHOWN THUS



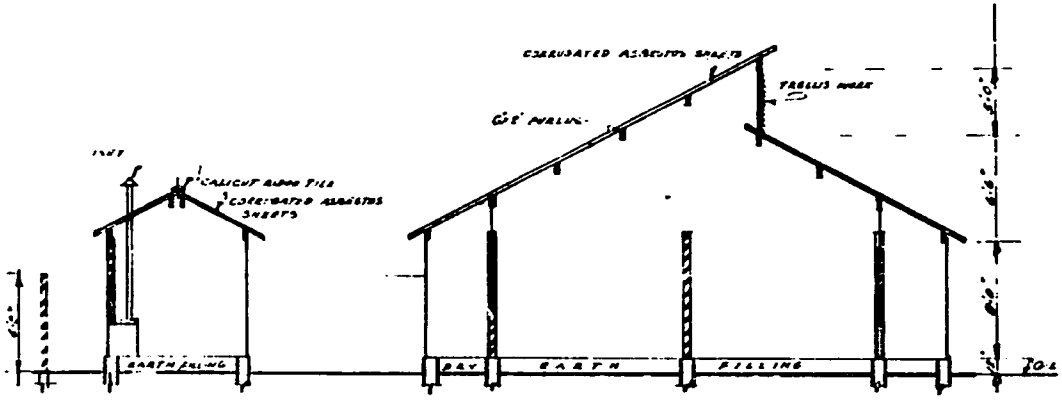
SIDE ELEVATION



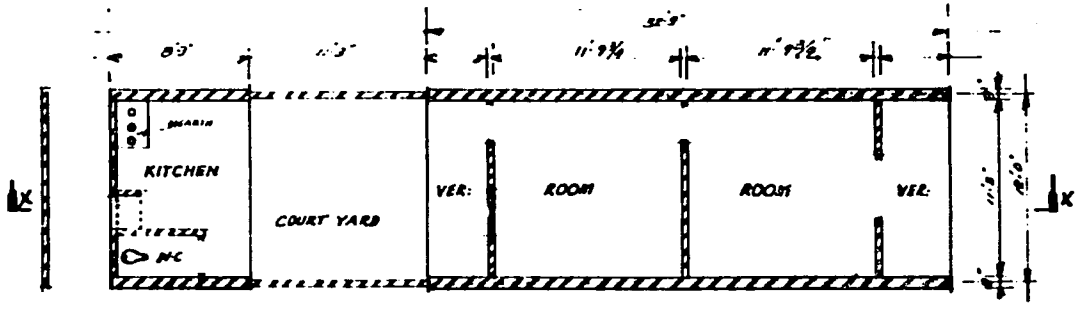
FRONT ELEVATION



REAR ELEVATION



SECTION X-X



PLAN

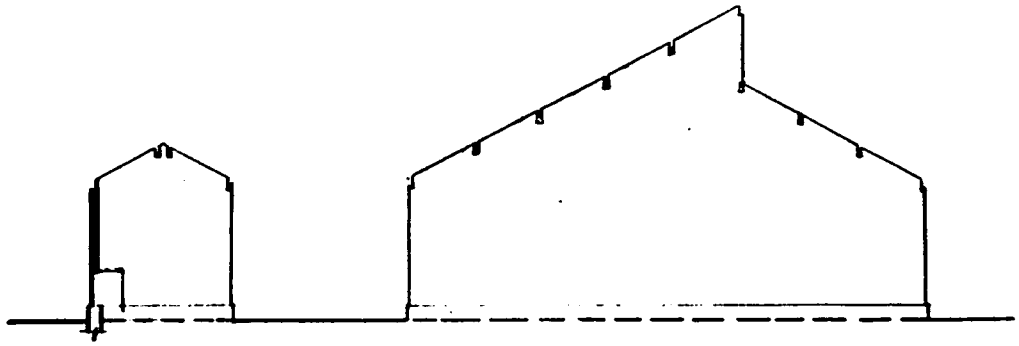
359

URBAN CORE HOUSE
AFTER STAGE 2.
(A.S.H)

