

# Sustainable Housing Development for Urban Poor in Sri Lanka

Recommendations for the Improving  
Relocation Housing Projects in Colombo

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## Introduction

The housing supply in the Colombo Metropolitan Region (CMR Map 2) remains very critical, especially, in the low-income sector. Despite the concerted efforts by the government, the improvement of the quality and quantity of housing remain less than satisfactory. In fact, the current situation indicates a significant deterioration of the housing stock, which also, indicates the widening of the gap between demand for and supply of housing. The problem has been addressed in the proposed new growth centres within the CMR, through the provision of infrastructure facilities to facilitate the expansion of the housing stock.

The problem is with shelter in Sri Lanka, as it seems to be perceived, one of the urban poor. It leads to a solution for Low Income Housing. Is our problem then of the slum and shanty dweller? Is the perception that everything about slums/shanties are bad, and therefore to be eliminated from the face of this earth, and the residents, re-housed?

This brings us to the crux of the Housing Problem.

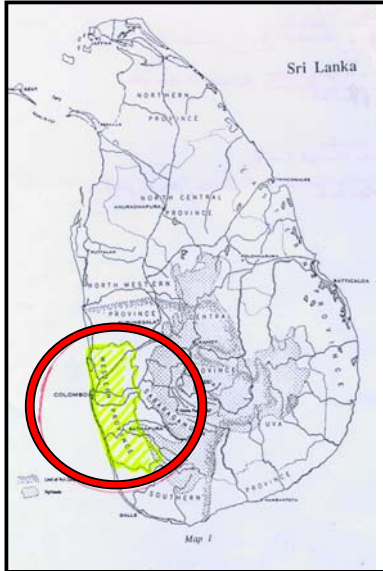
In accordance to housing need of Sri Lanka, the government has identified several Housing Development Programmes all over the country;

1. On-site Upgrading of Under Served Settlements.
2. Pre-sale Housing by the state.
3. Re-location Programme for shanty dwellers.

Among the above approaches, most effective are the number one and three, in terms of the number of families benefited each year. The second, Pre-sale Housing by state caters to a limited number in the middle-class.

This paper is aimed of analysing two case-studies from the Re-location Housing Programme, in terms of their effectiveness in solving the housing problem and SUSTAINABILITY.

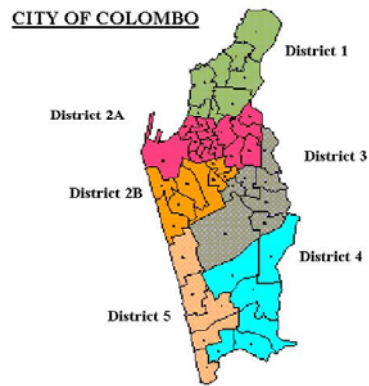
## Background of the Country (context) Sri Lanka



Map 1 (Source: Tourist Information Board – SL)



Map 2 Colombo Metropolitan Region



Map 3 City of Colombo

Colombo Municipality (Source: Urban Development Authority)

Colombo is the main commercial financial hub of Sri Lanka (see map 1). In area-wise it is 37.7 sq.km. Its vocational speciality, is being a coastal city of harbour, has helped it to achieve a significant position in the international trade as well. Nevertheless, when it is still compared with other major cities in the world, Colombo is still a medium size town. The area within Colombo Metropolitan Region, (see map 2 ) covers at present as area of 3731.28 Hectares with population of approximately one million, representing nearly 4% of the national population. (see Fig.2) In addition to the residential population, there is a floating population of around 500000 consisting of commuter traffic and the flow from provinces for business and other purposes. A brief categorisation of various types land use in the city is as follows:

|              |     |
|--------------|-----|
| Residential  | 43% |
| Public Roads | 20% |
| Water Ways   | 13% |
| Commercial   | 10% |
| Others       | 14% |

(Source: Land Use Map, Urban Development Authority, Sri Lanka)

Urban low income housing problem in Colombo Metropolitan Region is characterised by the lack of buildable urban lands affordable by the poor out of one million-city population, around 50% (about 500,000 inhabitants) live in slums and squatter settlements under unsatisfactory housing conditions<sup>1</sup>.

### Urbanisation in Colombo Metropolitan Region

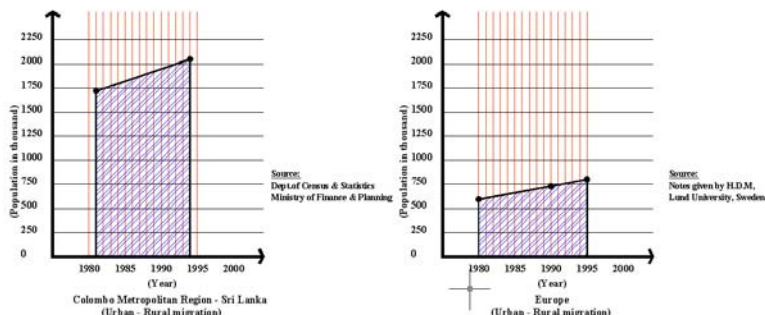


Fig. 1

As can be seen from the Fig.1, migration to the town, within the Colombo Metropolitan Region, stands around 1.2%. Rural-urban migration is no longer the main factor for urbanisation, as urban population represents less than 1/3 of the total population.

