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THE COMMUNITY CONSTRUCTION CONTRACT SYSTEM IN SRI LANKA



UNITED NATIONS CENTRE FOR HUMAN SETTLEMENTS (Habitat)

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FOREWORD

The task of providing, operating and maintaining infrastructure facilities in developing countries has, over the years, grown beyond the capacities of most governments. Institutional weaknesses have emerged as a serious constraint to the infrastructure delivery process, stemming primarily from the multiplicity of ineffective agencies, from an inadequate framework for encouraging and supporting community participation, and from a lack of motivation for efficient performance-oriented service delivery. Strategies to overcome these problems include the following:

(a) Streamlining local-government institutions and strengthening their organizational capacity to deliver urban services. Governments will have to review and redefine institutional responsibilities, create specialized units to plan and manage service delivery to poor sections of the population, and promote inter-sectoral and inter-agency coordination.

(b) Introducing reforms in organizational structures and mandates to encourage community involvement. Governments will have to introduce reforms in organizational structures and mandates that transform authoritarian institutions into ones which encourage community involvement and build up self-reliant and self-sustaining actions that promote community competence in planning, operating and maintaining infrastructure.

(c) Increasing organizational efficiency. Governments can promote increased use of small-scale sub-contractors with low overheads and can harness informal-sector participation in service delivery. Governments can also encourage administrative practices and organizational arrangements that allow voluntary and non-governmental organizations to participate in improving services in poor neighbourhoods.

This publication argues the need for new approaches to infrastructure service delivery and describes one innovative approach as developed in Sri Lanka. The community construction contract system is explained in detail, including the procedures of awarding contracts; the impact and results are analyzed. The report continues to explain the success of the community construction contract system and indicates the problems encountered. The main aim of the report is to promote the sustainability and replicability of the community construction contract system not only in Sri Lanka, but also in other countries in the developing world.

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I. THE NEED FOR NEW APPROACHES TO INFRASTRUCTURE SERVICE DELIVERY

Due to the inability of the public sector and the formal private sector to provide affordable housing in suitable locations, large portions of the urban population in developing countries have been forced to build, buy or rent accommodation in informal settlements. In many cities of the third world, one third to one half of the population lives in such slums and squatter settlements. The houses in these unauthorized settlements are of a poor quality, but evidence from many parts of the world shows that the urban poor are both willing and able to improve their houses incrementally to acceptable standards provided there is a basic level of security of tenure, i.e., if the poor are convinced that the investment will be worthwhile.

Although the low quality of the houses is perhaps the most striking feature of informal settlements, it is the lack of basic infrastructure services such as water supply and sanitation rather than the low quality of the houses which determines the quality of life in the settlements. Whereas the squatter families or the informal-sector contractors they employ are quite capable of building houses of an acceptable quality, they are generally unable to carry out large infrastructure works, because these require large investments, technical skills, planning and coordination. The authorities usually refuse to provide infrastructure in informal settlements, because of their illegal status and the inability of the population to pay for the costs.

As a result, 25 per cent of the urban population in the third world lack adequate access to safe water. Residents of squatter settlements often have drinking water only for a few hours per day and have to fetch it from a long distance. Although the number of people served increased by more than 300 million between 1975 and 1985, 100 million more people were unserved in 1985 than in 1975, due to the rapid increase of the urban population (Cairncross, 1990: 109). Based on government estimates, little over half of the third world's urban population has access to adequate sanitation at present, even where adequate sanitation is defined in the most modest terms possible (Sinnatamby, 1990: 127). Due to a lack of drainage, settlements in tropical areas remain flooded for extended periods of time during and after the rainy season, while dirt roads are full of pools of stagnant water which become breeding grounds for mosquitoes. Many low-income

communities in urban areas of the third world consider stormwater drainage to be their most urgent need as far as urban infrastructure is concerned, because their houses are often built on unsuitable land (Cairncross and Ouano, 1990: 158).

The plight of the urban poor in informal settlements is, however, only one of many problems faced by governments of developing countries and it is probably not the most pressing one for them. Due to rapidly increasing urban population, governments of developing countries are facing a growing demand for a wide range of urban infrastructure services and a strong social pressure to extend the coverage of the infrastructure services. Because of the strains on inadequate, poorly maintained and, therefore, quickly deteriorating physical facilities, there is a growing discontent with the quality of the services already provided, and dissatisfaction with the ineffective planning for the provision of new urban infrastructure services. At the same time, the governments are constrained in meeting this demand by insufficient revenues and high levels of debt service. State-owned enterprises which were established to provide the infrastructure service often generate losses rather than revenue, placing an additional burden on the government budget (Rondinelli and Kasarda, 1993: 134-142).

The above problems have led many governments to reassess their role in the delivery of infrastructure services. In view of the lack of public resources and in order to allow a reduction in government functions, there is a general call for privatization of infrastructure service delivery. Privatization of urban services can have different meanings, but it is often understood to mean that the formal private sector builds and operates the infrastructure on behalf of the government and transfers the infrastructure to the government once the investments have been recovered.

It is, however, doubtful that this policy shift will benefit the low-income population in informal settlements. The shortage of public resources has already led to a neglect of the low-income and consequently politically less powerful neighbourhoods. The privatization of urban infrastructure services with its greater emphasis on profitability and cost recovery is likely to result in more neglect and a further deterioration of the

conditions in such settlements. It seems, therefore, inevitable that parallel to the involvement of the formal private sector in the delivery of urban services, the residents of informal settlements will have to rely increasingly on their own initiative and improve their situation on a self-help basis and, where necessary and possible, with the participation of the informal private sector.

A government which wants to take its policy of privatization of infrastructure services seriously has to redefine its role and responsibilities and re-orient its activities and procedures. It has to abandon its hierarchical command-oriented system of management and it has to rely more on negotiation, persuasion, participatory decision-making and coordination. Its public officials and employees have to be trained in adaptive management, negotiation and interaction with private companies. Only then will the government be able to shift from a producer or provider of services to a financier, authorizer and overseer of services, a facilitator of service delivery by others (Rondinelli and Kasarda, 1993: 159).

The involvement of the formal private sector in infrastructure service delivery (i.e., privatization) and the involvement of the informal private sector and the end-users in the construction of housing units (i.e., sites-and-services schemes) have become a more or less acceptable approach. However, the idea that the informal sector or the end-users in low-income settlements construct infrastructure and operate and maintain the services is not yet generally accepted. Reasons for the reluctance of the authorities to allow the informal sector and low-income communities to become involved in the construction of infrastructure are the same which have obstructed the development of community participation in human settlements development in general:

- Objections from bureaucrats that the procedures and regulations of the government do not allow

for the involvement of unqualified persons, with insufficient assets;

- Objections from engineers that low-income communities are unable to design, construct and operate infrastructure adequately;
- Objections from politicians who often derive their position of power from the piecemeal provision of infrastructure in low-income settlements in collaboration with government officials.

In addition, there is a lack of confidence among the population of informal settlements in their own ability to construct, operate, maintain and manage public facilities, and a reluctance to become involved in work which it considers the task of the public authorities.

Consequently, there is a need to search for innovative approaches to the delivery of infrastructure services to low-income neighbourhoods and to study the experiences with community participation in infrastructure service delivery. A few attempts in different parts of the developing world are being made to involve communities in low-income neighbourhoods directly in the delivery of basic infrastructure services. Because the squatter population is unable to carry out large infrastructure works, the projects are usually a joint effort of the population and a non-governmental organization, of the population and a government agency, or of these three parties together.

This publication looks at an experience with community participation in urban infrastructure delivery in Sri Lanka under the Million Houses Programme where the populations of slums and shanty settlements work together with a public-sector agency, the National Housing Development Authority (or NHDA) to plan, construct, operate and maintain basic urban infrastructure.

II. THE MILLION HOUSES PROGRAMME

Between 1978 and 1983, the Government of Sri Lanka implemented the Hundred Thousand Houses Programme which aimed at the provision of houses for low-income households through direct construction as well as aided self-help. Before the programme could reach its target of 100,000 houses, it was abandoned because of a lack of funds. In April 1983, the then Prime Minister of Sri Lanka announced a new housing programme called the Million Houses Programme (1984-1989) to succeed the Hundred Thousand Houses Programme. The aim of the new programme was to reach a larger number of households at a lower cost to the state than the earlier programme, but with greater satisfaction to the occupants. The major question was how to reach such a scale with limited financial, material and manpower resources.

A task-force which had reviewed the results of the Hundred Thousand Houses Programme had noted that during the period 1977-1982, when the Government constructed some 115,000 housing units at a substantial cost, the people themselves had built many more houses without any governmental assistance. They had done so at a much lower cost and at a far greater satisfaction with the end-product. This process is the mainstream tradition of house building by the urban and rural poor in Sri Lanka. In the rural areas, house-building is a family and community activity. The prospective homeowners put a considerable amount of their own time and effort into the construction of their house. They can rely on their extended families for additional labour at frequent intervals and it is not uncommon for most of the villagers to join the effort. Only a few tasks require inputs from specialized craftspeople such as a mason and a carpenter. The family is expected to take all the key decisions regarding cost, technology, standards, infrastructure, location and environment.

The Government of Sri Lanka came to realize that housing is an activity of the people and that the role of the government is not to do what people have been doing for centuries, i.e., building their own houses and settlements, but to strengthen this process by providing support where it is needed. Therefore, the answer to the above question was a support-based housing programme where the State is participating in the house-building activities of the people rather than the people are participating in house-building by the State. The support by the

Government should not dominate the process, but facilitate it by assisting the actors involved to take decisions and to build and improve housing. The core of the Million Houses Programme was the extension of small housing loans to the rural and urban poor to enable them to construct or improve their houses. The beneficiaries of the programme were expected to be families living in unserved and informal settlements with a total monthly household income not exceeding Rs. 1200; the income ceiling was later increased to Rs. 1500 and then to Rs. 1750 per month. The housing loans would be provided at below-market interest rates ignoring the administrative cost of loan administration.

