PROFILE
Wattala- Mabole Urban Council

March 2002

- UN-Habitat (SCP)
- Government of Sri Lanka (Western Provincial Council)
- Wattala Urban Council
- SEVANATHA – Urban Resource Centre (Local Partner Institution)
Introduction

This city profile was prepared as part of the requirement of the Sustainable (Sri Lankan) Cities Programme (SCCP II) which is being implemented in the Colombo urban area during the time period of 2001 – 2002 involving eight urban local authorities (i.e. Colombo Municipal Council, Sri Jayawardenapura Kotte Municipal Council, Dehiwala Mt. Lavinia Municipal Council, Moratuwa Municipal Council, Negambo Municipal Council, Kolonnawa Urban Council, Wattala Mabole Urban Council and Panadura Urban Council). The primary purpose of preparation of a city profile is to understand the current status of environmental resources in the city, the development activities and the nature of interaction between these two factors. It is neither scientific investigation nor a high profile technical report but it is a simple document, which tries to highlight the current problems relating to city development in the concerned area. It also emphasizes on a participatory decision making process to solve the identified problems in the city. This city profile can be further updated and improved continuously whereby the local authority staff would be able to improve their skills in preparing documents such as these, which are essential for decision making at city level and influencing the policy making authorities above them. In this context, this city profile may be considered as a first step towards developing a proper database for Wattala Mabole town supporting towards better management of its future development activities.
## Basic Fact Sheet of Wattala Mabole Urban Council

1.0 Province : Western Province of Sri Lanka

1.1 District : Gampaha District

1.2 Local Authority Status : Urban Council

1.3 Year of Establishment : 1962

1.4 Location In relation to Colombo City : Located on the Northern direction of Colombo city about 10 km away from the city

2.0 Extent of Authority Area : 9.842 sq.km

2.1 No. of Council Wards : 05

2.2 No. of Council Members : 09

2.3 Total Population of the Town (2001) : 28,852

2.4 Average Population Density (2001) : 29 person p/h

3.0 Total Approved Cadre (2001) : 139

3.1 Total Cadre in place (2001) : 120

3.2 Rate percentage for Residential Properties : 6%

3.3 Rate Percentage for Commercial Properties : 12%

4.0 Total Budget Income (2001) : Rs. 27,955,800

4.1 Total Budget Expenditure (2001) : Rs. 26,868,600

4.2 Surplus : Rs. 1,087,200

*Source: Budget Report 2002, Wattala UC*
1.1. Introduction to the Town

History of the Town

The Wattala-Mabole Urban Council was legally constituted as a separate local authority on February 1st, 1962. It was hitherto a part of Wattala-Mabole-Peliyagoda Urban Council. Therefore, it has a short history compared to most urban councils in Sri Lanka.

Geographical Location

Wattala-Mabole U.C. is located in Gampaha District in the Western Province of Sri Lanka. It has been demarcated basically as a corridor along the Colombo - Negombo Road from about 2 km. post to about 7 km. post. Its boundaries are as follows:

- To the west by the Wattala Pradeshiya Sabha boundary;
- To the south by the Kelani river and Peliyadoda U.C. boundary;
- To the east and to the north by the Kelaniya, Mahara and Wattala Pradeshiya Sabhas boundaries;

The Urban Council area includes the townships of Thelangapatha, Wattala, Avariyawatta and Mabole.

Extent of the Town Area

The geographical area of the Urban Council is approximately 9.8 sq.km. The area is divided into five (5) council wards of different sizes varying according to population distribution.

Population of the Town

The town has a population of 28,850 at present (2001).

Population distribution, according to G.N. Divisions is as follows. The GN Divisions do not necessarily coincide with the council wards. However, the population data was available only on the basis of GN Divisions.

