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Tamilnadu Urban Infrastructure Financial Services Limited

Final Report - Nagercoil Municipality

Conversion of City Corporate Plan into Business Plan

July 2006

CRISIL INFRASTRUCTURE ADVISORY

A Division of CRISIL

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ABBREVIATIONS

TNUIFSL	Tamilnadu Urban Infrastructure Financial Services Limited
TNUDP	Tamilnadu Urban Development Project
CCP	City Corporate Plan
BP	Business Plan
ESR	Elevated Service Reservoirs
GLSR	Ground Level Storage Reservoirs
MLD	Million Litres Per Day
LPCD	Litres Per Day
FOP	Financial Operating Plan
O&M	Operation and Maintenance
ULB	Urban Local Body
TNUIFSL	Tamilnadu Urban Infrastructure and Financial Services Limited
LPA	Local Planning Authority
T&CPA	Town and Country Planning Act
MDR	Major District Road
ODR	Other District Road
ML	Million Litres
UGD	Underground Drainage
SWD	Storm Water Drain
SWM	Solid Waste Management
CAGR	Compounded Annual Growth Rate
ARV	Annual Rental Value
p.a.	Per Annum
CIP	Capital Investment Plan
LCS	Low Cost Sanitation
PC	Public Conveniences
TWAD	Tamilnadu Water Supply and Drainage
AMP	Asset Management Plan
WTP	Water Treatment Plant
STP	Sewage Treatment Plant
MoA	Memorandum of Association

EXECUTIVE SUMMARY

In the 2002-03 period, Tamilnadu Urban Infrastructure & Financial Services Limited (TNUIFSL), had led the preparation of city corporate plans (CCPs) for a group of towns in Tamilnadu. The objective of the exercise was to develop the vision and growth strategies for these towns. The CCP for each town included operational and financial assessment, capital investment programs and the required resources. However, the towns could not implement these capital investment programs due to inadequate finances and the absence of an action plan. TNUIFSL recently appointed CRSIIL Infrastructure Advisory to provide assistance in converting the CCPs into workable business plans.

Scope of CRISIL Infrastructure Advisory's Assignment

There have been significant changes in the operational and financial position of these towns in Tamilnadu since 2002-03, when the CCPs had been drafted. Thus, CRISIL Infrastructure Advisory is required to develop firstly, a business plan to identify the current infrastructure requirements of these towns. Secondly, we have been mandated to develop a financing operating plan, identifying the measure and timing of funds required for implementing the investment program identified in the CCPs.

Methodology Adopted

CRISIL Infrastructure Advisory has envisaged the execution of this assignment in the following steps:
Step 1: Identifying the infrastructure gaps based on discussions with town officials, available secondary information and CCP reports
Step 2: Determining the investment requirements of the town through technical analysis
Step 3: Determining the investment capacity of the town by developing a financial operating plan under two scenarios viz. Business-As-Usual scenario and Improved Case scenario
Step 4: Highlighting the gap/surplus between the investment requirement and investment capacity, as the case maybe
Step 5: Specifying the financial and operational responsibilities of all stakeholders, i.e. financial institution, Municipal Corporation, developers and users

1. Nagercoil's Economy and Infrastructure

CRISIL Infrastructure Advisory broached the town visit with a study of Nagercoil's infrastructure. Nagercoil has substantial growth potential, primarily due to its vantage position; it is a transit point to key tourist spots like Kanyakumari and Trivandrum. On the land development front, currently 19% of the town's usable land area is unused. If developed properly, this unused land could generate substantial additional revenues.

On the infrastructure front, despite a good water supply distribution network covering 95% of Nagercoil's roads, water supply reaches only 43% of the houses in the town; almost one-fourth of the population lacks proper sanitation facilities. The coverage of roads and storm water drains is below the prescribed norms, with roads covering only 58% of the town and storm water drains covering 34% of it. Street lighting facilities and the solid waste collection system cover larger areas; streetlights facilities have attained 83.3% coverage level, and the solid waste collections cover 100 per cent of the area under the Nagercoil municipality's jurisdiction. However, service delivery with respect to other aspects of solid waste management (SWM) like transportation and disposal are inadequate.

2. Key functions and performance of Nagercoil Municipality

One of our first steps towards formulating a business plan was to study the functions and performance of the Nagercoil municipality, which would be the chief executor of the plan. The Nagercoil municipality covers an area of 24.27 sq. kms and is divided into 51 wards. Responsible for a providing a host of services, the municipality plays a number of functions including obligatory functions like the provision of water supply, and discretionary functions like the development of parks and playgrounds. The functions are distributed between different departments; each department has a Head who reports to the Commissioner.

CRISIL Infrastructure Advisory examined the roles of each department and identified the weaknesses in each department, since the business plan had to be prepared taking these into cognisance. Our findings about the functioning and the lacunae in the discharge of responsibilities by each department are detailed below.

Revenue department: The revenue department raises demands for key revenue items like property tax and water charges, follows up on outstanding payments and prepares demand collection balance (DCB) statements. Our study revealed that the demand notice for property tax is not raised on time, which adversely affects the working capital cycle. Also, though targets have been identified for the bill collector, there are no significant checks to ensure that the targets are met. Finally, neither incentives nor disincentives are used to expedite payments from the users.

Accounts department: This department maintains all income and expenditure statements, prepares and implements the budget, pays works and supply bills and disburses salaries. However, due to the accrual based accounting system, the demand is being projected as the collection, which has been modified for projecting the cash flows in our engagement. This would provide a more accurate financial position of the town

Engineering department: This department is responsible for the execution of projects related to roads, street lighting, water supply and sewerage. Besides, it has to maintain these assets for optimum service delivery. We found that the department suffers from inadequate infrastructure and lack of scientific maintenance procedures.

Health department: This department attends to SWM, issues licences for non-hazardous and non-polluting businesses, and organises health camps and other government immunisation programmes. It also manages the municipal hospitals and other health centres. However, this department is still unable to provide proper sanitation facilities to significant segments of the population. Also, the SWM system is poor, excepting its collection component. Sewer is discharged in the open without any treatment.

Town planning department: This department issues building licences after assessing their need and legality. It also undertakes assessment of the town to ensure reduction in unauthorised layouts. But, we were able to identify about 60 acres of unauthorised layouts.

Information technology department: This department maintains computerised updates of all municipality-related information, updates the database for collection of various taxes and provides management information system (MIS) reports. However, this department is constrained by inadequate trained staff as well as insufficient maintenance of software and hardware.

Having assessed the operational and maintenance performance of the Nagercoil municipality, our team attended to the municipality's financial profile, vital to the formulation of a business plan.

3. Financial Performance of Nagercoil Municipality

Nagercoil municipality has maintained a healthy financial profile in the last five years, generating an average annual revenue surplus of 29% of its revenue. Fairly high tax rates, accounting for 21% of annual rental value, constitute the chief reason for its buoyant performance. Also, revenue receipts have grown by 8.6% and salary expenses decreased by 2% over these last five years leading to positive financial performance. Consequently, the municipality has generated a per capita surplus of Rs. 326[1], which is much higher than the state average.

This favourable financial performance has been marginally offset by the municipality's outstanding liability of Rs. 2285 lakhs (comprising debt and non-debt) that amounts to 64% of the closing balance of 2004-05. Also, two-fifth of the property tax demand raised is arrears, which implies a poor collection level over the years and is a cause of concern. The town's average operation and maintenance (O&M) cost in the period 2000-01 to 2004-05 was Rs. 221 lakhs, which constitutes 17% of its revenues.

4. CRISIL Infrastructure Advisory's Plans for Nagercoil

Based on our detailed study of Nagercoil's infrastructure requirements and the strengths and weaknesses of the Nagercoil municipality, CRISIL Infrastructure Advisory drew up the following plans for the town's growth.

Asset Management Plan

We drafted an asset management plan following our assessment of the impact the O&M expenses have on the finances of the municipality. This plan would help the municipality to identify its revenue generating assets as well as those that are draining its revenues.

Capital Investment Program

The Capital Investment Program (CIP) identifies the investment requirements of the town through demand-gap analysis. We estimate Nagercoil's total investment requirement to be of the order of Rs 10450 lakhs; 65% of this investment would be required for commissioning of underground drainage and up gradation of sanitation systems, and 11.5% for improved water supply. M/s. Suzlon Energy Limited has proposed the setting up of a 1.05MW Wind power project at an estimated cost of Rs. 525 lakhs that has also been highlighted. The estimated investments required for different sectors over a period of five years are shown in the table below.

Year wise projections of investment requirement in different service sectors

Sector wise Phasing	I year	II year	III year	IV year	V year	Total
Water supply	151.25	605.00	453.75	-	-	**1,210.00**
Storm Water Drain	-	68.00	272.00	204.00	-	**544.00**
Sanitation and Sewerage	847.75	3,391.00	2,543.25	-	-	**6,782.00**
Solid Waste Management	-	51.25	205.00	153.75	-	**410.00**
Roads	-	64.33	257.30	192.98	-	**514.60**
Transportation	-	-	-	25.00	25.00	**50.00**
Street lighting	-	23.75	95.00	71.25	-	**190.00**
Others	-	-	93.63	374.50	280.88	**749.00**
Total	**999.00**	**4,203.33**	**3,919.93**	**1,021.48**	**305.88**	**10,449.60**

All figures in Rs. lakhs.

Apart from this investment, an amount of Rs. 470 lakhs is required towards the construction of a bye-pass road. This, however is the responsibility of the NHAI and hence has not been included in the analysis

[1] For 2003-04

5. Financial Operating Plan

The Financial Operating Plan (FOP) assesses the financial strength of Nagercoil and the financial feasibility of the identified investment projects. CRSIL Infrastructure Advisory conducted the assessment in two envisaged scenarios viz. Base Case and Improved Case. In the former case, a Business-As-Usual scenario is assumed, while in the latter case, several improvement measures on account of efficiency gains[2], new charges and rate revisions across revenue items are assumed. We concluded that Nagercoil's investment sustenance capacity varies from 55% to 120% of the total required investment under various scenarios, the best being 'Improved with UGD' scenario. The investment capacity can be summed up as below:

Scenario	Investment Capacity (Rs. Crores)	% of required investment
Base without UGD	57.46	55%
Improved without UGD	101.6	97%
Base with UGD	81.3	77%
Improved with UGD	125.53	120%

6. Action Plan and Implementation schedule

Finally, CRISIL Infrastructure Advisory drew up a detailed action plan and implementation schedule to aid the effective execution of the business plan. Though the Nagercoil municipality will be the chief executor of the plan, it will require the involvement of other stakeholders to be successful. The two other chief implementers besides the urban local body (ULB) will be the Municipal Council and the state government. We expect the budgetary grant from the state government to meet 30% of the plan's total investment requirements[3]and the ULB to contribute around 10%. Financial institutions will meet the remaining 60 per cent of the investment requirements.

Achieving the set objectives would require a high degree of commitment from the municipality and active support of the council and the state government. Each of these stakeholders will be responsible for different areas of work. The municipality will be expected to adopt measures to ensure operational efficiency, hike water tariff and property taxes, introduce new charges for SWM, manage assets for its optimum use and induce new capability in the engineering, health and accounts sections. We expect the council to assume charge of increase in water charges, removal of public fountains, and coverage of unregistered properties. The council would also be required to include charges for SWM and regularise unauthorised layouts. The chief expectations from the state government are support for revision of water tariffs and introduction of a policy for converting unauthorised properties into authorised properties upon payment of penalty charges.

The project implementation has been highlighted under both the 'Improved' scenarios viz. with and without implementation of the UGD project.

[2] Efficiency gains are gains resulting from increase in coverage of services and taxes.

[3] For Karnataka ULBs, under the World Bank aided projects, it has been assumed at 40%. Since, we would like to adopt a progressive approach in making the ULBs self reliant, the grant level has been reduced to 30% in this case

6a. Improved scenario without UGD tariff

Implementation plan

Under this scenario, the investment towards windmill under 'Others' has been excluded, as the town can sustain only up to 97% of the total estimated investment (in the normal scenario). However, the key point to be noted is that, even without generating any revenues from the UGD connections, UGD project can be implemented. This signifies the strong financial position of the town.

Sector wise Phasing	I year	II year	III year	IV year	V year	Total
Water supply	403.3	403.3	403.3			1210.0
Storm Water Drain	181.3	181.3	181.3			544.0
Sanitation and Sewerage	1356.4	1356.4	1356.4	1356.4	1356.4	6782.0
Solid Waste Management	205.0	205.0				410.0
Roads			171.5	171.5	171.5	564.6
Transportation	50.0					50.0
Street lighting	95.0	95.0				190.0
Others	224.0	0.0				224.0
Total	**2515.1**	**2241.1**	**2112.6**	**1527.9**	**1527.9**	**9974.6**

Activity Chart

Stakeholders	Actions	Pre - Project	I year	II year	III year	IV year	V year	VI year onwards
	Financial							
TUFIDCO/TUFISIL	Release of loans		360.2	2558.3	2699.0	670.1	214.1	
Govt. of Tamilnadu	Release of grants		299.7	1261.0	1176.0	306.4	91.8	
Nammakal municipality	ULB contribution		339.1	384.0	44.9	44.9	0.0	
Public	Initial contribution for new projects like UGD							
	Physical							
Council	Resolution to undertake the project/ Signing the MoU							
Implementing agency	Implementation of the projects							
TUFIDCO/TUFISIL	Monitoring of the implementation							
Govt. of Tamilnadu	-do-							
Nammakal municipality	Monitoring of the implementation							
	Repayment of loans							
Self Help Group (Public)	Feedback/Highlighting pitfalls							
	Providing ground level support							

6b. Improved scenario with UGD project

Implementation plan

The connection and tariff for the UGD project has not been decided. Hence, the investment capacity is based on assumed charges[4]. The connections charges have been assumed at Rs.2500, Rs. 5000 and Rs. 7500 for residential, commercial and industrial respectively. Similarly, the monthly tariffs have been assumed at Rs. 100, Rs. 150 and Rs. 200. Under this scenario, the town can sustain the complete investments and would have a surplus.

Sector wise Phasing	I year	II year	III year	IV year	V year	Total
Water supply	151.25	605.00	453.75	-	-	**1,210.00**
Storm Water Drain	-	68.00	272.00	204.00	-	**544.00**
Sanitation and Sewerage	847.75	3,391.00	2,543.25	-	-	**6,782.00**
Solid Waste Management	-	51.25	205.00	153.75	-	**410.00**
Roads	-	64.33	257.30	192.98	-	**514.60**
Transportation	-	-	-	25.00	25.00	**50.00**
Street lighting	-	23.75	95.00	71.25	-	**190.00**
Others	-	-	93.63	374.50	280.88	**749.00**
Total	**999.00**	**4,203.33**	**3,919.93**	**1,021.48**	**305.88**	**10,449.60**

[4] This has been assumed based on the graded tariff levels of Cuddalore, which is of a similar population profile. The charges assumed here are much lower than Cuddalore.

Activity chart

Stakeholders	Actions	Pre - Project	I year	II year	III year	IV year	V year	VI year onwards
	Financial							
TUFIDCO/TUFISIL	Release of loans		699.3	2852.4	2473.0	351.3	76.3	
Govt. of Tamilnadu	Release of grants		299.7	1241.7	1079.1	169.8	32.7	
Nammakal municipality	ULB contribution		0.0	44.9	44.9	44.9	0.0	
Public	Initial contribution for new projects like UGD							
	Physical							
Council	Resolution to undertake the project/ Signing the MoU							
Implementing agency	Implementation of the projects							
TUFIDCO/TUFISIL	Monitoring of the implementation							
Govt. of Tamilnadu	-do-							
ULB	Monitoring of the implementation							
	Repayment of loans							
Self Help Group (Public)	Feedback/Highlighting pitfalls							
	Providing ground level support							

The above activities, undertaken in the specified time frames, will enable Nagercoil to attain its growth objectives and pave the way for its future progress.

1. BACKGROUND

Tamilnadu Urban Infrastructure Financial Services Limited (TNUIFSL) was involved in the preparation of City Corporate Plans (CCP) for a set of towns in Tamilnadu as part of the Tamilnadu Urban Development Project II (TNUDP II). The objective of the CCPs was to develop a vision and strategies for municipalities in the state of Tamilnadu. The CCP included appropriate investment strategies, capital investment programs and resource mobilisation measures to be adopted by municipalities in the delivery of efficient services. However, the Urban Local Bodies (ULBs) are not in a position to implement the identified capital investment programs due to several reasons, the primary being inadequate finances. In addition, there is no action plan that would enable the implementation of the corporate plan towards achieving the set objectives of service delivery. Hence, it was imperative to develop a Business Plan (BP) to define the strategies and tasks for the timing of fund with respect to programs identified in the CCP.

CRISIL Infrastructure Advisory has been appointed as consultants to TNUIFSL in providing assistance to convert the CCPs of seven towns (Cuddalore, Nammakal, Tiruchengode, Kodaikanal, Tirunelveli, Nagercoil and Avadi) to individual business plans.

