

UNDP / UN-Habitat - Sustainable Cities Programme (SCP)  
Sustainable Colombo Core Area Project (SCCP II)

# CITY PROFILE

## Panadura Urban Council

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- UN-Habitat (SCP)
  - Government of Sri Lanka (Western Provincial Council)
  - Panadura 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 Mabile 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 Panadura town supporting towards better management of its future development activities.



## 1.1 Introduction

Panadura is a town located about 32 km south of Colombo City on the western coastal belt of Sri Lanka, which has played a lead role in the religious and cultural revival of Sri Lanka. An important land mark in this connection was the famous ‘Panadura Debate’ held on 26-28 August 1873 at which Ven. Mohottiwatte Gunananda Thero led the debate on behalf of the Buddhists. The Buddhist temple known as ‘Rankoth Viharaya’ which was established in 1810 had been an important place of worship and a seat of learning located in the town center. Panadura is also the birth place of many philanthropists and social workers.

Panadura shared the economic boom associated with rubber, cinnamon and coconut plantations as it serves as the commercial center for a large hinterland area extending up to Moratuwa to North, Kalutara to the South and Horana to the East. Having been basically a commercial and service center, the character of Panadura town has now changed as a service-cum industrial city after the development of the Moderawila industrial estate, which employs nearly 8000 workers. .

### Geographical location

Panadura is a coastal town located in Kalutara District, which is bounded by sea to the West, Panadura Pradeshiya Sabha area to the North and to the South and Bandaragama Pradeshiya Sabha to the East. The Urban Council area consists of about 5.92 sq.km. area. The town area has been divided into 19 council wards. As per 2001 census of population, the Panadura town has 33,432 people living in the town.

### Relative importance of the town

Following factors have contributed to emerge Panadura as an important town centre in Colombo urban area.

- Divisional capital within Kalutara district providing for health, education, administration and social functions
- Commercial and service center to a large hinterland particularly extending towards Bandaragama
- Coastal town with prospects for fishing as well as tourism development activities
- Town with an established industrial base
- A town of religious and cultural significance
- A town with rich environmental resources
- Connected to important regional town centres by rail and by road transport routes
- A town with well educated people, professionals and wealthy businessmen

## 1.2 Details regarding the population

### Racial composition of the population

Racial Group	Population	%
Sinhalese	32777	98.0
Tamils	318	0.7
Muslims	205	0.5
Burghers	40	0.09
Sri Lanka Chetty	11	0.03
Indians	06	0.1
Malays	65	0.2
Others	10	0.1
<b>Total</b>	<b>33432</b>	<b>100.0</b>

Source: Census of Population, 2001

### Religious composition of the population

Religion	Population	%
Buddhists	31457	94.0
Hindu	255	0.7
Islam	291	0.8
Roman Catholics	1056	3.1
Christians	349	1.0
Others	24	0.07
<b>Total</b>	<b>33432</b>	<b>100.0</b>

Source: Census of Population, 2001

According to the above data it is evident that Panadura town has a majority Sinhalese – Buddhist population. The Tamils and Muslims being the other two significant racial groups. In terms of religion, Catholics and Christians together constitutes the second highest religious group.

### Distribution of population according to wards

Ward No:	Name	Population	%
679	Walana	3736	11.2
681	Thanthirimulla	543	1.6
682	Udahamulla	1599	4.8
682A	Kuruppumulla	841	2.5
682B	Atambagoda	611	4.8
683A	Walapola Pattiya	1702	5.0
685	Pattiya – North	1639	4.9
685A	Bazaar – North	1209	3.6
685B(i)	Bazaar -	1121	3.3
685B(ii)	Sagara Pedesa	1099	3.3
685C	Bazaar West	1047	3.1
686	Pattiya South	1602	4.8
686A	Uyankale	2104	6.3
686B	Pattiya	1830	5.5
687	Wekada West	2411	7.2
687C	Wekada North	2952	8.8
689A	Morawinna	774	2.3
692	Nalluruwa	3353	10.1
692A	Nalluruwa North	2259	6.8
Total		32432	100.0

The ward wise distribution of population indicates that 07 out of 19 wards constitute over 2000 people while majority of others have population between 1000 – 2000. Four council wars has less than 1000 people. Therefore, there is a wide variation of population distribution can be seen in Panadura town.