<table>
<thead>
<tr>
<th>G.N. Division</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>175 – Thelangapatha</td>
<td>5257</td>
</tr>
<tr>
<td>175A – Avariwatta</td>
<td>4856</td>
</tr>
<tr>
<td>176 – Wattala</td>
<td>3544</td>
</tr>
<tr>
<td>176A – Mabole</td>
<td>4518</td>
</tr>
<tr>
<td>176B – Galvetiya</td>
<td>3696</td>
</tr>
<tr>
<td>176C – Welikadamulla</td>
<td>6981</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>28852</strong></td>
</tr>
</tbody>
</table>

*Source: Provisional Census data – Census of Population – 2001*
The Relative Importance of the Town

Wattala-Mabole area has developed mainly as a residential and commercial corridor along either side of Negombo road, but subsequently the development has extended further in the easterly direction primarily by space consuming and polluting industries utilizing reclaimed land. Presently, town has a mixed development character. It is one of the smallest (09.8 sq.km.) urban local authorities in Gampaha District in terms of population and the geographical size.

This town also has some historical importance as the house where King, Sri Wickramarajasinghe was detained on his way to be deported out of the country is located in Galvetiya Grama Niladari division which falls within the Wattala-Mabole U.C.

1.2 Population Data

Racial and Religious Composition of the Population

The Sinhalese form the majority community who account for 53% of the population while the second largest community is Sri Lankan and Indian Tamils who constitute 24.8% of the total. Muslims account for 20% while other small communities including Burghers amount to 3.1%. Therefore it is evident that Wattala-Mabole population is a mixed community of different groups.

In terms of the religious composition, Catholics and Christians amount to 33.4% while persons of Buddhist, Islam and Hindu faith account for 27%, 20.9% and 18.2% respectively. Each religious groups have their places of worship and festivities and co-exist quite harmoniously.

Age Profile

According to the Population Census held in 2001, 51.84% of the population of Wattala town were males while 48.16% are females. Out of the total population, those who are below 18 years constitute 30% while those who are over 18 years constitute the balance 70%. The interim data of 2001 census released by the Department of Census and Statistics does not provide a detail age profile other than these two broad age categories.

1.3 Income Distribution and Poverty

According to the data available with the U.C., the monthly incomes of families resident within the U.C. are as follows.

Income Distribution

<table>
<thead>
<tr>
<th>Monthly Income</th>
<th>Thelangapatha</th>
<th>Avertatta</th>
<th>Wattala</th>
<th>Mabole</th>
<th>Galvetiya</th>
<th>Welikada Mulla</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than Rs. 1500</td>
<td>694</td>
<td>128</td>
<td>92</td>
<td>360</td>
<td>135</td>
<td>533</td>
<td>1942</td>
<td>32.6</td>
</tr>
<tr>
<td>Rs.1500 to 5000</td>
<td>420</td>
<td>629</td>
<td>410</td>
<td>270</td>
<td>360</td>
<td>591</td>
<td>2680</td>
<td>45.0</td>
</tr>
<tr>
<td>Rs.5000 &amp; over</td>
<td>251</td>
<td>393</td>
<td>213</td>
<td>144</td>
<td>210</td>
<td>120</td>
<td>1331</td>
<td>22.4</td>
</tr>
<tr>
<td>Total</td>
<td>5953</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

The above data indicate that Thelangapatha, Mabole and Welikadamulla are the predominantly low income areas of Wattala Mabole U.C.

Data are also available in regard to the number of public assistance or ‘Samurdhi” beneficiaries. According to the data available at the Wattala Divisional Secretariat Office, about 22.2% of the families living in Wattala-Mabole U.C. area are receiving public assistance (Samurdhi), as they fall below the poverty line. This figure compares favourably with the situation of the Wattala Divisional Secretary’s Division as a whole, where 31% of the families are receiving public assistance. Within the U.C. limits, Thelangapatha Welikadamulla and Mabole are the highest public assistance (Samurdhi) receiving areas (Welikadamulla 31%, Thelangapatha 24%, Mabole 31%). Their relatively high poverty level is also reflected in the income distribution data of these areas.

