

Better Living Environment for Fishing Settlements in Negombo, Sri Lanka

Learning from the Monocogama Experience

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Problem Definition

Settlement upgrading and provide housing for homeless are important aspects of a development of a country. Prevalence of slums and shanties in the urban areas has caused major hygienic and environmental issue as well as a social issue. It is also an obstacle to economic growth and development by way of discouraging investments and weakening of labour force. Therefore it is necessary to address this issue in an appropriate manner in order to provide a safety and a healthy society of the country.

I am working in the Urban Development Authority of Sri Lanka (UDA). I have been appointed as a Deputy Director for the Gampaha District, which has the highest urbanisation trend in Sri Lanka at present. The local authorities in Sri Lanka has been graded in to three different levels, namely municipal councils, urban councils and *pradeshiya sabhas* (formerly town councils and village councils) according to the population of the area. The municipal council is the highest level and the areas consist of more than 50,000 of population comes under this category. Although there are 18 local authorities in Gampaha District, only Negombo has got the municipal status.

Due to the rapid urbanisation, Negombo town is growing fast and haphazard development has been occurred. Therefore it is realised the importance of preparing a Development Plan for Negombo Municipal Council area in order to gear the development in a planned manner. Accordingly the Development Plan has been prepared in the last year (UDA, 2000). Public participation was involved at different stages during the preparation of this Plan. This was presented to a forum consisted of all the members of the Negombo Municipality including the public representations and the approval has been obtained.

During the analysis of the Development Plan, it has been revealed that 30% of the residents in Negombo depend on the fishing and related activities. And it has become the main economic activity of Negombo. However, the living standards of the majority of fishing families are at a sub optimal level. The main reason for this is that they have settled down in an area where the environment is not suitable for living. These areas are mostly marshes, which have been opened up by clearing the mangroves along the lagoon. Destruction of mangroves in large extents will bring adverse effects not only to their hygienic conditions, but also to their way of living by reducing the fish harvest.

At the proposal stage of the Development Plan, several projects have been identified and upgrading the living standards of the fishing community is one of the priority projects. Due to the unavailability of funds, the project could not be implemented in the last year. However, the Government of Sri Lanka has negotiated a loan with the Asian Development Bank (ADB) for upgrading the low-income groups and this project has been selected to be carried out under this programme. Since upgrading of fishing settlements has not yet been practiced in Sri Lanka, it has been decided to carry out the project to a small area consisting of few families as a pilot project.

Because this project will bring a major impact to the city, I would like to analyse and comment its advantages and shortcomings to find out a more effective way to carry it out in the future for the fishing community as well as for the whole Negombo.



Figure 1: They should not be like this forever

The Objective

The study has two main objectives. First, it will examine and analyse implementation programme of the pilot project in view of achieving a more effective results in upgrading the living standards of the fishing community of Negombo. Secondly, It will discuss the possibilities to replicate this experience in the whole of Negombo.

Background

City of Negombo is strategically located on the Northern periphery of Colombo Metropolitan Region and along the coastal belt of Sri Lanka and almost below the sea level. It is located 30 Km. from Colombo, the capital of Sri Lanka and 6 Km. from the Katunayake International Airport. There are 150,000 inhabitants live in Negombo. Since Negombo town has been developed along with the lagoon, it has become one of the main fishing towns of Sri Lanka and its economy is based on fishing and fishing related activities. It produces 16 % of the national fish harvest. 30% of population of Negombo depend on fishing.

With upsurge of civil unrest in 1983 in Sri Lanka, migration of fishing families to fishing areas in Northern and Eastern provinces as permanent settlers and for seasonal fishing could not be continued. Most of the fishing families that had already settled down in the areas had to return to their native places in Negombo for safety. The final result of this situation was emergence of slums and shanties along the coastal belt particularly in the fishing villages around the Negombo Lagoon. These settlers living under the sub human conditions due to the lack of minimum housing sanitary facilities, essential infrastructure and urban services. They were forced to encroach the state land and settle down there due to the sole reason that they do not want to move away from the lagoon or sea. Although they were offered apartments of two or three storey flats at the cost of the government, they even refused.

All the plans are made for the betterment of the livelihood of the society and high priority should be given to find a suitable solution for these issues.

