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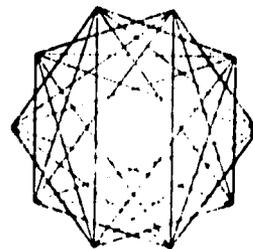
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PLANNING AND  
DEVELOPMENT  
COLLABORATIVE  
INTERNATIONAL

EVALUATION OF HOUSING  
PROGRAMS OF THE  
GOVERNMENT OF SRI LANKA

October 1982



P A D C O

AN INTERNATIONAL COLLABORATIVE FORMED TO  
PROVIDE GOVERNMENTS AND PRIVATE CLIENTS IN  
AFRICA, ASIA, LATIN AMERICA AND THE NEAR EAST  
WITH INTEGRATED RESEARCH, PLANNING AND MANAGEMENT  
SERVICES FOR URBAN AND RURAL DEVELOPMENT

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EVALUATION OF HOUSING PROGRAMS  
OF THE GOVERNMENT OF SRI LANKA

Prepared for  
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## EVALUATION OF PRESENT PROGRAMS

### I. AIDED SELF-HELP (ASH) PROGRAM

#### A. Technical Evaluation

A history of programs or information covered in previous USAID documents will not be repeated in this report. The emphasis will be on actual performance to date and on any changes which have occurred since earlier reports. The technical evaluation will cover the following areas: (1) unit production; (2) design standards; (3) project costs; and (4) capacity of technical staff.

The ASH program has and is continuing to evolve and adapt to changing conditions and needs. Some of the recent changes include:

- Combining of the model villages, fisheries and electoral housing programs, with the ASH program.
- Modifying the building materials supply process. Originally, the Building Materials Corporation (BMC) purchased and delivered all materials to the project sites. The first change was to establish a department within NHDA to take over purchasing and distribution. The latest change has been to require the maximum use of local materials. Individual owners will be responsible for the acquisition of materials and encouraged, where possible, to manufacture materials on the site.
- Some ASH schemes are being done successively in urban areas as part of the Electoral Housing Program.
- Unit designs have been modified to reduce costs and to better meet the needs of the target population. There has also been some limited experimentation with smaller units and core houses.

It is felt that all of these modifications have improved the program and will make it more productive and responsive to housing needs. However, some of the changes such as the maximum use of local materials have not yet been integrated into the program at the district level. Thus, continued effort will be necessary to distribute new directives and assist district personnel in their implementation.

1. Unit Production - As shown in Table 7 of the Housing Needs Study, the combined ASH programs have been the most productive of the public sector completing 24,973 units between 1978 and 1981 with an additional 18,164 units

under construction. Even though the program will not reach the original goal of 50,000 units, production is still impressive when compared with the 4,800 units built under public sector programs between 1971 and 1977. However, production has recently been reduced by lack of funding and by periodic shortages of building materials. The latter problem should be solved by the use of locally produced materials.

## 2. Design Standards

- **Unit Designs** - In the early phases of the program the most frequently used plans were not well designed for traditional rural life styles and were expensive to build. Revised plans are greatly improved and there has been experimentation with reduced floor areas and core house designs.
- **Infrastructure** - Standards appear in most cases to be in keeping with the needs of the target population. Streets are laterite with open graded channels for drainage. In rural areas water supply is usually from community wells, while toilet facilities are usually individual units on site. Water seal privies or double batch composting toilets are the most commonly used. Since there were indications of displeasure by residents with the composting toilets, continuing education and follow-up will be needed to insure proper use. Designs for urban areas have used on-site systems where possible.
- **Land Use** - In rural areas density and lot size are not major issues since land is not expensive and residents often have gardens adjacent to their houses. Efforts have been made to relate plans to the existing site conditions and development.

The plans for urban areas, while single storey, have a density that is considered acceptable for low-income urban areas. A recently designed scheme for core houses in Colombo has a density of 45 units per acre.

3. **Costs** - Because of rapid inflation in building costs from 1979 to 1981, the cost of a standard materials package has increased from around Rs.15,000 to 17,000 in 1979 to near Rs.30,000 today. As a result, the NHDA has been forced to modify designs and materials to reduce costs. Experimentation with local building materials indicate that costs can be kept to around Rs.20,000 to 22,000 for the standard house.

4. **Capacity of Technical Staff** - Attracting and keeping qualified technical staff has been and will continue to be difficult for the NHDA. Sri Lankan professionals are attracted by the significantly higher salaries available in the local private sector as well as abroad, particularly the Middle East.