\subsection*{1.4 Urban Utility Services}

\subsubsection*{Water Supply}

Nearly 100% of the town area is covered by the pipe borne water supplied by the National Water Supply & Drainage Board. The particulars of water consumers within the town limits are given below:-

<table>
<thead>
<tr>
<th>Category</th>
<th>Million Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial/Industrial Establishments</td>
<td>295</td>
</tr>
<tr>
<td>Govt. Institutions</td>
<td>32</td>
</tr>
<tr>
<td>Places of religious importance</td>
<td>14</td>
</tr>
<tr>
<td>Residential</td>
<td>2471</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3812</strong></td>
</tr>
</tbody>
</table>

In addition to individual connections, there are about 24 stand posts provided within town limits mainly caters to low income settlements. The practice of providing un-metered stand posts has now begun to stopped by the National Water Supply and Drainage Board and the local authority. It was also observed that there are unauthorized shanty settlements for which water supply is provided by stand posts.

\subsubsection*{Sanitary Facilities}

According to the information available with the Public Health Inspector of the urban council, sealed-pit toilets are available for 7300 houses out of the total 7700 houses in the area and toilets are not available only for about 400 houses most of which are squatter settlements in flood prone areas. There is evidence that raw sewage is thus discharged into drains and water bodies. Due to the high water table in the area,
septic tanks have to be emptied frequently and there are two gully emptiers available with the Council, which are made available on hire to the public.

### 1.6 Drainage

No proper drainage system exists in Wattala-Mabole area and flooding / water inundation is a common occurrence. A substantial area of Wattala-Mabole is low-lying. There had been a system of canals which provided drainage water across Negombo road to the Hamilton canal which is running further to the West of the U.C. area. But due to lack of maintenance, encroachments and unauthorized land reclamation, the canal network does not function creating major flooding and drainage problems. It was found that ‘Mudun Ela’ and ‘Kalu Ela’, which are two main storm water canals, have been encroached by housing and other construction activities restricting the water flow.

### 1.7 Solid Waste Disposal

Solid waste disposal has become a major health and environmental problem in Wattala Mabole area due to lack of a proper waste disposal system. Solid waste is disposed into two low-lying areas within the U.C. limits. One is located at Mabole, Marinawatta which is a low lying area owned by a private party. This site is used by a private company which has got the contract from the U.C. for the collection and disposal of garbage. After solid waste is dumped on the site, low income houses were constructed on the filled site and leased out to poor families by the land owner. The site is subjected to flooding and according to the Public Health Inspector of the area low income people who live on the site face a high health risk.

The other solid waste disposal site is located at Pathima Road which also is a low lying area owned by a private party. In this site too the same practice of constructing low-income houses on garbage filled land by the land owner exists on an increasing scale to be rented out to low income families. This appears to be one way of filling low lying lands by the land owners without encountering any opposition from the authorities. There are no specially selected sanitary land fill sites within the area, which are in conformity to CEA environmental standards. In order to contain the present unhealthy practices, intervention by both Provincial and National Government Authorities might be required.
It was also observed that heaps of scrap iron and metal pieces have been dumped in a low lying land by the side of the main road close to the main shopping area of the town. It is doubtful whether these could be recycled or used for any utility purpose. It is presently an eye sore and a health hazard in the town center.

1.8 Health and Sanitation

There are no Government hospitals located within the U.C. limits. However, Ragama Teaching Hospital is located within reasonable distance to Wattala town. The Ayurvedic dispensary run by the urban council also provides free medical treatment to the people of the area. It was found during the year 2001 more than 1200 patients, mostly from poor families have received treatment from this dispensary. There is also a private hospital located in the town centre which it is being used most by the people in Wattala.

In addition to curative health, preventive measures such as the spraying of detergents against Filaria, Dengue fever, Malaria etc. is being carried out by the U.C. This area needs greater attention in view of the poor environmental conditions that exist within this local authority.
2.1 Nature of Urban Development

Wattala-Mabole U.C. came into existence in early 1960s and the main land use has been commercial and mixed development activities concentrated mainly on either side of Negombo road, Welikadamulla road, Railway avenue, Hendala road, Averiwatta road, Old Negambo road, Thelangapatha road and Sri Wickrama Mawatha. Interior areas which were well served by developed road network such as Averiwatta road became good residential areas. No land use survey has been carried out and land use plans are not available for this local authority. Therefore, it is not possible to make an analysis of the existing land use pattern of Wattala Mabole Urban Council Area.