1.1 Objectives and scope

The objective of this assignment is to formulate a strategic plan for the conversion of the CCP into BP by assessing the ULB's financial capability to undertake capital investments. This would enable the ULB to accomplish the objectives specified in the CCP

The scope of work includes the following activities:

- Assess the finances of the ULBs - An assessment of the finances (of the past five years) in terms of sources and uses of funds, base and basis of levy, rate revision history and impact, state assignments and transfers - base and basis of transfer and its predictability, outstanding liabilities (loans, power dues, pension etc), levels of service, coverage and quality of municipal services, staffing and management arrangements in delivery of services
- Outline issues in revenue realizations, quality of existing assets in relation to service levels and coverage and institutional constraints
- Develop quick indicators of performance, based on current coverage and additional population in the medium term (10 years) and unit costs
- Indicate city level investment requirement for up gradation of infrastructure
- Improve service coverage and asset quality by:
  - Prepare a comprehensive Asset Management Plan and use fiscal notes and policy analysis to assist in making informed investment choices to achieve sector/ city goals
  - Define priority assets and indicative costs of rehabilitation
  - Conduct fiscal impact analysis of investments: life- cycle O&M costs, revenues from project, and costs/ impacts on finances and of not doing the project
  - Explore funding options for rehabilitation of facilities
- Prepare a Financial and Operating Plan (FOP). The FOP is a medium term framework of the ULB, and shall present the following

A. Additional data to be collected:

- Break-up of energy cost on UG, WS etc.
- Salary for all the departments including staff and payments to private operators
- The benchmark cost i.e. at ideal condition, what would be the cost of the identified investments, a table indicating the investment plan for the next five years with identified source of finance

B. Indicative areas of reduction in expenditure:

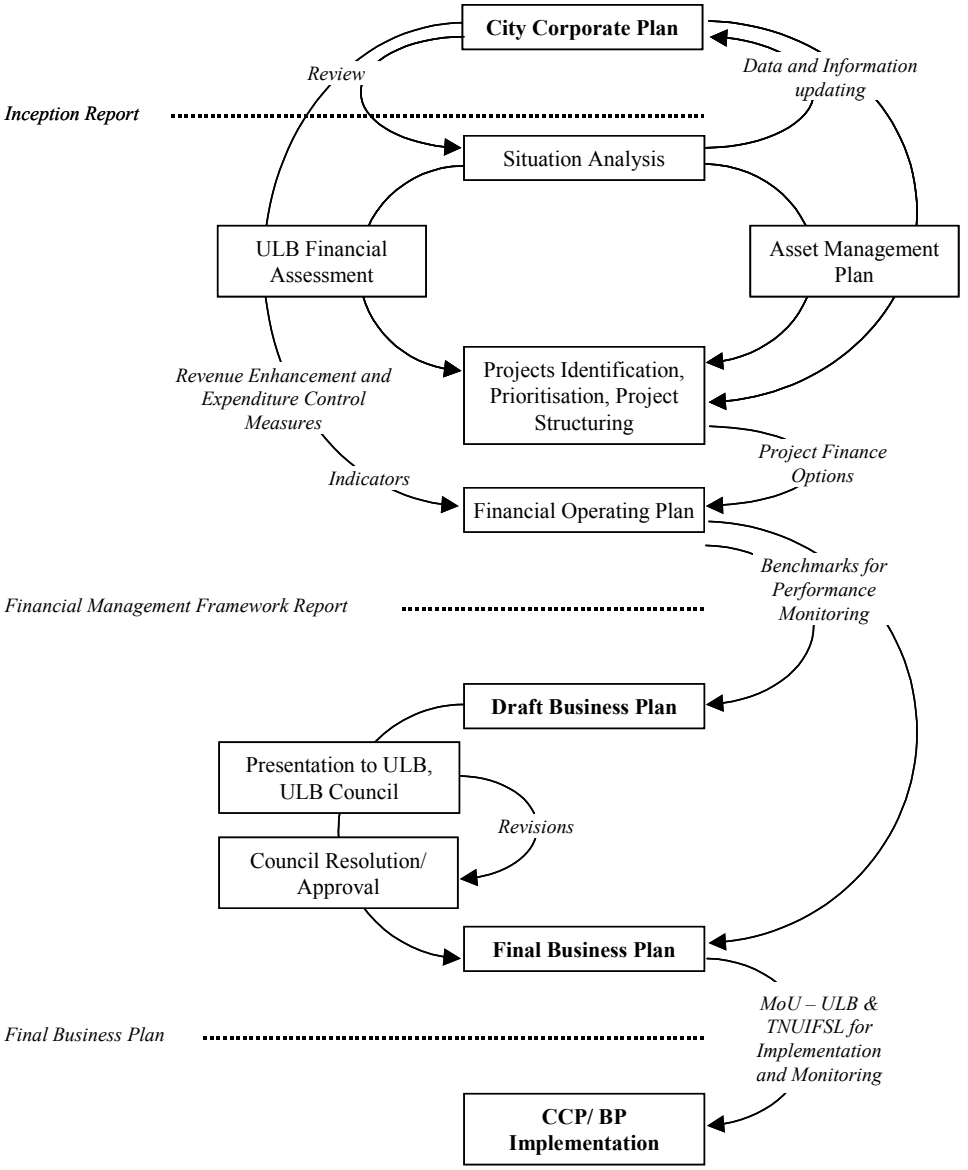
- Optimisation of financial, collection, operational and service delivery efficiencies
- Efficient operation and maintenance system
- Improvement and up gradation in the existing system
- New financing methods like leasing
- Cost reduction measures without additional investment, with minimum additional investment and with major additional investment
- Charging or levying of new taxes/charges
- Effective utilization of existing resources and untapped non-conventional resources
- Energy audit resulting in savings in energy
- Leak detection resulting either in connections or in the tariff (or) maintaining the same supply and achieving a reduction in energy cost
- Privatising the MSW collection and identifying a BOT operator for eliminating, composting etc. items of revenue can be identified
- Laying of cement concrete road / Fly ash and savings on maintenance cost resulting in increasing operating surplus
- Water recycling / reuse
- Rejuvenation of tanks and reduction of cost / litres of water produced
- Privatisation and options for revenue rising
- Better inventory control and management
- Fleet management
- Potential for scrap disposal

C. Options for increasing the revenues through non-traditional methods

- Land development for raising revenue (not the traditional commercial complexes)
- Suggestion for improvement of revenues and the latter would entail:

1. Prepare a draft Memorandum of Understanding (MoU) between ULB and TNUIFSL for effective implementation and monitoring of the BP. The MoU would outline the base line (based on the situation analysis) and the performance benchmarks to be monitored, apart from other financial and loan covenants. The targets would be based on service development targets and outputs of the financial and operating plan.
2. Initiate consultations with council and local stakeholders on the priorities; redefine priorities (rerun FOP if required) and work with the council to resolve on adoption of the city's FOP and CCP actions.
3. Finalise business action plan for the city, with a resolution from the council on the priorities and commitment to implement revenue and management improvement measures.
4. Identify the obligations on the part of the ULB/TNUIFSL/TNUDF/Government for successful implementation of the business plan.

1.2 Approach to CCP and BP



1.3 Report structure

Chapter 1: Background

Chapter 2: Review of the CCP – city profile

Chapter 3: Review of the CCP – Municipal assessment: Infrastructure and Organisation

Chapter 4: Review of municipal finances

Chapter 5: Capital Investment Program (CIP)

Chapter 6: Financial Operating Plan (FOP)

Chapter 7: Asset Management Plan (AMP)

Chapter 8: Action and Implementation Plan

Chapter 9: Draft Memorandum of Association (MoA) between Nagercoil municipality and TNUIFSL

Annexure

1.4 Deliverables

This report provides

1. The comprehensive business plan based on updated information from the towns, observations during town visits, service level assessments and a complete financial analysis
2. Draft Memorandum of Association (MoA) to be signed between Nagercoil municipality and TNUIFSL

2. REVIEW OF CCP - CITY PROFILE

Nagercoil is a town with a substantial growth potential due to its geographical location that is a transit point to key tourist spots and a center that undertakes extensive service-oriented activities. The town's growth has been stifled due to the lack of proper planning efforts and untapped revenue generation potential across sectors. The town has taken up measures to improve the existing situation, but it has met with limited success, as it lacks an integrated approach to town development.

Nagercoil, the headquarters of Kanyakumari district is a selection grade municipality, situated in the southern part of Tamilnadu at a distance of 18 kms from Kanyakumari town. Its total coverage is 24.27 sq. kms and is divided in to 51 wards. The town has a population of 2.08 lakhs as per 2001 census with a population density of 8576 persons per sq. km. The literacy rate has been increasing over the last 4 decades and as per 2001 census, 80% of its population is literate.

2.1 Economic profile

The main economic activities of the town are administrative services, agricultural marketing and tourism-allied activities, which is the town's primary revenue generation potential. The tourist attractions surrounding the town could increase the revenue generation capacity further, if measures are taken to improve the ambiance of the tourist spots.

2.2 Nagercoil Potential

Now being the capital of Kanyakumari district, untill 1956, it was a part of Kerala state. It is famous for Nagaraja Temple and the name of the city is derived from this Temple , which was once (1000 years back) a Jain temple. Nagaraja Temple is the centre of tourist attraction in Nagercoil.

St.Xavour's Church is the popular Roman Catholic Church built by St.Xaviour. Nagercoil is 12 kms away from Kanyakumari, which is the southern most part of India . In earlier days, Nagercoil and its surroundings were known as *Nanjilnadu* .

Nagercoil has a pleasant climate for most part of the year. Nagercoil is benefited by both the north-east monsoon and the south-west monsoon t is a district administrative center, with industries in motor repair, rubber goods, and rice- and cotton-milling. It is an important Christian center in the primarily Hindu country of India.

The vision thus formulated in the city corporate plan was to develop Nagarcoil **as a dynamic town promoting well balanced and sustainable development and continue to play the role as a tourism and agricultural marketing center.**

In order to support this vision the Nagarcoil municipality needs to upgrade its infrastructure and services. The role of other planning agencies would also be vital to achieve the above vision. This would mainly involve the tourism department, public works department and others. The corridor from Nagarcoil and Kanyakumari could also be developed as a tourism corridor, which would result in attracting more tourists. The government could also explore to rope in private sector for development of this corridor. This would also translate into upgradation of basic infrastructure and promoting hotel industry.

2.3 Past planning efforts

There are detailed development plans prepared by the town notified under Town and Country Planning (T&CP) Act 1971 and there are special zoning regulations that form part of the Master plan, which was approved in 1999. The development of the town is as per this act, which is permitted by the Local Planning Authority (LPA), whose key members are the counsellors and the existing land

use is largely based on their directives. The existing land use in the town highlights a proper usage of the land, as 70% of the land has been developed. However, almost 19% of town's area is unused, which, if properly developed could generate additional revenues. The land use pattern details are mentioned below.

Table 1: Land use pattern

Use	Area (Hectare)	Percentage
Residential	1253.98	51.65
Commercial	81.35	3.35
Industrial	58.75	2.42
Public-semi public	55.46	2.28
Education	98.75	4.07
Transportation	154.04	6.34
Total (1)	**1702.33**	**70.12**
Wet Lands	170.70	7.03
Dry Lands	261.64	10.78
Vacant	200.14	8.24
Water Bodies	93.08	3.83
Total (2)	**725.56**	**29.88**
Grand Total (1) + (2)	**2427**	**100.00**

Source: City Corporate Plan, Nagercoil

2.4 Key Development Issues

Despite the significant revenue generation potential of the town through various sources, the growth of the town is stifled due to three key issues viz. low levels of land development (Almost 20% of the usable land lying vacant), significant number of unauthorized layouts and full potential of the tourists spots untapped due to lower levels of development in these places

3. REVIEW OF CCP - MUNICIPAL ASSESSMENT: INFRASTRUCTURE & ORGANISATION

The municipality is responsible for providing a host of services ranging from obligatory functions like provision of water supply to discretionary functions like providing parks and playgrounds. The common requirement across the functions is good asset quality in adequate supply. Despite a good distribution network, water supply reaches only 43% of houses in town and almost 1/4th of the population lacks a proper sanitation facility. Roads and Storm Water Drains (SWD) are inadequate to cater to the existing population, while, street lighting and solid waste collection system is adequate. However, these assessments have been undertaken without a detailed assessment of its slum infrastructure, which is essential before implementing any of the projects identified in Section 5. Its existing staff would require training for managing the envisaged projects, and in some cases additional manpower is required

3.1 Water supply

The source of water supply to Nagercoil municipality is Mukkoodal dam, which is located at a distance of 12 kms from the town. The town is covered under the water supply scheme, which was commissioned in 1971 for an estimated supply of 5.68 MLD. Subsequently, to cater to the increased requirements of the town, the first improvement scheme was commissioned in 1991. However, these schemes also cater to 6 villages and 2 town panchayats beside the town that has affected the town's supply adversely. Hence, the second improvement scheme was implemented that provided 23.8 MLD. Despite these efforts, the supply is insufficient for the existing demand and hence a proposal to draw 326 mcft of water from Pechiparai dam has been proposed.

3.1.1 Additional storage capacity required

There are 8 Elevated Service Reservoirs (ESR) and 2 Ground Level Storage Reservoir (GLSR) with a total storage capacity of 6.05 ML that is 25 % of the daily requirement, lower than the norm of 33.33%. Hence there is a need for additional service reservoirs. In addition to it, the conditions of the old reservoirs need to be assessed in detail and plans should be drawn for their repairs, rehabilitation and maintenance, if found necessary. The existing treatment capacity is 34 MLD, which is more than the existing supply and hence adequate to cater to the current needs.

3.1.2 Distribution lines cover 95% roads

The total length of the distribution system is 268.83 km covering 95% roads. This is above the state average for municipalities (78%) and the norm of 85% and hence, there is no need for additional pipelines. However, the system requires an overhaul as most of the pipes were laid in 1940s that have exceeded its normal working cycle of 30 years.

3.1.3 Water supply reaching only 43% houses

The distribution system covers only 43% of the total households (22750 out of 53363 properties in the register). This could be even lesser, if the number of unassessed properties is taken into consideration. The non-coverage of 57% households highlights the poor operational efficiency level, as this level has improved only marginally from 38% to the current level. (Over the last 5 years from 2000-01 to 2004-05.). Even the existing supply is quite erratic with a supply frequency of once in 4 days. This has caused a high level of discontent with the users, leading to illegal tapping of water and non-payment of water charges.

3.1.4 Issues

Nagercoil needs to address a host of issues that are affecting the proper supply and distribution of water in the town. Due to lack of additional water source, despite sufficient supply capacity, there is an increasing demand-supply gap and there is a high level of transmission and distribution loss due to inefficient operations. The asset quality is deteriorating due to improper maintenance at source, transmission and distribution with a high-energy consumption due to poor efficiency of pumps. On the service delivery front, the coverage is very low

3.2 Sewerage and sanitation

3.2.1 28.5% population devoid of any sanitation facility

At present, there is no Underground drainage (UGD) in the town and it has only shallow open drains for disposal of the sewerage. Currently, the roadside drains carry the sewerage and rainwater. Houses and other commercial establishments have their own septic tank arrangements for sewage disposal. The sewage water from the houses as well as storm water is collected in the open drains and disposed in the open causing environmental degradation and spread of water borne diseases.

12.4% the town has access to public conveniences[5] and out of the 53363 properties in the town, almost 59% are covered with septic tanks, while none of the households have access to low cost sanitation facility[6], thus resulting in 28.5% of the population uncovered by any proper sanitation facilities

3.3 Roads cover 58% town[7]

The town has several roads leading to major cities like Madurai and Trivandrum. The major roads include Balamore road, M.S. road, College road, and Cape road and the total road length is 227.47 kms; 220.07 maintained by the municipality and the rest by the highways department. However, as per the accepted norms, per capita municipal road length is 1.75 meters, while for Nagercoil, it is only 1.02 meters, implying a shortfall of 42%. Excluding the cement concrete roads, the surfacing of the other roads is below the prescribed norms[8] viz. 22% cement concrete, 72.5% Bitumen top and 3% earthen roads. In order to decongest the traffic, a bye-pass road of 14.5 kms, branching off, west of the town has been proposed. This would ease the traffic flow of commercial vehicles, as it would provide an alternative route that currently flows into the town. Despite covering a significant portion of the town, the town has to upgrade its road infrastructure, in order to meet the growing demands of the town. The key areas of concern are insufficient roads and insufficient and improper maintenance

3.4 34% roads covered with Storm Water Drains (SWD)

The existing SWD is poor as it covers only 167 kms, which is much below the required level of 340 kms.[9] In addition to very poor coverage, there are several other key issues plaguing the SWD system in the town. Uneven distribution and poor design has resulted in stagnation and flooding at many points across the town. The residential sewer and industrial waste is draining into a single drain resulting in unhygienic conditions and the discharge into the lake without treatment is resulting in pollution of the town

[5] There are 63 'Pay & Use' public conveniences which is below the norm of 363 (60 persons per seat of public convenience – slum population of 21796

[6] Septic Tanks: 31552 households

[7] As per the norm of 1.75m of per capita municipal road

[8] Concrete: 5%, Black Top: 85%, WBM: 10%, Earthen: 0%

[9] As per the norm of 150% road length (including non-municipal roads)

3.5 100% collection of solid waste, but poor disposal facilities

The town has been able to collect 100% of its 88 MT waste generated every day through its privatised operations in 21 wards and its own infrastructure in the remaining 30 wards. This is dumped at the transfer points, from where the lorries and tippers clear it. However, there is no segregation of organic and inorganic waste that is causing substantial environmental hazard at the dumping site. The existing fleet of vehicles handle a capacity of 4.7 MT per day and make 2-3 trips per day[10] to transport the waste from the transfer point to the disposal site. This is a 15.52-acre site located at Valampurivilai within the town whose capacity has exhausted and the municipality has proposed to acquire a land at Puliyadi, at a distance of 9 km from the town.