An ODA technical assistance team of two architects and one engineer with the NHDA for the last three years has improved the planning and design capabilities for the rural ASH programs. Even though the TA team will leave before the end of 1982, the present staff has sufficient experience to continue effective development of this program. Possible problem areas are:

- The expertise for the rural program will be lost if the high turnover rate continues.
- If the ASH program is expanded into the urban areas, the technical staff will lack experience in dealing with the more complex problems.
- There is a lack of experience with contract administration and site supervision.
- The dissemination of technical expertise to the district levels is not efficient.

## **B. Administrative/Financial Aspects**

1. **Program Evolution** - The Rural Housing Program is presently the government's major low-income program serving primarily the rural poor. Only in 1979 when it was transferred from the National Housing Department (NHD) to the National Housing Development Authority (NHDA) did the program begin to have an impact. While there were only 3,485 completions in that year, some 18,400 units were under construction. This was due mainly to a decentralized administration under which District Managers had the authority to select sites, authorize starts, and disburse funds. However, after 1981, due to a combination of increased program popularity and decreased funding, starts were controlled by NHDA headquarters. In fact, due also to a lack of funds, the Electoral Housing Program was switched from direct construction to aided self-help in 1981 and stopped at 40 houses per electorate, instead of continuing to 40 and 50 houses per electorate as planned. Thus, of the 18,164 houses in the program still under construction as of August 1982, only 3,820 belonged to the 30 house E-H schemes.

The discontinuance of the Electoral Housing Schemes along with the housing loan program are probably the major reasons for the expected 24,000 unit shortfall in the 100,000 unit program. If the housing loan program, which had already exceeded its goals, had been continued, the goal might have been reached. However, due to fund limitations and poor recovery of existing loans, the program was discontinued.

The theme of "lack of funds" has run through the foregoing paragraphs. Actually there have been substantial budget allocations to the housing and urban development sector (running from 7 percent to 14 percent of the capital budget). However, the Rural Housing Program has had to continually compete

for funds with the Urban Housing (Direct Construction) Program. Given that the latter had to honor international contractual obligations which were often far above estimates and that budget funds come to the NHDA in "block" amounts, there has been no question that the Urban Housing Program has had priority claim.

This is where the leverage of AID/HG funds can be brought to bear. However, as far as could be ascertained, no formal allocation mechanism or "link" of local funds to HG funds has as yet been established. In other words, the Ministry of Local Government, Housing and Construction (MLGHC) and Treasury officials have not agreed as yet to establish a budget item or items for eligible housing programs against which foreign exchange could be disbursed. Further, while the Housing Management Study made specific recommendations on production forms and other supporting documentation for HG drawdowns on the Rural Program, key officials of the NHDA had not as yet seen the Management Study. Although the Direct Construction Program should be completed by the end of 1983, it would seem appropriate now to establish a formal budget allocation mechanism with conditions precedent for HG drawdowns, thus, giving the Rural Housing Program (and other eligible AID programs) greater leverage for necessary funding in the future.

2. Cost Recovery - According to the latest "Progress Report on Rural Housing Recoveries," the accumulated arrears as of June 1982 were Rs.6,465,526 (US \$323,276). In June, only 11.4 percent of the total rent due on all programs for the month was collected, while 4.8 percent of the total amount due (including arrears) was collected. The breakdown of the total arrears by sub-program is as follows:

	<u>Amount</u>
1. Electoral Houses (20 houses)	113,353
2. A.S.H. and E-II (30 houses)	1,943,578
3. Model Villages	4,249,823
4. Fisheries Houses	<u>156,000</u>
	<u>Rs.6,462,754</u>

Obviously, the Model Village Program comprises the bulk of the arrears. In site visits by the team, however, it was ascertained that hardly any family totally constructed the houses themselves. While they did carry out most of the unskilled labor, they hired skilled masons and carpenters, often going into debt at local banks - or moneylenders - to pay for them. These repayments therefore come first.