Table 2

|                             | Districts | Total population in thousands |
|-----------------------------|-----------|-------------------------------|
| Colombo Metropolitan Region | Colombo   | 2,057                         |
|                             | Kaluthara | 938                           |
|                             | Gampaha   | 1,708                         |
| Total population            |           | 4,703                         |

(Source: Dept. of Census & Statistics, Ministry of Finance & Planning).

<sup>1</sup> “In 1994, the housing deficit in the CMR was 40,794 units and this deficit accounted for 41.3% of the total housing deficit in the country. Permanent housing units in the CMR were 62.6%, which reflect the nature of the existing housing problem in the CMR. Pipe borne water was obtained only by 29% of housing units. The additional housing requirement for year 2010 is estimated at 375,800 units. The focus of the CMRSP (Colombo Metropolitan Structure Plan) regarding housing development is make to available adequately serviced lands for new housing. A comprehensive urban renewal programme is also considered as vital to upgrade the existing low-income housing stock.” (Source: Action Plan Year 2000 –2005 by NHDA.)

## Urban Population within the CMC, compared to the whole country

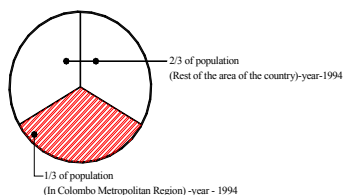


Fig. 2 (Source: By the Author)

Colombo Metropolitan Region, is the main commercial & industrial hub of the country, with comparatively higher level of infra-structure facilities. Migration of People from rural to urban sectors searching better jobs for better living conditions, is one of the causes of increasing urban population. Housing problem of urban poor increases rapidly due gap between demand and supply of housing at the Colombo Metropolitan Region (C.M.R.). This results in over crowding of old slums and creation of new shanty settlements, creating enormous environmental and other problems.

## Slums /Slum Garden and Shanty Development within the Inner City of Colombo.

In the conventional terminology Urban Under Served Settlements were classified as low income settlements taking poor levels of income of their inhabitants. However, considerable percentage of occupants in these settlements are not remarkably poor and they earn substantial income through informal means. Lack of management skills, poor attitudes towards savings and planning for future and behavioural patterns often push them towards poverty. Therefore, the crucial factor that separates these settlements from other urban settlements is the poor level of infrastructure services.

### 1 Slum

Slum is a condition of living. Decent palatial houses and old single storeyed apartments have deteriorated into slums as a result of poor management of the buildings and services and overcrowding. Most of these types of settlements are found in the inner-city area of Colombo City. Slum provide shelter for 38 % of the Under Served Settlements (USS) households in Colombo.

### 2 Slum Garden

Luxury houses which may be occupied by elite in the colonial era have been partitioned subsequently into several units and rented out. Those are appearing as garden houses with derelict structural conditions. Overcrowding, smaller living space and lack of ventilation seems to be very common features in these housing units.

### 3 Shanty Settlements

Shanties are temporary structures made of materials such as cadjan, planks and old zinc sheets. Some are squatter settlements on private, government or municipal lands constructed with or without permission of the owners. Most of the shanty settlements are located on marginal lands such as canal or river banks, road or railway reservations and or marshy lands.

*Three sub categories of shanties could be identified.*

#### A. Squatter

Temporary structures constructed by the encroached occupants on private or state land without the consent of the property owner.

#### B. Non Squatter

Temporary structures constructed by property owner or other party with the consent of the property owner.

#### C. Relocated Housing

Temporary structures constructed by the relocated or displaced families on a particular assigned land, who have compelled to move out from their early location of residence as a result of State sector development projects.

## Strategies for Low-income Housing

### Public Sector Housing

The state plays a multiple role in housing development in Sri Lanka. It performs the functions of national policy maker, regulatory authority, housing administrator, housing financier, housing facilitator, housing developer, infrastructure developer, landlord and operation and maintenance operator.

**In its regulatory role**, the State stipulates zoning plans planning and building standards, environmental controls etc.

**In its role as housing promoter**, it encourages the private sector individuals and organizations to invest on housing by offering tax incentives duty concessions etc. and offering lands at concessionary terms.

**As a developer**, the state constructs new housing estates and low-cost housing units for relocation of squatter settlements. It also offers serviced land plots in suburban and rural areas for individual's house builders.

**The state offers housing financing** through the National Housing Development Authority, especially for low-income sector. State banks especially the State Mortgage Bank and Housing Development Finance Corporation (HDFC) generally cater middle-income sector housing financing.