3.6 Street lights cover 83.3% of the town[11]

There are 8604 streetlights; 23% of which are high power lamps (sodium vapour and mercury vapour) and 77% tube lights. The existing spacing is 36m between lampposts, implying 83.33% coverage of the town and requires up-gradation for better illumination. The key issue here is the high-energy cost, which the municipality is trying to reduce.

3.7 Inadequate social and recreational facilities

The social infrastructure consists of only health care centres, as the private players run the entire educational facilities like schools, colleges & training institutes. The number of secondary schools and colleges is adequate[12], while the health care infrastructure is inadequate, as it has only 1 hospital, 3 health posts and 1 dispensary.[13] However, 8 private hospitals, 73 private clinics and 9 medical laboratories supplement it. There are 20 parks and more than 13 playgrounds. In addition to the seemingly low coverage of health care facilities, the existing quality of infrastructure is also suspect. The key issues to be addressed are lack of accident care centre/trauma centre at the hospital and Inadequate facilities at the government hospital like insufficient beds, limited parking etc.

3.8 Slum infrastructure assessment required

Nagercoil municipality provides basic amenities like water, public conveniences, drainage and street lighting to the 20 slum areas, all of which are notified. The municipality has been making efforts to improve the existing conditions of the slum dwellers through the Swarna Jayanthi Rojgar Yojana Scheme (SJSRY) and national slum improvement scheme of the central government. However, the details of slum infrastructure need to be assessed before undertaking the implementation of the projects, as these investments are non-remunerative that could change the investment requirement.[14]

[10] This is acceptable, as the existing norm is 3.5 trips per day

[11] As per the norm of 1 street light per 30m

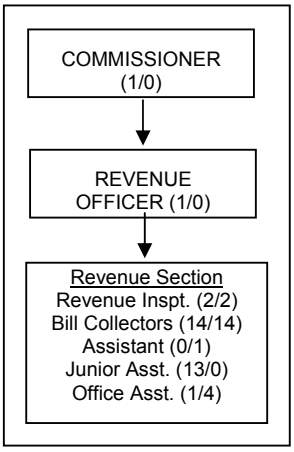
[12] As per the norm of 1 secondary school for a 7500 population and 1 college for 1.25 lakh

[13] As per the norm of 1 government hospital with 150 beds for 2.5 lakh population, 2 maternity centres with 13 beds for 45000 population and 2 nursing homes for 45000 population

[14] The CCP does not highlight the slum infrastructure adequately

3.9 The organisation requires training in key areas

3.9.1 Revenue section



The revenue section is responsible for collection of various taxes and charges from the citizens. This section consists of 31 permanent employees who handle all revenue functions including raising the demand for key revenue items like property tax, water charges etc., follow up on outstanding payment and prepare the Demand Collection Balance (DCB) statement. The payment is made by the users directly at the collection centres and hence, the earlier collection work has been eliminated.

Operation and Maintenance (O&M) issues

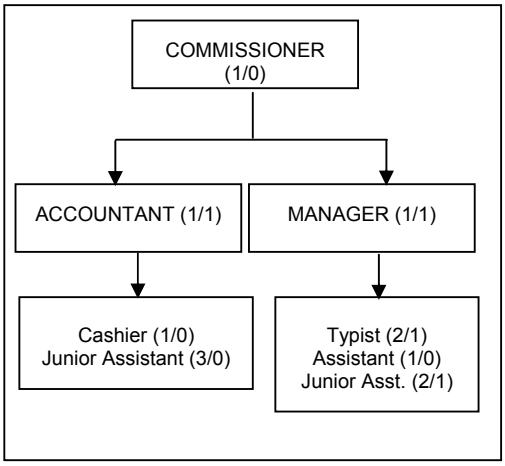
1. Adequacy of strength

Some of the existing Bill Collectors are posted at the various collection centres, after being trained on various modules. Discussions with the commissioner has highlighted that additional strength is not required in this department

2. Business process/system issues

On the demand side, the demand for property tax is not raised on time, which results in a lag in the entire collection cycle, thus adversely affecting the working capital cycle and there is an estimated 80-acre of unauthorized layout, which has a significant revenue generation potential. However, no significant action has been taken to improve it. On the collection front, there is no penalty for late payment, due to which, there is no incentive for the taxpayers to make timely payments and, there are no significant checks that prompt the bill collectors to achieve the target

3.9.2 Accounts & establishment section



The accounts section is responsible for maintenance of all income and expenditure statements, payment, preparation and implementation of budget. The system of accounting has undergone a transformation from cash based accounting system to accrual accounting system. The municipality maintains the accounts in three funds viz. revenue fund, water & drainage fund, and elementary education fund. An accountant heads the department, who is responsible for payment of all works and supply bills, scrutinising of pay bills, disbursement of salaries to the employee and payment of pension benefits to teaching and non-teaching staff of municipal schools and for retired municipal employees. A Manager heads the administrative functions of the town. His team of typists and clerks who are assigned specific revenue streams assist him. In the absence of the commissioner, the manager is responsible for the smooth functioning of the municipality

Though the work process captures significant amount of financial and operational information, it does not deliver the required information to the management due to its poor maintenance of records. A small improvement in the database design would aid in achieving the same. The following table highlights the information that can be derived from the existing account information. Maintenance of records of these parameters will implicitly improve the record keeping functions

Table 2: Suggestive list for MIS

Category	Description	Unit	Base data
Property Tax	Collection efficiency	%	Total collection, Total Demand
	Arrears as a % of the total	%	Current collection, Arrear Demand
Water	Metered Residential Connections/Total Residential properties	%	No. of residential, commercial and industrial connections
	Metered Commercial Connections/Total Commercial properties	%	
	Metered Industrial Connections/Total Industrial properties	%	
	Collection efficiency	%	Total Demand and Collection (in Rs.)
	Arrears as a % of the total	%	
	Unauthorized connections/ Total Connections	%	No. of connections
Sewerage & Sanitation	Sewerage connections/Total number of properties	%	No. of connections and properties
	Septic Tanks/Total number of properties	%	
	Low Cost Sanitation/Total number of properties	%	
	Number of Slum residents per seat of Public convenience	Number	No. of seats and Slum population
Solid Waste Management	Collection efficiency	%	Waste generated and collected
	Road length per staff	Meters	Road length and No. of conservancy staff
	Disposal site capacity/Total Waste Generated	%	Site capacity and total waste gen.
	Area covered per conservancy staff	Sq. Meters	Area of municipality and No. of conservancy staff
Storm Water Drain	Road covered with Pucca Open Drain	%	Length of drains and roads
	Road covered with Pucca Closed Drain	%	
	Road uncovered with SWD	%	
	Pucca Drain/Total SWD	%	
Roads	Roads Surfaced (any kind of surfacing)	%	Road length
	Concrete Road/Total Road	%	
	Black Top Road/Total Road	%	
	Earthen & Other Road/Total Road	%	
Street Lights	Tube lights/Total Lights	%	No. of lights
	High power lights/Total Lights	%	
	Other Lights/Total Lights	%	

O&M issues

1. Adequacy of strength

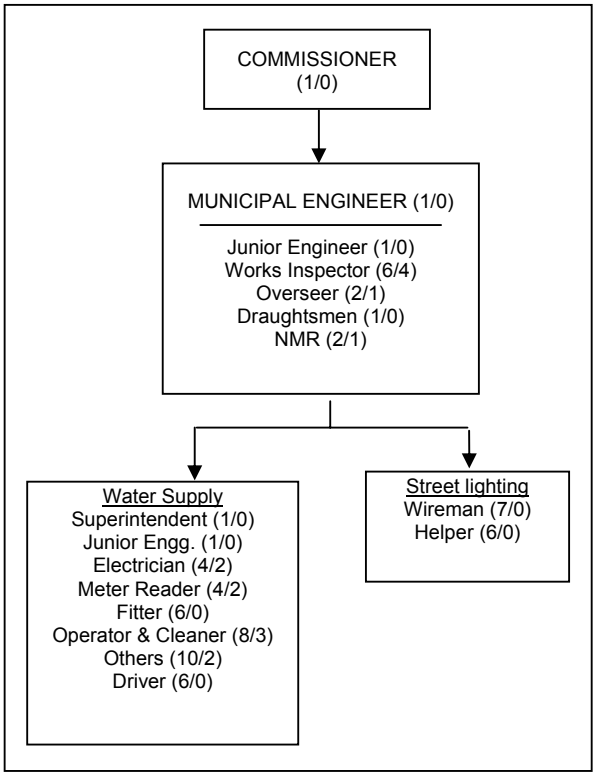
Currently, the accounts section consists of an accountant, 3 junior assistants and a cashier. The staff strength is adequate for the current functioning, but it requires additional training due to increased automation. Currently, there is no independent verification of reports (related to revenue / cost items) submitted by other departments.

2. Business process/system issues

Despite being vested with powers to increase the tax rates, the administration has not initiated efforts with the council to increase the property rates, which is only 21% of the Annual Rental Value (ARV). However, poor service delivery levels have hindered the municipality's inability to raise the rates

3.9.3 Engineering section

The engineering section is responsible for execution of projects related to road, street lighting, water supply and sewerage. It is also responsible for the O&M of these assets. Most of the projects are executed through private contractors who are appointed through a bidding system and the engineering section is responsible for overseeing the operations. A Municipal Engineer heads the department.



O&M issues

1. Adequacy of strength

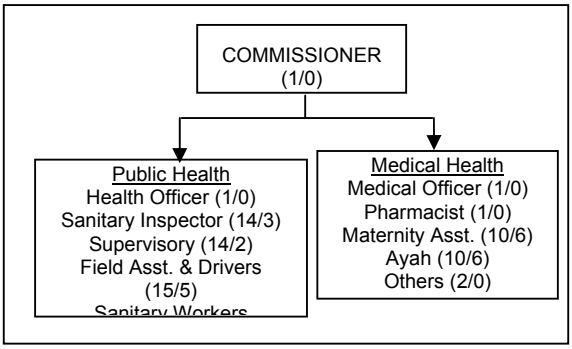
The staff is sufficient for the existing projects and works. However, due to the absence of a sewerage project, there are no employees assigned to that work.

2. Business process/system issues

There is a deficit in the water supply situation and the existing water supply's Transmission and Distribution (T&D) lines are obsolete resulting in significant T&D losses. On the sanitation front, Low Cost Sanitation (LCS) and Public Conveniences (PC) is not available to the entire slum population

3.9.4 Health section

The health section is responsible for maintaining a safe and pollution free environment. A health officer heads the department. The key functions are:



- Manage the solid waste disposal
- Ensure clean and safe environment
- Assess the hazardous/polluting nature of the business and issue licenses, only if satisfied with the nature of the business
- Undertake health camps and other government immunization programs to maintain the health of the citizens
- Manage and upkeep the municipality owned hospitals, maternity centres and other health centres

O&M issues

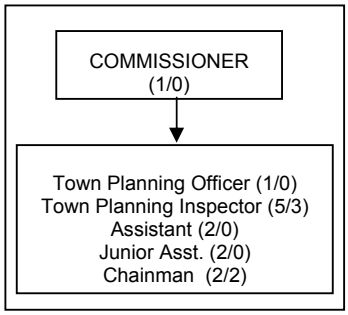
1. Adequacy of strength

The staff is sufficient for the existing projects. The department supervises the work of the private player in 21 wards.

2. Business process/system issues

Inadequate landfill sites and managing the operations of the private player are the two key issues of the town

3.9.5 Town planning section



The Town planning section is responsible for developing the integrated plan of the town. A Town Planning Officer heads the department. The key functions are, issue building licenses after assessing the need and legality and undertake assessment of the town to ensure the reduction in unauthorized layouts

3.9.6 Information technology section

An assistant programmer heads the systems department and one data entry operator assists him. The department has come under the limelight after a significant computerisation activity was undertaken in TNUDF-II, when a full-fledged department was established in 2003-04. The computerised system is used for the following functions viz. birth and death registration, water charges, professional tax and other non-tax items. However, some discrepancies still exist between the manual and computerised data. The municipality has also initiated the online collection counters with easy access to the public. This also ensures better service delivery and aids the municipality in effective collection of revenues. Computation of property tax is also carried out through this database. The module involves new assessment calculation (tax calculation), DCB statement, demand registers and challan registers (arrears demand), defaulters list and demand generation. The municipality also has an E-mail address and any complains or suggestions can be received on this. This also is a mode of correspondence from the Commissionerate of Municipal Administration (CMA), Regional Directors of Municipal Administration (RDMA) and the government departments.

O&M issues

1. Adequacy of strength

The staff is sufficient for the existing works. However, with the envisaged increase in computerisation, the department would require more experienced personnel with a proper training schedule.

2. Business process/system issues

Inadequate hardware and networking infrastructure and non-updation of various modules is the key concern of this department.

3.9.7 Status of e-Governance

The property tax, water charges and trade license module has been completed. Added to it, the Birth and Death registration module is also complete and the certificates are issued from the collection centres. The data entry for the remaining modules is in progress. These are

- Profession tax
- Solid waste management
- Building plan
- Hospital management
- Financial accounting system
- Vehicle
- Grievances
- Mother and child welfare
- Moveable and immoveable items
- Inventory items
- Personnel management system
- Census and Electoral rolls

There are several on-line collection centres, but are not interconnected. The details at the end of the day are updated in the main server located in the municipal office. However, additional training is required on the software front and it would be beneficial to train select individuals on the software developed for collections.

4. REVIEW OF MUNICIPAL FINANCE

Nagercoil municipality has performed quite efficiently during the period 2000-01 to 2004-05. Similar to other ULBs in the state, Nagercoil too over-estimates its revenues due to the incorrect accounting policy of projecting its demand as the actual collection. Nagercoil has maintained an average revenue surplus of 29% of its revenues for the above period, due to an 8.6% increase in its revenue receipts combined with a 2% decrease in salary expenses. However, its outstanding liability of Rs. 2285 lakhs (including debt and non-debt) could be a cause for concern, as it is 63.9% of the closing balance of 2004-05

The review[15] includes a time series analysis of the income and expenditure to identify the trends in the major sources and uses of funds and its impact on the financial position of the town. It also includes analysis of key parameters like per capita income, per capita expenditure and debt servicing ability etc. The municipality operates on accrual based accounting system that recognizes the **demand** of the revenue items as the **collection**, which results in an inflated revenue surplus position of the town. Hence, the annual accounts have been recast to arrive at the true financial position of the town. The core revenue receipts of the ULBs are broadly categorized as per the table shown below:

Table 3: Classification of revenue items

Tax Revenues	Property tax, Water tax, Advertisement tax, Professional tax and Education tax
Non-Tax Revenues	Service charges and fees viz. Water Charges, Education charges, Shops and market rent; Trade license and Building license; Other Income
Assigned Revenue	Entertainment tax, Surcharge on Sales tax
Grants and Contributions	Devolution Fund, Other Grants and Contributions

4.1 Nagercoil's per capita surplus higher than the state average

Over the past five years (2000-01 to 2004-05), Nagercoil municipality has consistently shown a revenue surplus with an operating ratio[16] of 0.48 (5 year average). The town had an accumulated revenue surplus of Rs. 3575 lakhs at the end of 2004-05. The per capita revenue and expenditure is Rs. 809 and Rs. 282 respectively in FY2003-04, implying a revenue surplus of Rs. 527 per capita, both of which are significantly above the state average for municipalities for that year (Rs. 174) [17]. Over the last 5 years (2000-01 to 2004-05), the town has been performing very efficiently with an average per capita revenue surplus of Rs. 339. The detailed financial statements are provided in Annex

Table 4: 6% growth in property tax between 2000-01 and 2004-05[18]

	2000-01	2001-02	2002-03	2003-04	2004-05	CAGR
Opening balance		410.0	794.5	1,758.7	2,876.8	
Municipal receipts	957.3	957.8	1,634.1	1,715.6	1,329.2	
Property tax	*181.2*	*214.5*	*229.3*	*227.5*	*224.7*	*6%*
Water tax	*60.6*	*107.2*	*114.7*	*132.9*	*151.5*	*26%*

[15] The financial information provided by the municipality for the period 2000-01 to 2004-05 is the basis for review of the current financial position of the municipality.