Methodology

I am going to analyse the implementation procedure of the pilot project and make comments on the possible shortcomings to rectify with appropriate solutions and make recommendations prior to the commencement of construction.

The Pilot Project

In this paper I am going to present the pilot project. The pilot project site is called Monocogama, located in an island called Siriwardena Place Southern end of Negombo Municipality. It is bounded by Holy Cross Church in the North, Negombo Lagoon in the East, protected area of Mangroves in the South and residential area in the West. There are 88 families living in the Monocogama under inhuman conditions. Some of the families with small children live in small huts put up on timber poles virtually in the lagoon. They subject to all kinds of water borne diseases and deteriorating their economic development. This pathetic situation faced by these settlements is a clear manifestation of the housing backlog in Negombo, which is estimated at 4166 in 1998. Almost all the families in this settlement considered as young families whose spouses are less than 35 years of age. As fisher folk they were forced to encroach the state land because they do not have alternative land for housing. Although the Negombo Municipal Council (NMC) offered land located few Km. away from this land, none of the families are prepared to accept any kind of alternative land elsewhere aiming at solving land or housing problem. They also think that they have to live on a land closer to the sea and the lagoon.



Figure 2: They are almost in the water

The community in Monocogama could be made descent and civilised, if their problems are solved. The major problems could be summarised as follows.

- Settlements do not have legal ownership for the lands they occupied and considered as encroaches or squatters.
- The cadjan huts (small house made out of woven coconut branches) have been put up in a haphazard manner, does not allow for road access to them.
- Almost all of these houses are temporary.
- Poor drainage and stagnation of water has paved the way for diseases caused by the mosquitoes.
- There are no toilets and sewerage system for this settlement.
- There is a danger of further encroachment of environmental sensitive mangroves.
- As a fisher folk, they are badly in need of a better anchorage. The existing anchorage is a shallow pool of water located within the site itself with some access to the lagoon. It has decreased the land area that can be used for housing.
- Erosion of soil and earth slips due to the floods and lack of drainage are real threats to the settlement. Prevailing sub human conditions and discrimination of community by others will cause degradation of human values.
- These settlements discourage new investors in tourist industry entering in to the area. It is hindrant to the economic growth in the area as well as the country.

In order to solve the above problems the following steps have been taken in the pilot project.

- 1 The project site is 0.72 Ha. in extent, owned by the Divisional Secretary of Negombo will be vested with the Negombo Municipal Council. A perimeter survey and blocking out of the site into 88 housing plots of 50 sq.m. with access roads will be carried out according to the rules and regulations of the UDA. The ownership will be given once the project is completed.
- 2 Preparation of site and provision of necessary infrastructure services by the government through the ADB loan.
 - Earth filling of the site as per the current government standards to a level above the high flood level to make the land buildable.
 - Construction of 4 m and 3 m wide roads and footpaths.
 - Construction of pre-cast side drains along the roads.
 - Provision of water mains and electricity lines along the roads.
 - Construction of an anchorage for fishing craft.
 - Construction of common septic tanks and sewerage lines connecting 88 households.
- 3 Construction of retaining wall along the lagoon shore by NGO at their cost.
- 4 Construction of 88 houses by the beneficiaries on self-help basis. They will be given a housing loan of 1000\$ by a NGO, payable in 15 years without interest . The floor area will be maximum of 35 sq.m. and this could be completed within 4 months period.



Figure 3: Location of the project Site



Figure 4: Project Site and its surrounding

Strategies

In this part I am going to analyse the strategies of the pilot project and to explain how they influence the proposals. The project comprises the following components.

- Land Provision
- Approval
- Socio-Economic Survey
- Financial Assistance
- Temporary Accommodation
- Land Development and Infrastructure
- Housing Construction

Land Provision

The project land is 0.72 Ha. in extent is owned by the Divisional Secretary of Negombo at present. Since the funding will be channelled through the Negombo MC, the land has been vested with the Negombo MC for the development.

Approval

Part of the above land belongs to the lagoon and the settlers reclaimed without any approval. Therefore it is necessary to get the approval prior to the development from the relevant authorities.

Central Environmental Authority (CEA)

Since the proposed land is located in an environmental sensitive area, Initial Environmental Examination (IEE) has been carried out by the CEA prior to the development. Approval has been given subject to several conditions mentioned in the IEE report, to be carried out at the construction phase and the operational phase and approval of the Urban Development Authority.