Most of the residential areas have been provided with a satisfactory level of public utilities. There are 7 public schools of which 2 are Tamil medium schools. There are two public markets located at Wattala and Mabole junctions. Weekly fair (Pola) is held on Sundays in a site near St. Annes Church. The following public buildings are also located within the town center:-

- Majestrate Courts
- Police Station
- Post Office
- Telecommunication Office
- Area office of the Lanka Electricity Board
- Divisional Education Office
- Divisional Secretary’s Office

There are 4 state banks and 4 private sector banks located within the town. These institutions provide services to the population of Wattala.

Industries and Warehouses

The Wattala – Mabole has attracted many service industries, space consuming polluting industries as well as warehousing and container yards most of which have utilized reclaimed low-lying lands which were available at comparatively lower prices. Less stringent planning control exercised by the local authority has facilitated this unregulated industrialization which has now contributed in a large measure to environmental pollution as well as to flooding problems. Many polluting industries which were not permitted in other local authorities where development controls were in operation have moved to Wattala-Mabole town which had many locational advantages for industrial development mainly due to its proximity to Colombo and the availability land at a cheap price than Colombo. Locational advantages of Wattala town having direct linkages with Port of Colombo, the International Airport and with other regional towns may have encouraged the industries to move to Wattala. However, lack of proper planning guidance of such activities has contributed to unexpected environmental problems in Wattala.

Following are some of the industries which have been located in the U.C. area which contribute to environmental pollution.
<table>
<thead>
<tr>
<th>Type of Industry</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Garment Factories</td>
<td>13</td>
</tr>
<tr>
<td>2. Printing Press</td>
<td>13</td>
</tr>
<tr>
<td>3. Plastic products</td>
<td>10</td>
</tr>
<tr>
<td>4. Textile printing and Washing Centres</td>
<td>03</td>
</tr>
<tr>
<td>5. Saw mills</td>
<td>05</td>
</tr>
<tr>
<td>6. Manufacture of Steel Furniture</td>
<td>05</td>
</tr>
<tr>
<td>7. Polythene Products</td>
<td>09</td>
</tr>
<tr>
<td>8. Foods Products</td>
<td>01</td>
</tr>
<tr>
<td>9. Grinding Mills</td>
<td>08</td>
</tr>
<tr>
<td>10. Hotels and canteen</td>
<td>20</td>
</tr>
<tr>
<td>11. Welding Shops</td>
<td>18</td>
</tr>
<tr>
<td>12. Vehicle Servicing and Repair Centres</td>
<td>20</td>
</tr>
<tr>
<td>13. Bakeries</td>
<td>09</td>
</tr>
<tr>
<td>14. Lathe works</td>
<td>18</td>
</tr>
<tr>
<td>15. Mould Making</td>
<td>03</td>
</tr>
<tr>
<td>16. Slaughter House</td>
<td>01</td>
</tr>
<tr>
<td>17. Coir Mills</td>
<td>03</td>
</tr>
<tr>
<td>18. Soap Manufactures</td>
<td>01</td>
</tr>
<tr>
<td>19. Paint Manufactures</td>
<td>01</td>
</tr>
<tr>
<td>20. Ice manufactures</td>
<td>01</td>
</tr>
<tr>
<td>21. Coconut Oil Mills</td>
<td>01</td>
</tr>
<tr>
<td>22. Power Looms</td>
<td>01</td>
</tr>
<tr>
<td>23. Electro-planting</td>
<td>01</td>
</tr>
<tr>
<td>24. Laundry Centres</td>
<td>05</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>87</strong></td>
</tr>
</tbody>
</table>

Source: Pradeshiya Parisarika Pathikada, Wattala Mabole 2001

### 2.2 Present and Future Land Use Patterns and any Problems Envisaged

The current land use pattern is characterized by the concentration of mixed land uses along Negombo Road in the form of a corridor. The present trend is towards further agglomeration of commercial, industrial and service activities along major roads, reclamation of low lying lands by developers for industrial activities without any consideration given to drainage and the resulting environmental impacts. No consideration given for maintaining bio-diversity including the provision and maintenance of open areas for the population who live within the town limits.