PLAN, ELEVATIONS
& SECTION

NATIONAL HOUSING DEVELOPMENT
AUTHORITY
SIR CHITTAMBALAM GARDINER MAWATHA
COLOMBO 2

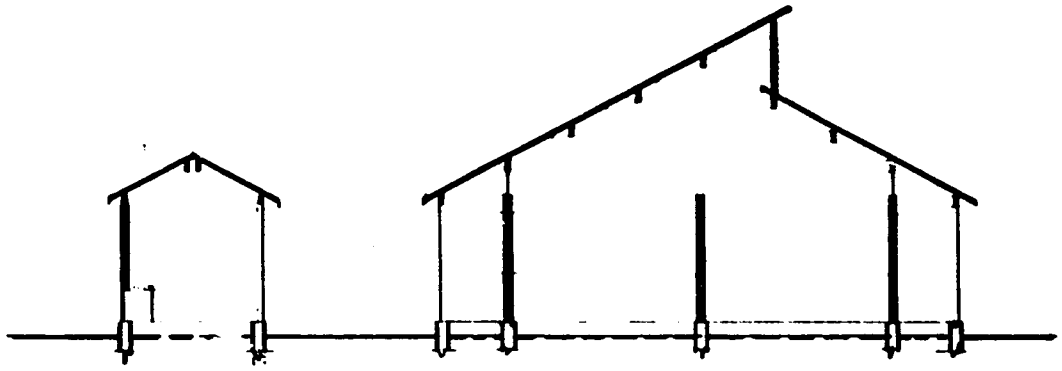
DRAWN	CHECKED	APPROVED
SCALE	DATE	NO:
1" = 8'-0"	20-08-80	715



STAGE I

DIRECT CONSTRUCTION

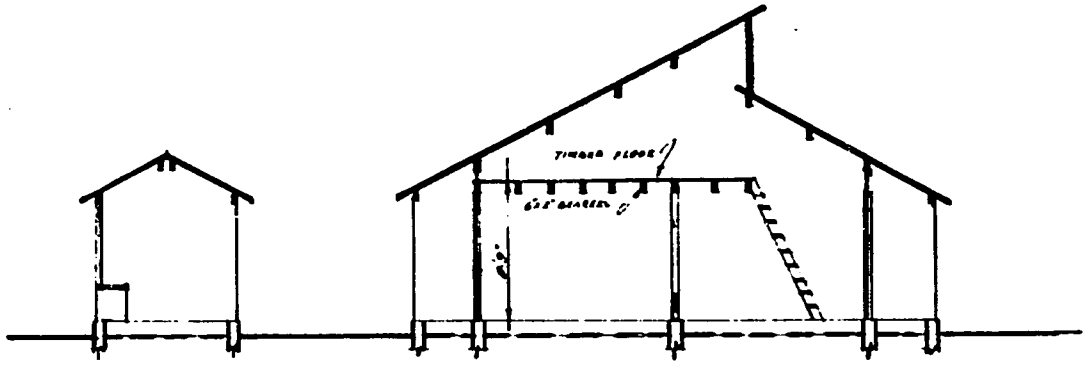
9" PARTY WALL ON RUBBLE FOUNDATIONS
4½" COURT WALL
4½" KITCHEN WALLS
REAR DRAIN & SEWER
WAS CONNECTION