Sri Lanka Land Reclamation & Development Corporation (SLLR&DC)

Since the proposed land is a marsh, the clearance has been given under the condition of implementing a proper drainage system in consultation with the SLLR&DC and the approval of the UDA

Urban Development Authority (UDA)

Since this area has been identified as a special residential zone in the Negombo Development Plan prepared by the UDA, the approval for this development is granted by relaxing some of the regulations enforced to the Negombo MC area.

Socio-Economic Survey

A socio-economic survey has been carried out in order to see whether the project is feasible and to implement without any obstacle. Also to evolve a series of suggestions to make the project more effective and meaningful and also to collect baseline information, which can be used in the future assessment.

Financial Assistance

The government of Sri Lanka has negotiated a loan with the Asian Development Bank for the Low Income and Housing Sector Project. The project helps to improve urban infrastructure in the selected towns that have deficiencies in infrastructure and delivery of services in sub sectors for which the government has accorded high priority under its Public Investment Plan. The project will provide the financial assistance through the Local Authority. Monocogama Upgrading Project in Negombo has been identified as a top priority project under this programme.

Temporary Accommodation

The settlers will be provided temporary accommodation with the close relatives of those families living in close proximity to the site during the land development, construction of infrastructure and the housing.

Land Development and Infrastructure

The land will be reclaimed and prepared for the housing construction with the approval of the relevant agencies. Infrastructure development will be carried out according to the standards stipulated by the Asian Development Bank. The following work will be done under the infrastructure development.

Construction of Roads

4m wide access road of 310m in length, 3m wide roads of 200m in length and 1m foot paths of 70m in length within the site to be constructed.

Storm Water Drainage

It is proposed to construct a storm water drainage system for the project site including roadside drains.

Sewerage & Domestic Wastewater Disposal

10 nos. septic tanks with soakage pits will be constructed for linking sewer network. Domestic wastewater will be discharged to the septic tanks.

Water Supply

Water for drinking and domestic purposes will be provided to the households by extending the present distribution network of the Negombo MC.

Electricity

Ceylon Electricity Board will provide the electricity supply.

Housing Construction

Negombo MC has arranged to provide an interest free housing loan for each household with financial assistance from a NGO to be repaid in instalments. The Negombo MC is responsible for repayment of loans.

Analysis

It is proposed to relocate 88 families in the land, which has an extent of 0.72 Ha. According to the rules and regulations of the UDA there should be at least 3 m-access road for each block, the minimum plot size is 150 sq.m for residential plots and 10% open space should be allocated for recreation and as a breathing space. But it is not possible to provide 88 plots if adhered to the regulations. However, the 10% open space requirement could be relaxed as two sides of the site are bordered to the lagoon and the protected mangrove area. However, there is a threat of encroaching the protected mangroves.

The ownership of the land is with the Divisional Secretary of Negombo at present. Since this is a state land, it is not justifiable to give this land free of charge. Since this project is carried out as a pilot project, it will be a problem of repeating the same strategy for the whole areas as the ownership of the other areas lies with the other parties, not only with the state.

The approval is granted by the SLLR&DC for this project considering the magnitude. Since the project area is less than 10 Ha. Initial Environmental Examination (IEE) has been carried out. Otherwise Environmental Impact Assessment (EIA) should be done and this requires more time and the possible environmental hazards will be studied in detail. If this project will be replicated to the other areas, there will be a danger to the environment. The reclamation is allowed for this area as this a very small in extent. Since Negombo town located at below sea level, reclamation of available marshes, which act as retention areas, may affect adversely to the drainage system and also there may be a threat of flooding. If the regulation is relaxed for the whole area, there will be very few open spaces for public activities, which lead to the degradation of health of the area as well as create social problems. Therefore replicability should be done in a more viable manner. If the monitoring programme will not work properly, there will be many problems, such as flooding, health hazards etc. Since the financial aid will be done by the ADB there is no risk of financing.

The socio-economic survey is essential to come out with the proposals. Otherwise the needs of the people could not be assessed properly. The way they have selected for the temporary accommodation is more practical solution. It is very difficult for the government to find out such places according to their satisfaction. It is also an advantage that the householders are in the vicinity, during the construction. They can supervise the work and help the whenever necessary.