In the absence of a land use plan to regulate urban development, the Council has to take ad-hoc decisions in regard to development applications which is most detrimental to the orderly development of the town.

It was also revealed that many cases where provisions of the Housing and Town Improvement Ordinance have been grossly violated not only in regard to the construction of ordinary houses, but also major commercial and other development activities.

If the current trends of unregulated land uses continue it could not only aggravate the existing problems, but also affect the long term sustainability of the development of the town.
3.1 The Main Environmental Features of the Town

The main environmental features of the town is relates to its topography and hydrology consisting of a considerable extent of wetlands, water bodies, a system of canals connected to the Hamilton Canal (the old Dutch canal). There had been a system of culverts across the main roads to facilitate drainage of storm water to the Hamilton canal without any obstruction. A large extents of wetlands and water bodies were available to accommodate flood waters during the rainy season. There had been much more greenery, water plants and much bio-diversity before Wattala-Mabole became urbanized and highly populated.

Present Usage of Environmental Resources and Relationship between Urban Development and the Eco-system

Over the years, the entire canal network consisting of the feeder canals and the main canal had not been maintained or looked after by any public agency and with the result, most canal banks have collapsed, others have been encroached upon and built on. Above all, the most damaging factor had been the reduction of the water retention capacity of wetland and low lying areas by more than 50% due to the reclamation of such areas, to accommodate development activities such as warehousing, container yards, industries, low-income housing and solid waste disposal sites. The result had been the complete collapse of the original hydrological balance that existed in the area.

3.2 Nature of any Existing Conflicts between the Environment and Urban Development

The conflict between the environmental protection and pressures of urban development are very common. The study team observed that there had been a planned shanty settlement called ‘Oliyamulla, Udyanapura’ which has been developed by a private developer few years ago by utilizing 10 acre low-lying land which is prominently located in relation to the main road. A play ground, community center etc. have been provided, but there is no adequate drainage and the internal roads are very narrow. Due to inadequate filling of the land it is most likely that the area will get flooded during the rainy season. About 225 families have been settled on this site and some of them have constructed reasonably good houses. Very recently, another 12 acres of low-lying land, just adjoining the earlier site has been encroached by another group of people and constructed shanties in the low-lying land without even basic toilet facilities.

According to the Public Health Inspector of the area this unauthorized settlement is a major health risk for the entire community. If these trends continue without adequate development control exercised by the authorities, in terms of a land use plan and a set of development regulations, the total system is bound to collapse in the near future.

Most of the water bodies are highly polluted and unsuitable for any form of human usage including bathing or agriculture. In most water bodies, water is stagnant and covered with algae and water hyacinth. Most of the water bodies are breeding grounds of mosquitoes. There are no parks and open spaces maintained as amenity areas of the town, excepting in private home gardens and some of the school playgrounds. The urbanization and unregulated urban development has completely disturbed the ecological balance in the area.

3.3 Natural Disasters

Floods had been a very regular occurrence during heavy rains and both the Urban Council and the Social Services Department of the Central Government have to provide temporary shelter, food provisions etc. to
flood victims. Floods is normally followed by epidemics which sometimes result in loss of human life. Therefore, the public health authorities and the environmentalists have to caution planning and regulatory agencies to take prompt action against the ad-hoc reclamation of marshes, dumping of garbage in low-lying areas and the obstruction of drainage canals which ultimately contribute to degradation of the environment of the town. It was observed that no flood prevention action was initiated either by the Urban Council or by any other concerned authority, but only act to provide relief measures when flood damage occur.
4.1 Particulars Relating to the Management of the Environment

Following measures have already been taken by the Urban Council to promote the environmental condition of the area but they are quite inadequate compared to the magnitude and seriousness of the problem.