**Infrastructure development**, especially water and sanitation is primarily a responsibility undertaken by the state.

**Operation and Maintenance functions** of many rental-housing schemes created by the state and many slum gardens got vested with the state by enactment of the ceiling of Housing Property law in 1973, are carried out by the state.

In 1994 with the change of the government, a policy change has occurred in the urban housing sector. Realizing the need for high density housing in Colombo with increasing land scarcity the government gave up the assistance given to the slum and shanty settlers to upgrade their housing and initiated a new programme to relocate them in walk up apartments built by the government. The increase in housing density caused due to this approach has enabled the government to recover some valuable lands for other urban development activities. Support based policy in Rural Housing Programmes are yet continuing.

It is estimated that housing requirement in CMR by the year 2010 could be around 375,800 units.

### Private Sector Housing

A new trend evident in the field of housing development is the involvement of the private sector property developers in mass scale housing. In the recent past several large foreign firms such as an ex. Keang-nam, Sumping so on., have appeared in the housing field to deliver several large scale housing projects. They mainly catered to the upper-income bracket, but, the government is now offering them incentives to bring new technology to bring the construction cost down.

NHDA provides lands to the local and foreign developers at the government chief valuers valuation. The developers are expected to bring in pre-fabricated modular construction techniques or other advance technologies to the housing field.

The NHDA provides necessary advice and assistance after obtaining cabinet approval for the development proposals.

But in the meantime, Private Sector participation in the low and lower middle income sector is poor. Substantial private sector involvement is there in the land supply sector where large lands are subdivided and sold to individual house builders, but in an unplanned way. This has to be regulated based on regional land use plans and minimum standards for layout plans and infrastructure must be set.

## Implementing Agencies and Constrains to Implementation

### Actors and Processes

As, it was mentioned in earlier chapters, the urban areas of Sri Lanka, have a large number of dilapidated settlements with low housing density but with high development potentials. Shanties have come up adjacent to these settlements and the population living in such dwelling has no claim to houses or land.

Therefore, the process of urbanisation is hindered by lack of developable urban lands; as many lands with development potential are occupied by old low-rise settlements and shanties.

To overcome this obstacle, the government has introduced a new housing and urban development programme, called 'Sustainable Townships Programme'. Under this programme, house holders in low density Under Served Settlements are offered apartments in high rise, high density condominiums, in exchange to the land plots they occupy. The lands thus recovered are sold or developed for other urban development purposes thus recovering the cost of apartments offered. This process is carried-out through a government owned company named Real Estate Exchange Limited or REEL.

Outside the Colombo city limit, upgrading of Under Served Settlements are to be carried out by a World Bank funded project named Urban Settlement Improvement Project (USIP). Under the USIP, such settlements are offered infrastructure facilities.

The above two programmes and NHDA development programmes are amalgamated into a common Action Plan for the CMR.

The REEL, USIP and NHDA programmes for the period year 2000-2004 have been incorporated in the Action Plan. The housing options to be considered for the Action Plan are listed in the project category list in Table 3.

**Table-3 Project category list**

| Item No. | Priority Area   | Housing Programme  | Actor                           |
|----------|---|--|---------------------------------|
| 01       | Clearing of slum & shanties and the redevelopment of such areas                                       | a.Relocation of Under Served Settlements<br><br>b.Sustainable Township Programme         | NHD A<br><br>REE L              |
| 02       | Provide finance or/ and other assistance to achieve the objectives in housing                         | a.Janaudana<br><br>b.Provision of infrastructure and services.                           | NHD A<br><br>USIP               |
| 03       | Directly engage in the construction of flats  | a.Middle Income<br><br>b.Public Servants Housing<br><br>c.Redevlopment of Housing Scheme | NHD A<br><br>NHD A<br><br>NHD A |
| 04       | Formulate schemes to establish housing development project in order to alleviate the housing shortage | a.Advance Construction Technology Scheme   | NHD A                           |

(Source:Action Plan, year 2000-2004 by NHDA)

NHDA, REEL and USIP are considered as the actors and the methodologies adopted by them in fulfilling their tasks are identified as the processes. The housing development programmes which will fulfil the objectives of the National Housing Development Authority are presently carried out by the actors and processes listed below.

#### **National Housing Development Authority (NHDA)**

The National Housing Development Authority (NHDA), was set up under the provisions of Act No. 17 of 1979 and the objects of the Authority being,

- Directly engage in the construction of flats, houses, other living accommodation or buildings.
- Formulation of schemes for establishment of housing development projects.
- Causing clearance of slum and shanty areas and redevelopment of such areas.
- Promotion of housing development
- Provision of land for housing development
- Provision of financial assistance to persons engaged in activities similar to NHDA.

In order to engage in the above projects the NHDA was organised as a state owned corporation managed by a Board of Directors. The NHDA functions under the purview of the Ministry of Urban Development Housing and Construction.