Since the land development will be done according to the standards of the Asian Development Bank, the knowledge of expertise will be channelled. Therefore the danger is minimum for the land development. However the technical staff allocated for this purpose should do the periodic supervision.

If the households do not pay the instalments, the Negombo MC will be in trouble. However, there is an informal loan schemes among the low-income settlements in Sri Lanka. Several co-operative committees within the community are formed consisting of ten to fifteen persons depending on the size of the community to handle the financial matters within the settlements. All the financial assistance comes from any organisation is channelled through this committee and it acts as the guarantor for repayment. Although there is no legal bond in this process, it is so

successful as the community has a clear understanding of impacts of the failures of repayment. Therefore they never try taking advantages in such instances.

Actors and their Roles

Actors of different levels have been identified in this project to be participated at different stages. These could be divided as follows.

- Government and Semi Government Organisations
- Asian Development Bank
- NGOs
- Community

Government and Semi Government Organisations

Several government and semi government organisations have been involved in his project. The semi government organisations are the organisations, which have been established under the 'parliament act', but they are working independently in terms of its expenditure and performance.

Government

Negombo Municipal Council plays an important role in this project. Primarily they are the owner of the project. Apart from that the Negombo MC is responsible for repayment of the loan given for the community for housing construction. However, the co-operative committee within the settlement co-ordinate with the Negombo MC for financial involvements.

Also the Negombo MC have to carry out several awareness programmes to the community at the stage of construction, getting the loan, land preparation etc.

Officials of the Community and Environmental Division of the Negombo MC will be directed to make the school children in the area aware about the importance of environmental conservation and sanitation. Ultimately overall supervision should be done by the Negombo MC and they are responsible of ensuring the work according to the plan.

Semi Government

There are three semi government agencies involved in this project, namely Urban Development Authority (UDA), Sri Lanka Land Reclamation and Development Corporation (SLLR&DC) and Central Environmental Authority (CEA). Since this project has been identified in the Negombo Development Plan prepared by the UDA, the approval is granted under several conditions. The land reclamation will be done by the SLLR&DC. The reclamation plan is done by the same organisation, as they are the sole authority for this task. The CEA has granted approval for environmental clearance under the several conditions.

Asian Development Bank

The Asian Development Bank provides the financial assistance for the site and services. The project implementation will be done by their representation called 'Project Implementation Unit' (PIU). They play an important role in this regard. The preliminary studies, socio-economic surveys, coordination with necessary organisations and personnel and the awareness of the community regarding this project have been carried out by this unit. They also have done the feasibility studies to get the approval of the Asian Development Bank. Finally they are the main coordinating authority with the ADB. They will guide all the actors throughout the project.

NGO

Presently three NGOs involved in this project. An international NGO called 'Habitat for Humanity for Sri Lanka' provide the loan facilities for the households at free of interest. The loan amount for about 1000\$ per household and have to be repaid in the period of 15 years. 'The World Vision', which is another NGO take part in this project has undertaken the lagoon development in the area. A fence around the project site has been constructed at their cost in order to protect the land from erosion. 'Centre for Awakening of People' is another NGO conducts awareness of building programmes and importance of environmental conservation for the society.

Community

The main role of the community is to construct their houses on self-help basis. Apart from that they have to find the alternative places during the period of site preparation and the construction of houses. Women participation is more in this community, since the men are involving in their economic activities. They have formed several committees to monitor the different stages of the project. The maintenance of the site will have to be done by the community once the project is completed.

Analysis

The main role of this project lies on the Negombo MC. Although they have given their fullest corporation for this project at present, this is not so strong as there is no special committee appointed for this purpose. Therefore, there is no proper monitoring system to evaluate the project at different stages. The only person available for this purpose apart from the community upgrading is the municipal engineer who has to engage in several other work other than this project.

There will be an election in next month for selection of a new Mayor as the period is expired. If any other person selected for the post of Mayor, I have my doubt that he may take the same interest to carry out this project. If any other party comes to the scene, the situation may be worse. The success will depend on his personal interests of the project. However, there is a chance to continuing the project even without the political corporation, as the approving agencies have already given their consent and the project is identified in the Development Plan of the UDA.