## 1.3 Urban utility services

### Water supply

It was observed that National Water Supply and Drainage Board (NWS&DB) provides the water to the population of Panadura town. However, due to less capacity of the present supply system, a regulated water supply for about 15 hours per day was provided.

The provision of water supply to different user categories is indicated in the following table.

<b>User category</b>	<b>No. of Units</b>	<b>Percentage</b>
Residential	5986	89.4
Commercial	430	6.4
Public & semi-Public	22	0.3
Religious places	88	1.3
Industrial	31	0.5
Public taps	139	2.1
<b>Total</b>	<b>6696</b>	<b>100</b>

It was observed that the following problems have been experienced in the present system of water supply for people in Panadura town.

- Ø According to the NWS&DB, there is a shortage of water supply for Panadura as the town is located at the far end of Ambathale main supply line.
- Ø The existing water distribution pipe network in the area is too old and therefore difficult to meet the growing demand for new connections.
- Ø Reduced water pressure is a continuous problem in the present supply system.

### **Sanitary Facilities**

Individual toilets with septic tanks are available for most of the households. There is no pipe borne sewerage system in Pandadura town. There are six public toilets located within the town, some of which are not maintained satisfactorily such as the public toilet in the market premises in the town center were provided by the Urban Council.

Toilet facilities are not available for nearly 90% of the families living in sub standard houses along the beach front from Wellaboda to Uyankale. There are about 415 such families. Therefore the beach area around these settlements has been heavily polluted.

The sewerage plant at Moderawila industrial state has not been completed yet. Therefore the urban council has received complaints from the public that raw sewage is being discharged into the canal network from the industrial state causing serious health problems and environmental pollution.

### **Drainage system**

The drainage network of the town is in a very unsatisfactory state. Floods occur even after a minor shower as most of the drains are blocked due to dumping of garbage into the drains particularly in the town centre. It was observed that many buildings have been constructed in the town center encroaching the drains and the road reservations contributing to further blockage of the drains thus blocking most of the drains. Unauthorized constructions and indiscriminate dumping of solid waste has rendered many drains non-functional.

### **Solid waste disposal**

Solid waste disposal has been a major problem in Panadura town. Eighteen to twenty tons of solid waste is generated daily in the town. The Council had been using the vacant lands and reservations of Moderawila Integrated Urban Development project area for the disposal of solid waste. The Modarawila project was formulated and implemented by the Urban Development Authority in collaboration with the Ministry of Policy Planning and Implementation and the Western Provincial Council in 1990 with funding assistance from FINIDA (Govt. of Finland). The project has been planned to ensure environmental standards prescribed by the donors. Construction of a sewerage scheme was included in the project. However, the project has not been successfully completed by the contractors and therefore expected environmental

standards were not been able to meet. As a result, most of the essential infrastructure components such as sewerage network, disposal of industrial waste and drainage in the area have become in completed tasks.

Meanwhile, the urban council in its desperate attempt to find a solid waste disposal site utilize the vacant blocks of lands and reservation areas of Moderawila industrial area for solid waste disposal. The practice has met with protests from the industrialists and the Urban Development Authority and it has now been stopped.

The Urban Council (UC) is currently using two sites located outside the Urban Council area for disposal of solid waste, (in Panadura Pradeshiya Sabha area bordering Bolgoda Lake). Both these sites were located at the edge of Bolgoda Lake, involving filling of the lake and the reservation land of the lake. The owners get the reservation land filled by using the garbage free of charge by the Panadura U.C. with the intention of constructing permanent buildings on the lake reservation.