[16] Revenue expenditure /Revenue receipts

[17] Per Capita Revenue Income: Rs. 702, Per Capita Revenue Expenditure: Rs. 528

[18] The financial statements provided by Nagercoil municipality have been recasted to facilitate analysis

Municipal expenditure	547.3	573.2	669.9	597.5	631.1	
Municipal Surplus/deficit for current year	**410.0**	**384.6**	**964.2**	**1,118.1**	**698.1**	
Final closing balance	410.0	794.5	1,758.7	2,876.8	3,574.9	

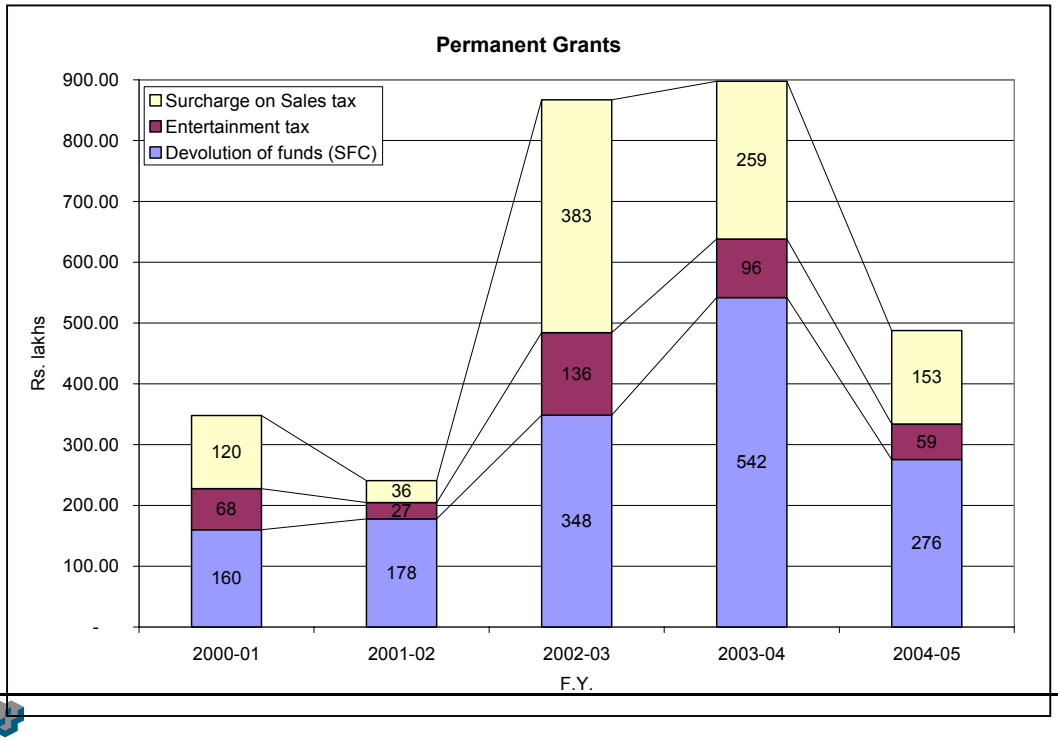
All figures in Rs. Lakhs

Note: The increase in FY 2002-03 is due to sudden increase in surcharge on sales tax and SFC devolution.

The per capita income and expenditure has been analysed and the results of the same are given below:

Head of Account	2000-01	2001-02	2002-03	2003-04	2004-05	Avg (2000-01 to 2004-05)
Own Sources	**295.4**	**344.4**	**365.2**	**385.9**	**393.5**	**356.9**
1 Taxes	145.8	191.1	197.2	201.0	206.5	188.3
2 Others	149.6	153.3	168.1	184.9	187.1	168.6
Permanent Revenue Grants	**168.7**	**115.7**	**412.7**	**423.4**	**227.9**	**269.7**
1 Devolution of funds (SFC)	77.5	85.4	165.9	255.6	128.8	142.6
2 Others	91.2	30.3	246.8	167.8	99.1	127.0
Total Revenue Income	**464.1**	**460.1**	**777.9**	**809.4**	**621.4**	**626.6**
					0.8	
PAYMENTS						
A Salaries	185.0	184.3	174.6	171.7	164.4	176.0
B Operation and Maintenance	71.0	83.4	137.4	106.4	126.4	104.9
Water Supply	15.3	20.0	34.7	27.6	33.4	26.2
Public Health (Sanitation)	2.6	1.1	0.9	0.3	0.4	1.0
Street Lighting	50.4	54.9	77.3	76.9	92.4	70.4
Miscellaneous Items	2.7	7.3	24.5	1.5	0.3	7.3
C Loan & Interest Payments	9.3	7.7	7.0	3.8	4.2	6.4
Total Revenue Expenditure	**265.3**	**275.4**	**318.9**	**281.9**	**295.0**	**287.3**

The analysis above shows increase in per capita revenue income from Rs. 464 to Rs. 621 over the five year period. The revenue is mainly driven by the permanent grant from other sources, which mainly comprises of SFC devolution and surcharges on stamp duty. The increase has not been uniform, this is due to the collection of outstanding arrears for past years. The graph below shows the patters in which these grants have been received by the local body.



4.2 Revenue receipts

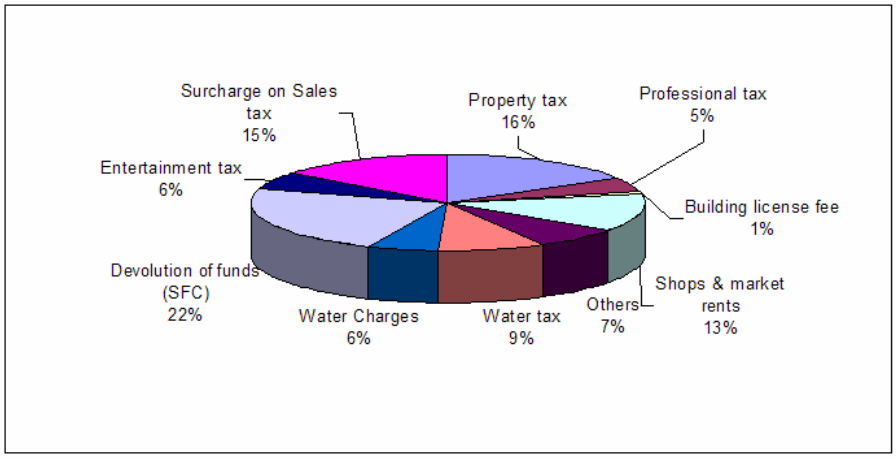
4.2.1 Revenue growth of 8.6% due to increase in all revenue streams

Nagercoil municipality had a revenue receipt growth of 8.6% and a very favourable operating ratio averaging 0.48 during 2000-01 to 2004-05. The growth would have been higher, if the town had been able to tap into the **betterment charges**, which it is losing out due to the issue of unauthorized layouts. Currently, to develop any new property, the approval of the Registrar is required. However, the Registrar does not co-ordinate with the municipality to establish, if the property is being constructed on authorized layouts, resulting in a proliferation of properties on unauthorized layouts. The municipality is affected adversely due to loss of revenue from the estimated 60 acre of unauthorized layouts that have a potential to generate Rs. 2 lakhs per acre. It also has to incur higher expenses as, these properties, release their sewer in the open causing environmental hazards and increasing the maintenance cost. In addition to it, the properties utilise the public stand posts meant for others that increases the cost of service

4.2.2 Property tax and shop & market rent contribute to 30% revenues

Property tax and shop & market rent tax are the major revenue sources, comprising 30% of the total revenues receipts, while water charges and taxes contribute to 15% of the revenues. This highlights the equal impact of tax and non-tax revenues on the town that contribute to 31% and 28% of the revenues respectively.

Revenue receipts during 2000-01 to 2004-05



The average collections efficiency levels during 2000-01 to 2004-05 for property tax and water Tax is 46% and 54% respectively, which is significantly below the state's average of 74% and 90%. Despite a robust own revenue source, Nagercoil, like other ULBs in the state, relies significantly on state grants for its revenue expenses that contribute to 43% of the revenues, which is higher than the state average for municipalities - 34.8%.

4.3 Revenue expenditure

4.3.1 O&M expenses is 17% of municipal revenues

The municipality's salary expenditure is 30%; lower than the state average of 45%, while the O&M expenses is 17%, much lower than the state average of 45%. The overall revenue expenditure has grown at a CAGR of 3.6% p.a. during 2000-01 to 2004-05, which is lower than revenue growth of 8.6% p.a. The growth in expenses is due to the 16.6% increase in O&M expenses, which has negated the 2% decrease in salaries. Despite the salary expenses decreasing by 2%, it is still high compared to other similar towns in Karnataka. The town's salary expense is 1.48 times higher than the average for

similar towns. A comparison of the Salary and O&M expenses for the similar towns in Karnataka is highlighted below

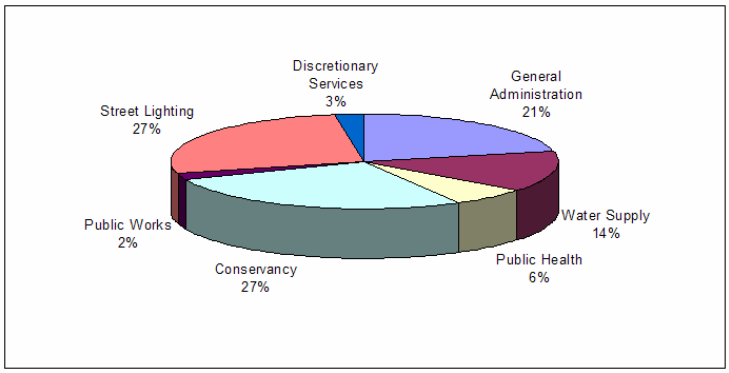
Table 5: Salary and O&M expenses of similar towns in Karnataka

			Expenses (Rs. Lakhs)	
Town	**No. Of Properties**	**Population**	**O&M**	**Salary**
Bijapur	41428	228175	507.55	308.08
Bommannahalli	48479	201652	966.71	126.67
Dasarahalli	67758	264940	911.64	16.36
Raichur	38080	207421	279.60	304.15
Shimoga	59005	274352	406.30	472.71
Tumkur	53958	248929	857.25	240.00
Average			**654.84**	**244.66**

4.3.2 No significant maintenance of roads and SWD

Unlike other poorly performing towns, its expenses towards general administration are only 21% and the largest share of expenses is towards conservancy contributing 27% of the total expenditure. However maintenance of roads and SWD has been neglected. The figure below highlights the sector wise expenditure.

Administrative and conservancy expenses contribute to 48% of expenses



During 2000-01 to 2004-05, Nagercoil's financial burden has been quite insignificant, as only 2.25% of its expenses are towards debt repayment.

4.4 Outstanding liabilities

4.4.1 Debt liabilities - 60.43% of closing balance of 2004-05

The town's outstanding debt liability is Rs. 2160.59 lakhs, which is 60.43% of the closing balance of 2004-05. (Rs. 3574.9 lakhs). This should not pose much of an issue, as the town has been able to generate an average yearly revenue surplus of over Rs. 715 lakhs. Moreover, there are no overdue payments indicating the town's prompt repayment. The details of the loan are highlighted below

Table 6: Rs. 2160.59 lakhs of debt liabilities

Lending Agency	Loan (Rs. Lakhs)	Interest Rate	Repayment period (Years)	Total loan repaid as on 31.03.2005 (Rs. Lakhs)			Outstanding Loan (Rs. Lakhs)
				Principal	Interest	Total	
Govt. Loan	96.25	13.5	3	31.59	47.50	79.09	64.66

TWAD	446.36	13.5%	10	-	-	-	446.36
TUFIDCO	60.66	10.25%	15	-	3.71	3.71	60.66
	110.29	10.25%	10	-	20.70	20.70	110.29
HUDCO	1478.62	13.5%	10	-	-	-	1478.62
Total	**2160.59**			**31.59**	**71.91**	**103.5**	**2160.59**

4.4.2 Non-debt liabilities – 3.47% of Closing Balance of 2004-05

Nagercoil's non-debt liabilities include a few items that amount to Rs.124.17 lakhs. The details are highlighted below.

Table 7: Rs. 124.17 lakhs of non-debt liabilities

Item	Amount (Rs. Lakhs)
Pension arrears due to pay commission revision	73.5
Library cess collected but not transferred	40.83
Group insurance not paid	6.00
Survey charges	3.84
Total	**124.17**

Overall, the liabilities could have a financial impact on the town, as these constitute about 173% of the town's average annual revenues, over the last 5 years. All other loans are deducted from the SFC devolutions

4.5 Capital expenses met from internal revenues surplus

Capital expenditures are the most flexible item of the city's budget, and are normally contingent upon receipt of associated revenue. The capital expenditure of Nagarcoil includes all expenditure incurred on creation/ acquisition of capital including construction of buildings and infrastructure systems and purchase of furniture, plant/ equipment, machinery and vehicles.

Despite receiving 43% of its revenues from external grants, the municipality has met 63% of its capital expenditure from its internal revenues indicating its minimal reliance on external funds for capital investment programs. The summary of expenses under various heads of capital account are presented in table below.

Table 8: Deficit capital accounts

A	Capital Income		2000-01	2001-02	2002-03	2003-04	2004-05
	i	Grant from State govt.	58.90	56.15	96.24	86.45	24.85
	ii	Grant from central govt.	6.00	106.75	27.53	8.58	8.54
	iii	Loan Receipts	-	-	-	-	-
	Total capital income		**64.90**	**162.90**	**123.77**	**95.03**	**33.39**
B	**Capital Expenditure**		**465.00**	**292.49**	**526.93**	**538.99**	**586.73**
Surplus/deficit			**(400.10)**	**(129.59)**	**(403.16)**	**(443.96)**	**(553.34)**

4.6 Key Performance Indicators

The key parameters that need to be monitored for the effective functioning of the municipality are highlighted below

Table 9: Key Performance Indicators (KPI)

Area	Item	Measure	Existing levels (2004-05) / Growth over previous year	Unit
Revenue Improvement	*Per Capita Income*		621.4	Rupees
	Source of Funds	Share of Taxes	33.32	%
		Share of Non Tax	30.11	%
		Share of Grants	36.67	%
	Growth in Income Sources	Growth in Taxes	10.7	% p.a.
		Growth in Non Tax	6.8	% p.a.
		Growth in Grants	(45.7)	% p.a.
		Growth in Own Sources	8.5	% p.a.
Expenditure Management	*Per Capita Expenditure*		295.0	Rupees
	Functional Allocation	Share of Salaries	55.73	%
		Share of O&M expenses	42.86	%
	Growth in Items of Expenses	Growth in Salaries	(3.4)	% p.a.
		Growth in O&M expenses	20.0	% p.a.
		Growth in Total Expenditure	5.6	% p.a.
Performance	*Operating Ratio*		0.47	Ratio
	Per-capita performance Assessment	Per Capita Own Income	393.5	Rs. p.a.
		Per Capita Grants	227.9	Rs. p.a.
		Growth in Per Capita Revenue Income	(20)	% p.a.
		Per Capita Salaries	164.4	Rs. p.a.
		Per Capita O&M expenses	126.4	Rs. p.a.
		Growth in Per Capita Revenue expenses	1.0	% p.a.
Taxation	*No. of Property Tax Assessments*		53363	
	Current Tax Rate (Weighted Average)		21	% of ARV
	Tax Per Assessment (excluding Vacant Land)		829.49	Rs. p.a.
Efficiency	*Property Tax*	Growth in Assessments	0.9	% p.a.
	Collection Performance-Property Tax	Arrears as % of Total Demand	49	%
		Demand per Assessment	1613.36	Rs. p.a.
	Water Supply	Growth in Water Connections	5	% p.a.
		Average Expenditure/Connection/ month	37.1	Rupees
		Average Revenue / Connection/ month	88.2	Rupees
		Cost Recovery on Water Supply	238	%
	Collection Performance-Water Charges	Arrears as % of Total Demand	37.65	%

4.7 Financial Plan for various revenue sources of Nagarcoil MC

Property taxes and water charges are the main components of own revenue and have been on average contributing 17 % & 15 % of total revenue respectively. Shops and market rent contribute 13.3 % of total revenue. Such an income distribution means that any effort to bridge the impending revenue deficit will require significant improvements under these three heads.

4.7.1 Revenue improvement potential and feasibility

The estimates for improvement potential against the various revenue sources have been based on the discussion with the municipal officials. The potential identified is high, but will require immediate and sustained effort from local body.

The improvement potential has been classified into three groups to highlight the efforts required. Several improvements are possible mainly by efficiency gains while others may require additional burden on the taxpayers / customers. The additional revenue would come from the following avenues:

Category	Efficiency Gains	Increase in rates	Property gain/system refurbishment	Total potential
Property taxes	1.31	20.71	0.47	22.50
Water charges	0.55	5.34	3.69	9.69
Trade licenses	0.07	-	-	0.07
Building license fee	-	0.13	-	0.13
Shop market rents	8.77	-	-	8.77
Total	**10.70**	**26.18**	**4.16**	**41.16**

Note: All figures in Rs. Cr in current value terms

The above table also shows the impact of each of the major revenue items. It is therefore imperative for the local body to prioritise the above actions to enhance their revenue base. Increase in efficiency gains, rate revision along with induction of new properties and refurbishment of water system would have an impact on the taxpayer / consumer and would therefore face resistance. The support of the council and the state government would be required for successful implementation of the changes.

5. CAPITAL INVESTMENT PROGRAM

The Capital Investment Program (CIP) identifies the investment requirement of the town based on the demand-gap analysis. However, it does not take into account the financial feasibility of the projects, which is undertaken in the Financial Operating Plan (FOP). Nagercoil's investment requirement is Rs 10450 lakhs with 65% of the investment in UGD and sanitation systems and 11.5% in water supply.

The CIP is essentially a multi-year scheduling of physical investments that determines the priority investments based on the demand-gap analysis. It also highlights the implementation and monitoring requirements. The scheduling or phasing of the CIP is also based on choice of specific improvements that need to be taken up over a period of five years. In addition to the core services, the CIP would also highlight other investments that are essential for developing the town.

5.1 Capital Investment

The CIP is formulated to meet the estimated need of the town over a five-year period. Based on the existing demand-supply situation, the town's investment requirement is Rs. 10450 lakhs over the next five years. The phasing of the investment is given below:

Table 10: Phasing of investment over five years

Sector wise Phasing	I year	II year	III year	IV year	V year	Total
Water supply	151.25	605.00	453.75	-	-	**1,210.00**
Storm Water Drain	-	68.00	272.00	204.00	-	**544.00**
Sanitation and Sewerage	847.75	3,391.00	2,543.25	-	-	**6,782.00**
Solid Waste Management	-	51.25	205.00	153.75	-	**410.00**
Roads	-	64.33	257.30	192.98	-	**514.60**
Transportation	-	-	-	25.00	25.00	**50.00**
Street lighting	-	23.75	95.00	71.25	-	**190.00**
Others	-	-	93.63	374.50	280.88	**749.00**
Total	**999.00**	**4,203.33**	**3,919.93**	**1,021.48**	**305.88**	**10,449.60**

All figures in Rs. Lakhs

5.2 Department wise investment identified for immediate requirement

Immediate investments have been identified for the core sectors of the town. These are highlighted in the following section.