STAGE II

AIDED SELF HELP

FIX PURLINS, ROOF SHEETS
FORM FLOOR, BUILD PARTITIONS
FIX TOILET, BUILD TOILET PARTITIONS



STAGE III

TENENT INITIATIVE

FIX INTERMEDIATE FLOOR & LADDER

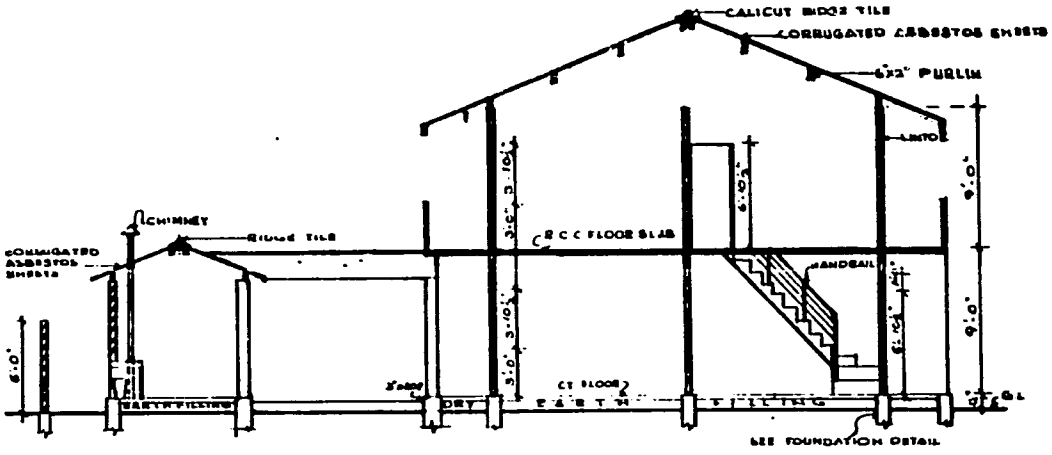
360

URBAN CORE HOUSE
STAGES 1-3

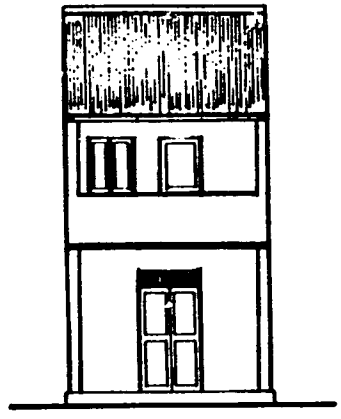
SECTIONS

NATIONAL HOUSING DEVELOPMENT AUTHORITY
SIR CHITTAMPALAM GARDINER MAWATHA
COLOMBO 2

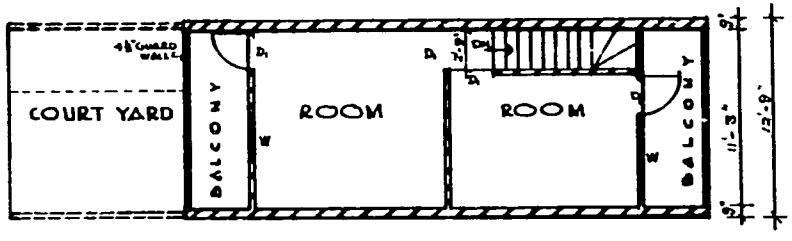
DRAWN	CHECKED	APPROVED
SCALE	DATE	NO
1" = 8'-0"	20.8.80	716



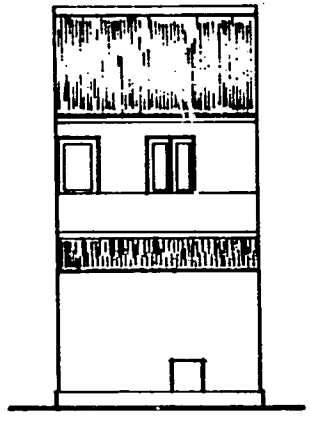
SECTION X-X



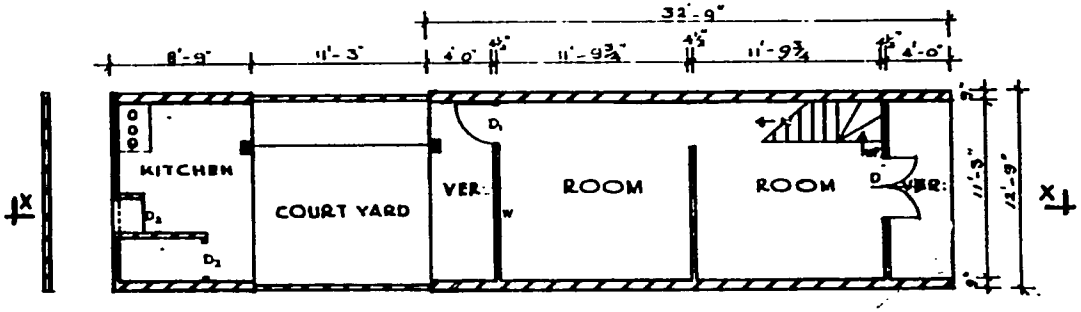
FRONT ELEVATION



UPPER FLOOR PLAN



REAR ELEVATION



GROUND FLOOR PLAN

SCHEDULE OF DOORS & WINDOWS			
TYPE	SIZE	NO.	DESCRIPTION
D	4'-0"x7'-0"	1	FRAMED AND PANELLED DOOR