The owner of one site seem to have the intention plans for constructing a tourist guest house while the owner of the other site at Pallimulla, Keselwatta already has a large paint factory put us on the site. He is getting the factory site extended into the Bolgoda Lake by getting it filled with solid waste. At a time when the filling of water bodies is not permitted by the Government, allowing a local authority to dump garbage on such areas is a convenient way of getting over the law and reclaiming water bodies and marshes to be added to their private lands. Private sector participation in solid waste disposal is governed by such ulterior motives. This is a matter which has serious implications on the environment, public health hydrology. The public authorities such as the Central Environmental Authority (CEA), Urban Development Authority (UDA), Sri Lanka Land Reclamation and Development Corporation (SLLR&DC), Department of Irrigation and the Western Provincial Council will have to take prompt action to stop these irregular practices and provide sustainable alternatives to the solid waste problem in the town.

## **Public Health and Sanitation**

The public health services provided by Panadura Urban Council covers both preventive and curative aspects.

### **Preventive healthcare programs**

Following programs are being carried out jointly by the Urban Council and the office of the Medical Officer of Health (MOH) improving the public health and the environment.

- Spraying of insecticides and control of places of mosquito-breeding
- Anti-malaria programs
- Family health clinics
- Maternity clinics
- Childcare clinics
- Health education programs for the public and school children
- Inspection of food preparation and food stalls and restaurants

The MOH is assisted by three Public Health Inspectors and eight family health attendants in carrying out above activities within the Panadura area. It was observed that the above preventive health programmes receive public commendations.

### **Curative Programs**

The only base hospital in Kalutara district is the Panadura hospital. A maternity unit of the hospital has been established at 'Kethumathi' house which is a private bungalow donated by its owner to the Government.

The following services are being provided by the Base Hospital.

- Dental clinics
- Eye clinics
- Treatment for skin diseases
- V.D. clinics
- Mental illnesses
- Treatment for diabetics
- Surgery
- ENT clinics
- High blood pressure
- Family planning
- Health education
- Children's clinics
- General illnesses

Services of specialist doctors are also made available in the hospital. The specialist services wards have a lower occupancy rate compared to the general wards. This may be due to better services offered at non-paying wards.

The main deficiencies of the present hospital are

- Lack of an incinerator for proper treatment / disposal of hospital waste;
- Obsolete sewerage system, which is overloaded



## 2.1 Nature of urban development

Panadura has developed as a major service center to a large rural hinterland covering Horana, Mathugama, Keselwatta, Wadduwa areas. It also serves as a regional center with its highly connected southern coastal towns as well as other main centres like Horana and Ratnapura. In addition to its importance as a commercial and services center, there has been a diversification of its economic base with the establishment of the Modarawila industrial township which has changed the functional activities the of the town.

### Land use pattern – 2000

Land use	Extent of land (Ha)	Percentage
Residential	402.64	67.50
Commercial	15	03.00
Public & semi-public	31	05.23
Industrial	17.75	03.00
Play grounds & Open spaces	6.5	01.14
Vacant land	9.6	01.62
Religious	12.75	02.14
Agricultural	9.75	01.64
Marshes	0.81	00.13
Cemeteries	2.25	00.37
Roads	53.25	08.99
Water bodies	31.00	05.23
<b>Total</b>	<b>592.3</b>	<b>100.00</b>

Source: UDA draft development plan – Panadura, 2000

As evident in the above table the residential land uses dominate the city's activity pattern. This may be due to several reasons such as high proportion of old residential bungalows occupying large blocks of lands, dormitory township for commuting population of Colombo due to availability of good transport facilities and conversion of agricultural lands for housing purpose.

Lands utilized by various other users were not very prominent. The extents of land used for public & semi public users, water bodies and by industries shows high among the rest of the activities in the city.

## 2.2 Problems relating to existing land uses

The problems relating to existing land use pattern as identified by the local authority officials and other stakeholder groups are as follows.