The name, Million Houses Programme, should, therefore, not be interpreted to mean that the Programme aimed at building 1 million houses; the Programme aimed at reaching 1 million households to support their efforts to improve their own housing. The fundamental principles of the Million Houses Programme were:

- Minimum intervention and maximum support by the State;
- Maximum involvement of the builder-family;
- Minimum assistance for many rather than ample assistance for few;
- Minimum standards for many rather than high standards for few;
- Decentralization of decision-making, planning and implementation to the local authorities, the communities and the householders.

The Million Houses Programme consisted of six sub-programmes: the rural housing sub-programme, the urban housing sub-programme, the plantation housing sub-programme, the Mahaweli housing sub-programme, the private-sector housing sub-programme and the major settlement schemes housing sub-programme. The two most important sub-programmes were the rural housing sub-programme and the urban housing sub-programme. The Government of Sri Lanka gave NHDA the responsibility to implement the Million Houses Programme. To implement the urban housing sub-programme, the NHDA created the Urban Housing Division which absorbed the Slum and Shanty Division of the Urban Development Authority, until then responsible for slum and shanty upgrading in Sri Lanka.

The rural housing sub-programme started in 1984, but the Urban Housing Division needed more time to develop its approach and the urban housing sub-programme was launched a year later. Unlike in rural areas, a simple loan provision programme for individual house builders is not enough to improve low-income housing conditions in urban areas. Most urban poor in Sri Lanka live in settlements without formal land tenure, so the land tenure has to be regularized to create sufficient security of tenure to make the investment in housing worthwhile. Most of

the settlements are not adequately served by infrastructure, so piped water, a human-waste-disposal system, roads and drains have to be constructed. Moreover, urban areas are subject to complicated planning and building regulations which need to be waived for low-income housing projects to keep housing affordable. For these reasons, the urban housing sub-programme required a project-based approach of regularization and upgrading of slums and squatter settlements (UNCHS, 1985: 22).



Figure 1. Drainage problems in squatter settlement before improvement

III. COMMUNITY ACTION PLANNING AND MANAGEMENT

The approach developed to implement the urban housing sub-programme was called the community action planning and management approach or CAP. The approach sees people as the main resource for development rather than as purely an object of the development efforts or as mere recipients of benefits. The objective of the approach is to motivate and mobilize the population of an urban low-income settlement to take the lead in the planning and implementation of improvement activities for its settlement. The role of the NHDA and the urban local authorities is to support this process where necessary, but the community is expected, through this process, to develop its ability for self-management and eventually to take its development in its own hands.

The vehicle for community action planning and management is the interaction/partnership workshop which is organized by the NHDA. At such workshops, community members interact as partners with the staff of NHDA's Urban Housing Division, the local authority and the non-governmental organizations. They discuss the problems of the community, identify solutions and formulate plans of action. The community assumes the responsibility to implement these action plans in collaboration with the NHDA and other organizations, and to maintain and manage the built environment after the completion of the project.

The first step in the process of CAP for an urban low-income settlement is the two-day community action planning workshop. This workshop is the core activity of the CAP approach. Participants include community leaders and representatives of the various interest groups in the settlement, NHDA staff, the urban local authority and other organizations concerned. The workshop provides an opportunity for the community to obtain a comprehensive view of its socio-economic situation and to identify its main problems and priorities. The workshop exposes the community to the opportunities available for the improvement of its living conditions as well as the constraints and obstacles that need to be overcome.

During the workshop, the participants identify all problems of concern to the community, determine the nature, the magnitude and, where relevant, the cause(s) of each of the problems, prioritize the problems, explore possible solutions and determine the resources needed and available to introduce the solutions, prepare a concrete plan of action which spells out who will do what, when and how, develop a system to monitor the implementation of the action plan, and design ways to ensure that everyone concerned is aware of the plan of action.

The key to the workshop is the options-and-trade-off technique, because a problem may be solved in several ways and each solution may call for different trade-offs. The planners have an important role to play in the workshop, because they have to clarify the trade-offs for the community. However, the selection of the option is left entirely to the community and the individual families. Once the plan of action has been formulated, the community and the external organizations need to discuss more specific problems and issues and to decide on particular actions which have to be taken to solve those specific problems. For this purpose, half-day (4-hour) workshops are organized along the same lines as the two-day community action planning workshop. These problem-centred workshops are called issue-specific workshops. These workshops can deal with any problem or issue which the community wants to raise, but examples of issue-specific workshops are:

- Planning principles and technical guidelines;
- Community building guidelines and rules;
- Orientation to housing information services;
- Small house-loan disbursement and recovery;
- Community construction contract system;
- Community management and maintenance of services;
- Savings and credit options for enterprises;
- Orientation to thrift and credit cooperative societies;
- Principles of enterprise plots;
- Orientation to women mutual help groups;
- Community-based monitoring and evaluation.

IV. COMMUNITY DEVELOPMENT COUNCILS

In order to facilitate the interaction between the population and the external agencies, all urban low-income settlements involved in the urban housing sub-programme first have to go through a process of community organization which results in the establishment of a community development council or CDC. Community development councils are established to wean the residents of urban low-income settlements away from a sense of over-dependency on the external agencies and to develop confidence in their ability to solve their own problems. The councils fulfil several crucial functions:

- They are a channel of communication between the residents, government agencies and non-governmental organizations, disseminating information from the agencies to the community and conveying concerns and opinions from the community to the agencies;
- They serve as a forum where the population of the low-income settlement can take decisions on improvement projects for the settlement and on any other community activity;
- They form the basis for the organization of direct community participation in the implementation of different programme components.

Community development councils are established in one of two ways. In some settlements, informal groups or organizations already exist. They may hear about the urban housing sub-programme being implemented in an adjacent settlement and they begin to organize themselves into CDCs in order to be eligible for participation in the urban housing sub-programme. This pattern is common in Colombo where many CDCs were already established before the start of the urban housing sub-programme. In other towns, residents may request

the NHDA directly or through their urban councillor or Member of Parliament to include their settlement in the urban housing sub-programme. In this case, an NHDA officer or one from the urban local authority holds a meeting with the population of the settlement to explain the concept, the purpose and the role of the CDC and to motivate the residents to organize themselves into a community development council.

Most populations of urban low-income settlements recognize that a strong community organization facilitates the implementation of the regularization and upgrading project and they take the initiative to establish a CDC. The NHDA encourages the population to sustain the council and guides the residents to initiate some community activity. Once the councils have been established, a large number of hitherto hidden community leaders emerge from among the slum residents. Over 1000 community leaders were identified for training in community leadership and group work in one- to three-day orientation courses and workshops organized by the Colombo Municipal Council (Cassim and others., 1982: 164).

A CDC is a relatively unstructured organization with simple rules and low membership fees. The council is elected once a year and consist of a chairman, a secretary, a treasurer and approximately 10 ordinary members. The number of families which select a council depends on the size of the settlement. Settlements with 50 to 60 families usually have one council; larger settlements have more than one council. Some large settlements with more than 300 families have councils at two levels: a zonal council for each neighbourhood or cluster and a federation of zonal councils for the entire settlement consisting of representatives of the zonal councils (Citynet, 1991a: 10).

V. INFRASTRUCTURE DEFICIENCIES IN INFORMAL SETTLEMENTS

The Urban Housing Division of the NHDA faced a daunting task implementing the urban housing sub-programme. The urban areas of Sri Lanka and the capital city of Colombo in particular have many neighbourhoods without adequate infrastructure services. A survey conducted in 1986/87 (Karunasena, 1988) showed that the Colombo Municipal Area had 82,317 housing units, of which only 40,861 (49.6 per cent) were of an acceptable physical quality. The remaining 41,456 units were of a poor quality with inadequate infrastructure and/or illegal land tenure. In other words, about half of the population of Colombo lived in poor housing conditions in informal settlements. Three types of informal settlements can be distinguished: shanty settlements, slum houses and slum tenements.

A. Shanty settlements

Shanties are houses made of temporary material such as coconut palm leaves, planks and old zinc sheets, and constructed on private, government or municipal land without permission by the owners. The shanties originally emerged as temporary dwellings constructed by refugees from floods and by people made homeless by fires. With the passage of time, other families such as recent migrants to the city and persons evicted from their houses settled in these areas and put up shanties.

Most shanties are located in the low-lying areas on the eastern periphery of the city, because such land could hardly be utilized for any other purpose. However, shanties have also been built on the banks of rivers and canals and on road reserves. There are about 20,685 shanty units in Colombo providing housing to some 21,000 families or 100,000 persons (Dayananda and Dissanayake, 1991: 2). As many as 37 per cent of all shanties are located on land in unprotected or flood-prone locations; 65 per cent are located on government or municipal land (Marga Institute, 1976: 80).

B. Slum houses

Like in so many old cities, the central area of Colombo around the port and the commercial area used to house the urban middle- and upper-class families. When these moved out to the spacious newly developed areas in the south of Colombo, the vacated houses were sub-divided into small units and rented out to low-income workers who needed to

live near their places of work. Moreover, the owners allowed poor families to build their shacks in the gardens of these houses giving rise to the "slum gardens". Sanitary facilities were grossly inadequate to cope with the high rate of occupancy and slum conditions set in quickly. The overcrowding of the buildings and the lack of maintenance and repairs accelerated the pace of deterioration. There are an estimated 8100 such units in the city of Colombo.

C. Slum tenements

Most of the present slum tenements were constructed between 1900 and 1940 to house the city's labour force at a time when industrial and commercial ventures in the city were expanding. The tenements were situated in the proximity of factories, stores and other work places which employed large numbers of workers. Tenements are built in rows and each row consists of about 10 units. Most units have a single bedroom of about 15 square metres, a small veranda and a common living area with shared water and toilet facilities. Tenement settlements vary widely in size, containing anything between 5 and 500 tenements.

The shared facilities are inadequate for the large number of residents; in some instances, one latrine serves as many as 50 families. The neglect of the buildings, the lack of adequate sanitation and the over-crowding which sets in when more than one family occupies a tenement led to a rapid deterioration of the living conditions in the tenements and most tenements have turned into slums. Moreover, families made unauthorized extensions to their units and squatters built their shelters between the tenement structures contributing to a further densification of the settlement. The City of Colombo has about 700 tenement settlements with 17,000 units accommodating 22,600 families (Marga Institute, 1976: 78).