This is only one reason for the massive arrears. Perhaps the major cause is the fact that the orientation of the program is still on production of units. The NHDA staff, especially the District Managers, have not come around as yet to the importance of Estate Management. In fact, an Estate Management Department (Rural) was only established in the NHF at the end of 1981. Although the staff is still small and has just begun to keep records, they are working on a debt reduction program in cooperation with the Rural Housing staff in which cost recovery will be treated as an integral part of overall community development and possible employment generation efforts. It is felt that in order to achieve effective cost recovery, the NHDA must better understand the priorities of the people, when they have money (e.g., in harvest season) and when they don't, and gear collection programs to these cycles, not necessarily monthly payments. A study ascertaining the spending and borrowing habits and earning capacity of the people, and where housing fits in their sets of priorities would, therefore, be worthwhile in designing any community development cost recovery program.

3. Affordability/Level of Subsidy - There has been great deal of discussion between USAID and the GSL on the affordability of its shelter solutions and the level of subsidy involved in the Rs.50 per month payment under the ASH low income program. According to information supplied to the team, it has recently been agreed that full capital cost recovery will be obtained on the USAID supported programs. This would be in the form of a lump sum payment at the end of 30 years which would be the difference between Rs.18,000 and the actual cost of the unit, i.e., the building materials. This agreement, however, seems not to have yet been officially communicated to the field staff. Based on field trip conversations, the District Managers spoken to were unaware that full capital cost recovery was to be attempted.

In NHDA headquarters, however, the basic Rent Purchase Agreement has recently been amended to state the following:

"14. Once the estimated cost has been paid to the satisfaction of the owner, the National Housing Development Authority shall execute a deed of transfer in favor of purchaser and the cost and expense of the transfer deed shall be borne by the rent purchaser." (Unofficial translation.)

While the foregoing is not a clear statement that the full capital cost will be recovered, it does give the NHDA the flexibility to define the "estimated cost," and the payments that will satisfy it. Further, under the new program the people will build as much as possible from locally available materials and be reimbursed for two-thirds of the equivalent cost of conventional materials by the NHDA. This amount will be far less than the present

estimated cost of materials, i.e., closer to the present payment of Rs.50 per month.

In this pre-election period and most likely until Parliamentary elections are held, it is probably to be expected that campaigns for full cost recovery will not be officially announced and communicated to field staff, let alone the people. Perhaps the most important factor which will affect the ultimate reduction of subsidies in the ASH and future GSL housing programs is the desire and intent on the part of key government officials to base future programs on target population affordability. This intent was not only expressed verbally to the Team but has been proposed in various papers to the ad hoc Housing Planning and Policy Committee composed of representatives in the Ministry of Local Government, Housing and Construction and related institutions. Members of this Committee have already begun to think of principles on which to base future policy and programs -- affordability and full cost recovery being among them. In order to assist this Committee in its deliberations and provide a rationale for these principles, the following estimates of the level of subsidies under the Rural Housing Program have been calculated. The estimates are based on the most recent cost information to the Team and should be taken as orders-of-magnitude.

Table 1 essentially calculates the difference between the current cost of the units and the present value of the 30 year stream of Rs.50 monthly payments (Rs.105 per month in the case of middle income housing), i.e., the per unit revenue. The difference or unit subsidy is then multiplied by the number of units to estimate the total subsidy. It can be seen from the table that compared to cost recovery at 6 percent the total program subsidy is on the order of Rs.800 million or 25 percent greater than the projected 1983 budget for housing. If costs were recovered at a market rate of 14 percent, the program subsidy is nearly Rs.1 billion, i.e., the annual amount of former budgets and nearly 2.5 times the projected 1984 housing budget.

## II. SLUM AND SHANTY UPGRADING

### A. Technical Evaluation

The program of the Slum & Shanty Upgrading Division (SSD) of the Urban Development Authority is intended to improve infrastructure for existing slum and shanty areas. In slum areas improvements are usually confined to water supply, drainage and sanitary facilities, while in shanty areas improvements also include roads, footpaths, grading and community facilities as well. In the case of shanty improvement schemes, much of the work has, therefore, involved replacement and/or relocation of families to new units. Thus, the SSD program has per force expanded into areas of land development and housing construction which, to a certain extent, duplicate activities of other agencies and are beyond the original scope of the project.