- Divisional Environmental Operations Committee (Pradeshiya Meheyum Kamituwa) has already been set up under the chairmanship of the U.C. Chairman.
- An environmental unit has been established in the Council which is carrying out environmental protection and promotion activities.
- Introduction of environmental pilot projects in five schools under guidance of the Central Environmental Authority.
- Promotion of awareness on environmental protection among schools children by conducting essay and art competitions.
- Organization of City Cleaning campaigns with public participation. This was carried out on Earth Summit day of the year.
- Once a year, National Tree Planting Day program was carried in school gardens.
- During the Local Government Week, several environmental programs were carried out for the ‘Habitat Day.’ Distribution of leaflets among school children was carried out to create an awareness regarding environmental issues.
- Compost bins were distributed to 30 families to be used for household waste disposal.
- Tree planting campaign was organized with the participation of the Lions Club and the Rotary Club.
- Provision of resource contribution to St. Annes and St. Anthonys Colleges to assist the environment promotion work of the students.

Source: Pradeshiya Parisanka Pathikada, Wattala-Mabole U.C. 2001

Cadre and Financial Provisions available

The Council has an approved cadre of 134 out of which only 126 have been filled. It was observed that the post of Administrative Secretary, Financial Assistant, 2 posts of Technical Officers which are key positions in the Council cadre remain vacant which could affect the management efficiency of the urban council.

The council’s budget for the year 2002 provides for an income of Rs. 34,816,460 and an expenditure of Rs. 31,330,550. Thus it provides for a surplus of Rs. 3,485,910. This year’s budgetary provision for physical planning, roads and buildings is Rs. 9,024,970 compared to the actual expenditure on this item in the year 2000, which is 11.7 million. The reduction of financial provision this year by nearly 2.7 million is a regrettable factor when taking into account the importance of this sector for the sustainable development of the town.

Whether a Standing Committee has been Established?

Divisional Environmental Operations Committee has bee established under the chairmanship of the Chairman, U.C.
5.1 Conclusions

The Main Environmental Systems of the Urban Area and their Significance for the Present and Future Sustainable Development

Most part of the Wattala-Mabole U.C. area is essentially a drainage Basin. Its hydrological balance has been completely disturbed due to excessive and haphazard land reclamation. The eco-system has a certain carrying capacity for urban development (man made activities) in relation to the supporting environment which has apparently exceeded to a great extent.

The system of drainage together with wetlands and water bodies also has a certain carrying capacity in terms of buildable areas and other human activities. This too has now greatly exceeded due to ad-hoc development activities.

As the carrying capacity of the eco-system has already exceeded, a highly unbalanced and unsustainable situation exists even at present and it will lead to a collapse of the eco-system unless positive steps are taken to arrest the present development trend and rectify the situation.

5.2 The main Environmental Problems Experienced at Present

Flooding and water logging during the rainy season resulting in damage to life and property involving a large number of flood victims to be supported at State expense.

Pollution of ground water and water bodies resulting in the creation of insanitary conditions and spread of diseases. This is further accentuated due to garbage dumping in low lying areas and due to discharge of fecal matter to open drains as observed in some of the areas.

Environmental pollution resulting from industries. It was observed that many industries which are not permitted in the surrounding local authorities have been located in this local authority area and operate without proper planning for efficient discharge industrial waste.

Mushrooming of unauthorized shanty settlements in low lying areas resulting in many environmental and drainage problems.

Very poor quality of visual environment with no greenery and vegetation.

Lack of stakeholder participation in the development and management city affairs.

5.3 Strategies to Overcome the Problems

A consistent policy and action plan with long term and short term measures need to be implemented at all levels. This strategy based policy action plan needs to be formulated for the area.

The strategy based on the above should contain development or construction oriented measures as well as legal and regulatory measures which have to be implemented within a given time frame.