D_1	2'-9"x6'-0"	4	LEDGED BRACED & BATTENED DOOR
D_2	2'-0"x6'-0"	2	-DO- -DO-
W	3'-0"x3'-0"	3	FRAMED & PANELLED CENTRE PIVOTED WINDOW

361

URBAN CORE HOUSE
POSSIBLE FINAL STAGE.

PLAN SECTION AND ELEVATION

NATIONAL HOUSING DEVELOPMENT AUTHORITY
SIR CHITTAMPALAM GARDINER MAWATH
COLOMBO 2.

DRAWN	CHECKED	APPROVED
SCALE	DATE	DRG. NO.
1"=8'-0"	24-09-80	708

ANNEX XIV

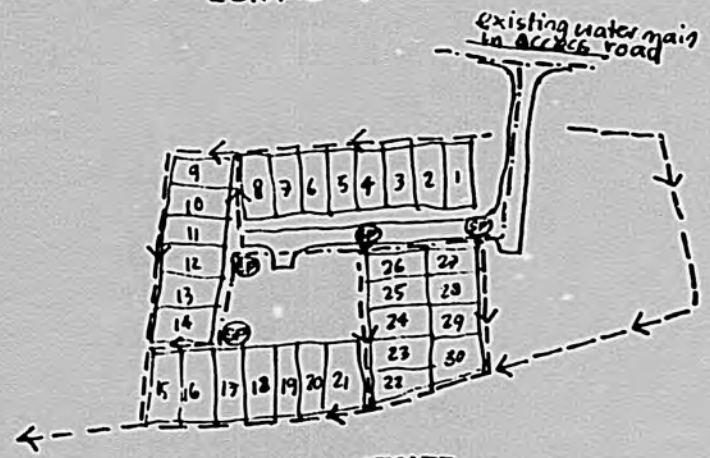
Sample Serviced Plot Layouts

Surveyed Plots

NOTES:
- plots 1-30 to be built immediately as 1980-81 electoral housing
- plots 31-43 to be built as future Asti when site ownership problems have been solved.

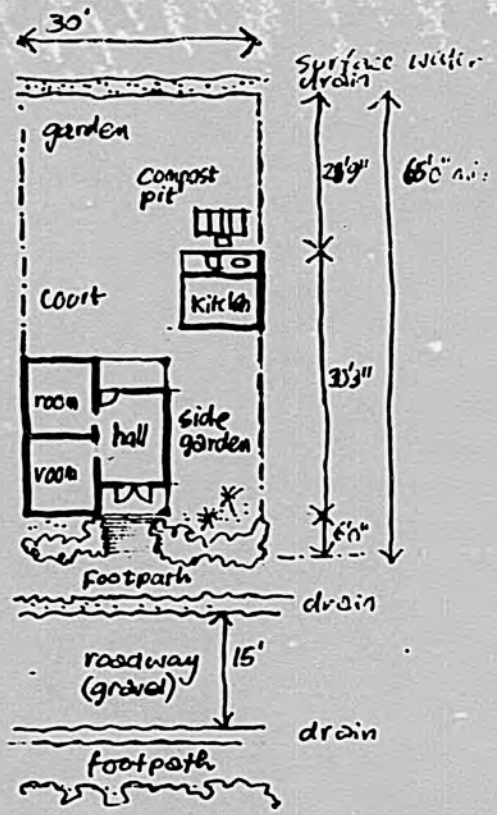
drain connection to canal to be cleared

BLOCKING OUT PLAN
2 CHAINS = 1"