1. Unit Production - Table 2 shows the annual production of the SSD from its start in 1979. Projects containing just over 1,100 units have been

TABLE 1

ESTIMATED LEVELS OF SUBSIDY IN THE RURAL HOUSING PROGRAM

TYPE	(1) NO. OF UNITS 1978 - 1982 (a)	(2) COST	(3) TOTAL REPAYMENT IN CURRENT PRICES	(4) PRESENT VALUE OF 6% INTEREST	(5) REPAYMENT AT: 14% INTEREST	(6) UNIT SUBSIDY AT 6% (2) - (4)	(7) UNIT SUBSIDY AT 14% (2) - (5)	(8) TOTAL SUBSIDY AT 6% (1) x (6) (1,000 RS.)	(9) TOTAL SUBSIDY AT 14% (1) x (7) (1,000 RS.)
1. L - 4	42,000	27,000	19,000	2,340	4,220	18,560	22,780	783,720	956,760
2. M - 2	1,200	40,250 <sup>(b)</sup>	41,800 <sup>(c)</sup>	17,513	8,862	22,737	31,388	<u>27,284</u>	<u>37,666</u>
								<u>811,004</u>	<u>994,426</u>

NOTES:

(a) For total program see Table 7 of Housing Needs Study. Assumes 35 low income units per one middle income unit.

(b) Materials cost of Rs. 35,000 plus 15 percent NHDA overheads.

(c) Rs. 105 per month for 30 months plus downpayment of 10 percent (Rs. 4,000).

Source: PADCO Estimate, September 1982.

completed with work in progress on another 2,381 units bringing the total units involved in improvement projects to just under 3,500. This is 40 percent of the units proposed for upgrading under the program and 9 percent of the 38,820 estimated improvised urban units in the country.

**TABLE 2**  
**SLUM AND SHANTY UNIT PROGRAM**

	1979	1980	1981	1982 (End of August)	Totals
<b><u>Slum Upgrading</u></b>					
Completed	0	58	318	429	805
Under Construction	110	660	571	864	
<b><u>Shanty Improvement</u></b>					
Completed	0	0	0	302	302
Under Construction	302	1,686	1,819	1,517	
Total Completed	0	58	318	731	1,107
Total Under Construction	412	2,346	2,390	2,381	<u>2,381</u>
					3,488

Source: Slum & Shanty Division, Urban Development Authority.

The difficult tasks of developing the program and getting the first projects completed have been accomplished; but now activities need to be expanded if conditions of the urban poor are to be improved. For example, in order to wipe out the backlog of improvised and overcrowded housing during a 10 year period, it will be necessary to produce or upgrade 8,552 units a year (see Table 6 of the Housing Needs Study).

## 2. Design Standards

- **Site Selection** - The SSD staff has done an excellent job of establishing design criteria for the varied and complicated conditions found in upgrading projects. Project selection goes through a three-phase process. Once a site has been identified, a complete investigation is made to verify that no other projects are proposed for the same site. Following this, a feasibility study is made to identify any major technical problems, statutory requirements or alternative uses which would exclude the area from upgrading. Finally, the project is scheduled for implementation based on additional criteria. Since only a few of the shanty areas in Colombo can meet the criteria to qualify for improvement, the remaining areas will require replacement sites.
- **Infrastructure** - Standards are designed to meet basic health and sanitation needs at a minimum expenditure. In most areas services are provided by standpipes, public toilets and shower facilities. However, there have been some complaints that the standards are too low.
- **Land Use** - The maximum acceptable density is 60 units/acre with a preferred density of 45 units/acre.

3. **Cost** - The costs of projects differ considerably depending on existing conditions and the types of improvements provided. The least expensive project cost was Rs.491 per unit while the most expensive had an estimated cost of over Rs.23,000 per unit. The latter cost was due to substantial requirements for plot regularization and family relocation. The average cost of shanty improvement projects at Rs.10,418 is almost double the average cost of Rs.5,815 for slum upgrading activities. The costs of the slum projects and most shanty projects are, thus, quite low particularly when compared to the cost of new direct construction. The feasibility of slum improvement projects, however, must be looked at more closely since costs of over Rs.23,000 come close to the cost of new self-help units. At the present time there is no cost recovery in the SSD projects.

4. **Capacity of Technical Staff** - The SSD has the same problem as NHDA in recruiting and keeping qualified technical staff. There are eight or nine project officers who, with two assistants each, supervise project implementation. Most of the staff does not come from a technical background. Presently, there is only a part-time sanitary engineer (soon to leave) and two assistant architects on staff. The Director of the SSD feels they cannot expand the program beyond its present levels because of staffing difficulties.

Lack of technical staff has also created problems with project implementation. Several approaches have been tried or are being considered including:

- Turning implementation over to the Common Amenities Board (CAB) which has been unsatisfactory and expensive.
- Involving NGO's, which has worked well but has limited application.
- Using the Engineering Services of UDA.
- Setting up a division in SSD to handle tendering and construction supervision.