Since filling of land for this project is a small project for the SLLR&DC when compared with their other work. Although they are keen on the project at the planning stage, due to the shortage of staff and also the site is far away from the head office or regional office, I have my doubt that they will take care of this project seriously. If it is happened so, the whole project will be a failure. Therefore a proper coordination should be done to avoid such things. However, the PIU has been appointed an officer, 'Social Welfare Specialist' with 4 assistants to go into detail coordination and supervision to avoid such instances.

Due to the low level of educational standards among the community, sometimes there will be conflicts when carrying out the project. Therefore involvement of Negombo MC in a greater extend will enhance the effectiveness of the project. This could be accomplished by appointing special committee consisting 3 or 4 members among the community for monitoring the work under the supervision of the Negombo MC.

Although the construction will be done on a self-help basis, the special tasks such as lay of foundations construction of super structure and the roof have to be done with skilled labour as a safety measure. However, they have to be paid and this will add to the total cost of the house. At the several meetings this matter have been discussed with the community and they are willing to pay for such things as they need a structurally sound building and they fed up with living in the temporary houses.

Since the NGO will be benefited once they have done a project, they may give their corporation successfully.

Design

The design of the project is two fold, the site design and the house design.

Site Design

The lay out of the site of the project area has been done according to the planning and building regulations of the UDA. However, the regulations have been relaxed for this project area, since it is coming under the special residential zone of the Development Plan of Negombo. The following are provided in the site.

- All the plots are accessible with 3m wide roads and a 4m wide road has been designed in the periphery of the site.
- Plot area is 50 sq.m for each block (8.5m x 6.5m)
- There is a set back of 2m from the rear, 1m from the front and 0.7m from the side are kept open for every plot.

- 10 common septic tanks are provided along the 4m wide road at identified locations.
- All sewerage lines will be connected to above septic tanks. The Negombo MC has taken measures to empty these tanks using gully suckers periodically. The 4m wide road runs along the periphery of the site will facilitate the movement of gully suckers within the site.
- Several garbage collecting centres are provided to dispose their garbage and the settlers are requested to dispose at designated places.
- The Negombo MC will provide water and the electricity supply.
- A community centre at the entrance is provided for their community development activities and this could be used by the surrounding community as well.
- The roads are designed in such a way to get the sea view for the interior roads of this island and to provide the fresh air to the interior.



Figure 5: Site Design

House Design

According to the conditions given by the NGO, which is the donor agency for granting loan, the area of the house should not exceed 35 sq.m. Therefore the house design has to be done to satisfy the above requirement and also to minimise the cost as much as possible. The following are provided for the house.

- The floor area is 35 sq.m.
- Since the land area is limited, provision has been made to expand the house vertically.
- The houses are twin houses and the common wall between two houses will reduce the cost of the house.
- Two bedrooms, small living room and a kitchen have been provided. Since this community mainly use firewood their cooking, the back garden and the extended eave on the rear will help for such purposes.
- A small toilet on the out side of the house is provided to prevent the unnecessary smelling as well as to keep their tradition.
- The walls of the house are of cement blocks, which could be produced by the community on self-help basis.
- The roof is of asbestos, which is the cheapest, and durable material widely used in Sri Lanka.
- Since the timber is costly, the interior doors are fixed to wooden plugs embedded into the wall.

- The windows are provided adequately to get the natural light and ventilation as far as possible.
- The orientation of all houses is at the north-south direction to avoid from the hot sun and high wind pressure during the night.