PLAN TO ILLUSTRATE
WATER SUPPLY & DRAINAGE

KEY:
- water main
- stand pipe (4 no.)
- surface drain



TYPICAL PLOT 1/16" = 1'

NOTES:
- minimum plot = 65x30' = 7.1 perches
- in this scheme the kitchen & toilet positions are reversed so that compost pit is situated on side away from the house
- cut as few trees as possible!

NOTES.
- use housetype EH3 but note that position of toilet & kitchen are reversed.
- drawings to print:

EH3 1/8" scale	A.[illegible]
HOUSE 1/4" scale	[illegible]
ANNEXE 1/8" scale	A.33
DOORS & WINDOWS	[illegible]
MAKKI COMPOST PIT	[illegible]
OVERV I FLOS	[illegible]
[illegible] pipe drains	[illegible]
FOOTPATH [illegible]	[illegible]

30 HOUSES [illegible]
MATARA [illegible]
MATARA [illegible]

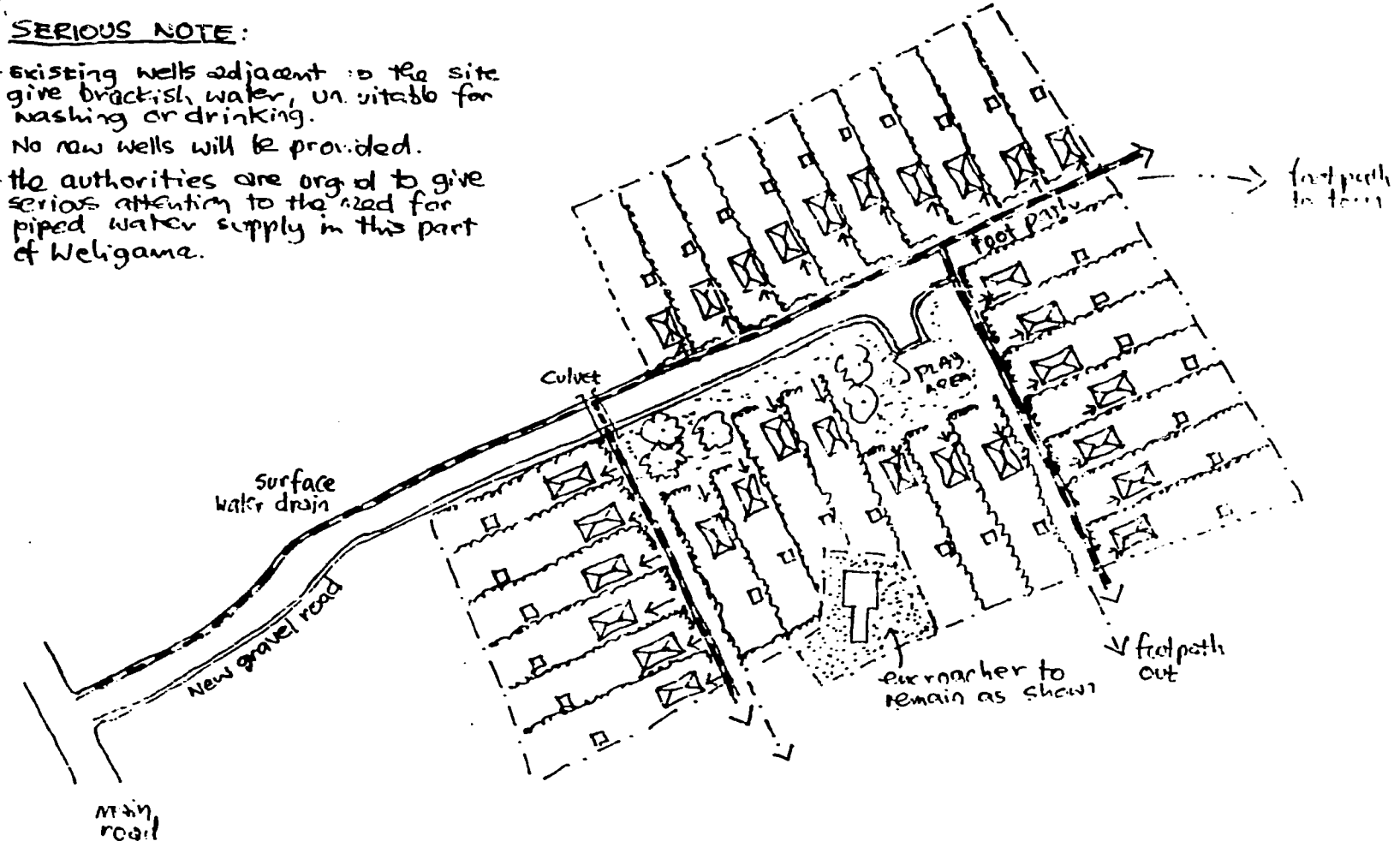
National Housing Development Authority
Sir Chittampalam Gardiner Mw
Colombo 2.