### **Real Estate Exchange (Pvt.) Ltd. (REEL)**

This company was formed as the management arm of the Sustainable Township Programme (STP). The Sustainable Townships Programme is expected re-house more than 50,000 out of the total of 66,000 households currently living in slums and shanties in the city of Colombo in fully developed modern mini-townships, without burdening the beneficiaries or the state. This process will liberate nearly 1,000 acres of encumbered prime land in the city, on a voluntary basis.

About 60% of these will be utilized for urban development after leaving the rest for environmental and public purposes. The market value of lands so utilized shall be available to the government through a system of land based securities. The proceeds will be re invested to construct the rehousing townships, complete with modern facilities and infrastructure.

#### Objectives

- To re-house slum and shanty dwellers.
- To carry out quick action of construction on the liberalized land purchased from its main principals the NHDA, Urban Development Authority, & SLLRDC (Sri Lanka Land Reclamation Development Company).
- To operate as land based securities exchange as a tool to achieve above.

### **Urban Development Improvement Project (USIP)**

The Urban Settlements Improvement Project (USIP) would serve as a vehicle to test a mix of strategies, ranging from direct government intervention for the provision of basic infrastructure services to the use of private sector-lead market forces for long term housing finance.

Ministry of Urban Development, Housing & Construction wishes via design and implementation of USIP to increase the access to improved and sustainable services and formal ownership of land and housing for residents within the Colombo Metropolitan Region (CMR) particularly the poor, through decentralised implementation, by strengthened Local Authorities and with community cost sharing. The project is also expected to increase cooperation and coordination between institutions serving urban low-income communities, to reduce waste, to ensure that developments focus on areas of greatest need, are implemented on an equitable basis and are economically and institutionally sustainable. In order ensure above a number of project packages have been identified for implementation.

The following packages are available for project implementation:

- Environmental Improvement
- Housing Finance
- Provision of Serviced Lands
- Strengthening of Urban Local Authorities to improve delivery of Municipal services
- Technical Assistance for the Partners for Implementation and management

### **Constraints To Implementation**

The constraints to the smooth expedition of the process could be categorised into following main areas.

- 1 The rental Housing sector in urban areas in Sri Lanka is inactive since there is no adequate incentives for rental housing sector and therefore, the private sector does not participate in the rental housing supply.
- 2 Unavailability of a proper data base on housing.
- 3 Delays in approvals by regulatory bodies.
- 4 Delays in the acquisition procedure of lands for housing.
- 5 Shortcomings in obtaining the chief-valuer's valuation of lands.
- 6 Shortages in the allocation of funds for social housing.



# Housing Development Programmes

In accordance to the housing needs of Sri Lanka, the government has identified three approaches of doing housing development programmes.

## Upgrading of Slums and Shanties

The approach enables development of housing including physical, social and environmental conditions, without uprooting the settlers, from their present habitats. The small financial assistance given by the NHDA through a housing loan multiplies into a complete house of a much higher value, with the self contribution by beneficiaries in terms of money and labour. Many internal linkages within the community is maintained in fact as no relocation is involved.

## Pre-sale basis of housing

The families of middle and upper income brackets have pay greater attention to purchasing houses. Owing to the less opportunities of personally building a house, they prefer to purchase houses that have been constructed. The government to satisfy the needs of this target group launched the Pre-sale houses programme. ( walk-up apartments in the CMR on pre-sale basis).

Houses constructed under the 'Pre-sale Housing Programme' are advertised in the daily news papers and eligible applicants are selected on the basis of non-possession of houses, ability to pay for the houses and the retirement status of employees. A number of concession such as the possibility of paying  $\frac{1}{2}$  of the value of the house initially and the balance in monthly installements over 20 years at an interest rate of 15% have been provided to those who purchase these houses.

## Relocation

A. Relocation within the sites, where improved housing was provided along with ancillary facilities and community services.

There are large number of Under Served Settlements in urban areas within CMR, where haphazard low density housing has horizontally expanded throughout a long period of time, depriving the inhabitants from obtaining basic infrastructure services or improve their housing conditions. Such settlements which are existing in lands permissible for housing are selected for On-site Relocation. Residents are temporarily removed from the land (some times part by part) and new houses with proper infrastructure are constructed.

The original settlers are re-settled in the new houses and the area saved by increase of density are used for additional housing or other development purposes.

B. Aided self-help housing programmes within the urban and sub-urban areas.

The NHDA provides housing loans, assist in procuring or manufacturing building materials and offer technical assistance in housing development in existing low-income settlements. Participants entering the programme are going through an initial orientation programme. Then they involve themselves in construction and finally become legitimate owners of a house with a plot of land. This approach helps to reduce construction cost tremendously due to Participation of beneficiaries at all the stages in the development process.