It is felt that none of the above approaches is fully satisfactory because they either remove control from the planning agency or create new personnel and staffing problems for the SSD. There are three other areas where staffing problems could result.

- The development of sites and services schemes and new house construction as replacement for shanty areas.
- The starting of a housing loan program which is under consideration.
- The expansion of the program into other urban centers outside of Colombo.

## B. Administrative/Financial Aspects

1. Program Evaluation - This section gives a brief assessment of (a) the present actual organization and staffing of the SSD, (b) an outline of what it presently does, (c) a summary of recommendations made by various missions and persons regarding the future of the SSD, and (d) an outline of what the SSD itself thinks about the above as well as its own felt needs and priorities.

To take (c) first: a general consensus among foreign aid and foreign consultant missions, as well as at least one Sri Lankan evaluator, has been that the SSD is in an anomalous position in the UDA, a planning agency whose main emphasis is on the development of major administrative and commercial complexes in Colombo and other urban centers on the island. It has been generally recommended that SSD should be attached to the NHDA and that while it should retain a separate identity, it should be closely affiliated to the ASH program, with which it is seen as having increasingly common concerns. Another factor influencing this recommendation has been that SSD's funding for its programs is channelled through NHDA.

Other general recommendations have been that:

- SSD should become the implementing as well as the planning organization for slum and shanty upgrading;

- Staff, administrative support and funding should be increased (there are no suggestions as to exactly how much);
- The SSD should develop mechanisms for recovering costs on:
  - land titles given;
  - materials loans; and
  - capital cost of units constructed plus a small amount of interest.

How do these recommendations fit in with the SSD's present activities and achievements to date? With respect to the first recommendation, the AID Housing Management Study stated that a specific study should be carried out on the implications of SSD joining NIIDA. This study has not been carried out as yet. However, the assumption that SSD will necessarily function better under the NHDA might be questioned. In the first place, the SSD grew "historically" out of the same organization (the Colombo Master Plan Bureau) as did the UDA. While it may have been and may still be true that the SSD is anomalous in such an organization as the UDA, its position and relationships within this body appears to have developed and strengthened over the last three years. The SSD has a good working relationship with a supportive and committed Chairman; its other most important relationships within the organization -- land acquisition and finance -- are also working fairly smoothly.

In terms of a closer affiliation with the ASH program, this is desirable but could be developed more particularly through an integrated and cohesive housing policy. Close relationships between ASH and SSD top management already exist.

The separation of implementation from the planning activities of SSD has also been categorized as undesirable. It has particularly been recommended that SSD phase out the use of the CAB in implementation of their projects. In fact, SSD has recently received authority to carry out their own tendering, which will no doubt result in the elimination of the CAB from most of their projects as they recognize the extra costs that use of the CAB entails.

The implementation capacity of the SSD is now greater than it used to be, although there are still some very important gaps. Their involvement in physical upgrading is primarily supervisory, as they have no building or infrastructure construction capacity themselves. They are involved in socio-economic welfare programs, but even this area is weak. The whole section needs organizing and expanding as well as strengthening of its relationships with both government and non-government social welfare, community development, and health and employment creation groups. The NGOs working on SSD projects, on the other hand, are directly involved in all aspects of upgrading.

An additional problem from the SSD's point of view is the multiplicity of organizations carrying out infrastructure upgrading -- CAB and the CMC both carry out upgrading independently from the SSD. Many community development organizations also carry out a multiplicity of activities in an uncoordinated fashion.

The SSD would, of course, like to have the increase in staffing, administrative support and funding that has been recommended, but it has its own priorities based on its experience and knowledge of its capacities. First of all, establishment of clear government and political support for the slum and shanty upgrading program is a priority of the SSD. The development of a comprehensive and integrated housing policy clearly delegating areas of responsibility is also seen as a priority.

The highest priority within the SSD itself is seen as an increase in technical staff. The division has had problems in spending its budget partly due to a lack of technical capacity (about Rs.20 million out of a targetted Rs.32 million will have been spent by the end of FY 1982).

An increase in socio-economic program capacity is seen as following an increase in technical capacity, and only then would an increase in funding be desirable. This approach seems practical and realistic, although the SSD foresees problems, and has had problems, in obtaining and keeping good technical staff without at least an increase in the prestige and priority of the SSD program.