In 1973, the Government of Sri Lanka established the Common Amenities Board to undertake environmental improvement work in the slum areas. The Common Amenities Board and the Colombo Municipal Council launched the Environmental Health and Community Development Project (1979-1983) with financial support from UNICEF. The aim of this Project was to improve the living conditions in urban low-income settlements by

Table 1. Slums and shanties in Colombo in 1991

Type	Settlements	Units	Population
Slums	700	22,368	250,000
Shanties	150	20,886	100,000
Total	850	43,041	350,000

Source: Dayananda and Dissanayake, 1991: 2.

providing physical amenities, executing health and health-education programmes, creating a trained cadre of community workers and establishing community organizations to elicit community participation in the maintenance of common amenities, health care etc. The project was limited to the Colombo Municipal Area. As part of the project, the Municipal Council recruited health wardens who were trained in community development, primary health care, nutrition education and environmental education. After two months of pre-service training the health wardens started to visit the slums and shanties in their wards to win the confidence of the population and establish a dialogue on the needs of the community with regard to health and sanitation.

The wardens also had the task of convincing the population of the need to organize CDCs which were part of a proposed three-tier council system through which the urban poor were able to participate in urban development. Initially, it was difficult to sell the idea to the communities, but once the activities of the CDCs started to produce results and communities became aware of the negotiating power of their council, the people took the initiative themselves and requests came regularly from settlements for assistance in organizing a council. During the first year, the project was able to establish over 100 CDCs (Cassim et al., 1982: 157).

A team which evaluated the first phase of the Environmental Health and Community Development Project in 1984, came to the conclusion that there was insufficient community participation in the programme and that community participation needed to be strengthened in the upgrading of urban low-income settlements. It shifted its financial support to the NHDA so that its programme could be integrated in the newly established Million Houses Programme and renamed it Urban Basic Services Programme. Community participation in the provision of urban services was now ensured, because the Urban Housing Division applied the CAP approach.

Contacts between the staff of the Urban Housing Division and the population in low-income settlements provided more insights in the shortcomings of the first phase of the Programme. Communities complained that they were not consulted about the amenities provided by the Common Amenities Board which, therefore, often did not meet their most urgently felt needs. community. Because the communities were not consulted, many common amenities were constructed in the wrong location. In one case, a communal toilet block had been built at the rear of the settlement close to the boundary wall, inaccessible to the vacuum truck of the Municipal Council. The septic tank of the toilet block could, therefore, not be emptied and after some time started to overflow; as a result, the people stopped using the toilet block. Communities also complained about the slow pace and the poor quality of the work of the private contractors who constructed the amenities. Rather than using a cement/sand ratio of 1:5, the commercial contractors would use 1:7 or 1:8 in order to increase their profits. Because of the lack of community participation in the provision of the amenities, the community felt little responsibility for their operation, maintenance and repair, and this led to a further deterioration of the situation.

VI. DEVELOPING THE COMMUNITY CONSTRUCTION CONTRACT SYSTEM

The National Housing Development Authority understood the importance of a speedy delivery of urban infrastructure services to urban low-income settlements, because better infrastructure can quickly improve the sanitary conditions in a settlement. It also understood that the active involvement of the community in the provision of infrastructure could enhance the sense of responsibility of the community for the operation and maintenance of the amenities and this would result in a longer life span of the amenity and lower costs to the NHDA. A new approach with extensive community participation in the planning and construction of infrastructure was required. The NHDA requested the UNCHS/Danida Training Programme for Community Participation to come up with proposals for the construction and maintenance of infrastructure through community participation.

In the earlier slum- and shanty-upgrading programme of the Urban Development Authority and in the urban housing sub-programme of the NHDA, there had been experiments with low-income communities providing labour for the improvement of their settlements. In 1983, the Slum and Shanty Division tested the possibility of utilizing community labour for the construction of two wells in Bandaranayakapura, an urban low-income settlement in Kotte, a town east of Colombo. The Division provided the materials and the technical supervision, while the community contributed its labour free. Therefore, the same community constructed a community centre, but this time the Division also paid for the community labour. In 1985, residents of Navagampura, a sites-and-services scheme in Colombo, complained to the General-Manager of the NHDA about the poor quality of the drains which a contractor had constructed. At the advise of the General-Manager, the residents reconstructed the drains with technical and financial assistance from the NHDA.

These were, however, isolated examples of community labour; the new approach would have to give the community complete control over the process of infrastructure delivery. During meetings between the staff of the Urban Housing Division and community leaders of several low-income settlements, the community leaders had complained about the poor quality of the work of the commercial contractors. They had urged the NHDA

to send the tender documents for the next construction work in their settlement not only to the commercial contractors, but also to the CDC. The community leaders were convinced that the CDC could do the job at least as well as a commercial contractor; it had both skilled and unskilled labour and it only needed some technical training and advise. With this challenge in mind, the staff of the Urban Housing Division and the consultants of the UNCHS/Danida Training Programme started to design a new procedure.

Their joint efforts resulted in a procedure for the active participation of communities in the physical upgrading of their neighbourhoods: the community construction contract system. According to the proposal, the NHDA would not award a contract for the construction of infrastructure in a low-income settlement to a commercial contractor or ask the community to provide free labour, but it would award the contract to the community as if it were a contractor. It would pay the community the cost of construction (i.e., the cost of building materials and labour) plus a small profit margin of about 15 per cent.

It was clear that not all low-income communities would be able to carry out all kinds of construction work. The proposal, therefore, distinguished three types of situations:

Situation a:

In well-established settlements with an experienced CDC, the NHDA can award a contract for the construction of infrastructure directly to the CDC.

Situation b:

If the CDC is unable to carry out the work on its own, a non-governmental organization can assist the community to carry out the project and act as an intermediary between the CDC and the NHDA.

Situation c:

Due to its technical complexity, some construction work cannot be carried out by a low-income community, even if it is assisted by a non-governmental organization. In such a case, a commercial contractor will do the work, but the contract will have a clause insisting on the recruitment of skilled and unskilled labour from within the community.

It would be left to the community to decide how to organize the work. The community would have to buy the building materials, but it could ask the staff of the NHDA for advice. It could decide to hire skilled labour and pay any unskilled labour provided

by community members, or to carry out the entire work with unpaid labour and use the money for other community activities. It was proposed that a technical officer of the NHDA would supervise the work, check its quality and give technical advise.

Table 2. Construction methods for different amenities

Component	Facility	Method		
		A	B	C
Water supply	Water distribution network with standposts	•	•	
Sewage disposal	Toilet with septic tank			•
	Double soakpit toilet	•	•	
	Sewer line			•
Drainage	Surface drain	•	•	
	Precast drain	•	•	
	Built-up drain	•	•	
Roads	Tarred road			•
	Gravel road	•	•	
	Footpath	•	•	
Refuse collection	Garbage container	•	•	
Electricity	Street lights			•

VII. TESTING THE APPROACH IN WANATHAMULLA

After the proposal for the community construction contract system had been formulated, the staff of the Urban Housing Division organized a series of workshops in shanty settlements to present the ideas to the communities. The most interesting experiences came from a workshop with the CDC in Wanathamulla in September 1985 (UNCHS, 1987).

With about 1200 housing units and some 6000 inhabitants (in 1988), Wanathamulla (which is now called Seevaleepura) is the largest squatter settlement in Colombo. A non-governmental organization, US Save the Children Federation (USSCF), had started working in Wanathamulla before the Urban Development Authority and the NHDA became involved in the settlement. It organized income-generating activities; it conducted training courses in construction skills; it established a library and financed a child-feeding programme run by community members.

Wanathamulla had the reputation in Colombo of being a place inhabited by drug dealers and criminals and when the first CDC was elected in Wanathamulla, those people occupied the prominent positions in the council. It took US SCF several years of community development work and community leadership training before a CDC was elected which represented the common population of the settlement. The presence of the US SCF in Wanathamulla over an extended period of time was, therefore, extremely valuable to the CDC and to the NHDA once the project for the regularization and upgrading of the settlement was launched.

During a first workshop to discuss the newly-formulated community construction contract system in Wanathamulla, the staff of the Urban Housing Division explained the procedure to the CDC and asked the leaders for their comments. The reactions of the participants in the workshop were generally positive and the staff received useful suggestions as to how to improve the procedure. The participants were in fact so enthusiastic about the idea that the CDC proposed to test the procedure with the renovation of a bathing well in one of the neighbourhoods of Wanathamulla, Block A. The old bathing well had also been constructed by the population some 30 years earlier, but it was in a dilapidated state and urgently required repair.

Encouraged by the response of the CDC, the staff of the NHDA refined the procedure and drew up a

plan for the renovation of the well to be carried out by the community. Shortly afterwards, the officers returned to Wanathamulla with a type plan for a well as was normally built by private contractors for the NHDA. While the CDC was ready to accept the new procedure, it rejected the design of the well, because in its opinion the design did not meet the needs and wishes of the community.

The NHDA had to organize a second workshop during which the CDC presented its own design of the well which had been prepared by seven residents of Wanathamulla. The proposed well was square instead of round which made it possible for more people to use the well simultaneously; the platform around the well was divided into two separate parts (one for bathing and one for washing clothes) so that the soap from the people washing themselves would not spoil the freshly washed clothes; in the design, a small area near the well had been fenced off to create a place where the women could change their clothes; there was also a place to hang the clothes to dry. The CDC proposed its use of rocks instead of bricks as lining for the well to make it stronger, because experience had shown that buckets constantly hit and damaged the brick wall of the existing well. The staff of the Urban Housing Division had to admit that this design was superior to their own plan.

In addition to discussing the design of the well, the community and the staff of the Urban Housing Division again reviewed the procedure and made further improvements. On the second day of the workshop, staff members of the Urban Housing Division and an experienced community leader from another shanty settlement in Colombo taught the community leaders of Wanathamulla how to read plans, how to keep accounts and how to organize the maintenance of facilities. The CDC elected a committee of six people from Wanathamulla (the construction committee) to take care of the day-to-day management of the construction of the well. The project officer and the technical officer of the NHDA were appointed advisers to the committee. On 26 January 1986, the CDC of Wanathamulla and the NHDA signed the first community construction contract.