# Comparative Case Studies for Sustainable Development in two Projects under Relocation Housing Programme

## On-Site Relocation and Aided Self-Help Housing Programmes under Housing Renewal Programmes in Sri Lanka

As to elaborate on the above, two case studies are used. Two relocation projects are Rahulapura Housing Development at Madiwela, Nugegoda as On-Site Development and Naigala at Anandagama, Awissawella as Aided Self-Help Housing Development.

### **Rahulapura Housing Development at Madiwela, Nugegoda (Lower Middle Income On-Site Relocation Housing Programme)**

#### *General Introduction*

The “Rahulapura” project is a land owned by the government which has been densely populated during the last decade by squatting of the migrant families from the neighbourhood and elsewhere. It is twenty km. of Colombo, at Sri Jayawardanapura, the administrative capital of Sri Lanka.

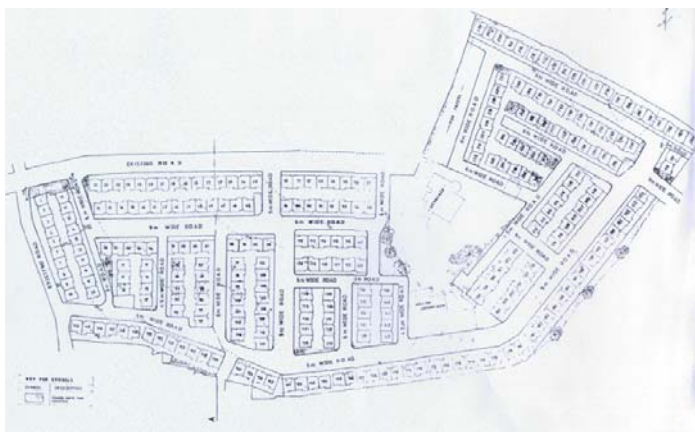
It has been revealed that, the political leaders in the area has in several occasions proposed to the Provincial Council and the Pradeshiya Sabha to regularise the settlement for to the present occupants. This proposal has never been materialised due to the high residential potential in the area.

Political Authorities have now realised that the two storied row housing development in this settlement is a better solution when compared to the verticle development proposed for this settlement, because this area is within the security zone of due close by Parliament Complex.

The proposal was to be develop a part of the land as a Lower Middle Income Re-Location Housing Project for the present occupants and the balance part as a Middle Class Housing for sale.

#### *Location*

This settlement is located in Maharagama Pradeshiya Sabha Area in Madiwela Grama Seva Division behind Sri Rahula Maha Vidyalaya.



*Map 4 Layout of Rahulapura (Source: National Housing Development Authority)*

*Details of the Site*

Extent – According to the survey plan the usable extent for housing is 3.819 hectares.

Nature of the Settlement – The “Rahulapura” settlement consists of approximately 277 housing units occupying entire area of the land.

Topography – More or less flat land.

*Infrastructure Condition*

Access Roads – No direct access to the proposed settlement from any of the main tar roads. There are two gravel roads approximately 6.0M wide passing through the “Welsiripura” settlement. Those are the only approach roads which could be used legally to enter into the “Rahulapura” site. It was found that the other access (tar road) from the Madiwela junction., which passes by the Rahula Vidyalaya play ground. This is the only road (10M wide) which can be used for a developments.

Water Supply – Most people use individual wells. Others use common wells. Piped water is not available, before starting the housing project it has been observed that the pipe borne water supply (under the Maharagama Water Supply Scheme) is available at the limited area.

Electricity- Electricity is available at the site proximity. Capacity checked.

Sewerage Disposal- No pipe born sewer lines are available in the area, when starting the project. The low cost option envisaged is septic tanks after checking the well waters are not allowed for drinking.

Storm Water Drainage- It could be done, according the land is sloping towards the direction of the canal passing through the site.

*Proposed Land Utilization*

Since the land is situated in a residential area locating close to Battaramulla, Pitakotte town centres and hospitals, schools etc. it is a very high potential to attract middle income residential development. Investment can be profitable.

Also, there was a proposal, when the topographic condition and the land to be alienated to the person who is presently maintaining a “KOVILA” (religious place), the extent of balance area that can be used as a pre-sale housing and the on-site rehousing to be critically analysed.

Given below is a tentative calculation to justify the possibility of pre feasibility exercise.

|  |            |             |
|--|------------|-------------|
| Usable land extent   | 3.819 Hec. | (9.43 Acre) |
| Area to be released for a “Kovila” and reservation for hazardous locations., slopes etc. | 0.8 Hec.   | (2.00 Acre) |

---

Area can be used for housing      3.00 Hec      (7.43 Acre)

Assuming the density of housing as 85 Acre (outside the Colombo city limits)

Area required for re house 286 families      = 2.90 Acres (1.18 Hec)

Area can be used for pre sale housing      = 4.53 Acres (1.84 Hec)

Ideal location for pre sale housing project is the lowest portion of the settlement land. For that, the present occupants in the area, to be re housed little inside the settlement land. The under mentioned steps are proposed for easy implementation of the project.