To sum up, while by no means fully equipped or capable of dealing with the task in hand, the SSD has been making progress in establishing itself and expanding its activities and capacities. As it is nearing the point where it could be organized to take on a great deal more responsibilities, any necessary studies<sup>1</sup> should be carried out very soon, before the SSD becomes too firmly entrenched in its present situation.

2. **Affordability/Level of Subsidy** - The present Slum and Shanty Upgrading Program is completely affordable to the target population primarily because there are no charges, i.e., the level of subsidy is 100 percent. However, if this program is expanded in the 1983-87 Plan as intended, it must be put on a far more rational, self-financing basis. The present workload covers roughly 10 percent of the total slum and shanty areas in Colombo which seems to be the present capacity of the Division.

Since there will have to be substantial cost recovery under any expanded program, the Team investigated one of the NGO's shanty upgrading exercises on the theory that shanty dwellers are often able and willing to pay more than

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<sup>1</sup> As recommended in the AID Housing Management Study.

Government charges on its formal schemes. While the self-help construction process of Kirillapone has been used as a model for the ASH program, other aspects of the project could certainly be used as a model for an expanded slum and shanty upgrading program. For example, present inhabitants are taking loans at 3 percent for 18 years to repay the materials and labor for their houses. Repayments for the loans average Rs.98.50 per month. Out of the 44 families who have taken the loans, only 3 families are over 3 months in arrears, while 8 families are 2 to 3 months in arrears -- some of which could be due to tardy processing by the Peoples' Bank. However, in a 1979 survey of residents, fully 86 percent stated they could not pay over Rs.75 per month (Rs.100 per month in 1982 at a 10 percent rate of increase).

There has been intensive technical assistance and comprehensive development, including training and employment generation, in Kirillapone. However, the project was established as a demonstration to Government. Thus, it seems worthy of further investigation to ascertain which components could be replicable in a wider, more cost effective urban basis. For example, if survey and title registration techniques could be streamlined, occupants could be charged for the serviced or upgraded plot to which they would have legal tenure. At an average cost of Rs.5,815 at 3 percent for 30 years, monthly payments would be Rs.25, and for shanty upgrading (average cost of Rs.10,418), Rs.44 per month. These should be well within the paying capacity of most families; however, socio-economic surveys would have to verify community affordability.

### III. DIRECT CONSTRUCTION PROGRAM

#### A. Technical Evaluation

Since the Direct Construction Program of NHDA is not funded by the HG loan, the team had originally not planned to review its programs, but on discovering its influence on other housing activities it was decided an evaluation was necessary. Unfortunately, the Team was not able to obtain detailed cost and budget data on the Urban Housing Program requested from the NHDA.

1. Unit Production - The output of the Direct Construction Program between 1978 and 1982 is shown in Table 7 of the Housing Needs Study. At the end of August 1982, 10,005 units had been completed with an additional 4,011 units under construction. The last of these units should be completed by June of 1983. An additional 3,000 mostly luxury units were started but sold to private developers before completion.

The production of just over 14,000 units is less than half the original goal of 36,000 units but, because of high standards and cost overruns, the program has used a high percentage of NHDA available funds. The Public Investment Program does not list funds for direct construction after next year, but staff indicated that they had sites and project plans prepared if

additional funds could be obtained. According to the NHDA's estimated budget for 1983, the total liability for the Urban Housing Program is Rs.318.89 million with Rs.6.71 million being carried over to 1984. Moreover, the Ministry of Finance and Planning has reserved Rs.371 million (including Rs.40 million for land acquisition) for Urban Housing in 1983 and another Rs.140 million in 1984. Thus, while adequate funds have been reserved, the question is whether construction will actually be complete by the end of 1983.

## 2. Design Standards

- Unit Designs - The sizes of units and percentage breakdown in two large projects visited by the team are listed below:

400 ft<sup>2</sup> - low-income - 80 percent

800 ft<sup>2</sup> - middle-income - 15 percent

1200 ft<sup>2</sup> - upper middle-income - 5 percent

The site visit indicated that there were only minor differences in finishes of the different sized units.

- Infrastructure - Standards are very high with paved streets, sidewalks, individual water and electrical connections, piped sewer systems and extensive landscaping. All areas of the project are developed to the same level.
- Land Use - The largest scheme visited had a density of 33.5 units per acre. This is lower than the planned ASH projects because of wider streets and more open space. The low density also contributes to the higher cost per unit.