drawn	checked	appr
dgr		
scale	date	no.
1"=2chains	23.10.80	EH73

363

SERIOUS NOTE:

- Existing wells adjacent to the site give brackish water, unsuitable for washing or drinking.
- No new wells will be provided.
- the authorities are urged to give serious attention to the need for piped water supply in this part of Weligama.



PLAN 1 chain = 1"

Key: ⊠ : EH2 house type
□ : toilet
→ position of porch (entry)

Site area = 3.25 acres
plot size = minimum 13 perches (30' x 130')

NOTE:
This scheme uses house type EH2. Prefab construction [illegible] used. Because of [illegible] water table, plots have to be [illegible] 6" [illegible] [illegible] house [illegible] [illegible] type to be [illegible]

Drawings [illegible]
EH2 [illegible]
EH2 [illegible]
Mark II toilet
drains & soil [illegible]
[illegible]
roads & footpaths

364

30 HOUSE[illegible]
PROGRAMME

[illegible]
WELIGAMA
MATARA DISTRICT

NATIONAL HOUSING AUTHORITY
SITE [illegible]
COLOMBO

drawn dgv	checked dgv	[illegible]
Scale 1"=1ch.	25.8.80	EH 71

Best Available Document

Key: housetype EH1
toilet cubicle
direction of entry

north

Trees to be planted on hill tops and along boundaries (to act as wind breaks)

DISPENSARY SITE

ROAD CAN SERVE FUTURE EXTENSION

TO [illegible] road

footpath

WASHING WELL

AMPALANA

DRINKING WATER WELL

100' min dist.

15' grade road in reservation with surface [illegible] drains either side & culverts will be necessary

NOTE: [illegible] construction.

SITE AREA = 5.4 ACRES

MINIMUM PLOT SIZE = 20 PERCHES

note lower sites offer better land and are slightly smaller than upper sites

washing well head	B.41
drinking well head	B.42
well construction	B.14
roads + footpaths	B.51

NOTE:
This scheme uses housetype EH1 with separate toilet.
drawings required:

EH1 1/8" scale gen.	A.11
EH1 1/4" scale Mahapath!	A.13
doors & windows	B.11
Mark II. compost pit	B.22
toilet cubicle	B.24
oven & flue	B.31

[illegible]
Adhikaramgama
ATURESSA [illegible]
MATARA [illegible]
[illegible]
AKURESSA
Sri Chittaranjan [illegible]
Colombo 2

drawn	approved	checked
dgn		
scale	date	
1"=1ch.	23.8.80	EH 70

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