- 1 As discussed with the person residing in the large house near the “Kovila” it has been revealed that he is willing to shift to the “Kovil” area by vacating the house if he will be given a piece of land permanently to maintain the Kovil.
- 2 If the above (1) could be implemented, the big house and the land around the house, could be used as a “Transit Camp” where 10 to 15 families could be accommodated.
- 3 If the above 1 & 2 could be worked out, the 1<sup>st</sup> phase of the project could be needs to move far away from their present locations.

- 4 In addition to the above, 10M wide access from the Madiwela town could be used for material transport and necessary procurements.  
Water supply connection got from the Maharagama Provincial Council
- 5 Part of play ground used to construct temporary stores etc.

*Socio Economic Profile of the Site*

Majority of settlers in this settlement earn their livelihood by engaging themselves in the informal sector economic activities. The table below indicates the distribution of population against 04 different income levels as revealed by the enumeration survey done by the Colombo District Office (NHDA) in February 1998.

**Table 4 Levels of Income**

|   | Income Level  | No. of Housing Units | %   |
|---|---|----------------------|-----|
| 1 | Samurdhi/Janasavi Recipients<br>Rs. 0.00 – 1000.00<br>(1 SEK = Rs.8.00) | 11                   | 4   |
| 2 | Rs. 1001 – 3000   | 182+13=195           | 70  |
| 3 | Rs. 3001 – 5000   | 58                   | 21  |
| 4 | Rs. 5001>   | 13                   | 5   |
|   | Total   | 277                  | 100 |

(Source: National Housing Development Authority)

**Table 6 Conditions of Structures Nature of Existing Housing Units**

|   | Category       | Good | Fair | Poor | Total | %   |
|---|----------------|------|------|------|-------|-----|
| 1 | Permenent      | 54   | 14   | -    | 68    | 25  |
| 2 | Semi-permanent | 92   | 20   | 3    | 115   | 41  |
| 3 | Temporary      | 30   | 12   | 52   | 94    | 34  |
|   | Total          | 176  | 46   | 55   | 277   | 100 |

(Source: N.H.D.A)



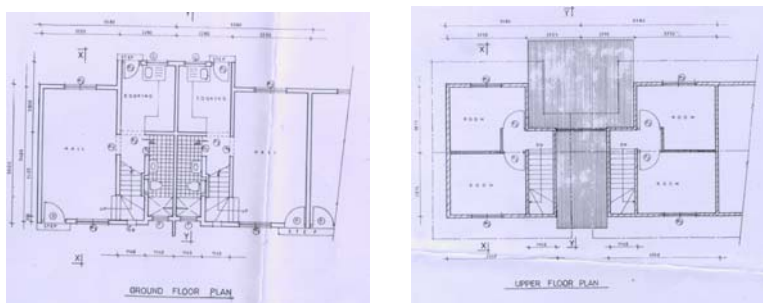
**Fig. 3 The existing environment and haphazard arrangement of semi-permanent structures.**



**Fig. 4 Completed row of houses; when enhancing its aesthetic beauty by identification when applying colours for each unit. (Source: photo by author)**

*Housing Development*

Housing development envisaged is two storied blocks. Unit size in floor area-wise, 50.36 m<sup>2</sup>. (540 sq. ft.)



Plan. 1 Ground and Upper floor plans (Source:N.H.D.A)

Table 7 Tentative composition of Units are as follows:

| Floor Area/<br>Apartment             | No. of<br>Blocks | No. of Units | Floor<br>Area |
|--------------------------------------|------------------|--------------|---------------|
| 50.36 m <sup>2</sup> (540<br>sq.ft.) | 16               | 286          | 14402.96      |

(Source: N.H.D.A.)

#### On-site Infrastructure

Provision of on-site infrastructure will be done to suit condominium marketing of units & cooperate management of apartment housing. Cost of on-site infrastructure based on standard norms will range from Rs.30,000/= to Rs.50,000/= per units.



Fig 5 Facilitating of on-site infrastructure including roads, electricity, water supply, sewerage and waste water disposal so on. (Source: photo by author)

#### Cost Benefits Analysis

Objective of the cost benefit analysis done under this section is to quantify direct foreseeable expenditures against the income achievable through the project. For this purpose a set of elementary cost data derived from the recently completed projects by NHDA will be used. (1 SEK = Rs.8.00)

#### Elementary Cost Data

- |   |                   |
|---|-------------------|
| 1. Cost of construction of apartments       | Rs 1000.00 sq.ft. |
| 2. Cost of on site infrastructure (average) | Rs 100.00 sq.ft.  |