5.2.1 Rs. 1210 lakhs required for water supply projects

Department-in-charge – Engineering department
Project title – Improvement of water supply
Project manager – Municipal engineer

Description:
Water supply – Source augmentation, storage facilities, distribution network.

Justification:
The municipality sources its water from the Mukkoodal dam under 3 schemes with a design capacity of 34 MLD. The scheme also caters to 6 villages and 2 town panchayats beside the town, due to which, the town receives only 13.1 MLD, including 2 MLD from 27 bore wells. Nagercoil will require 21.75 MLD and 24.07 MLD for the population expected in the year 2014 and 2024. However, desilting of the dam is at an estimated cost of Rs. 750 lakhs is required to extract the maximum quantity from the source. There are 8 ESR and 2 GLSR. However, the GLSRs cannot be used for

storage and the existing ESR's capacity is 6.05 ML, which is 25% of the daily requirement, lower than the norm of 33.33%. Hence there is a need for additional service reservoirs of 2 ML.

The existing distribution loss across any water distribution system is approximately 40% to 50%, against the permissible limit of 15%. More than 60% of these losses occur at the last mile – house service connections. The situation in Nagercoil is not be much different and hence it would be advisable to undertake a wastage assessment survey that would aid in taking measures to control the loss levels, thereby improving the service level and revenue. In order to undertake the surveys and preventive maintenance procedures, the staff has to be trained adequately. A proper maintenance schedule should be prepared and adhered to. The privatisation option could be explored that might result in better maintenance and higher savings to the municipality. In order to minimize losses, studies need to be undertaken to assess the unaccounted water.

Investment requirements in different areas

Area	Description of works	Quantity	Unit	Unit cost (In Rs.Lakhs)	Total cost (In Rs.Lakhs)
Distribution system					
	Replacement of existing lines	120	Km	0.5	60
	Installation of new lines	60	Km	3	180
	Borewell	50	Nos	1.5	75
	Pumpsets	5	Nos	1	5
	Pumping main	10	Nos	2	20
Source					
	Desilting Dam		Nos		750
Storage & Treatment					
	OHT (20 lakh liter capacity)	2	Nos	50	100
	Chlorination plant	1	Nos	5	5
Capacity building studies					
	Consultancy				15
Total					**1210**

Total Project Cost: Rs.1210 lakhs

5.2.2 Rs. 6782 lakhs required for UGD and sanitation facilities

Department-in-charge – Tamilnadu Water Supply and Drainage Board (TWAD)/ Engineering department
Project title – Implementation of sewerage project and construction of public conveniences
Project manager – Municipal engineer

Description:

UGD scheme, public conveniences

Justification:

The sewerage scheme has been prepared at an estimated cost of Rs. 6732 lakhs. Due to the implementation of this scheme, the investment in this sector towards other projects like public conveniences, septic tanks, LCS has decreased. There would be no requirement for additional septic tanks or LCS. However, in order to cater to the slum population and areas not covered by the UGD scheme, 3 additional PCs and 8 sanitary complexes would be required. This would require an investment of Rs.50 lakhs. Similar to the water supply system, the UGD system requires high levels of maintenance. Preventive maintenance schedules including flushing of sewers and maintaining of the pumps should be prepared and implemented scrupulously. The privatisation option could be explored that might result in better maintenance and higher savings to the municipality. The user charges that would be levied would aid in generating the required revenue for meeting the capital and O&M expenditure. The O&M of PCs could be entrusted to the local women Self Help Groups (SHG), who could collect nominal user charges to meet the O&M expenses.

Investment requirements in different areas

Area	Description of works	Quantity	Unit	Unit cost (In Rs. Lakhs)	Total cost (In Rs. Lakhs)
UGD scheme					6732
Public conveniences					
	Sanitary complexes	8	Nos	5	40
	Low cost sanitation	3	Nos	3	9
	Repair to existing LCS	1	Nos	1	1
Total					**6782**

Total Project Cost: Rs.6782 lakhs

5.2.3 Rs 410 lakhs required for Solid Waste Management (SWM)

Department-in-charge – Health department

Project title – Improving the SWM system

Project manager – Health officer

Description:

Procurement and development of sanitary landfill and additional vehicles for disposal

Justification:

Currently, 88 tons per day of solid waste is generated with a per capita waste generation of 355 g/day. The municipality has achieved 100% collection due to its efficient collection system. However, there are no specific plans to extend the privatisation to other wards after the retirement of the employees in these wards; the ULB intends to carry out its operations by filling up the required vacancies through its own employees.[19]

The transportation and disposal facilities are inadequate. The solid waste is disposed at the site located at Valampurivilai, which is 15.52-acre land located within the town. However, the capacity of the site has exhausted and hence another site has been identified at in Puliyadi, at a distance of 9 km from the town, which is yet to be acquired. An investment of Rs. 150 lakhs is required for the development of this site, establishment of an incineration plant for disposal of Bio-medical waste and procurement of vehicles.

Investment requirements in different areas

Area	Description of works	Quantity	Unit	Unit cost (In Rs.Lakhs)	Total cost (In Rs.Lakhs)
Primary collection					
	Storage bins	50	Nos	1.3	65
Secondary collection					
	Tippers	4	Nos	5	20
Secondary transportation					
	Compactors	2	Nos	12.5	25
	FEL/JCB	1	Nos	100	100
Disposal site					
	Bio processing plant/ Incineration plant	1	Nos	50	50
	Scientific landfill	10	acre	3	30
	Compost yard	40	acre	3	120
Total					**410**

Total Project Cost: Rs. 410 lakhs

[19] It was not possible to estimate the cost through outsourcing, as the exact age profile of the employees was not available with the municipality

5.2.4 Rs. 1589 lakhs required for roads and drain service

Department-in-charge – Engineering department/ National Highways Authority of India (NHAI)

Project title – Improving the road and drain service

Project manager – Municipal engineer

Description:

Bye-pass roads, resurfacing BT roads, upgrading earthen roads to BT, widening of roads, traffic management systems

Justification:

The total municipal road is 220.07 km with 72.5% BT, 2% earthen road and 22.3 % cement concrete surface. The Bye pass road mentioned in the below investment table is to be constructed by NHAI and hence would not form a part of the capacity assessment of the town

Investment requirements in different areas for roads:

Area	Description of works	Quantity	Unit	Unit cost (In Rs.Lakhs)	Total cost (In Rs.Lakhs)
Black Top Roads					
	Formation	5	Km	5	25
	Restoration	50	Km	6	300
WBM Roads					
	Upgradation to Black top	11.2	Km	8.0	89.6
Traffic Management					
	Upgradation of existing systems	1	Nos	50	50
Others					
	Bye pass road	1	Nos	470	470
	Road over bridge/Road under bridge	1	Nos	100	100
Total					**1034.6**

Total project cost for roads: Rs. 1035 lakhs

Currently, the length of storm water drains is only 167 km, which is 73 % of the total length of the roads of 227.5 km (including state highways). In addition to the projects in roads and SWD, improvement measures in the existing traffic management systems need to be undertaken. This includes setting up of automated and manual traffic signals. Over the last few years, it can be seen that the population growth is concentrated in the Rajakkamangalam road and Beach road junction. Hence, traffic management systems should be first commissioned in these areas.

Investment requirements in different areas for SWD

Area	Description of works	Quantity	Unit	Unit cost (In Rs.Lakhs)	Total cost (In Rs.Lakhs)
Kutcha drains					
	New construction	68	Km	1	68
Pucca drains					
	New construction	59	Km	8	472
Others					
	Cover slabs for pucca drains	2	Km	2	4
Total					**544**

Total project cost for SWD: Rs. 544 lakhs

Total project cost for roads and SWD Rs. 1589 lakhs

5.2.5 Rs. 190 lakhs required for street lighting services

Department In-charge – Engineering Department

Project Title – Improving the street lights

Project Manager – Municipal Engineer

Description:

Energy saving lamps, providing lightings at strategic locations

Justification:

There are 8604 streetlights; 23% of which are High power lamps (Sodium Vapour (SV) and Mercury Vapour) and 77% Tube lights. Solar lamps, energy saving lamps etc., in place of conventional lamps could be installed. Possibility of identification of sponsors for providing and maintaining lamps at strategic location should also be explored. An investment of Rs. 150 lakhs to improve the quality of lighting is required.

Investment requirements in different areas

Area	Description of works	Quantity	Unit	Unit cost (In Rs.Lakhs)	Total cost (In Rs.Lakhs)
Tube light					
	Installation	750	Nos	0.04	30
Sodium vapour					
	Installation	1500	Nos	0.08	120
Others					
	Timer switches	20	Nos	2	40
Total					**190**

Total Project Cost: Rs. 190 lakhs

5.2.6 Rs. 749 lakhs required for other services

Department-in-charge – Engineering department

Project title – Setting up slaughterhouses, parking spaces, improving hospitals etc

Project manager – Executive engineer

Description:

Improving the social and physical infrastructure of the town

Justification:

There are several projects that require immediate attention that would improve the overall living conditions of the town. Currently, the municipality has invested substantially to improve the basic infrastructure in all its schools. Apart from this, there are several project envisaged. This includes setting up of slaughter houses, improving the conditions of the hospitals and schools, providing parking spaces, setting up parks and playfields etc.

Investment requirements in different areas

Area/Description of works	Quantity	Unit	Unit cost	Total cost
Slaughter houses	2	Nos	42	84
Hospital - Improvement	2	Nos	10	20
School buildings -Improvement				25
Parks and Playfield	10	Nos	6.00	60
Crematorium (Electric)	1	Nos	30	30
Windmill				525
Parking space	1	Nos	5	5
Total				**749**

Total Project Cost: Rs. 749 lakhs

Total investment requirement for Nagercoil: Rs. 10450 lakhs

6. FINANCIAL OPERATING PLAN

The Financial Operating Plan (FOP) assesses the financial strength of the town to implement the identified investments. The assessment is done under two scenarios of 'Base Case' and 'Improved Case'. In the former case, a 'Business As Usual' scenario is assumed, while in the latter case, several improvement measures across the revenue items is assumed. The analysis highlights that the town's investment capacity is sustainable only under the 'Improved' Case with the implementation of the UGD scheme. If the town continues in the 'Business As Usual' scenario, then, it would be able to invest only 58% of the requirement, which would affect the service delivery levels

The Financial Operating Plan (FOP) forecasts the municipal finances on the basis of certain assumptions on income and expenditure. The primary objective of the FOP is to ascertain the investment sustenance capacity of the municipality under different scenarios of revenue enhancement and expenditure control. This would assist the decision-makers in structuring and implementing appropriate policy with the required management and operational interventions to maximise investment sustenance and achieve the goals set for provision and maintenance of basic services.

The investment identified is based on iterative process taking into account the loan, grant and ULB contribution. This further highlights the priority needs for future development and other immediate requirement contemplated by the municipality.

6.1 Need for a FOP

Under a 'Business As Usual' scenario, the municipality's existing revenue surplus is not being utilized effectively due to the various reasons viz. lack of an integrated approach to town development, inability to identify the priority sector for investment, inability to raise the required finances for funding and inability to tap into other sources of funds due to lack of a comprehensive FOP. Moreover, in the absence of a FOP, new projects would not be undertaken that would adversely impact the position of the town. In the event of the town not undertaking the project, the key problems would be poor infrastructure resulting in poor service delivery and loss of potential revenue from new revenue streams like UGD.

To counter these issues, the framework for FOP is developed that aids in harnessing the existing strengths of the town and also reducing the inefficiencies in the system, such that the town develops significant financial strength to undertake projects. In order to develop a FOP, there are several activities to be undertaken by the various stakeholders.

6.2 Assumptions for FOP

The FOP estimates the surplus that would be available for undertaking additional investments based on the current financial position. The investments are derived from the amount of surplus that is generated in the future. Not all the surplus can be used for capital works, as the municipality would also have to provide for additional O&M expenses for the upkeep of the assets.

The year-on-year surplus is translated into investment capacity i.e. project size (loan, grant and ULB component) based on certain preliminary assumptions regarding interest rate, repayment method and loan-grant mix. Additional O&M expenses have been estimated based on percentage of capital cost. A financial model has been created to depict the financial position of the Municipality. The model can be used to calculate future surpluses under various scenarios involving combinations of internal revenue improvement, state support, financing terms, etc.

6.2.1 Revenue Receipts Items

Taxes - Property and Utility-based taxes and Charges

The assumption adopted in forecasting property tax, water tax/charges, other tax items are essentially based on:

- Growth in assessments
- Tax demand
- Periodic revisions
- Collection performance

Other Taxes

Other tax items including fees, etc. are assumed to grow at the past growth trends, subject to a minimum of 7% and maximum of 10% per annum.

Own Income Sources

Non tax income from the municipality's operations and assets, like income from commercial activity, fees for permissions/ registrations, etc, rental income from properties, income from educational and health facilities, new connection charges, etc. are assumed to grow at the past trends, subject to a minimum of 7% and maximum of 12% per annum.

Revenue Grant

The recurring revenue grants like SFC grant are predetermined amounts based on the criteria specified by SSFC. Thus, these grants are assumed to grow at the current level of CAGR. The deduction from the SSFC grant would continue at the same level. The gross SFC grant (amount released by the state government) has been considered for projection in the FOP. The other revenue grants announced from time-to-time are assumed to grow at past trends, subject to a minimum of 7 per cent and maximum of 12 per cent per annum. These grants mainly include SFC developmental grant, Tenth Finance Commission/ Eleventh Finance Commission grant. The following table highlights the assumptions and scenarios for generating the municipal surplus

6.2.2 Revenue expenditure

The items of revenue expenditure under current heads of expenses and for current service levels are projected based on past trends subject to a minimum of 6% p.a. and maximum of 8% p.a. The additional O&M expenditure and debt servicing commitment of the municipality that would accrue due to new investments is also considered as incremental O&M expenditure.

6.2.3 Capital income and expenditure

The municipality receives capital grants from the government under various state and central government sponsored schemes for specific capital works. The income under such grants has not shown any specific trend during the last five years. In addition to the regular scheme-based capital grants, Government of Tamilnadu (GoTN) also extends grants for capital works for various capital projects.

The grants under the capital projects would not have any impact on the financial health of the municipality. Hence, the items under capital head are not considered for forecasting in the FOP. At the same time the grant received under this head are scheme specific grants, which means that it should be utilised for the same purpose for which it has been earmarked.

6.3 Property tax and water tax improvements have the maximum impact

The main areas of intervention, where improvement potential exists are enlisted below. The objective is to enhance the revenue generating potential that would aid in meeting the investment obligations of the town. These include

- Property taxes
- Water charges
- Shop market rents
- Others
  - Development / Betterment Charges
  - Building license fee
  - Trade licenses
- Expenditure control

The estimates for improvement potential for the various revenue sources are based on the discussions with the municipal officials. The investment potential is quite high, but would require immediate and sustained effort from the municipality. The improvement potential has been classified into three groups viz. improvement in collection, increase in rates and addition of new rates. The internal improvements is possible through increase in efficiency levels, while the external improvements will include changes like higher rates/taxes, additional charges etc. Increase in rates and introduction in new charges would both have an impact on the taxpayer/consumer and would therefore face resistance. The support of the council and the state government would be required for successful implementation of the changes.

6.4 Property tax / General tax

6.4.1 Rs. 830 collected per property per annum in 2004-05

The property tax (general tax) collection for the year 2004-05 was Rs. 533.68 lakhs, with an average collection per property of Rs.830 per annum. Taxes are also collected form the vacant land, Central/ State Government and PSU entities. The detail of the properties for the last five years is highlighted below.

Table 11: 2% growth in properties during 2000-01 to 2004-05

No of Properties in the register	2000-01	2001-02	2002-03	2003-04	2004-05
Residential Properties	47865	48678	50462	55055	52285
Non-Residential Properties	1435	1019	1318	1615	1078
Vacant Land Sites	315	315	315	315	315
Total	**25016**	**25251**	**25681**	**26658**	**27373**

6.4.2 Improvement measures can yield Rs. 6563 lakhs

Improvement in collection efficiency: The efficiency of property tax collection in 2004-05 was 62%, which is low. If the efficiency increases to 90 % and 60% (For Current and Arrears) from the existing 49% and 74% (For Current and Arrear), over a 5-year period from 2005-06 to 2010-11, it would generate additional Rs.4282 lakhs[20] (in current value terms).

[20] The efficiency gains highlighted for each improvement indicate the expected increase in revenue, if the other parameters of improvement are kept constant for a period of 15 years. Also, the overall gain would not be a sum of individual efficiency improvements

Inclusion of unauthorized properties: The existing number of person per property is 3.9, which is much above the benchmark of 5 indicating a very high level of coverage of properties in the register. If this level is maintained throughout the projected period till 2020-21, the probability of adding new properties into the register is low. However, if the growth in the number of properties were proportional to the population growth, it would capture the unauthorized properties as well. The expected gain from this improvement would be Rs. 4197 lakhs (in current value terms).