- Overcrowding, congested and unregulated development activities taking place at the town center
- Ribbon form of development along Galle Road and Horana Road contributing to traffic congestion along these roads
- Unauthorized shanty structures on the beach front
- Declining of the old town center developed along the main street (Arthur V. Dias Mawatha)
- Congestion and overcrowding of Galle road due to location of commercial establishments with no adequate vehicular parking spaces and passenger walk ways.

### **3.1 Main Environmental features of the town**

Panadura is a coastal town with a broad strip of sea beach and river front to the west. The sea out fall of Bolgoda River is located at Panadura runs about one km within Panadura town and is a visually attractive natural environmental feature.

#### **Moderawila**

There was a scenic inland lake, which also functions as a water retention area during the rainy season, known as 'Moderawila'. This lake which was a lotus pond over hectares in extent, was reclaimed by the SLLR&DC in 1979, on the initiative of the then the Member of Parliament of the area. The original plans were to utilize this area for commercial and residential purposes. Most of this area is presently utilized for the Moderawila Industrial Estate which came up as a subsequent proposal of development. This was an amenity area which was lost for the town which has now resulted in many environmental and drainage problems. There is a canal linking Moderawila with Thalpitaya Ela (Bolgoda Lake) which is not functioning at present due to the sea out fall of this canal is obstructed by the formation of a sand bar. This sand bar is regularly removed by people particularly during rainy season.

#### **Beach area**

The Panadura beach area which was visually attractive sea shore extending over 02 km from Wellaboda to Uyankela seem to have been neglected by the authorities. As a result, many unauthorized shanties and environmentally unfriendly activities have been taken place along the beach area. According to the Urban Council officials some arrangements are being made by the Coast Conservation Department in consultation with the Western Provincial Council to improve the environmental condition of this area.

#### **Interior areas with a semi urban character**

There are coconut lands and paddy fields towards the eastern direction of the town, some of which are being gradually utilized for housing and other activities. Conversion of these agricultural land to construction activities may further aggravate environmental deterioration and drainage problems in the area. Little attention has been paid by the authorities to control and guide this type of ad-hoc development activities in the town.

### **3.2 Present usage of environmental resources and the relationship between the development activities**

Presently there appears to be no understanding or appreciation of the environmental resources or implication of development activities on the eco-system in the area either by Urban Council or by the people of the town. The industrial effluent of the Moderawila Industrial area is being discharged untreated to a canal that is connected to Thalpitaya Ela. Although work on a treatment plant and a sewerage scheme for Moderawila was commenced by the Western Provincial Council a several years ago, the work has not yet been completed. Therefore, the canal water and the water in Bolgoda Lake is being contaminated.

In addition to the above a large extent of paddy fields and water bodies located in the Urban Council area are being reclaimed for housing and other development activities. Drainage canals have been encroached disturbing the storm water flow which resulted in frequent flooding problems. The sub-division of coconut lands and reclamation of paddy fields for housing has changed the semi-urban character of the fringe areas and had reduced the water retention capacity of the area. The available open spaces and vegetation cover are dwindling. The above mentioned changes that are taking place in the physical landscape may seriously affect the ecological balance of the town.

### **3.3 The nature of any existing conflicts between environmental resources and development:**

- Recurrent flooding and damage to properties and human life due to unregulated land reclamation and obstruction of the canals and drainage network. (e.g. Moderawila).
- Encroachment of scenic beach areas by shanty dwellers and unregulated development activities affecting the quality of the visual environment and public use of same as an amenity area.
- Derelict condition of the surroundings of the public market area with many unauthorized structures and fish stalls affecting the environmental condition and health aspect of the population.

### **3.4 Natural disasters**

Flood is a recurrent feature in the town center and surrounding areas of Moderawila due to poor drainage network, lack of maintenance of canals and encroachment of drains and canals by construction activities. This situation has become more acute particularly after the filling of Moderawila low lying area for new development activities.