3. Costs - The Team's information on costs is quite limited but indications are that they are four to six times higher per unit than for ASH units. The total cost for a 425 ft<sup>2</sup> unit in one project visited is Rs.98,000 or Rs.230 per ft<sup>2</sup>. The Team was told that units in other projects cost between Rs.250 and Rs.300 per ft<sup>2</sup>. At these costs an L<sub>4</sub> unit of the ASH program would cost Rs.107,500 to Rs.129,000 rather than Rs.22,000.

Major problems could arise when the NHDA tries to either rent or sell the 400 ft<sup>2</sup> units. They will be much too expensive for low-income families and yet not acceptable to the families who can afford them because of the small size. This results mainly from the fact that no differentiation was made in development and design standards between the different types of units.

4. Capacity of Technical Staff - The Direct Construction program has the same problems as other agencies in recruiting and keeping qualified staff. For example, they have had two sets of senior engineers during the

last year. They try to keep a staff of 12 engineers and 12 inspectors to follow construction activities even though the design and supervision are contracted out to private consulting firms for most of the projects.

Four small projects have been designed "in-house" using the services of the Architectural and Quantity Surveying sections of NHDA which work with both the Direct Construction and ASH Programs.

The Staff appears to lack experience in contract administration. The original contracts which were cost plus fixed fee with no upset limit have resulted in many of the problems the program has today.

## B. Administrative/Financial Aspects

1. Program Evaluation - The management of the Direct Construction Program is handled by the DGM (Building and Development) with assistance of his staff which consists of: 1 Manager-Engineering, 3 Senior Project Engineers, 8 Junior Engineers and 12 Inspectors. Since the majority of the projects are designed and supervised by private consulting firms, the primary staff responsibilities are coordination and review. The almost total preoccupation at present is to complete the ongoing projects with little thought or involvement in establishing policy or prices for the disposition of the projects when they are finished. This is understandable since the present staff was not involved in the original programming. If there are any additional direct construction projects in the future, the engineering section should participate in detailed feasibility studies and cost reviews before construction is started.

The NHDA organization chart shows the Architectural Division as being responsible to the Building and Development Division. In reality the Architectural Division is involved more with the ASH program doing all the site planning and building design. If the Direct Construction Program is discontinued, it will be necessary to reorganize or at least redirect the focus of the Building and Development Division to work on different types of programs. Table 6 of the Housing Needs Study shows that over 45,000 new housing units must be added to the urban stock annually. The expertise of the Building and Development Division Staff could be used in formulating an effective housing program that is affordable and would help to meet these housing needs.

2. Affordability/Level of Subsidy - Since adequate cost data of the Direct Construction Program was unavailable to the Team, Table 3 is based on summary cost data found in the USAID Housing Subsidy Study. It can be seen from column (4) of the table that at 9 percent of interest, the monthly payment is Rs.925 requiring an income of Rs.3,700 at 25 percent for housing. According to an updated distribution of urban family income (see Table 10 in the Housing Needs Study), such an income would be well into the upper 20 percent of families in 1983. At 6 percent interest the monthly payment is

Rs.690 which would require an income of Rs.2,760 putting the family at roughly the 73 percentile.

TABLE 3

ESTIMATED LEVEL OF SUBSIDY IN THE URBAN HOUSING PROGRAM

(1)	(2)	(3)	(4)	(5)	(6)
<u>No. of Units</u>	<u>Approx. Cost.</u>	<u>Down Payment</u>	<u>Monthly Pmt. @ 9%/30 Yrs.</u>	<u>Initial Subsidy @ 14%/30 yrs.</u>	<u>Total Estimate Subsidy (1) x (5) (Rs.10,000)</u>
14,000	125,000	10,000	925	36,900	516,600

Source: PAUCO Estimates, September 1982.

In addition, assuming the units are sold at 9 percent for 30 years, and Rs.125,000 represents a rough estimate of the average cost of all units, the equivalent initial interest subsidy compared to a market rate of 14 percent, is Rs.36,900 per unit. Multiplied by the total number of units presently in the program, the program subsidy is Rs.516.6 million. To the extent that not all costs are included, i.e., land, infrastructure, overhead, etc., this amount is understated. It is, however, roughly equivalent to the budgeted amounts for urban housing in 1983 (Rs.371 million) and 1984 (Rs.140 million).