Back in the office, the staff of the Urban Housing Division prepared the final drawings and the bill of quantities for the bathing well. The CDC opened a bank account and waited for the NHDA to transfer

the funds so that it could start the work. However, it waited in vain. The Finance Department of the NHDA rejected a request from the Urban Housing Division for an advance payment to the CDC of Wanathamulla on the grounds that the council was not a legal entity and there was no guarantee that it would use the money correctly. Eventually, the US SCF had to advance the money so that the work could start, and was later reimbursed by the NHDA.

The construction committee was well organized and divided the various tasks among its members: a woman member of the committee worked as the book-keeper and store supervisor. She carefully recorded all the expenses, maintained an attendance register and recorded the movement of building materials and equipment in the morning and the evening. The construction committee produced its own mimeographed account books, material record sheets etc. The construction committee met every day to review the progress and discuss any problems which had occurred during the previous day. Because most people were occupied with their own work during the day, the work often went on during the night until 1 or 2 a.m.; o'clock in the morning; the community illegally tapped the power lines running through Wanathamulla to set up spotlights to enable the labourers to continue working throughout the night.

The NHDA had estimated the cost of the renovation of the well at Rs.25,000. There were some unexpected costs such as that for the pumping of the water from the well due to a larger than expected number of springs. Furthermore, the community used concrete rather than bricks for the platform and the walls of the well, and a heavier beam at the bottom of the well to improve the quality. The actual expenditures consequently increased to Rs.29,000.

The CDC completed the renovation of the well in two weeks, one week ahead of schedule. On 27 February 1986, a Member of Parliament and local politician officially inaugurated the bathing well. After the opening ceremony, community leaders from other slums and shanty areas in Colombo came to visit Wanathamulla to ask the local CDC for advice about the organization and functioning of the council and the procedure for community construction of infrastructure. The NHDA received several requests from other areas to allow their CDC to construct infrastructure.

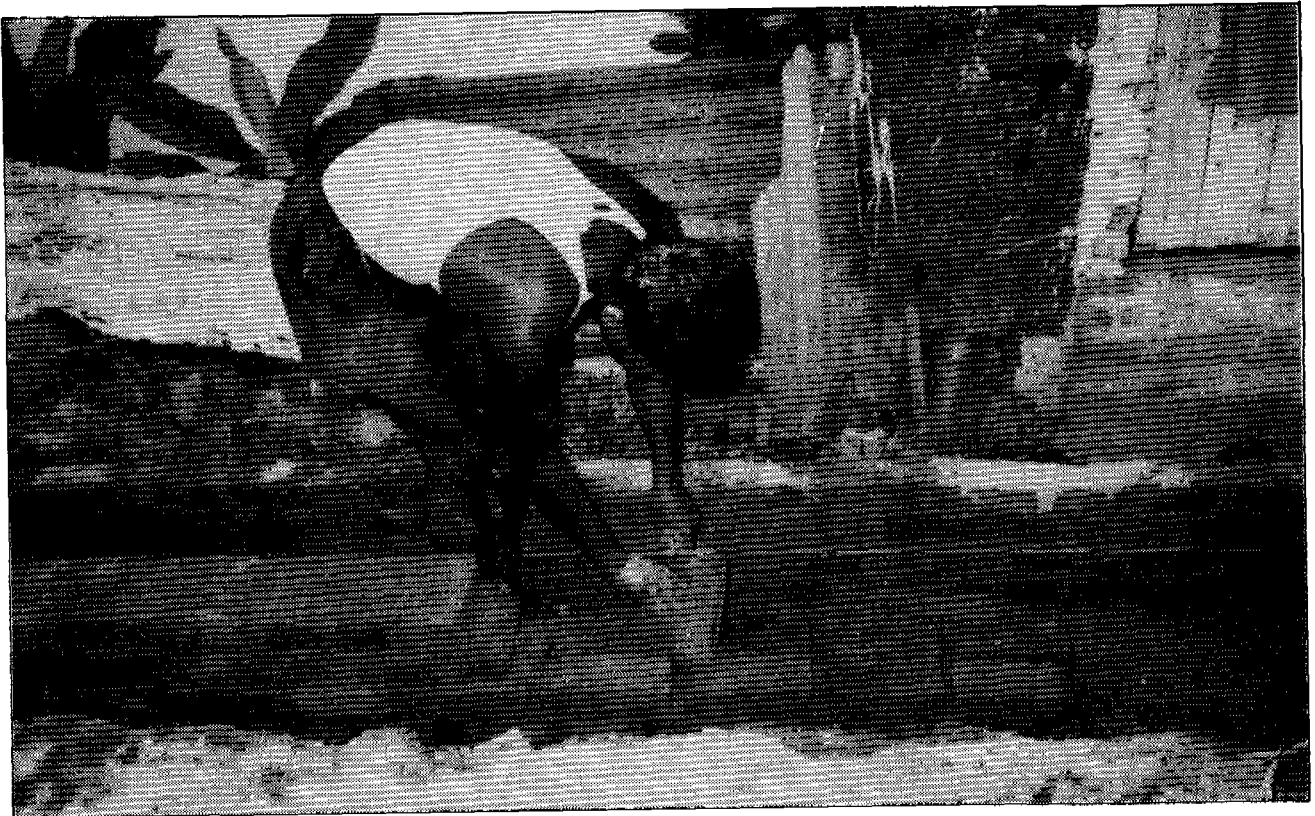


Figure 2. Construction of drainage by community in Seevaleepura

VIII. THE PROCEDURE FOR COMMUNITY CONSTRUCTION CONTRACTS

The Urban Housing Division had the strong backing of the General-Manager, later Chairman of the NHDA for the CAP approach and could, therefore, work relatively unhindered by the prevailing bureaucratic rules and regulations of the Authority. However, it needed the cooperation of other departments for the implementation of the community construction contracts system. Opposition came primarily from the Finance Department and the Engineering Department of the NHDA. The Finance Department objected to the payment of money to communities without guarantees that they would spend it correctly. The Engineering Department questioned the ability of communities to construct infrastructure of an acceptable quality. To meet the demands of these departments, the community was asked to submit its accounts to the NHDA and to allow more inspection. Eventually, the NHDA approved the community construction contract system (but did not adjust its rules and regulations to incorporate the new system in its working procedures).

The present procedure for the award of community contracts is now as follows:

- (a) The CDC together with the NHDA or a non-governmental organization identify the amenity most urgently required by the population in the low-income settlement. This should preferably be done during the two-day CAP workshop, as this is the opportunity for the residents of the settlement to acquire a general view of the situation in the settlement and identify the major problems and their solution.
- (b) The NHDA organizes a half-day workshop on community construction contracts to inform the community about the system and the procedures.
- (c) The staff of the NHDA makes an assessment of the capacity of the community and the CDC to carry out the contract on its own and of its interest to do so. If the CDC is found to be weak, the NHDA will suggest that a non-governmental organization with good links with the population in the settlement joins the project to support the council.
- (d) If the result of the assessment is positive, the staff of the NHDA designs the amenity and prepares the bill of quantities, a list of building materials and an estimate of the labour requirements for the project. The budget includes 15 per cent for contingencies or overheads; this is in fact the profit margin for the community. At the same time, the staff of the NHDA prepares the documents required to obtain official approval within the Authority for the allocation of funds to the community. Once approval has been obtained, it sends a letter to the CDC to ask formally if it is ready to sign a community construction contract.
- (e) Once the CDC has communicated its readiness, the Urban Housing Division organizes another workshop to teach the members of the construction committee the procedures they have to follow for the community construction contract and how to organize the work, how to purchase building materials, how to keep accounts, how to read the construction plans and the bill of quantities, and how to prepare bills.
- (f) During the workshop, the meeting elects a construction committee composed of two CDC members and two other community members who have to be persons with experience in construction work. The committee may include a technical officer from the Urban Housing Division and an officer from the Purchasing Department of the NHDA as advisors. The committee is responsible for the day-to-day management of the project.
- (g) At the end of the workshop, the construction committee signs the community construction contract with the NHDA (and, if necessary, a non-governmental organization co-signs the agreement). The details of the contract are advertised in the settlement by means of a simple handbill. This announcement is usually written in the local language and displayed in a highly visible location for information of all residents.
- (h) The CDC opens a bank account to establish the community fund formally so that the NHDA can transfer the money to the council. Some CDCs already have a community fund account.
- (i) The CDC recruits skilled and unskilled labourers from the community, as it feels necessary, and

pays them at its own discretion. It buys the building materials with the assistance of the NHDA technical officer. Payments exceeding the estimated costs require NHDA approval. The technical officer is responsible for the certification of the bills and the monitoring of the progress.

- (j) The NHDA will make payment in instalments to the account of the CDC according to the progress of the work. The NHDA reimburses the community for work carried out. Members of the construction committee are personally

responsible for the funds and the materials. In case of unsatisfactory performance, the NHDA may suspend payments to the community until the work has improved or resort to legal action against the committee.

- (k) On completion of the work and receipt of the final instalment, a financial statement of the contract is advertised. The CDC can utilize any surplus funds as it wishes, but they should, preferably, be used to improve the community's living conditions in the settlement.



Figure 3. Inspection chamber for shallow sewer system in Bo-Sevana

IX. MAINTENANCE AND MANAGEMENT

Proper operation, management and maintenance by the users is critical to realizing the full impact of the provision of services and facilities. Poor management and maintenance results in excessive wear and a shortened life span and the cost of replacement bears heavily on the budget of the government limiting its ability to meet the massive need for infrastructure. In Sri Lanka, toilets, bathrooms, bathing wells and other common amenities in slum and shanty areas have to be used by a large number of families. This can create serious maintenance problems. If the cleaning is not well organized, the facilities soon become so dirty that people stop using them. If the municipality does not have the resources to maintain them, they will quickly fall into complete disuse.

Table 3. Organization of maintenance of amenities

Method	Number of amenities	Percentage
Labourer hired by user-group	37	77.1
Maintenance by user-group itself	5	10.4
Maintenance by local authority	6	12.5
Total	48	100.0

Source: Pathirana, 1990: 57.