#### Cost Analysis

- |  |                        |
|--|------------------------|
| 1. Cost land preparation                                       | Rs 5,000,000.00        |
| 2. Cost of construction of apartments<br>(Rs.1000.00 x 140800) | Rs 140,800,000.00      |
| 3. Cost of on site infrastructure<br>(Rs. 100.00 x 140800)     | Rs 14,080,000.00       |
| 4. Cost of off site infrastructure                             | Rs 5,000,000.00        |
| 5. Cost of compensation according to the Chart no.111          |                        |
| a. Structures above average 68 x 200,00                        | Rs 13,600,000.00       |
| b. Structures in average condition 92 x 125,000                | Rs 11,500,000.00       |
| c. Structures below average 117 x 75000                        | <u>Rs 8,775,000.00</u> |
| Total Cost   | Rs 198,755,000.00      |

|                       |                          |
|-----------------------|--------------------------|
| Add 10% contingencies | <u>Rs 19,875,500.00</u>  |
| Total Project Cost    | <u>Rs 218,630,500.00</u> |

#### Cost Benefit Analysis

##### 1. Sale of Housing Units

| Unit Size | No of Units | Sale Price(Rs) | Income (Rs.)  |
|-----------|-------------|----------------|---------------|
| 540 sq ft | 286         | 700,000        | 200,200,00.00 |

Sale price per unit has been formulated taking into account of the locational land value as approximately 75,000/= per perch and the area occupied by the single condominium apartment is equal to 1 perch.(approx.).

##### 2. Tentative Cost & Benefits Analysis for the Re Location Housing Part of the project

Sale of re location housing units Rs 196,800,000.00

Total project cost  
(excluding profits & over heads) Rs 218,630,500.00

Cost to be born by the  
Implementator of the project Rs 21,830,500.00(-)

##### 3. Cost Recovery from the Project

Expected return from the land sale Rs 36,000,000.00

(approx. 3.00 acre = 480 x 75,000/=)

Cost to be born by the projects as  
Shown in the above item (2) Rs 21,830,500.00

Expected tentative net gain from  
The project Rs 14,169,500.00

When the cost benefits analysis is taken in to account, it has been revealed that the project is financially viable if the occupants agreed to the proposed compensation package. However, considering the income levels of the majority of settlers it is unlikely that they can afford the housing units offered through this mechanism. Therefore, it is important to introduce a reasonable subsidiary component as the rehousing of present settlers. Also, instead of two storied row housing programmes, if could be able to implement four storied walk-up apartments due to the high residential potential in the particular area, may be evolved to gain high profitable margin when comparing in the present situation, but due to security problems, there was no permission to go beyond two storied high. It is the major problem which has to be faced, when doing this housing programme. The aim of this is mainly to help people, to improve their living situation.

### **Naigala at Anandagama, Awissawella**

(Aided Self-Help Housing Programme, for Low-income category)

#### *General Introduction*

This Housing Programme, launched under Jana Udana housing programme (village expansion programme), involving with the site and services with housing assistance by N.H.D.A.

The under mentioned steps has been taken into consideration, before starting this project.

- Was there a considerable number in the target group in low income category.
- Whether affordable land can be provided for individual house builders
- Will result in creation of many micro-urban centres thus reducing pressure on main cities.
- Regarding vacant lands, either owned by N.H.D.A. or those acquired will be properly developed with infrastructure facilities.
- Will cost be totally recovered from the beneficiaries.
- Is it possible to arrange financial assistance through mortgage financing; so on

#### *Aim of the project*

Help people to improve their living situation.

*Target group*

Around 168 no. of families living, under utilized area, at Naigala, Anandagama.

*Time period*

Start in 10<sup>th</sup> Jan. 1999, completed in 30<sup>th</sup> August 1999.

*Location*

It is in Colombo District at Awissawella Pradeshiys Sabha Division, 35km away from Colombo in Akarawita Grama Seva Division.



*Map 5 Layout of Naigala, Awissawella (Source: N.H.D.A.)*

*Details of the site*

Extent in accordance to the survey plan, is 15 acres (6.1 Hec.) and this land belongs to Divisional Secretariat of Hanwella Pradeshiya Sabha and consisting with 168 nos. of temporary housing units occupying entire area of the land.

*Others**Existing condition before starting the project*

The temporary houses built with using semi-permanent materials and they were living here as unauthorised settlers, without any infra-structure facilities, even toilet facilities, without proper access roads, electricity, supply of pipe borne-water service so on. For water purpose, they used common well close by their residents.

*Condition after the construction*

The extent of ten purch lots given by Hanwella, Divisional Secretariat, to each family, free in charge. Also, by the NHDA given Rs.70,000/= (**1SEK** = Rs.8.00) as a loan and 1000 nos. of tiles free in charge for each family, to construct their houses by themselves. For that, NHDA spent Rs.24,568,890.00 as per total cost. Also, by the NHDA, constructed Community Centre and playground at Naigala, when spending Rs.1,117,898.26 and Rs.3,095,555.00 to give electricity supply and another Rs.1,038,884.00 to construct roads and culverts. The total cost spend by the NHDA for these services, nearly about, Rs.29,821,327.00 regarding this housing programme.