Epidemics have not been experienced so far, but there had been a few cases of Dengue fever due to the breeding of mosquitoes due to poor drainage and sanitary conditions that exist in the town center. The poor sanitary conditions may contribute to increase health risks in the future.

## 4.1 Particulars regarding the availability of resources and systems for environmental management

### Measures/ Plans already adopted

According to the Urban Council, the following measures have been taken to ensure improved environment in the city.

- Cleaning up of the city drains from time to time
- Prevent piling up of solid waste in the town for long periods
- Cleaning up of all main drains in the city by organizing Sramadana campaigns with the help of citizens
- Cleaning up of canals of Moderawila area regularly

### Cadres and Financial Provision Available

Total Cadre provision	–	222 employees
Already in places	-	204

The budget for the current year (2002) provides for a revenue of Rs.45,329,000 and expenditure of Rs.45,310,000 providing a surplus of Rs.18,800. An expenditure of Rs.13,234,900 (29.2%) has been provided for public health related activities. A sum of Rs.12,197,00 has been provided for urban development activities covering physical planning, roads, land and buildings. This indicates that the aspects of public health and health related services are the most expenditure demanded areas of the Council's Budget. On the other hand, this implies that the resources available for other development activities are limited.

### Whether any special programs implemented for improving the city's environment

- Cleaning of drains on either side of Galle road by Sramadana.
- Cleaning of all the drains of the town
- Cleaning of Moderawila main canal.
- Cleaning of the canal which goes across Galle road through the hospital premises to the river.

### Whether any standing committee has been established for addressing environmental issues

An environmental committee has been established as a permanent standing committee, which consists of the following members.

- Chairman of the Council (presently the Special Commissioner)
- Secretary
- Works Superintendent
- Public Health Inspectors
- Chief Clerk of the works division
- Community Development officer
- Environmental Officer
- Development Assistant

The committee meets regularly for discussing and initiating environmental improvement activities for the town including licensing of industries as per the guidelines provided by the Central Environmental Authority.

## **4.2 Activities of Environmental Organizations**

The environmental organization known as 'Green Field' has initiated a tree planting program on selected roads of the town. However, it has not been a regular programme.

There are a few neighborhood development Societies and Community Development Societies who have been involved in health and environmental programs in the town. It was observed that these organizations do not have continuing programmes. On the other hand, the Urban Council does not have a mechanism to obtain the assistance of these organizations on a regular basis. However, there is a greater potential for involving Community Based Organizations in the city's environmental programmes.

## 5.0 Conclusions

### The main environmental systems and their significance for the present and future sustainable development of the area

- The sea beach, the river banks of Bolgoda river and the sea out fall
- Moderawila main canal which is connected to Thalpitiya Ela and its environment
- Paddy fields and low lying areas towards the eastern boundary of the U.C. area

The sea beach of Panadura is environmentally significant because of its scenic value which is an amenity area for the population of Panadura town. The area has a great potential for tourism industry provided the environmental quality and the character is maintained. Presently, the area is not being properly looked after by the authorities concerned and therefore much neglected. The environmental quality is affected by unauthorized structures and dumping of solid waste along the beach side. Furthermore, the social environment prevalent at present in the area is not conducive for public to use this area as an amenity area. The environment which existed about a decade ago in this area need to be restored by removing the unauthorized structures and cleaning the area to maintain its pleasant quality. It was observed that some coconut trees have been planted on the beach to provide some improvements to the beach environment which alone may not be sufficient to improve a balance environment. Therefore, a more comprehensive strategy is needed to restore sustainability of the beach environment. Public participation would be required to preserve the character and quality of a good environment.