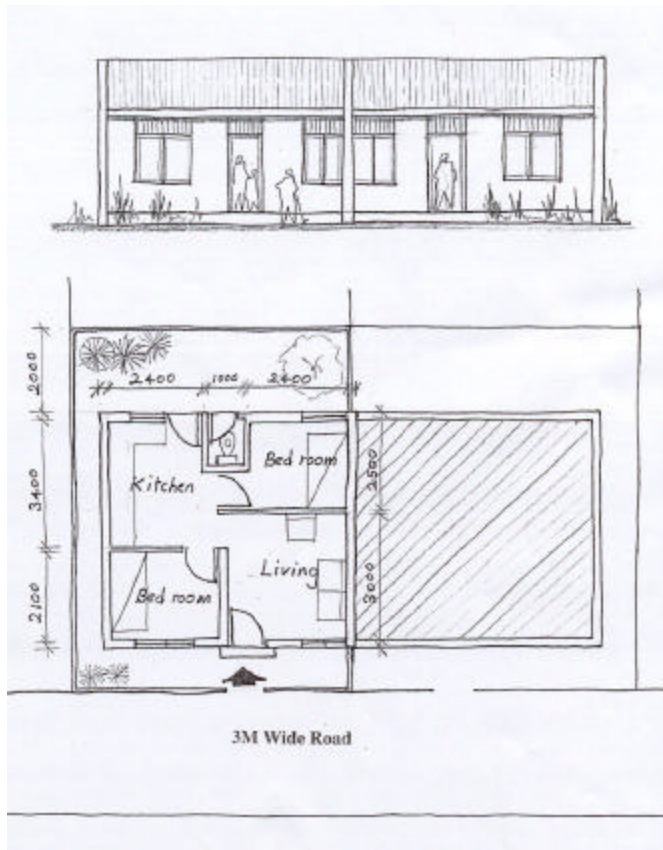


Figure 6: The House Design

Analysis

The site is adequately provided with the access roads. Although the open area of a plot is limited, the lagoon and the protected mangroves on the two sides of the site facilitate the visual comfort. However, it only provides a vertical expansion, which may tend to increase the construction cost at the beginning. Since the absorption capacity of the site is less, the common septic tanks, which empties periodically, is a good proposal for such situations. However the Negombo MC has to coordinate properly the system. Provision of garbage collecting centres is a good proposal for disposal of garbage, but care should be taken to avoid the garbage dumping to the lagoon. In this connection, the community organisation should be monitoring this aspect properly. A community centre for the whole communities of the surrounding areas will have much impact rather than a separate one for a particular community. The road design is acceptable. However, if few parking areas are provided, it will help the settlers in the future.

Since the area of the house is limited to 35 sq.m. it is justifiable to have small rooms in the house. The two bedrooms facilitate to separate the sleeping area and the community can enjoy with the improvement of their living standards as they used only one small room for all purposes earlier. Although the roofing material is cheaper, it gives a less comfort for living. Provision of green areas as much as possible may reduce such situations. The method of fixing the doors for the interior is good solution to reduce the cost.

Conclusions and Recommendations

- It is noted that the measures taken to increase the living standards of the low-income community is desirable. Although this project will bring positive effects for a small community, the replication will be difficult due to the following reasons.
 - 1 State owned lands could not be found everywhere, especially close to the sea.
 - 2 It is difficult to find investors for infrastructure development.
- There is a danger to the protected mangroves and a threat of disposing garbage in to the lagoon. Therefore measures should be taken to avoid such instances.
- Effectiveness of the project mainly lies on the Negombo MC. Hence, their efficiency will provide the project a success.
- These families will not be fishermen forever. The government should facilitate the low-income settlers to improve their capabilities and provide them a choice for selecting their way of life.

The following recommendations could be drawn to provide a better living environment for the low-income settlements.

- Since the replication of this pilot project is difficult, it is recommended to carry out with necessary alterations. This could be done by facilitating the fishermen with a fishing equipment centre (to keep their equipment such as boats, fishing nets etc.) closer to the sea and encourage and aware them to move away from the sea for better hygienic conditions. The infrastructure development could be done through the investors by encouraging them with attractive incentive schemes.
- It is recommended to carry out a detailed study on low income settlement upgrading programme taken into consideration all aspects, such as environment, land availability, various types of reservations (lagoon, coastal, mangroves etc.), conservation areas, rules and regulations, open spaces etc. for the whole area of Negombo MC without going into isolated areas and to prepare a **Comprehensive Plan** in order to solve this problem with a broad perspective.

The responsibility of the implementation programme of the Plan should be with a proper authority, which could not be affected by the political interference. A semi government agency could be given such authority, as the political intervention is less as their work carry out independently. The monitoring should be done according to a programme especially for the garbage and sewerage disposal and environmental protection.

- Community awareness programmes, vocational training etc. should be carried out through government involvement to improve the capabilities of these low income settlers as well as to open up them for other professions as well other than fishing.

References

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2000 *Development Plan for Negombo Municipal Council*, Printing Press, UDA, Sri Lanka.