Rate increases: Property tax in Nagercoil municipality is assessed on the basis of Annual Rental Value of the property, which is based on the guidelines fixed by the council. The Annual Rental Value is estimated based on the basic value of the property, its age (depreciation), type of occupancy and the nature of building. The quinquennial revision of the property tax was last carried out in the second half of the 1998. The property tax rate is approximately 21% of the Annual Rental Value, which is payable half-yearly

The TNULB Act provides powers for determination of Basic Property Tax, Additional Basic Property Tax, etc., by municipalities. The municipality shall determine the basic property tax, the additional basic property tax and the concession, subject to the minimum and maximum rates prescribed by the Government, with regard to the age, for every building or land. The basic property tax for every building shall relate to the carpet area of the building and its usage. If the rates were increased by 30% every 5 years, it would yield Rs. 6270 lakhs in current value terms (The growth in number of properties would be as per the Base Case scenario).

6.4.3 Summary

If all improvement measures are undertaken as per the assumptions, the total additional revenue would to be Rs. 6563 lakhs (in current value terms)

Table 12: Rs. 6563 lakh revenue potential through improvement in Property tax

Improvement Measure	Revenue (In Rs. Lakhs)
Increase the efficiency from 49% (Current) and 74% (Arrears) to 90% (Current) and 60% (Arrears)	4282
Inclusion of unauthorized properties in the tax net	4197
Rate increase by 30% every 5 year	6263
All of the above measures combined	6563

Revenue: In current value terms

6.5 Water charges

6.5.1 Low coverage of 43% and low collection efficiency of 53%

At the end of 2004-05, there were 22750 connections (22038 domestic and 712 non-domestic connections) generating Rs.85.84 lakhs. The coverage of water connections (Number of water connection to Number of properties) is very low – 43%. Despite the distribution pipelines covering 95% roads, the low levels of water connections coverage could be attributed to the poor operational efficiency.

At the existing low levels of coverage of 43% and collection efficiency of 54% (5 year average), the average monthly per capita water collection is Rs. 32. The municipality has tried to improve the situation by increasing the water rates in 2003. However, this is a case of imposing more financial stress on the regular payers, which could have an adverse impact, if the supply situation is not improved

Table 13: 4.66% growth in water connection during 2000-01 to 2004-05

Connection details	2000-01	2001-02	2002-03	2003-04	2004-05
Domestic	1826	18984	19722	20968	22038
Commercial	528	528	528	532	180
Industrial	178	178	178	180	532
Total	**18962**	**19690**	**20428**	**21680**	**22750**

The monthly charges for Non-Domestic connections are thrice the Domestic rates. The details are highlighted below

Table 14: Water Charges details

Water rates (Rs.)	Domestic	Non- Domestic
Connection Charges	3000	6000
Monthly rates	50	150

6.5.2 Improvement measures can generate Rs. 1776 lakhs

Increase in connections: If the coverage (Number of water connection to Number of properties) increases to 80 % over a 5-year period from 2007-08 from the current level of 43% with the increase in properties as per the 'Improved Case' scenario[21], it would generate additional revenue of Rs. 1097 lakhs (in current value terms).

Collection efficiency gains: If the collection efficiency increases to 90% (For Current and Arrear) from the existing 66% (For Current) and 33% (For Arrear), over a 5-year period from 2007-08, it would generate additional revenue of Rs. 802 lakhs (in current value terms).

Rate increase: The rates have been increased in 2003. Hence an immediate increase would not be acceptable, given the current supply situation. However, over the years, with improved service delivery, if the rates were increased at 30% every five years, it would generate additional revenue of Rs. 1036 lakhs (in current value terms).

6.5.3 Summary

If all improvement measures are undertaken as per the above assumptions, the total additional revenue would to be Rs. 1776 lakhs (in current value terms)

Table 15: Rs. 1776 lakh revenue potential through improvement in Water tax

Improvement Measure	Revenue (In Rs. Lakhs)
Increase in number of connections	1097
Increase the efficiency from 66% and 33% (Current & Arrears) to 90% (Current and Arrears)	802
Rate increase by 30% every 5 year	1036
All of the above measures combined	3347

Revenue: In current value terms

[21] In this case, the number of properties growth is as per the existing level of 3 persons per household, which is higher than the existing growth rate of 2.28%

6.6 Shops & market rent

6.6.1 Improvement measures can generate Rs. 2202 lakhs

Currently, the municipality generates approximately Rs 151 lakhs from 141 shops that it owns. The shops are leased for a 3-year period with a contract to increase the rent by 15% after the end of the contract period.

Collection efficiency gains: If the collection efficiency were maintained at existing levels for Current collections (99%) and for arrears increased from 21% to 75% over a 5-year period from 2007-08, it would generate additional revenue of Rs. 1225 lakhs (in current value terms).

Rate increase: If the rates were increased at 30% every 3 years, instead of the existing 15%, it would generate additional revenue of Rs. 2192 lakhs (in current value terms).

6.6.2 Summary

If both the improvement measures are undertaken as per the above assumptions, the total additional revenue would to be Rs. 2202 lakhs (in current value terms)

Table 16: Rs. 2202 lakh revenue potential through improvement in Water tax

Improvement Measure	Revenue (In Rs. Lakhs)
Maintain the existing Current efficiency level of 99% and for arrears increase to 75% from the existing 21%	1225
Rate increase by 30% every 3 year	2192
Both the above measures combined	2202

Revenue: Current value terms

6.7 Other revenue sources can generate Rs. 2000 lakhs

The other heads of revenue include:

- Trade licenses
- Building license fees
- Others including Solid Waste Management charge

The trade license and building license fee generate approximately 1.17% of the total revenues. Hence, the absolute gains, which can be made from these sources are very small and would not have any tangible impact on the overall investment capacity of the town. The increase in revenue from these sources is expected to be Rs. 147 lakhs in current value terms. However, the revenue generation potential from the other components like Drainage charges, Bus stand fees, Library Cess collection charges, Fees from land and buildings etc has a significant impact and has a potential to generate Rs 1852.36 lakhs.

Table 17: Revenue potential for other sources

Category	Revenue (In Rs. Lakhs)
Trade Licenses	66.48
Building License fees	80.82
Others (including SWM cess)	1852.36
Total	1999.66

Revenue: In current value terms

In addition to the revenue improvement measures, the town also needs to focus on the areas of expenditure reduction.

6.8 Implementation measures

Revenue improvements under various heads are already identified above. In order to accrue the same, a will have to adopt two pronged approach – a) one that focuses on achieving revenue improvement very early so that investment capacity is scaled up and b) one that sustains these improvements and builds a recurring revenue generation capacity. Accordingly the following two approaches are suggested:

1. Immediate revenue improvement measures to increase the investment capacity
2. Long term measures to create a sustainable revenue generation capacity

The above approach would need to have five broad areas of focus-

1. **Small special cells** with expertise in specific areas such as GIS and IT. In addition, in the transition stage, the department will also have special cells to focus on one time assessment activities and legal changes.
2. **A high value group** is expected to be constituted to focus on commercial properties, institutions and large residential properties. The group would be provided MIS support by the full time co-ordinator for property tax.
3. **Outsourcing** is expected to be utilised in the proposed system. Outsourcing would require special skills in contract design, procurement, monitoring and in dispute management.
4. A systematic approach for **new assessments** and integrating the different databases of the corporation will also be an area of focus. The department structure will include a group of employees who will be tasked with updating the database of properties.
5. Lastly, the revenue department will be **decentralised** at the zonal or ward level. This decentralised department will undertake the core functions of collections and enforcement for both property tax and user charges.

In case of water charges, the following activities need to be carried out:

1. ULB should develop a volumetric metering, billing and collection system for water supply. This should cover -- redesigning of processes for collecting meter readings, redesigning of the billing system and the principles collection and enforcement.
2. It should unify decentralised collection staff across departments. Based on the outcome of the new operating structure the department would be reoriented to ensure that the manpower of the department is optimised so as to ensure better collection alongwith non duplication of efforts.
3. Design and implement a billing system, which should be linked with the GIS database and the accounting system.
4. Improve enforcement against defaulters by modifying byelaws with adequate recourse to ULB within the current framework of laws for enforcing disconnections on defaulters.

6.9 Areas of Expenditure reduction

There are several areas of expenditure reduction across individual department that would aid in increasing the revenue surplus of Nagercoil. Most of the highlighted area would involve engineering issues to determine the actual savings, which is outside the scope of this report. The following section highlights the key areas of expenditure reduction, which, if implemented would enhance the revenue surplus position of the municipality

Table 18: Key areas for expenditure control

Department	Sector	Area	Estimated reduction in O&M cost
Engg. Department	Water	1. The possible activities for reducing water losses include water leakage audit, installation of leak detection equipment and replacement of pipes 2. The possible activities for reducing operating costs include energy efficiency studies, employee training and appointment of competent private contractors through better scientific methods of bid process management	30%
	Roads and drains	1. Private Sector Participation (PSP) could be envisaged in project management at two levels viz. contract management and contract execution a. Contract management – This is an end to end service, wherein the private player would assist the municipality in selecting the bidders and then develop a project specific performance monitoring system to ensure optimal execution. b. Contract execution – This includes the selection of highly technical and experienced contractors with state-of-art technology and on time execution capability. 2. Municipal officials should be trained on the latest contract allocation and project monitoring techniques. 3. Computerization of records of the projects, current infrastructure, material details, contractor details, project evaluation systems, etc should be done. This would facilitate the process of project allocation and monitoring	Roads: 25% SWD: 20%
	Sanitation	1. Savings in usage of materials for sanitation works	30%
	Street lighting	2. Introducing telemetry system	25%
Health department		1. Energy conservation measures through higher usage of solar/wind energy, public awareness program on fuel efficiency, purchase of latest infrastructure 2. Study tour of several similar municipalities to identify potential reforms by adopting the specific best practices 3. Training sweepers on hygiene standards; medical professionals and other specialists in the department on the latest technology and equipment 4. Public awareness program on town cleanliness and citizens' responsibilities	15%
Revenue department		1. Centralisation of the tax collection system to avoid over-lapping and duplication. For example, for one commercial property, the property tax collection responsibility lies with the revenue department, while water charges, the responsibility lies with the engineering department; again, trade license is with the health department. By amalgamating these	

Department	Sector	Area	Estimated reduction in O&M cost
		departments on the basis of functionality, costs could be substantially reduced as well as pilferage in collection could be tracked. 2. PSP involvement in computerization, billing, collections and survey of properties. 3. Study to assess systems such as effective enforcement, out of court settlements, effective auctions. 4. Study to formulate an encroachment reduction and rehabilitation plan. 5. Training of employees 6. Computerisation of records of encroached properties, action taken, list of encroachers that would enable the linking to a comprehensive MIS/GIS system.	
Town Planning		A cost benefit study should be conducted to evaluate the possibility of the introduction of remote sensing/GIS. Mirzapur Municipal Corporation successfully introduced the GIS system by integrating property tax mapping with the infrastructure and services database through the unique location codes system.	

6.10 Alternative payment structures and incentive structure

In order to undertake water investment, the corporation may consider alternative payment structures for services like water. It could offer one-time payment options, where the connection fee is bundled with usage fees for a number of years. The packages could be made attractive by offering suitable levels of discounts. The advantages of such a structure include reduction in collection risk and reduced cost of billing and collections. The same could be used for other services, where the collection requires the effort of the municipal staff. A substantial portion of this staff would then be used to carry out other activities, which would result in better service delivery.

To improve the collection levels, the municipality could look at providing an incentive and penalty structure fro payment of the taxes and charges. The system in Karnataka could be a good example to emulate. The citizens are provided with a rebate of 5% of the total property tax, if it is paid within 30 days of the start of the financial year and then the normal charges are applied till 90 days. Subsequently, a penalty of 2% per month (24% p.a.) of the outstanding amount is applied. If this is communicated effectively to the citizens, there is a high possibility of increasing the collection levels.

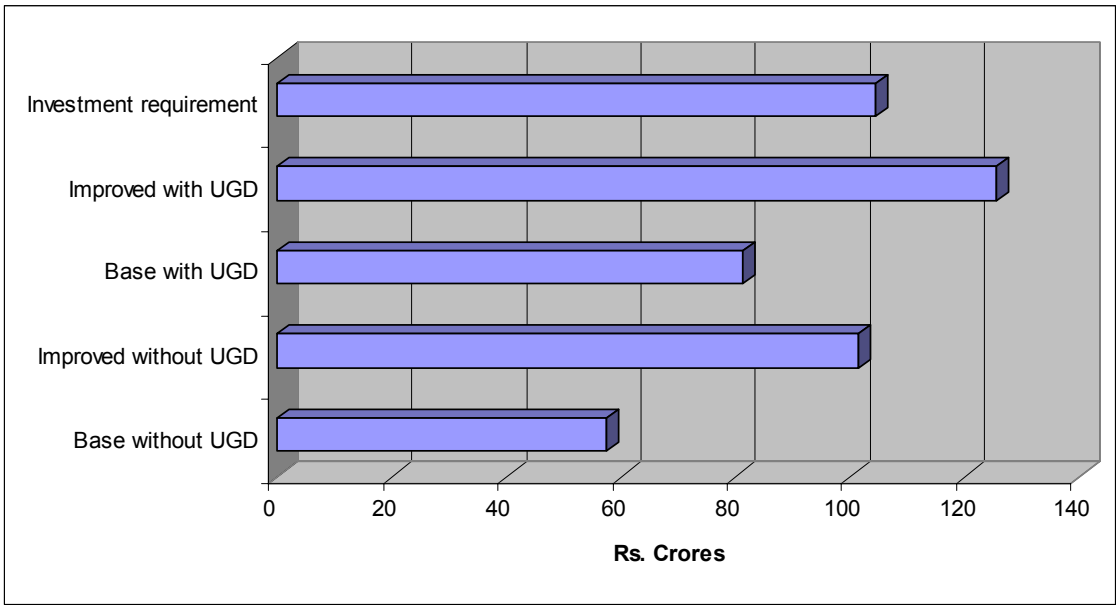
We have highlighted a list of actions in Annexure VIII that could be incorporated to increase the collection efficiencies.

6.11 The town can sustain up to 120% of investment – Rs. 125.5 crores

The FOP, as mentioned above has been estimated under 2 scenarios viz. Base Case and Improved Case. Based on the Demand Gap analysis and discussions with the town, the identified investment capacity, as mentioned in Section 5 is Rs. 10450 lakhs, which is based on the immediate requirement of the town, in the next 5 years. Under the 'Improved' scenario and implementing the UGD project, the town can sustain up to 120% of the investment requirement.

Scenario	Investment Capacity (Rs. Crores)	% of required investment
Base without UGD	57.46	55%
Improved without UGD	101.6	97%
Base with UGD	81.3	77%
Improved with UGD	125.53	120%

The town can sustain the complete investment



6.11.1 Summary Improvement measures with implementation of UGD scheme mandatory to sustain the complete investment

It is observed that Nagercoil municipality cannot sustain the identified investment in the base case. The municipality can undertake the complete investments, if improvement measures are undertaken by way of collection efficiencies, better coverage, new tariffs and upwards revision of tariff. Moreover additional investment would facilitate wider coverage of the system and hence increase in the tax-base and further enhance investment sustainability.

In addition to this, the municipality is required to undertake steps towards improving its affordability by several means such as enhancing revenue collection; revising property, water taxes, shop rent, building license rates; introducing new taxes such as underground charge, SWM cess; collection of advertising fee, cable charges; innovation in the revenue generation.

Improved management information system, enforcement and appropriate communications are important to introduce the management innovations. The most important in the entire revenue generation process is the commitment and support from the elected representatives and administrators.

In order of criticality with respect to contribution towards improved scenario, the ULB will have to focus on property tax and water charges, as both these contribute largest share of revenue. Any improvement in these two items would result in multiple impacts on the revenue collection. Hence the ULB have to focus on improving collection efficiencies, improving coverage followed by revision in rates.

7. ASSET MANAGEMENT PLAN

Nagercoil municipality has several assets that require regular maintenance for sustenance of reasonable service delivery levels. Nagercoil's average O&M cost during the period 2000-01 to 2004-05 was Rs.221 lakhs, which is 17% of its revenues. Given the high impact the O&M expenses have on the finances of the municipality, it is prudent to undertake a proper review of the assets under its control. This would aid in identifying the revenue generating assets as well as the ones that are causing a drain on municipal revenues. A comprehensive asset management plan aids in achieving the same. The municipality has several assets, which, if maintained properly would generate higher revenues.

Management of municipal assets is an essential part of urban management activity. Most municipal entities do not have a proper database; hence creating and listing assets is one of the first activities the municipality should carry out. An asset management plan typically involves the development and maintenance of infrastructure asset portfolios. This also ensures:

- Asset requirement and management driven by defined service levels and performance standards
- Scarce financial resources allocated properly and optimally investment
- Long-term approach in determining asset operations, maintenance and renewal

7.1 Classification of municipal assets

Municipal assets are normally classified into movable and immovable assets. All the assets developed, operated and maintained by the Municipality are termed as municipal assets and comprise roads, bridges, culvert, water supply system (distribution network, transmission main, pump sets, WTPs, etc), UGD distribution network, STPs, drains, and street lights. Social infrastructure assets such as schools, hospitals, parks and playgrounds, community halls, shopping complexes, stadium, and vacant land also belong to the municipality.

7.1.1 Activities of Asset Management Plan (AMP)

Asset identification and facilities audit

All movable and immovable equipment, immovable municipal properties, assets of municipality that have been developed, handed over or acquired over time from various sources and departments have to be identified and traced. This would include the detection of unrecorded infrastructure facilities, and properties; scrutiny of revenue records, land registers and land surveys, etc.