Infrastructure facilities for Moderawila Industrial Township were planned and funded by the Govt. of Finland together with the UDA and Ministry of Plan Implementation in early 1990s. The plan provided for a treatment plant to be established to serve to the industrial area and the surrounding residential area. The design of the sewerage plant and its sea out fall were developed by the Department of Engineering of the Moratuwa University. The contract was awarded several years ago by the Western Provincial Council to a private contractor but only about two thirds of the work has so far been completed in regard to the laying of the pipe line and other engineering work. There had been some cost escalations and it was understood that there was no financial provision to complete the project. As a result, the untreated industrial waste and sewage is discharged into the open drain which carries the polluted water to Thalpitiya Ela which is part of the Bolgoda Lake. Due to sand bar formation at the sea out fall of Thalpitiya canal, it does not flow into the sea continuously. This has caused water stagnation at Thalpitiya canal which leads to many problems of public health and environment. In this context, the sustainability of the natural environment would be seriously affected unless early action is taken by the authorities to solve these problems.

The quality and the character of the semi-urban areas towards the eastern boundary of the town is affected by the reclamation of wetlands, paddy fields and sub-division of coconut lands for housing and other construction purposes. These changes are most evident in Udahamulla and Wekada areas. Certain regulatory measures are needed to preserve the sustainability of the environment of these areas.

### Strategies to overcome the identified problems

- A long-term plan with an implementation mechanism be formulated to provide for the sustainability of the Panadura beach area. This task has to be carried out with a coordinated approach by central Govt. agencies such as the Coast Conservation Department, CEA, UDA and the Western Provincial Council along with the urban council since it does not have the capacity of carryout such a comprehensive task.
- The implementation of the Moderawila sewerage treatment and waste disposal project be completed without further delay by the Western Provincial Council, after reviewing the engineering designs by a competent technical panel.

- A long term urban development plan for the Panadura U.C. area be formulated taking into account its existing problems and potentials as well as future needs towards a sustainable environment (a collective vision for the city must be formulated with city's stakeholders). This plan should provide not only for land use zoning, but for the preservation of remaining agricultural lands and environmentally sensitive areas.

### **Short term measures**

- Public awareness programs about issues of public health and the need for environmental improvements to be launched with the participation of the public and private sector agencies, NGOs and School children with adequate publicity given to such activities by the Urban Council.
- Regulatory measures must be introduced to stop environmentally unfriendly development activities in the area.
- The members of the Urban Council should take personal initiatives to stop environmentally unfriendly practices within their areas at ward levels.
- Introduction of alternative approached for solving solid waste problems based on principals such as reducing , recycling and reuse of solid waste to minimize the volume of waste that is needed to be disposed by the Urban Council.

### **Long Term Measures**

- Reassessment of properties of the town, including the industries of Modarawila project and all new commercial properties along the Galle Road, Horana Road etc. in order to enhance the revenue capacity of the local authority.
- Mobilize the civil society organizations including the business community to carry out a major cleaning up operation of the town center involving the removal of all unauthorized structures particularly in and around the present market premises at the bus stand and near the clock tower. Introduce strict measurers to prevent any unauthorized construction within the town centre.
- Cleaning up of the beach area from Wellaboda to Nalluruwa area remove all unauthorized structures, improve the physical and social environment in order to make it a pleasant place for leisure and recreation of the public.
- Remove all obstructions and encroachments along the road network of the town including the Galle road and Horana road.
- Provide adequate vehicular parking facilities in the town centre with introducing a proper traffic management system.
- Complete the work at Moderawila Sewerage treatment plant and make it operational.
- Clean up Moderawila canal and remove all encroachments along the canal reservation and maintain such areas for recreational walk and any other public amenity purposes with the participation of the communities, private sector and the Urban Council.
- Preparation of a long-term Development Plan for the town containing a land use zoning plan, street lines map, detail set of planning and building regulations and implementation of the plan with active stakeholder participation.

- Initiate institutional capacity development programmes for performance improvement of the urban council.
- Provide opportunities for active stakeholder participation in city development through which the urban council would be able to share most of its responsibilities with the citizen groups and civil society.