*Fig. 6 The view of an existing house and new house within the same site (Source: photography by author)*

### *The settlement of the housing loan*

The process of the settling of housing loan by the house holders to the NHDA; the Authority considered the estimated value of their existing house and deduction of this amount from the given housing loan by the authority, that was Rs.70,000/= (1 SEK = Rs.8.00). The rest of the amount of the loan, reducing within the 30 years of period, without charging any interests. In accordance to this procedure, the payment of this housing loan became in between Rs.200/= and Rs.300/= per month for one house holder.

### *Technical advice*

NHDA helped when providing plans, and getting approvals of building permissions from Local Authority and giving free instructions and supervision regarding the construction work.

### *Self-help construction*

Each family is responsible for organising construction of its own dwelling.

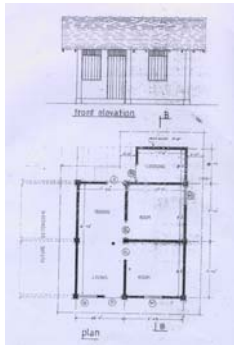
### *Cost per dwelling*

Rs.2,65,000/= (Total floor area of the house is 480 sq.ft.) and construction cost per sq.ft. is Rs.550/= (1 SEK = Rs.8.00)

In first stage, they completed, part of the house with getting government helps and gradually, they suppose to be develop other parts in accordance to their financial status.

### *Success/strength*

- The house holders belongs in same social category and almost same in their living patterns, when doing temporary jobs for their survival, due to this kind of Aided-Self Help Housing methods, it has be evolve to stabilised their social category, as one community as much as possible.
- Four types of house plans given by the NHDA for the villagers and they selected one type plan out of four, as their interest and sometimes they changed it, little bit as their satisfaction.



### *Plan 2 Selected type plans (Source N.H.D.A)*

### *Problems/ weakness*

- Until final payment of the Rs.70,000/= loan, given by the NHDA, the new house should be mortgage to the NHDA, as a security. After finishing the payments of loan then the new house is releasing to the house-holder. Therefore, the ownership of the already built-up houses belongs to NHDA.
- Another problem is mis-using of loans due to anti-social moral attitudes. Also, due to non-participation of the allottees, the programme could not able to achieve its targets and the officials could not able to complete the projects as scheduled earlier.

The factors analysis taken into consideration, it has been understand that the On-Site Relocation Housing Projects like Rahulapura housing project done under the direct construction procedure has to incur more money when comparing with Aided-Self- Help method which is applied for Naigala, Anandagama housing project. It is mainly due to the construction is done by



family members, spending their time payment involved in to direct labour and most of the materials like cement hollow blocks made by familier themselves at their premises. Timber is also can be procured relatively cheap.

Aided Self-Help Housing Programmes approach results in delivery of houses much faster due to the motivation of beneficiaries. Less amount of wastage of materials and high in user satisfactory, can be seen through this method. Therefore, the Aided Self-Help Housing Programmes is good that is semi-urbanised areas but not to the congested inner city areas. It's mainly due to the necessity of allowing 10 perch (250 m<sup>2</sup>) blocks for a family, which is too high for inner city situation.

On the otherhand, the people who participate in Self-Help Housing are those busy in making their livelihood in urban activities, and have no spare time to devote for house construction. Therefore, houses are built by NHDA engaging contractors. Hence the cost is more.

## Conclusions and Recommendations

Therefore, when considering all these pros and cons, regarding Aided Self-Help Housing Programme at Naigala Awissawella and On-site Relocation Housing Project at Rahulapura, if it is possible to over come the crux housing problem in Sri Lanka on these methods can become as an effective bootstrap that may be used by the poor in Sri Lanka to pull themselves up. It can be enhances by the taking few points into consideration.

When considering case study – 1 (Rahulapura On-Site Relocation Housing Project) can be enhance following factors,

- 1 It is suitable to be developed in the urban areas.
- 2 Cost effectiveness can be achieved due to simplicity of the design.
- 3 It is conducive with a high demand on both land and the environment.
- 4 The demand of prime land increases.

And through the case study – 2 (Naigala- Aided Self-Help Housing Project)

- 1 The concept is suitable to be adopted for a sub-urban sectors.
- 2 Some targets could not be achieved due to minimal participation of allottees.
- 3 According the time factor, it was a cost effective project due to the construction done by the house-holder and the family members.

Finally, when considering all these things, can be say, to achieve an ultimate goal, for a new vision for the year 2000, the overall housing development activities of Sri Lanka, should follow a more systematic development path in future.

The housing development programmes, could understand correctly, the needs of the beneficiaries of housing development and make maximum use of available resources while providing permanent solution to housing problems of all sectors of the society.

Based on this experience the NHDA will now implement the housing development programme more productively in the year 2000, through the five year ACTION PLAN it is now in PROCESS when adopting methodologies to fulfil their tasks, under Housing Renewal Programmes with cooperating of all other ACTORS under the Ministry of Urban Development Housing and Construction.

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