Updating and reconciliation of records

The municipality should record all movable and immovable municipal properties and assets and infrastructure facilities. Maps and master plans should be crosschecked and an infrastructure facilities audit should be prepared or updated (if already existing). A municipal facilities asset register should be compiled with approximate replacement asset values assigned. Additionally, present-day asset values should be assigned based on a 'condition-survey' of the infrastructure facilities. Land and property records should be crosschecked and municipal registers updated to include previously undetected land, properties and development. A comprehensive list of municipal land, properties and development should be compiled with approximate valuations assigned.

Assessment of revenue earning potential

Municipality should review the existing revenue earning potential of all its assets. New projects or initiatives should be taken to maximise the revenue-earning potential of assets including infrastructure facilities.

Computerisation of asset register

Focus should be placed on designing, testing and installing a database management system for municipal assets. All data, once complied should be classified on the basis of sector specific infrastructure facilities, land and properties. Specific software should be customized to suit local requirements and data should be translated into specified formats.

Training in database management

Training is the most important part of an asset management plan. Training should emphasize methods of simplified updation of data, and methods of monitoring and follow-up, relating to infrastructure facilities management, land use, litigation, encroachment, values, expenditure and revenue flows.

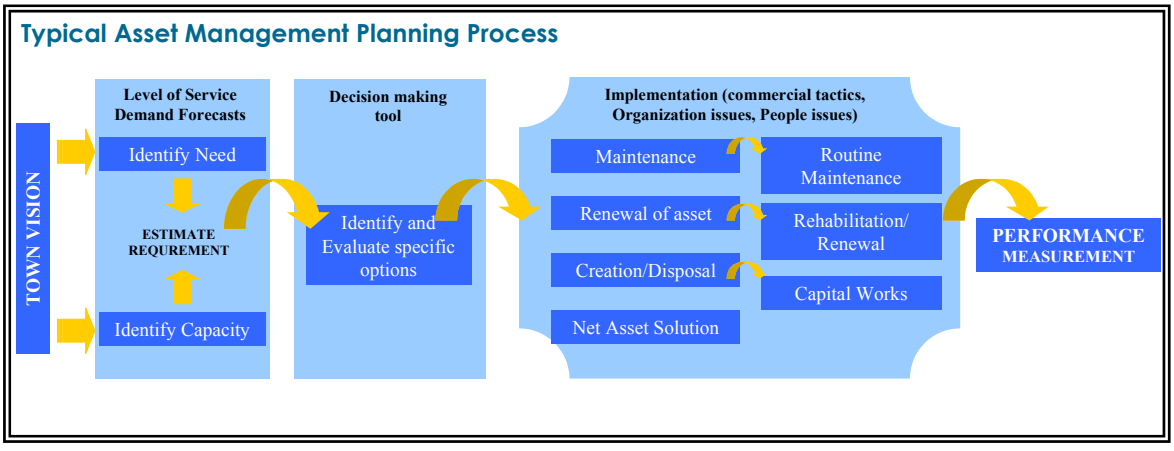
7.1.2 The process

Management of assets is an evolving process that improves as the understanding of asset conditions; their performance and operational costs improve. The benefits of implementing the asset management plan would include:

- Improved understanding of service level options and costs
- Improved decision making based on the benefits and costs of alternatives
- Proper justification of investments to stakeholders
- Proper timing and magnitude of investments
- Establishment and evaluation of performance benchmarks.

Some of the benefits associated with the development of an **AMP** of mixed urban infrastructure assets are effective management of assets, optimisation of maintenance expenses, reduction of emergency interventions and introduction of the IS0 9000 concept

Asset Management Plan - Process



7.2 Planning of Nagercoil municipal assets

In order to prepare the AMP, it is imperative to know the potential of these assets. The details of assets in Nagercoil municipality are provided below.

7.2.1 Non-remunerative asset

The non-remunerative assets are in the form of vehicles, which are used by different departments of the municipality. In addition to these vehicles, the municipality also uses vehicles for SWM activity. The most important activity is to maintain the vehicles used by the health department, since they are utilised on a regular basis and have maximum wear and tear. The details of the vehicles are enumerated below

Table 19: Motor vehicles owned by the municipality

Number of Motor Vehicles owned	Number	Original Value (In Rs. Lakhs)
Public Health	12	51.76
Details of Conservancy Vehicles	**Number**	**Age (Years)**
Tippers	2	5 & 15
Dumper Placer	1	7
FEL/JCB	1	9
Others	8	Varying between 8 and 15

Plan for vehicles maintenance

Vehicles owned by the municipality are poorly maintained. As a result, the life span of the vehicle gets reduced considerably. Hence, the municipality should draw up a plan to enter into a contractual agreement with the maintenance workshop for regular maintenance of municipal vehicles. This should also include a spot pick-up facility for vehicles in case of a break down during their operation.

A register that provides the maintenance work details of the vehicles on a daily basis should be maintained. The register would also detail the type of problems and the time taken for rectifying the same. The municipality should also specify the time frame for minor repairs and major repairs. These kinds of contracts would improve the productivity and life of the municipal vehicles. The register could be designed in the following manner.

Table 20: Typical structure of the register for maintenance contract

Sr. No	Vehicle No	Type of Vehicle	Municipal department	Problem	Cost involved for repair parts	Time in	Time out
1							
2							
3							

7.2.2 Remunerative asset

Most of the assets created by the municipality are under the central or state government supported schemes. Since the assets are remunerative in nature, it becomes more important for the municipality to maintain and utilise these optimally. The commercial complexes that form the most significant part of the asset base typically consist of shops, which are leased for a period of three years with a revision of 15%, which is less than the market rate. Hence it is imperative for the municipality to auction the shops in the open market so as to get the optimum returns from the investment.

Table 21: Details of remunerative assets owned by the municipality

Description	Number	Income
Bus Stand	2	51.16
Taxi Stand	2	0.20
Kalyana Mandapam	1	0.55
Commercial Complexes	6	22.50
Pay and Use latrines	5	15.56
Slaughter House	2	1.31
Markets – Local Body		
Daily	4	168.45
Weekly	1	2.26

Note: Income in Rs. Lakhs for 2004-05

The FOP considers the incremental increase in revenue potential from these sources. These are some of the elements that drive the business plan and ensure the timely availability of resources to sustain the assets in an acceptable condition for better service delivery. In addition to increasing the revenue potential, it is equally important to manage the assets is terms of their maintenance and rehabilitation. This would ensure reducing costs, improving reliability, and ensuring sustainability. Hence it is imperative for the municipality to have a highly simplified approach with a long-term schedule of delivery of actions and a set of short-term measures.

8. ACTION AND IMPLEMENTATION PLAN

As in any project, the success of this business plan is also contingent on the action taken by key stakeholders of the municipality. The immediate onus lies on the council, who would need to approve the plan and pass the council resolution. Subsequently, the municipality needs to initiate action in terms of mobilising the funds from the users. Simultaneously, it should make available its sources of finance. This would provide the needed impetus to the financial institutions to initiate their course of action. Also, during the implementation phase, the town should be flexible to undertake some changes across its departments that would aid in easier and faster service delivery in the subsequent years

The implementation of the project requires the involvement of several stakeholders throughout the implementation period, the most critical being the financial involvement of the lending agency, the state government and the ULB. The investment required would be released over a five-year period from various agencies. The lending agencies provide the loan, while the state government would provide the support through the budgetary grant. The budgetary grant has been assumed at 30% of the total investment requirement.[22] The ULB's contribution is assumed at 10%. The amount and the timing of the financial involvement are highlighted in the table below.

8.1 Implementation schedule

8.1.1 Improved scenario without UGD project

Under this scenario, the investment towards windmill under 'Others' has been excluded, as the town can sustain only up to 97% of the total estimated investment (in the normal scenario). However, the key point to be noted is that, even without generating any revenues from the UGD connections, UGD project can be implemented. This signifies the strong financial position of the town.

Table 22: Project phasing - Without UGD tariff

Sector wise Phasing	I year	II year	III year	IV year	V year	Total
Water supply	151.25	605.00	453.75	-	-	**1210.00**
Storm Water Drain	-	68.00	272.00	204.00	-	**544.00**
Sanitation and Sewerage	847.75	3,391.00	2,543.25	-	-	**6782.00**
Solid Waste Management	-	51.25	205.00	153.75	-	**410.00**
Roads						**564.60**
Transportation	-	-	-	25.00	25.00	**50.00**
Street lighting	-	23.75	95.00	71.25	-	**190.00**
Others	-	-	28.00	112.00	84.00	**224.00**
Total	**999.00**	**4139.00**	**3597.00**	**566.00**	**109.00**	**9974.60**

[22] For Karnataka ULBs, under the World Bank aided projects, it has been assumed at 40%. Since, we would like to adopt a progressive approach in making the ULBs self reliant, the grant level has been reduced to 30% in this case

Table 23: Key responsibilities - Without UGD tariff

Stakeholders	Actions	Pre - Project	I year	II year	III year	IV year	V year	VI year onwards
	Financial							
TUFIDCO/TUFISIL	Release of loans		360.2	2558.3	2699.0	670.1	214.1	
Govt. of Tamilnadu	Release of grants		299.7	1261.0	1176.0	306.4	91.8	
Nammakal municipality	ULB contribution		339.1	384.0	44.9	44.9	0.0	
Public	Initial contribution for new projects like UGD							
	Physical							
Council	Resolution to undertake the project/ Signing the MoU							
Implementing agency	Implementation of the projects							
TUFIDCO/TUFISIL	Monitoring of the implementation							
Govt. of Tamilnadu	-do-							
Nammakal municipality	Monitoring of the implementation							
	Repayment of loans							
Self Help Group (Public)	Feedback/Highlighting pitfalls							
	Providing ground level support							

8.1.2 Improved scenario with UGD project

The connection and tariff for the UGD project has not been decided. Hence, the investment capacity is based on assumed charges[23]. The connections charges have been assumed at Rs.2500, Rs. 5000 and Rs. 7500 for residential, commercial and industrial respectively. Similarly, the monthly tariffs have been assumed at Rs. 100, Rs. 150 and Rs. 200. Under this scenario, the town can sustain the complete investments and would have a surplus.

Table 24: Project phasing - With UGD project

Sector wise Phasing	I year	II year	III year	IV year	V year	Total
Water supply	151.25	605.00	453.75	-	-	**1210.00**
Storm Water Drain	-	68.00	272.00	204.00	-	**544.00**
Sanitation and Sewerage	847.75	3,391.00	2,543.25	-	-	**6782.00**
Solid Waste Management	-	51.25	205.00	153.75	-	**410.00**
Roads						**564.60**
Transportation	-	-	-	25.00	25.00	**50.00**
Street lighting	-	23.75	95.00	71.25	-	**190.00**
Others	-	-	28.00	112.00	84.00	**224.00**
Total	**999.00**	**4139.00**	**3597.00**	**566.00**	**109.00**	**9974.60**

[23] This has been assumed based on the graded tariff levels of Cuddalore, which is of a similar population profile. The charges assumed here are much lower than Cuddalore.

Table 25: Key responsibilities - With UGD tariff

Stakeholders	Actions	Pre - Project	I year	II year	III year	IV year	V year	VI year onwards
	Financial							
TUFIDCO/TUFISIL	Release of loans		699.3	2852.4	2473.0	351.3	76.3	
Govt. of Tamilnadu	Release of grants		299.7	1241.7	1079.1	169.8	32.7	
Nammakal municipality	ULB contribution		0.0	44.9	44.9	44.9	0.0	
Public	Initial contribution for new projects like UGD							
	Physical							
Council	Resolution to undertake the project/ Signing the MoU							
Implementing agency	Implementation of the projects							
TUFIDCO/TUFISIL	Monitoring of the implementation							
Govt. of Tamilnadu	-do-							
ULB	Monitoring of the implementation							
	Repayment of loans							
Self Help Group (Public)	Feedback/Highlighting pitfalls							
	Providing ground level support							

8.2 Activities and responsibility

Apart from financial involvement, the stakeholders are also responsible for implementing the projects. In order to ensure effective implementation, the involvement of the citizens is required. It would be more effective, if the citizens form SHG to represent their problems and provide regular feedback to the ULB.

8.2.1 Involvement of elected representatives

All these efforts would be effective only if there is a sustained co-operation from the council members, who would have to lay the path by adopting the business plan and adhering to the implementation schedule identified. Several of the revenue improvement initiatives would also need support from the councillors, while in other areas, the council would need to support the enforcement measures that are taken by the administration. Some of the key areas where active support is required are:

Provide minimum number of public fountains - The public fountains (644) in the town may be a limiting factor in adding water supply connections. Public fountains would need to be minimized in a phased manner so that the households are encouraged to opt for regular connections. Alternatively households that benefit from public fountains may need to be charged at regular rates. Such a measure, due to its inherent unpopularity, would need to be approved by the council.

Increase in water charges - Increase in rates is inevitable to bridge the revenue deficit. The council's support in this measure is vital.

Coverage of unregistered properties - The revenue department has identified that some properties do not pay taxes. Council action can help in recovering revenues from these properties that are currently not registered in the property tax database. Including them in the property tax database can yield large one-time revenues in the form of penalties, building license fee and betterment charges. Also, these properties will be sources of regular property tax income.

SWM charges - The support of the council is required for the user charges

Regularisation of unauthorized layouts - The Nagercoil municipality is currently losing substantial revenues on this account. Around 60 acres of unauthorized lands currently exist in the peripheral areas. The recently issued G.O. for the regularisation of unauthorized layouts needs to be incorporated by passing the council resolution. Discussions with the officials revealed that an indicative assessment of the cost involved in the development of these layouts is not possible. Hence, it was unable to determine the cost-benefit of regularising these layouts.

Institutional arrangements for the water & UGD functions - The institutional issues in the water and UGD functions and the available options need to be debated within the council.

Auctioning clearance - Auctioning of shops instead of the current allotment method based on pre-determined rent could be examined.

8.2.2 State government support

In addition to facilitating the above institutional measures, the state government's involvement would be necessary in the removal/reduction of exemptions, if any. The state government may also facilitate and provide the required support to enforce water rate hikes and impose SWM cess.

8.3 Actions require during implementation of the business plan

8.3.1 Land management, urban economy and environment

A strong coordinating mechanism between the municipality and the Local Planning Authority (LPA) of the area is needed. For successful implementation of the business plan, the following actions would be necessary:

1. The municipality to constitute a core planning team consisting of representatives of town administration, representatives of LPA, representatives of industry and commerce and representatives of civil society. The responsibilities for this team would be:
    - Firming a medium term (ten years) strategy plan for the LPA, clearly bringing out the relationship between the core town and its hinterland (different from the conventional master plan)
    - Establishing the role of stakeholders in the implementation of this medium-term plan
    - Identifying investments in the public sector to trigger private sector investments, and
    - Monitoring the implementation of the plan and carrying out course corrections as needed.
2. LPA to delegate the powers of issue of planning permissions to the ULB, retaining the power of supervision.
3. The municipality to set up a permanent interdepartmental infrastructure planning and development cell for continuing action on the business plan with dedicated staff. For this purpose the ULB should associate with a professional consulting firm or specialists to bring in new innovations and cost effective practices.
4. The municipality should also constitute a town-level advisory committee (drawn from local chambers of commerce, NGO and responsible citizens) to provide inputs to the planning and development cell mentioned earlier.

8.3.2 Performance targets for revenue section

A clearly defined geographical responsibility with a target for improving coverage across all revenue sources and individual revenue targets for monitoring the performance would increase the productivity per staff. Supervisory staff like Revenue Inspectors (RI) and higher-grade officials should handle the accounts of chronic defaulters and high value customers such as large commercial properties, and government buildings.

8.3.3 Supervisory requirement for Revenue section to handle issues

Given the large scale and width (activities across several departments of the municipality) of the revenue improvement program, substantial focus on system related activities would also be required. Under this circumstance, the supervision needs to be at a senior administrative level within the municipality. A senior level officer at a rank below that of the Commissioner could carry out this task. The key activities would be:

On a day to day level

- Supervise revenue functions
- Interpret revenue MIS
- Initiate required corrective actions

For the medium term

- Understand the trends of revenue collections
- Initiate long-term corrections such as inclusion of previously unassessed properties.
- Enforce and collect revenues that are slipping like advertisement fees
- Manage the system and technology changes

In the short term

- Oversee implementation of the revenue generation plan
- Undertake survey of the entire town to assess the revenue generation potential
- Create and update the revenue database linking it to various departments such as water, health, etc for automatic actions and enforcements
- Identify unauthorized buildings (commercial & residential) within the municipal jurisdiction.

All the above functions can be housed within the revenue section, if the proposed integration of commercial functions occurs.

8.3.4 HRD improvement measures

For undertaking the changes, significant training needs to be provided. Unless, the employees undertake the identified projects, their success is suspect. In order to ensure that the projects are implemented properly, proper capacity building measures are required.

The training needs to be undertaken for the elected representatives and the ULB staff at various levels in various areas of urban governance. The training programme needs to be conducted at the local, district, and state levels; and out side the state for any specialised training. The CMA has to prepare a detailed curriculum for each training module; if external consultants are preparing the curriculum and training material, it is better to involve the same group of consultants in training. The training should be given to a fixed number of personnel selected from each department; these personnel, in turn would train the other employees. Thus, in effect, it would be a training for the trainers.

The key areas in which, training is required are

- Local governance and urban management for mayors, chairpersons, other elected officials and other senior ULB staff
- Financial management for managers, revenue officers and accountants and related officials
- Improvement of service delivery for Town Planning Officers (TPO)
- Office management and use of computers for ULB office management
- Social safeguards and environmental management for senior and middle level ULB staff

The key points to be covered in the training would be highlighting the best reform initiatives across the country viz. specific reform initiatives such as property tax, solid waste management, revenue improvement and accounting reforms, as well as showcasing the 200 plus reform initiatives from Indian cities that were a part of the 'CRISIL Awards for Excellence in Municipal Initiatives'. The following table highlights some of the training components required in the ULB.