In some low-income settlements in Colombo, the user-group (i.e., the families who make use of a particular common amenity like a toilet block or a water tap) hires a labourer on its own initiative to clean the latrines and the drains. In other settlements, the cleaning is done by the families themselves on a rotation basis. These arrangements work well if the community is well established, cohesive and self-reliant, but the residents of most settlements still expect the local authorities to take care of the management and maintenance of common amenities. However, as the local authorities have fewer and fewer funds for the provision, maintenance and management of infrastructure, they tend to ignore the low-income settlements.

Direct involvement of the community in the construction work through the community contract system is expected to increase the community's sense of responsibility for a proper operation, maintenance and management of the infrastructure. However, in order to achieve the active involvement of the community in the management and maintenance of infrastructure, it is also necessary:

- To define clearly the responsibilities of the individual households, the user-group, the community and the local authorities for the operation, management and maintenance of common amenities;
- To provide incentives for proper operation, management and maintenance at all levels;
- To organize the population in the settlements to undertake operation, management and maintenance work and to raise funds for this purpose;
- To increase the understanding of hygiene and cleanliness and the knowledge about operation, management and maintenance at each level.

So, besides a procedure for the construction of infrastructure, the Urban Housing Division developed an issue-specific workshop on this topic so that in a dialogue between the population of the settlement and the public agencies concerned, a decision can be taken as to who does what and when, and who pays for it. The workshop enables the representatives of a settlement to work out guidelines and rules for operation, management and maintenance. Because of the complexity of the issues, three one-day sessions are required.

The objectives of the workshop are:

- To identify and list all common amenities and services in the settlement;
- To identify responsibilities for cleaning and minor repairs, major repairs and management and enforcement for all common amenities and services in the settlement.
- To distribute these responsibilities among the main actors: household, cluster or neighbourhood, settlement and government or non-governmental agency;
- To clarify the sanctions imposed on those breaking the rules;
- To identify who initiates and who carries out the enforcement action.

X. COMMUNITY CONSTRUCTION CONTRACTS: THE RESULTS

The community contract system was developed in 1985 and between 1986 and 1991, the NHDA awarded approximately 150 community construction contracts to the CDCs of urban low-income settlements. The system experienced its best performance in 1987 and 1988 when in total about 80 contracts were concluded. The unstable political situation in the country and the lack of government funds for slum- and shanty-upgrading were the two main causes of the decrease in the number of contracts since 1989. During the whole of 1989, the country was paralysed by curfews, strikes and lack of transport. The immediate need to finance the military activities in the north of the country was met by cutting other government expenditures including the housing programmes.

In 1990, Pathirana reviewed the community construction contract system and analyzed 63 community construction contracts in detail (Pathirana, 1990). She found that many different types of amenities were constructed under the community construction contract system (see table 5). Most frequent were contracts for the construction of toilet blocks, drains and community halls. Toilet blocks and drains obviously have a high priority for residents in the low-income settlements, because most of the informal settlements have been developed on low-lying lands. Community halls do not have a high priority, but politicians and non-governmental organizations like to finance such a project as it guarantees high visibility. Refuse collection used to be a problem in low-income

settlements, but only one garbage bin has been constructed, because the Colombo Municipal Council changed its collection method and now distributes plastic bags to the households and comes to collect the bag every day.

Table 4. Community construction contracts (1986-1991)

Year	Urban Housing Division	Engineering Services Division
1986	4	3
1987	37	-
1988	40	-
1989	12	5
1990	10	3
1991	9	12
Total	112	23

Source: UNCHS, 1993: 62.

The review of the community construction contracts awarded by the Urban Housing Division during the period 1986-1988 showed that the cost of most of the works remained within the budgeted amounts: 41 per cent of the contracts were completed within the estimated time and cost, while 43 per cent of the contracts were completed within the estimated cost, but with a time overrun (see table 6). The main reason for the delays in completion of the work was the lack of initial funds to start the work, and delays in the payment of the instalments by the NHDA which resulted in increased costs due to rapidly escalating prices of building materials. Communities which already had a community fund usually completed their work in time. Most of the construction committees were satisfied with the procedure for the community construction contracts, but some complained about the delays in payment (Pathirana, 1990: 67-78).

Delays in the completion of the work also had an impact on the costs of the project, because building material prices in Sri Lanka increased rapidly due to

Figure 4. Community construction contracts (1986-1991)

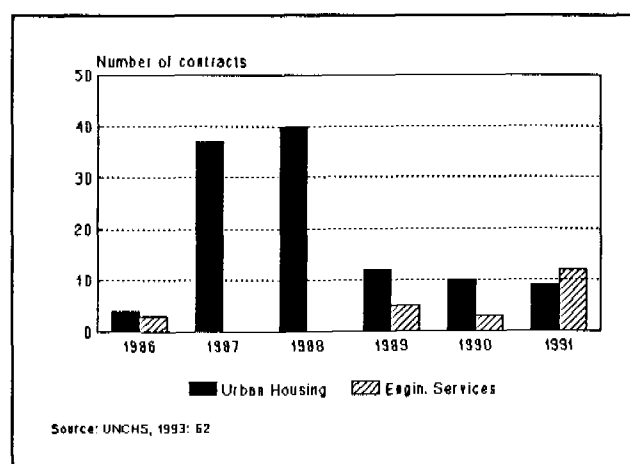


Table 5. Types of facilities constructed (1986-1989)

Type	Number of contracts	Average value of contract (Rs)
Toilet block	25	43 236
Drains	13	59 528
Community hall	13	87 125
Bathing well	9	34 682
Water stand post	7	6 823
Common amenities ^a	6	83 890
Site office	4	19 437
Water supply network	4	78 667
Foot path	3	33 475
Site clearance	3	15 916
Boundary stones	2	6 633
Garbage bin	1	2 470
Retaining wall	1	235 343
Wooden benches	1	3 000
Earth filling	1	43 215
Total	93	

a "Common amenities" is a combination of several amenities such as water supply, toilet blocks, foot paths etc.

Source: Pathirana, 1990: 37

the high rate of inflation. These cost increases did not always result in cost overruns, because some could be absorbed by the overheads, thereby affecting the profit margin. In fact, 33 of the 63 contracts made a profit, 16 contracts made no profit or loss, six contracts made a loss and in seven cases no information was available.

The review of the community contract system revealed that communities implement the contracts in three ways:

- (a) Only with members of the community;
- (b) With community members and hired labour;
- (c) Through a sub-contractor; the sub-contractor was either a small contractor from the informal sector or another, better organized community.

Figure 5. Efficiency of community contracts

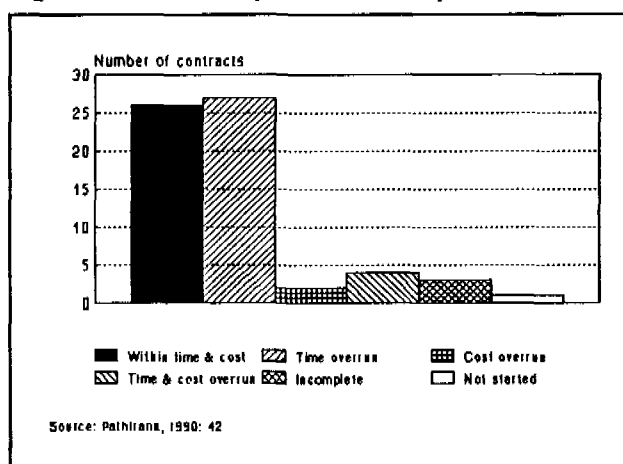


Table 6. Efficiency of the community contracts

	Number of projects	Percentage
Within time and cost	26	41.3
With time overrun	27	42.9
With cost overrun	2	3.2
With time and cost overrun	4	6.3
Incomplete	3	4.8
Not started	1	1.6
Total	63	100.0

Source: Pathirana, 1990: 42.

The review revealed that only in 39 per cent of the cases the members of the community carried out the work alone; in 34 per cent of the cases, community members hired labourers to help them do the work (see table 7). In 27 per cent of the cases, the CDC sub-contracted the work to either a private contractor or the CDC of another settlement.

Stated reasons for sub-contracting the construction work to a commercial contractor or another CDC were problems within the CDC, a lack of skilled labourers in the community and the easiness of sub-contracting. However, it appears that CDCs which sub-contracted the work to others usually had a poor understanding of the community contract system as

Table 7. Implementation method

	Number of contracts	Percentage
Community itself	24	38.1
Hired labour	2	3.2
Community and hired labour	18	29.1
Private sub-contractor	10	16.1
Sub-contract to another community	5	8.1
Direct contract to another community	1	1.6
Other	2	3.2
Total	62	100.0

Source: Pathirana, 1990: 47.

a result of lack of training. Communities which received training generally implemented the projects on their own or with hired labour, while those which did not receive any training tended to subcontract the work to others.

The NHDA was generally satisfied with the quality of the work done by the community; it felt that in 90 per cent of the contacts completed the quality of the work was either good or excellent.

Figure 6. Quality of construction

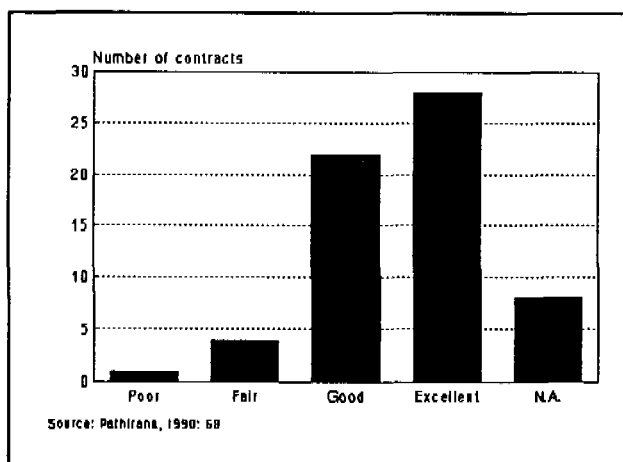


Table 8. Quality of construction

Quality	Number of contracts	Percentage
Excellent	28	50.9
Good	22	40.0
Fair	4	7.3
Poor	1	1.8
N.A.	8	12.0
Total	63	100.0

Source: Pathirana, 1990: 68.