A detail engineering and planning study needs to be carried out prior to formulate this policy action plan which may require the services of a multi-disciplinary team of consultants who have to work in consultation with the political leadership, line agencies as well as the target communities in the town.
Short-term Measures

Short term measures are those which could immediately arrest further aggravation of the problem and bring about some immediate relief to the worst affected areas. This may involve introduction of land use zoning plans and regulatory measures which are more powerful and effective such as the UDA Law, introduction of community awareness programs and setting up community based organizations to carry the message to them to get the programs implemented through their fullest participation. They could be made active partners in this exercise not only by getting their views for the plan preparation and project development process, but also for the implementation of small scale maintenance and construction projects such as cleaning of canals, clearing of reservations, construction or repairs of small culverts and embankments tree planting. Community workshops may be organized with the participation of all stakeholder organizations with the Urban Council playing the main role.

The following measures have been identified by the environmental cell of the Urban Council to deal with the immediate problems.

1. **Solid waste disposal:**
   - Recycling of non-biodegradable materials such as glass, paper, polythene and plastic material etc. and identification of market for same.
   - Introduction of composting for domestic solid waste in order to reduce the volume of waste coming into the waste stream.
   - Garbage collected from market places be utilized for the generation of bio-gas or any other useful mean.
   - Creation of public awareness regarding the above measures.
   - The government institutions to make available suitable solid waste disposal sites or sanitary land fill sites.

2. **Drainage problems**
   - Construction of a suitable culvert near Gemunu Palace cinema on Wattala-Negombo road, by the Road Development Authority to facilitate free flow of storm water.
   - Clearing of the underground culverts by the use of equipment for which the Council presently has no finances
   - Canals be repaired and reconstructed by the Central government agencies responsible for canal rehabilitation and maintenance.
   - Legal action be instituted against those parties who dispose effluent and solid waste to the canal system.

3. **Problems created by the reclamation of low-lying areas and marshes:**
   - Prevention of further reclamation of low lying areas.
   - Establish coordination between the agencies which are responsible for canal maintenance.
• Carrying out awareness programs to eliminate breeding grounds of mosquitoes.
• Ensure that canals and water bodies are not encroached when building plans are approved and Certificates of Conformity are issued.

4. Problems of pollution created by industries

• Adequate treatment of industrial waste within the premises of the industry concerned before discharging into public water bodies must be ensured.
• Regular monitoring of the quality of effluent discharged by the industrialists to public water bodies and take appropriate action against those who exceed the permissible limits of discharge.
• Introduction of standards in regard to activities which cause environmental pollution.

Long-term Measures

Long term measures must include restoring the environmental condition which existed prior to the present urbanization and industrialization where harmony existed between human settlements and the environment. This may involve certain fundamental changes to the existing city fabric. It would involve the following.

• Determination of the limitations of the carrying capacity of the city’s environmental resources to provide for a sustainable human settlements i.e. threshold limits for different urban activities.
• Determination of the threshold size of the population and economic activities of the town which could be supported and sustained by the environmental resources.
• Identification of all environmentally sensitive areas including wetlands, lakes, canals and other water bodies and their reservations based on the high flood level and the resources they have.
• Relocation of all families and human activities located in the above areas either on high ground within the UC area or outside the town in suitable areas.
• Undertake a major project to restore and reconstruct the original drainage system for dredging and re-creation of the water bodies and canal network
• Construct relocation housing preferably in walkup flats to improve the environment and accommodate at least some of the families who are affected by the restoration of the canal network.
• Tree planting, landscaping and restoration of green areas to provide amenity to the city population
• Prepare a master plan for Wattala-Mabole area to provide for the implementation of projects on the lines stated above to be implemented within a given time frame.
• The city development plan is to be prepared and implemented within the framework of its regional context with consideration given to possible relocation of surplus families within the Wattala Pradeshiya Sabha area and surrounding local authorities.
• Involve low income communities and all other stakeholder groups in a regular consultation process with the urban local authority in the formulation of above stated strategy.