XI. THE IMPACT OF THE COMMUNITY CONSTRUCTION CONTRACT SYSTEM

The community construction contract system was expected to have a number of advantages over construction by commercial contractors: lower costs of construction for the Government, the creation of employment in the low-income settlement, on-the-job training of the population in technical and managerial skills, a higher quality of work than that done by commercial contractors, a speedier completion of the work, greater satisfaction by the end-users and an enhanced feeling of responsibility by the community for the amenity provided.

A. Cost

The overall cost of construction of an amenity through a community contract is lower than through a contract with a commercial contractor. The community construction contract can be awarded faster, because there is no need to call for tenders, to assess the bids and to approve the tender. The profit margin for commercial contractors is 35 per cent, while that for community construction contracts is only 15 per cent.

Furthermore, the community can save money and increase its profit by using free labour from within the settlement. In Seevaleepura, for example, 300 people provided free labour for the preliminary excavation work and site clearance for the construction of a drain. The cost of construction of a footpath in Aramaya Place had been estimated at Rs.53,700 but the community spent only Rs.44,227 and made a profit of Rs.9473. These profits are used to pay for other improvements in the area which the NHDA or another government agency then does not have to pay for. The community of Siddharthapath used the profit made with a community construction contract to construct an additional drain.

B. Employment generation

In 31.3 per cent of the cases, the CDC hired labour to do the construction work; in 38.1 per cent of the cases, the community did all the work itself and in the remaining cases (31.6 per cent), it followed another method. When the CDC hired labour, the community construction contract system created employment for skilled and unskilled labourers in the settlement, in particular for masons and carpenters. Although the projects were usually

rather small, they could provide income to unskilled unemployed labourers.

Moreover, the community construction contract system helped to retain public funds within the low-income communities, thereby generating income for other residents in the settlements such as shopkeepers who were not directly related to the project. In some settlements, the labourers employed to construct the amenity had to pay a fixed amount (e.g., Rs. 5 per day) from their daily wage into the community fund as a sort of tax.

C. Skills training

Every community which implemented a community construction contract gained some experience through the project, even if it was a bad experience. Masons and tradespeople who had been involved in a community construction project confirmed that they learned new skills such as grading, levelling and the use of the metric system from the technical officers of the NHDA. However, because most communities did not keep financial records, few people learned any financial-management skills.

At least equally important was the development of a sense of self-confidence among the members of the CDC and the construction committee in their ability to deal with formal financial institutions such as banks. Opening a bank account for the community fund, depositing and cashing cheques from the NHDA and withdrawing money from the account were valuable experiences which lowered the threshold to the banks and made the people less dependent on informal financial institutions.

D. Speedy work

As shown in table 5, the community construction contract system did not result in speedy completion of the work: 49.2 per cent of the contracts experienced a time overrun. However, the time overrun was usually due to delays in the payment of the next instalment by the NHDA which tended to interrupt the work.

In addition, plans and bills of quantity were not always up to standard. It has been suggested that the Urban Housing Division did not have the expertise or experience to design the infrastructural works and should have left this task to the Engineering Services Division of the NHDA. Because of faulty plans,

communities have been forced to do extra work or changed the design without feedback from the NHDA.

E. Greater responsibility

Both the NHDA and the communities themselves were extremely satisfied with the results of the community contract system. As shown in table 8, the NHDA graded most of the work as good or excellent. Because the population was aware of the amount of money it actually cost to construct a particular amenity and because it had contributed its own time and labour to produce this result, it also felt more responsible for the operation, maintenance and management of the amenity.

Unfortunately, this effect is to some extent undone because the NHDA pays all the costs of constructing the infrastructure, in view of the community's low paying capacity. The provision of infrastructure free of charge reinforces the community's perception of the Government as a provider and it shrouds the idea that the community itself has perhaps a responsibility to contribute to the cost or to find partial funding elsewhere.

F. Dissemination

The community construction contract system has now also been adopted by the Engineering Services Division of the NHDA. The Division uses the system for construction work in low-income settlements with a total cost of less than Rs. 750,000. The Colombo City Office of the NHDA in consultation with the community of the settlement identifies the amenity to be provided; the funds come from the Urban Housing Sub-Programme. The Colombo City Office prepares the regularization drawings of the settlement so that the Engineering Division knows exactly where the infrastructure has to be located. The Engineering Division prepares the design and the bill of quantities and discusses these with the CDC which can suggest changes. The CDC has to send a letter of consent to the NHDA stating that it accepts the work at the set price and it has to sign a standard community construction contract. The Engineering Services Division also supervises the progress of the work through weekly meetings.



Figure 7. Construction of septic tank through community construction contract

XII. THE SUCCESS EXPLAINED

The community construction contract system in Sri Lanka has provided strong evidence of the ability and willingness of the population of urban low-income settlements in Sri Lanka to construct common amenities through community participation provided it receives support from an external agency, either in the public or private sector. This has been a major outcome of the experiences with the system.

In their review of experiences with community participation in the delivery of urban services, Rondinelli and Cheema (1985: 184-185) provide a list of factors which facilitate community participation and which have been clearly present in the case of the community construction contract system:

- *Representative and responsive leadership within the community, with some degree of homogeneity and harmony among the residents of the community and shared goals and perceptions of basic needs by community residents;*

The CAP approach could build on a foundation laid by other programmes for urban low-income communities such as the UNICEF-funded Environmental Health and Community Development Project which promoted the organization of the population of urban low-income settlements into CDCs and created the framework for the cooperation between these CDCs and the local authorities, in particular the Colombo Municipal Council. Despite the ethnic problems which have plagued the country, community development in the settlements succeeded, because many settlements are quite homogeneous in ethnic composition, and even in ethnically diverse settlements the various groups seem to have developed good relationships over the years. The high level of organization of the residents in slum and shanty settlements undoubtedly facilitated the work of the Urban Housing Division when it introduced the CAP approach and the community construction contract system.

- *Positive experience with collective action and participation and visible gains from the service provided;*

The involvement of the neighbourhood population in the construction and maintenance of public amenities is not unfamiliar to Sri Lankans. Rural areas in Sri Lanka have a tradition of community work for the improvement of the living conditions in the villages:

shramadana (literally, energy sharing) or the voluntary donation of time, thought and energy for the welfare of all. *Shramadana* can be utilized to develop physical infrastructure such as access roads to the villages, safe footpaths to every home, a sufficient number of protected wells or a pure drinking water supply system for the community irrigation canals, housing and systems for sewage and waste disposal, environmental sanitation, water storage and even rural electrification (Ariyaratne, n.d.: 27, 46). Not only is it second nature of Sri Lankans to give their labour to a worthy cause, but in the process of working together, of sharing meals cooked on site or provided by other volunteers and of celebrating the achievements of the day, the community spirit is enhanced and all have a good time. *Shramadana* is a social occasion; whether large-scale or small-scale, religious or political, urban or rural, *shramadana* always has takers (USSCF, 1982: 15). Although *shramadana* is rare in urban areas, the construction of infrastructure by a community is, therefore, not a new concept.

The Sarvodaya Shramadana Movement, the largest non-governmental organization in Sri Lanka, took the traditional concept of *shramadana* to help the village populations to mobilize their own resources for the development of the community. In the words of A.T. Ariyaratne, the founder of the Movement:

“[the] authority for planning and development, presently enjoyed by the privileged few must pass on to the people themselves. The best in each community can itself unfold only when this freedom to participate in decision-making becomes a reality to the people.”

One of the most important functions of the Movement is the training of community leaders, because Sarvodaya does not believe that leadership imposed from above can ever solve the problems of the people. The teaching is conducted by non-formal methods, primarily discussions and work groups (Ariyaratne, n.d.: 29, 113). The ideas of the Sarvodaya Shramadana Movement have had a strong impact on Sri Lankan society and have clearly influenced the CAP approach and the community construction contract system of the Urban Housing Division.

The community construction contracts also resulted in very tangible gains for the community; by

working together, the residents of a low-income settlements made visible improvements to their settlement. Moreover, residents from neighbouring low-income settlements would come to visit the community where a construction contract had been implemented and see the impact of the work. In this way, word about the community contract system would spread through the city. The Urban Housing Division, assisted by the UNCHS/Danida Community Participation Training Programme, would also bring community leaders from a settlement which had implemented a community construction contract to workshops on community construction contracts to explain the procedures, the problems and the advantages of the system to the communities.

- *Creation by the government of a process of participation by community residents in programmes affecting them, with an early involvement of the residents in the planning for the service, based on credibility and trust between authorities and community, with adequate training to enable the residents to participate effectively and with sufficient flexibility to allow different types and degrees of participation as conditions change and different sizes of community groups to respond to services of different scope or scale;*

The community construction contract system was not an isolated programme, but formed part of the (in itself innovative) CAP approach which "sees people as the main resource for development rather than as an object of the development efforts or as mere recipients of benefits" (UNCHS, 1993). The entire approach aimed at developing a sense of confidence among the populations of urban low-income settlements in their ability to become self-reliant. The workshops which are the core of the approach provided the residents with opportunities to understand their situation better and propose actions to solve problems. Moreover, they were important occasions for hands-on training. Within this approach, the community construction contracts were an expression of the increased confidence of the communities in their own abilities.

Slum and shanty settlements would have one or more CDCs depending on their size and

homogeneity. For issues which concerned only individual households such as the construction or improvement of the dwelling, the Urban Housing Division would deal with the individual households only. It would meet the user group of a common amenity, the residents of a cluster of houses, the CDC of a neighbourhood or the CDC of the entire settlement depending on the issue or problem at stake, always selecting the optimum size of the group.

- *Resource availability and control by the community.*

The CAP approach in turn was part of the Million Houses Programme of the Government of Sri Lanka. In the second half of the 1980s, this Programme had a high political priority. It had been initiated by the then Prime Minister, Ranasinghe Premadasa, who simultaneously held the portfolio for the Ministry of Local Government, Housing and Construction and who understood the political strength of improving the housing conditions of the poor in urban and rural areas. The strong political backing for the Million Houses Programme guaranteed that funding was available for the many activities of the programme and that "red-tape" could be cut.

During the period of developing the community construction contracts system and the awarding of the initial contracts, the Urban Housing Division received support from the UNCHS/Danida Community Participation Training Programme which forwarded the costs of holding the training workshops in the communities.

The community construction contract system envisaged the transfer of relatively large sums of money from the Government to CDCs and construction committees in low-income settlements. The amount made available to the community was based on cost estimates by the NHDA, but it was left to the councils to decide if and, if so how, the money would be spent, in particular the funds for skilled and unskilled labourers who would be recruited from within the community. In other words, the community and the community leaders had almost complete control over the resources made available by the NHDA.

XIII. PROBLEMS OF IMPLEMENTATION

Although the community construction contract system as a whole has been very successful in delivering basic infrastructure services to low-income settlements, problems occurred in the award and implementation of some of the contracts. These problems can be traced back to three factors: (a) pressure by outsiders to award contracts and to speed up the procedure and the work; (b) the unclear legal status of the CDC; and (c) a lack of training in community construction for CDCs by the Urban Housing Division.

A. The initiative for the contract

According to the NHDA procedure, the decision to undertake a community contract should be made by the community in consultation with the NHDA. However, such a decision was sometimes not taken by the community and the NHDA, but by the latter and a local politician without the direct involvement of the community. In some instances, local Members of Parliament and other politicians used the development fund at their disposal to fund community construction contracts. Such an initiative is in itself a positive development, since it reduces the burden on the budget of the NHDA, improves the living conditions in the low-income settlement and gives the politicians the sought-after exposure.

However, because a local politician rather than a community took the initiative for a community construction contract, a relatively large number of community halls have been constructed by low-income communities. Community halls can hardly be considered a priority amenity for low-income settlements, but they are high on the priority list of politicians and non-governmental organizations because of their high visibility: in three settlements the Member of Parliament of the area paid the construction of the community hall and in two settlements the construction of the community hall was paid by a non-governmental organization.

B. Assessment of the community's capacity

Because not every community can undertake a community construction contract, the NHDA procedure included an assessment of the capability of the community and the CDC before a community contract is awarded. However, an analysis of the community construction contract system revealed

that a contract was sometimes awarded, although the population of the low-income settlement and its CDC were not ready for it. As a result, the community construction contract failed to produce good results.

It seems that if there was strong pressure from a local politician or even from within the community itself to award a community construction contract, the assessment of the capabilities of the community and the CDC was sometimes either inadequately done or not done at all. The politician wants to use the money from his/her development fund for a specific settlement and does not want to share the position of benefactor with a non-governmental organization who could help the community undertaking the contract. Moreover, the politician wants to see quick results and, will, therefore, urge the NHDA to speed up the procedure and the work.

C. Legal status of the CDCs

A problem which repeatedly created problems in the implementation of the community construction contract system was the unclear legal status of the CDCs. According to the law, one can only enter into contract with a natural person or a body of persons having a legal status. The CDCs and the construction committees established by the CDCs do not have a legal status; they are informal organizations. If a CDC or a construction committee signs a contract, the signatories of the contract (i.e., the members of the CDC or the construction committee) are personally responsible for the compliance with the contract. Because these people were invariably poor, the Finance Department of the NHDA was usually reluctant to award a community construction contract (Yap, 1990).

Most communities and members of CDCs and construction committees were not aware of this legal problem. When they signed a community construction contract, they did not know that they were signing in their personal capacity and would be held personally responsible for its implementation.

In 1983, the Government of Sri Lanka issued a circular which allowed all ministries to give small community contracts to rural development societies without the need to follow normal tender procedures. The maximum value of the contract was set at Rs 150,000. In 1987, the circular was amended to increase the upper limit of the contract and to increase the number of societies which were

eligible for such a contract, but the CDCs were not included.

The NHDA as a statutory body, has the legal power to create its own rules and regulations and it is not bound by government rules and regulations. It can make rules regarding the form and manner in which communities enter into contract with it, NHDA but it does not have the authority to award contracts without an approved tender procedure. It nevertheless awarded community construction contracts without a tender procedure (Keppetiyagama, 1989). The low-income housing projects in other cities and towns of Sri Lanka are implemented through the local authorities which have other rules and regulations than those of the NHDA. The rules and regulations of the local authorities may not allow for community construction contracts to be issued.

The Urban Housing Division could nevertheless award community construction contracts, because it had the endorsement for its approach of the head of the Urban Housing Division, as well as the General-Manager and later Chairman of the NHDA. The Chairman explained that the legal issue is secondary importance to the trust in the people which is of primary importance [in the Million Houses Programme and the CAP approach] (UNCHS, 1987).

D. Delays in initial and progress payments

The unclear legal status of the CDCs created many problems in the implementation of the community contract system. It delayed payments to the communities, as the Finance Department of the NHDA preferred to reimburse communities rather than make advance payments. Eventually, the NHDA released the initial payment at different times depending on the trust between the community and the officer in charge of the project: some communities received advance payment after signing the contract; other communities received it after they had started the work; some received it after they had finished the first phase of the work.

However, many low-income communities did not have funds to start the work, particularly if it was their first community contract. Almost 38 per cent of the communities faced difficulties in obtaining funds to start the construction work. However, not all communities suffered from the delays in payment; some already had a community fund. The money in such funds may have come from a non-

governmental organization or may have been collected from the population of the settlement or it could be the profit from an earlier community construction contract. In the case of some small contracts, the community or some wealthier person in the settlement advanced the money and after the work was completed the CDC asked the NHDA for reimbursement.

Figure 8. Source of initial funding

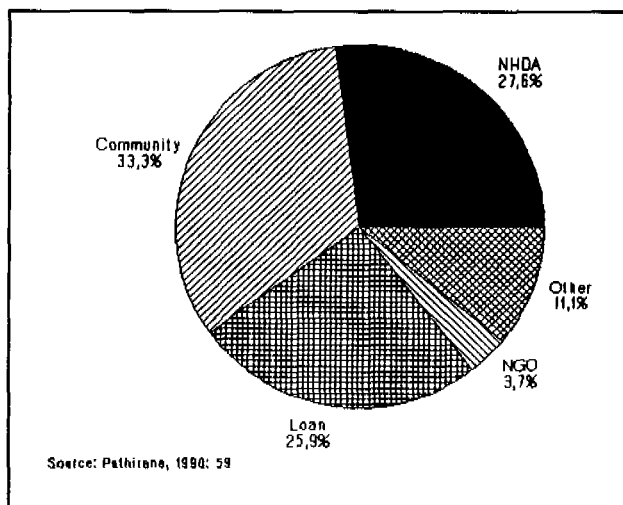


Table 9. Source of initial funding

Source	Number of contracts	Percentage
NHDA	16	27.6
Community fund	18	33.3
Loan	14	25.9
NGO	2	3.7
Other	6	11.1
No information	7	
Total	63	100.0

Source: Pathirana, 1990: 59.

The NHDA released the balance of the funds in stages and delays in these payments slowed construct work in 45 per cent of the community contracts. The community had to prepare a bill to request payment, but they depended on the technical officer of the NHDA to prepare the bill. Each payment needed to be authorized by different levels of the bureaucracy of NHDA depending on the value of the work: payments of up to Rs.25,000 can be authorized by the head of the Urban Housing Division, while work of more than Rs.100,000 has to be approved by the Chairman of the NHDA. The

minimum time required to process a payment is 10 days, but it sometimes takes one month. Because most communities did not have funds of their own, they postponed the next stage of the work until they received the payment. Due to the high rate of inflation and the rapid increase of building-material prices, the delays seriously affected the profit margin.

Some communities borrowed money from money lenders at a high interest rate to be able to continue the work. In some cases, the NHDA project officer authorized payment before (a stage in) the work had been completed, so that the work was not delayed while the cheque was being prepared. In other cases, the project officer personally moved the file with the authorization request from one desk to another to make sure that payment was made in time. Sometimes, project officers even used their own money to make advance payments in anticipation of a payment by the NHDA, because a date for the official inauguration of the project had already been set.

E. Lack of training and information

Other problems occurred during the implementation of the community construction contracts: a community started the work before it had signed the contract or received the plans, because it did not know the procedure. Another community did extra work and spent extra money without prior approval by the NHDA, because it was not aware of the exact procedure. Many communities had problems understanding the documents, the bills of quantity and the plans, because they were written in English. These problems were the result of a lack of training of the communities by the NHDA (Pathirana, 1990: 47-49, 63).

Training was supposed to be an essential component of the community contract system, because few communities have any experience with construction work, the organization of labour, financial management, the recruitment of staff and the daily recording of activities. In the period 1986-1991, the Urban Housing Division conducted only eight issue-specific workshops for community construction contracts; this is a low number if compared with the total of 136 CAP workshops conducted during the same period. Only 12 out of the 18 communities which carried out a community construction contract received any official technical training (UNCHS, 1993: 58; Pathirana, 1990: 63).

Table 10. Training received by the community

Training	Number of communities	Percentage
Organization of work	12	42.8
Procedures	10	35.7
Reading of plans	6	21.4
Reading of bills of quantity	6	21.4
Supply of building materials	12	42.8
Book-keeping	6	21.4

Source: Pathirana, 1990: 63.

While the urban housing sub-programme has provided common amenities in numerous settlements in and outside Colombo, it organized only four workshops on maintenance and management. It seems that because of its higher visibility, the provision of new infrastructure is still (politically) more important than the maintenance and management of existing infrastructure. However, in a CAP approach which aims at increasing the self-reliance of the population of low-income settlements, maintenance and management workshops are as important as the two-day CAP workshops. The planning workshops focus on the rights of low-income communities to improved living conditions. The maintenance and management workshops focus on the responsibilities of the communities to maintain those improved living conditions so that the population can benefit from what has been provided with public funds, over an extended period of time.



Figure 9. Community involvement in neighbourhood improvement in Bo-Sevana

XIV. SUSTAINABILITY

The community construction contract system has not been sustainable within the context of the NHDA. As shown earlier (see table 4), the number of community construction contracts has decreased rapidly during the past few years, when the public resources were limited and government priorities shifted from low-income housing to poverty alleviation. These developments revealed a major weakness in the community construction contract system: the funding for the contracts. As long as the NHDA had funds to pay the low-income communities to construct common amenities, the system flourished, but when the Government reduced its financial support to the NHDA and the NHDA could not award many contracts, the communities stopped constructing common amenities, because they depended on the NHDA for the money.

The Government and the NHDA took the decision to provide 100 per cent subsidies for the construction of common amenities in urban low-income settlements in view of the low paying capacity of the residents in these settlements from whom it would not be able to recover the costs. However, the subsidies created dependency rather than self-reliance and affected the sustainability of the system. The NHDA could have asked the population for a (token) contribution towards the cost of construction or could have prepared the communities through its workshops for the time when they would have to raise their own funds for community contracts, within or outside the settlement.

Recently, the Urban Housing Division of the NHDA has moved away from direct implementation of slum- and shanty-regularization and -improvement projects to the training of staff of local authorities to implement such projects. This change in strategy is in line with the policy of the Government of Sri Lanka to decentralize the responsibility for development activities. Because subsidies under the 1.5 Million Houses Programme (the successor to the Million Houses Programme) are limited, the urban local authorities and the low-income communities will be forced to find funding for the provision of basic urban infrastructure services elsewhere. This is, therefore, the right time to train low-income communities in fund-raising. Possible sources of funding are, besides the development budgets of the urban local authorities and the funds of the NHDA,

the development fund at the disposal of the local Members of Parliament, and local and international non-governmental organizations. Where external funding can be found, the funding organization should require the benefiting community to make a small contribution towards the cost of the project to show its commitment.

The idea of raising funds within the settlement is also not unrealistic, as two experiences from Pakistan reveal.

For more than a decade now, the Orangi Pilot Project (OPP) in Karachi has organized communities in squatter settlements to construct small sewer lines in house access lanes. Appalled by the conditions in the squatter settlements, the founder of the project, Dr. Akhtar Hameed Khan, studied the situation and discovered that a sewerage system had the highest priority for the population. However, the population also felt that the installation of a sewerage system was the responsibility of the Government. Upon inquiry, Dr. Khan learned that government agencies charge a certain amount per plot for the installation of a sewer connection which would be unaffordable for the residents of the squatter settlements. He also learned that in any case the agencies would not carry out any development work in squatter settlements, as it would indicate legalization of illegal land occupations.

His conclusion was that the communities in the squatter settlements should design, finance and construct its own innovative, low-cost sewerage system. However, he found that there were four barriers to the idea:

- (a) An economic barrier, i.e., the cost of a conventional sewerage system is beyond the paying capacity of the residents;
- (b) A psychological barrier, i.e., the population felt that the Government rather than the population is responsible for the provision of infrastructure;
- (c) A technical barrier, because neither the residents nor the small-scale informal contractors have the skills to construct an underground sewerage system;
- (d) A sociological barrier, because the population would have to be organized for collective action before it would be able to construct a sewerage system.

To overcome the economic and technical barriers, the OPP designed a sewerage system which was easy to construct and would cost less than a conventional system. It further reduced construction costs by eliminating formal-sector contractors with their profit margins, bribes and corruption. To overcome the psychological barrier, community organizers of the OPP started a campaign to explain to the population that the government agencies were unwilling or unable to construct a sewerage system in their settlements and that they would have to take the initiative themselves if they wanted to improve their sanitary conditions. To overcome the sociological barrier, the most responsive segments of the population were organized into community organizations which were small enough to encourage active participation and large enough to undertake a relatively large task of building a sewerage system. The population of a lane (20-30 houses) appeared to be the most suitable grouping.

The heads of household in a lane were invited to a meeting to discuss the problem of sanitation. Once they agreed to participate in the project, they were urged to elect a lane manager whom they all trusted. The lane manager was asked to make a formal request to the OPP for technical assistance. An OPP team would survey the lane and present the population with technical designs and an estimate of the costs of construction. The manager would collect money from the population, hire labour and manage the construction process, and would keep detailed accounts of the costs and submit a copy of the statement of accounts to the OPP. The OPP would

assist the lane manager with the technical aspects of construction and provide training in simple book-keeping. In addition, the OPP would train local small-scale building contractors to develop their skills in carrying out the construction without constant technical supervision by OPP staff. Today, almost 90 per cent of Orangi is served with underground sewer lines (Citynet, 1991b).

Also in Pakistan, the Hyderabad Development Authority experimented with an innovative type of sites-and-services project: the incremental development scheme. The allottees of the scheme receive only an unserviced plot and water supply by tankers, in order to reduce the initial costs for the settlers. The Hyderabad Development Authority recovers the cost of the unserviced land in the initial payment by the allottee, an amount of Rs.1000, which is affordable to even the lowest-income groups. Rather than providing the remaining infrastructure and recovering the costs afterwards, the Hyderabad Development Authority tells the residents to save collectively for the infrastructure by making (preferably monthly) deposits in a neighbourhood account. Once a substantial amount has been saved, the community can decide on what type of amenity it wants to use the money and how the amenity will be constructed. In this way, the community is in full control of the financing process and becomes independent from the Government for the provision of the infrastructure services, while the external agency avoids the invariably onerous cost-recovery process (Aliani and Yap, 1990).

XV. REPLICABILITY

In view of the fascinating results of the community construction contract system in Sri Lanka, the question should be raised as to what extent the approach can be replicated in other countries. It is, however, extremely difficult to assess the replicability of an approach. It is unlikely that any approach can be replicated in its totality under different circumstances. It is, therefore, necessary to separate the core principles of the approach from the secondary features and the "packaging", and to determine what conditions are indispensable to implementing these core principles.

The three core principles of the community construction contract system are:

- The delegation of the responsibility for the provision of infrastructure in low-income settlements from the government to the end-users of the infrastructure;
- The development of a sense of responsibility among the end-users for the maintenance and management of that infrastructure as a result of their involvement in its provision;
- The commitment of the government to providing all technical support, training and information required by the end-users to carry out these responsibilities.

To introduce these three core principles, the following conditions seem to be necessary.

A. A supportive government policy and attitude

Public administrators and politicians must change their attitude about the role of the government in service provision. The role of the government must cease being the one and only provider of services and become one of the possible providers while acting as a facilitator for other providers, be it the formal or informal private sector, a low-income community or a household. To allow the private sector and communities to play a role in infrastructure service delivery, the government will have to change its rules and regulations, standards and procedures to accommodate the other providers of services. In fact, the rules, regulations and standards should be made quite flexible.

Communities trying to become self-reliant often have to compete with politicians and administrators who prefer the communities to be dependent on their favours for their development. Consequently, there

must be a general acceptance by the politicians and administrators that large sections of the urban population will not have access to basic urban services unless the efforts of local governments are complemented by community-based initiatives aimed at operating, managing and maintaining infrastructure, in particular in urban low-income settlements. A division of labour and responsibilities could be developed whereby the authorities construct, finance and maintain the external (trunk) infrastructure and the low-income communities look after the internal infrastructure, i.e., the infrastructure within the settlement.

B. Committed and skilled staff

With a key role for low-income communities and households in the development of their own settlements and with the government as a facilitator rather than as a provider, the attitudes and the skills of government staff directly involved in the provision of infrastructure and the upgrading of unauthorized settlements also has to change. The objective of any governmental development effort should not be merely to bring about improvements in the physical environment of the urban poor, but to change the position of the urban poor in society, to increase their confidence in their ability to improve and maintain their own conditions and, thereby, to increase their self-reliance. Such an approach requires a different attitude: rather than behaving as professionals who know all answers and who come to bring development to the residents of low-income settlements, the staff has to accept the residents as partners who may have better answers to some of the questions and can contribute their resources to their own development.

Such an approach requires other skills than those of most staff of Housing and Development Authorities. These skills are much more similar to those of the staff of non-governmental organizations: community development and organization, information packaging and dissemination, the ability to provide training and to organize meetings and to initiate and maintain a dialogue with low-income communities. The staff should maintain their professional and technical skills, because they need to advise low-income communities and residents about the technical and financial implications of their decisions.

The Sri Lankan housing professionals also had to undergo this process of un-learning and re-learning from the people and amongst themselves in the development of the CAP approach (Lankatilleke, 1988). It is a learning process which is difficult to initiate in a formal educational setting; it needs to be learned on the job, through practical experience in contacts with the population.

C. Community organization and leadership

Although many populations of low-income settlements have shown their ability and willingness to take the development of their community into their own hands, definitely not all communities have the ability or willingness. The experience with the community construction contract system in Sri Lanka has shown that if the responsibility is placed on the population of a low-income settlement too early and without adequate preparation, training and support, the community organization might collapse. In order to undertake work collectively, a population needs to be organized and have elected and trusted leaders. If a population is not sufficiently homogeneous (ethnically, economically or otherwise) it may not have sufficient internal strength to maintain a level of organization adequate to carry out work, handle finance and cooperate and coordinate.

Community activities are, therefore, more likely to occur in squatter settlements and squatter-settlement regularization and upgrading projects than in sites-and-services schemes. In the latter type of projects, households with diverse backgrounds from different parts of the city suddenly become residents of the same neighbourhoods and are expected to work together for their common benefit. It will take a long time and/or considerable community development work before the residents will have a sense of belonging together and form an active community. In squatter settlements, on the other

hand, families have often lived together for a long time and are often linked by kinship, religion or ethnic background. This will greatly facilitate a community initiative.

In many countries of the third world, the urban population is organized at neighbourhood level. Such an community organization is often either part of the administrative set-up of the country or of the political structure of the ruling party. While such grass-root organizations are useful as channels of information, to mobilize residents for the contribution of labour or to consult the population about the improvement of their neighbourhood, they are rarely supposed to become self-reliant and independent. However, unless they learn to become self-reliant, they will always prefer to wait for the government to provide and maintain the infrastructure rather than to take the initiative and take their future into their own hands.

The level of organization required to attain community management of common amenities in slums and squatter settlements should, on the other hand, not be exaggerated. Too much community participation resulting in participation fatigue is as detrimental to a settlement as too little participation. In order to manage the settlement affairs, a community does not have to have a permanent organization with a council consisting of a president, a secretary, a treasurer and several members who meet on a regular basis. What is important is that the population has had an experience of a (successful) community activity with visible gains, that it has developed the self-confidence to undertake new activities, and that it has identified the leadership which it can trust and which it can call upon when needed. In other words, it needs to have developed an attitude of self-reliance so that it will take initiatives rather than wait for an external initiative, and is able to manage such initiatives until they bear fruit. The community construction contract system can enhance this attitude of self-reliance.

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