Table 26: Basic Training

Position/Designation	Area
Commissioner, Manager, Revenue department	Improvements in commercial orientation and customer service
Commissioner, Manager, Municipal Engineer	Transfer and redeployment strategies and implementation of the same
Commissioner	Review of performance management systems
Respective department clerks and officials	Functional areas like Commercial, Regulatory, Finance & Accounts, Internal Audit, Corporate Planning, Technical Operations, and IT etc.
Commissioner	Communication strategy to address key stakeholder and reform related issues
Commissioner, Manager	Change enablement and communication mechanisms to create awareness amongst various stakeholders' viz. employees etc.
Municipal Engineer	Private Sector Participation
Manager	Property survey and mapping
Municipal Engineer, Manager	Systems and procedures of utilizing the property survey database to increase revenues from property tax which will include setting up improved systems in terms of: billing, collection and receivables, monitoring and follow-up, accountability and transparency, human resource management and availability, and capacity building of the staff.
Commissioner	Reorganizing the Revenue Department for achieving better tax administration and training of revenue staff, Advise on reorganisation of Revenue Department, Training and Study Tours
Chief Accounts Officer	Analyse the prevailing fiscal status of the ULB
Manager, Chief Accounts Officer	Penal provisions & dispute resolution
Chief Accounts Officer	Available funding options and Accessing donors

Table 27: Specialized training

Position/Designation	Area
Commissioner	Organisation structure - Its roles and responsibilities, Developing a proper residual and successor entity
Commissioner	Identify the strengths, weaknesses and constraints of private sector participation in urban infrastructure, healthcare and education
Commissioner, Chief Accounts Officer	Credit enhancement options for the ULB, which would enable them to raise debt in the capital markets
Chief Accounts Officer	Asset inventory and valuation
Programming Officer	Software development and training
Commissioner	Prepare a vision document.
Municipal Engineer, Town Planning Officer	Project Preparation, Procurement Process, Sectoral and tariff issues, Contracts & risk issues, Managing consultants,
Commissioner, Manager	Formulation and implementation of communication strategy
Commissioner, Manager	Development of Role definition at each hierarchy

8.3.5 An integrated commercial approach

Currently, the facility centre of the municipality carries out the billing functions for various departments. Additionally, the follow up action and enforcement measures are carried out independently without actual coordination between the departments. This leads to duplication and also weakens the enforcement efforts. Additionally, it is difficult to generate effective MIS, as it is difficult to integrate the data from the respective sections.[24]

It may therefore be useful to integrate the commercial functions of the various sections. This would both rationalise the requirement for staff as well as lead to greater co-ordination between the commercial activities of the various sections. It would greatly assist in the identification of unauthorised properties, disconnection of water to such properties and those properties not paying municipal taxes. The revenue section could take up this responsibility, as the revenue section would have a larger database of properties than the engineering or health sections; the daily operating load of the section has come down due to the computerised bill generation process that has relieved resources, which may be deployed for integrated commercial activity. The integrated activities, which could be handled by the revenue section, could include the following:

[24] To some extent property tax and water connection data can be integrated. But the utilisation is presently very limited.

Table 28: Integrated activities of the revenue section

	Water supply related	Revenue section related	Health section related
Billing activities	Generation of water bills, delivery of water bills, collection, MIS generation	Shop rent bills, MIS of property tax, Building permissions	Trade License, SWM charge
Field activities	Detection of unauthorized connections, disconnection of water supply	Identification of unauthorised development	Detection of new trades, proceedings against trade owners
Co-ordination	Co-ordination within the municipal department for regular updation of the database (in co-ordination with building permissions issue) and for enforcement functions (disconnection of water supply, proceedings against property etc)		

The integration would yield several benefits. On the operational front, this would ensure an integrated database for all revenue-related functions and provide an impetus for the financial management function, as it would allow development of long-term financial plans. This would also provide an integrated approach to fund mobilisation for the municipality through a better portfolio of rate increases. On the management front, it would provide the ability to integrate the commercial data with the accounts information and thereby provide relevant MIS

On the service delivery front, it would provide integrated billing to customers and a single point customer grievance handling; it would also be easier to out source certain functions like bill delivery and collections in the integrated structure. On the human resources front, it would develop a common enforcement strategy and the staff required for billing and collections would also be rationalised. The revenue section could also draw on the existing staff of the engineering and health sections that would be freed up due to the transfer of commercial functions.

Given the nature of operations of the section, it is necessary that someone who is also fulfilling the financial management function head it. The current skills heading the revenue section may not be sufficient for the function. If an officer with the necessary skills cannot be dedicated from within the municipality, external recruitment may be required for the same, failing which the role may have to be carried out by the commissioner.

8.4 Some key measures that could aid in implementation of the business plan

There are some innovative and interesting methods adopted by various ULBs across the country that have aided in improving the operational and financial efficiency of the respective ULBs. Nagercoil municipality can undertake a few of the highlighted initiatives that could aid in improving the efficiency levels. A detailed listing of other initiatives are highlighted in Annex

8.4.1 Professionalization of workforce – AMC

Ahmedabad Municipal Corporation took an important step towards the professionalization of its workforce by recruiting certified Chartered Accountants and graduates with Masters' degree in Business Administration.

8.4.2 Slum sanitation with community Participation - PMC

Municipal corporations have 'conservancy' departments whose duty is to clean and maintain toilet blocks, drains, streets and the like. However, it has been widely recognised that this staff is usually remiss in their duties and hence the toilets soon fall into disrepair and disuse. Since the local community does not have any control over the sanitation staff, the latter do not respond to their concerns. Often, communities have to pay additional money to the same workers to persuade them to clean the toilets.

The city of Pune carried out a major experiment of building toilets in slums through community participation by giving contracts to non-governmental organisations. Advertisements were issued in the newspapers inviting NGOs to come forward and make bids for building toilets. They were expected to quote a lesser cost. A guarantee was also to be given that the NGO and the community would maintain the toilet block for thirty years by collecting contributions from the community.

Eight NGOs were selected to carry out the work. Weekly meetings, which were attended by the municipal commissioner, relevant staff, NGOs and community representatives, were held to monitor the progress of the work and deal with impediments. Slum dwellers, especially women, were actively involved by the NGOs in this project. Community members were trained in various aspects of maintenance like electrical issues, carpentry and so on.

Several innovative features were incorporated in the toilet design. For example, a caretaker's room was provided over the toilet to house a family. This room was an incentive for the family that would take charge of maintenance. In some cases, where space permitted, a community hall was built that could be used for social and ceremonial purposes in the slum.

More than 400 toilet blocks with over 10,000 seats were built at a cost of about Rs. 40 crores. Assuming that 50 persons use a toilet seat a day, more than five lakh people in the slums have benefited from the programme.

8.4.3 Park management committees - MCL

In Ludhiana, neighbourhood 'park management committees' undertakes the maintenance of around 70% of the parks. They hire gardeners and are reimbursed by MCL @ Re. 1 per sq. metre per month. This system has resulted in saving of around 80% for MCL and also avoids the hassles of absenteeism, unionism and continuous supervision.

8.5 Way forward

Several parallel initiatives need to be implemented by all the stakeholders (municipality, elected representatives and the state government) to fully realize the revenue improvement potential. It is proposed to discuss this report in a citywide discussion with the stakeholders and councillors to reach a consensus on the improvement measures that would be pursued. The supporting plan for these measures, including those identified in this report along with a time-bound plan with identified implementation responsibilities has been highlighted in the Memorandum of Association (MoA) for the town's discussion and approval.

9. DRAFT MEMORANDUM OF UNDERSTANDING BETWEEN NAGERCOIL MUNICIPALITY AND TNUIFSL

The council has evaluated the proposed implementation of business plan for possible funding by World Bank. The council has held discussions with all local elected representatives & officials in the stakeholder consultation workshop and noted that all were in agreement with the proposal for implementing the Business Plan.

The council took note of the following facts placed before it during the discussions:

- The Government of Tamilnadu (GoTN) had nominated TNUIFSL, Chennai as the nodal agency for the proposed funding from the World Bank
- After taking into account its present/potential financial status and capacity for O&M/repayment of loan, the following priority infrastructure works have been identified/proposed under the project for this town with the loan-grant-own contribution mix as indicated in the table below:

Item-wise Base Costs for Identified Components

S. No	Item of Works	Total	Loan	Grant	ULB Contribution
1.	Water Supply				
2.	Sewerage & Sanitation				
3.	Roads				
4.	Storm Water Drains				
5.	Street Lighting				
6.	Solid Waste Management				
7.	Social Infrastructure				
	Total				

(In Rs. Crores)

- All cost and time overrun burden is to be borne by this ULB and that the GoTN or TNUIFSL will not be responsible for the same
- Carrying out reforms and complying with pre project conditions/actions as suggested by the GoTN/TNUIFSL as mentioned in the **Service Level Agreement** that shall be the qualifying criteria for disbursal of the funds
- The terms of the loan will be
    a. Interest rate - 8.5%
    b. Term – 20 years
    c. Moratorium – 5 years

The council agrees to the following points:

- Issues presented in the project report and to agree to follow all directions of GoTN/TNUIFSL towards execution of the project
- Assure and ensure utilization of assets created under the project
- Draw the loan part for the execution of the works and repay the loan with applicable interest as per schedule
- Open a joint account with Deputy Commissioner for the project and to agree to deposit the ULB's share every quarter (10 % of the cost of the tendered works) failing which to abide by action taken by GoTN/TNUIFSL

- Conform to the subsequent change, if any, in the loan-grant composition made by GoTN
- Undertake the following minimum reforms during the FY 2006-07 and to improve during the loan period to achieve the target set for every year:
    a. Listing of assets of the ULB and maximizing efficient use of the same, revenue generation from municipal properties through collection of land rent/lease covering at least __percent municipal properties, improved collection of land rent to at least __ percent demand
    b. Listing of all trade activities and improving collection of trade license fee to at least __percent of demand.
    c. Revising water tariff as per ___GO, identification/regularization of unauthorized water connections, improved collection of at least __ percent of water tariff.
    d. Collection of at least __ percent of water and sewerage connection charges within a year and then invite the tenders for water supply and sewerage schemes.
    e. Imposing solid waste management cess/fees.
    f. Increasing coverage with respect to property tax collection - bringing at least __ percent properties into the tax net, increasing collection efficiency and ensuring arrears collection of at least ___ percent and collection of at least __ percent of current demand for property tax.
    g. Computerizing municipal systems and procedures.

- Undertake public awareness through ward-level consultation workshops, with NGO involvement, improving the image of the ULB and generating confidence among citizens regarding the ability of the ULB to deliver quality services
- Acquire land, free from all encumbrances / encroachments, required for all identified projects before project loan effectiveness
- Solve all problems (like agitation) during construction activity and to ensure timely completion of the work as per schedule
- Offer necessary co-operation/coordination with consultants, PMU/Divisional Offices/NGOs and various other agencies involved in implementation of the project
- Undertake full responsibility, in respect of civil works, for quality assurance and joint measurement of completed works and to assure full co-operation and co-ordination and to agree to all pre-qualification requirements and bidding procedures of World Bank and to impose penalty, if any, from the first bill itself;
- Undertake that no variation order without citing reasons for variation as well as working out the time and financial implications, will be issued subsequent to tendering without prior approval of TNUIFSL
- Carryout the all the directions of GoTN/TNUIFSL.

Finally, the Council agrees to bind itself to these terms, which would form part of future agreement with GoTN/TNUIFSL, and further resolve to authorize the Commissioner/Chief Officer to take necessary action to get the above mentioned infrastructure facilities to this town. The Council further agrees to authorize the Commissioner and Chairman to sign the sub-loan agreement with TNUIFSL.

Sd/
Chairman of the council
Date

Commissioner
Nagercoil municipality

Service Level Agreement

Category	Description	Unit	Target - Year 5	Year 1	Year 2	Year 3	Year 4	Year 5	Reforms and Action Required by the ULBs
Demography									
	Population	Number							
	Annual Growth	%							
	Below poverty line families	Number							
	Developed Land Area	Sq. Km.							
	Undeveloped Land Area	Sq. Km.							
	Residential Land Area	Sq. Km.							
	Transportation Land Area	Sq. Km.							
Service levels									
Water Supply									
	Gross Per Capita supply	Litres							
	Net Per Capita supply	Litres							
	Elevated Storage Capacity/Total Supply	%							
	Ground Storage Capacity/Total Supply	%							
	Treatment Capacity/Total Supply	%							
	Length of Distribution Network	Km.							
	Transmission & Distribution losses	%							
	Public Stand posts	Number							
	Public Bore well	Number							
	Population having access to water sources	%							
	Supply	Hours/day							
Sewerage & Sanitation									
	Municipal area covered by sewerage system	%							
	Municipal area covered by Public convenience system	%							
	Municipal area covered by Septic Tanks	%							
	Treatment Capacity/Total Supply	%							
	Roads Covered by sewerage system	%							

Solid Waste Management									
	Daily per capita waste generated								
	Primary Collection Capacity	MT							
	Secondary Collection Capacity	MT							
	Door to Door collection coverage	%							
	Total Rated capacity of vehicles/Total waste generated	%							
	Average Spacing between Dustbins	Meters							
Storm Water Drain									
	Municipal Area covered with SWD	%							
	Population covered by SWD	%							
Roads									
	Municipal Area covered with SWD	%							
	Population covered by SWD	%							
	Per Capita Road length	Meters							
	Road Density	Km/Sq. Km.							
Street Lighting									
	Spacing between Streetlights	Meters							
Efficiency Levels									
Property Tax									
	Residential Properties	Number							
	Commercial Properties	Number							
	Industrial Properties (If any)	Number							
	Vacant Land	Number							
	Collection efficiency	%							
	Arrears as a % of the total	%							
Water									
	Metered Residential Connections/Total Residential properties	%							
	Metered Commercial Connections/Total Commercial properties	%							
	Metered Industrial Connections/Total Industrial properties (If any)	%							
	Collection efficiency	%							
	Arrears as a % of the total	%							
	Unauthorized connections/ Total	%							

	Connections								
Sewerage & Sanitation									
	Sewerage connections/Total number of properties	%							
	Septic Tanks/Total number of properties	%							
	Low Cost Sanitation/Total number of properties	%							
	Number of Slum residents per seat of Public convenience	Number							
Solid Waste Management									
	Collection efficiency	%							
	Road length per staff	Meters							
	Disposal site capacity/Total Waste Generated	%							
	Area covered per conservancy staff	Sq. Meters							
Storm Water Drain									
	Road covered with Pucca Open Drain	%							
	Road covered with Pucca Closed Drain	%							
	Road uncovered with SWD	%							
	Pucca Drain/Total SWD	%							
Roads									
	Roads Surfaced (any kind of surfacing)	%							
	Concrete Road/Total Road	%							
	Black Top Road/Total Road	%							
	Earthen & Other Road/Total Road	%							
Street Lighting									
	Tube lights/Total Lights	%							
	High power lights/Total Lights	%							
	Other Lights/Total Lights	%							

ANNEX

Assumptions adopted for FOP

Important Assumption Adopted for Financial Operating Plan

Item		Assumption Adopted for Forecast	Base Case	Improved case
A	**General Purpose/ property tax**			
1	Forecast based on.	⇒ Growth in assessments ⇒ Tax demand ⇒ Periodic revisions and ⇒ Collection performance		
2	Growth in assessments	Current CAGR in assessments of 1.99% and Current CAGR in population of 0.9%	Minimum of current CAGR in population/ Household size (3.9)	Maximum of current CAGR in assessments /Household size (3.9)
4	Average Property tax demand	Average demand per assessment in 2004-05 is Rs.829.49.	The current level would continue	Increase by 30% every five years from 2006-07
5	Collection Performance	Collection performance in 2004-05 is: Arrears- 49% and Current- 74%	The current level would continue	Arrears- Reach 60% Current- Reach 90% (Both over a 5 year period)
B	**Water tax/ charges**			
1	Forecast based on:	⇒ Growth in connections, ⇒ Minimum monthly charge, ⇒ Periodic tariff revisions and ⇒ Collection performance		
2	Growth in connections	Coverage of House Service Connections to the number of properties in 2004-05 is 43%	The current level would continue	Gradual increase in number of connections from 2006-07 and would reach a coverage of 80%
3	Minimum monthly charge	Average demand in 2004-05 is Rs. 42 per connection per month.	The current level would continue	Increase by 30% every five years from 2007-08
4	Collection Performance	Collection performance in 2004-05 is: Arrears- 33% Current- 66%	The current level would continue	Arrears and Current - Over a 5 year period, reach 90%
5	New connection charge	New connection fee Domestic – Rs.3000/- Non-Domestic – Rs.6000/- Weighted average – Rs.3094/-	The current level would continue	Increase by 30% every five years from 2007-08
C	**Shops and Market rent**			

Item		Assumption Adopted for Forecast	Base Case	Improved case
	Forecast based on:	⇒ Growth in shops, ⇒ Minimum monthly charge, ⇒ Periodic tariff revisions and ⇒ Collection performance		
1	Growth in number of shops	Current level – 141 (CAGR of 0.36%)	Current level of growth in number of shops CAGR – 0.36%	
2	Minimum monthly charge per shop	Average demand for the last 5 years is Rs. 8218/shop/ month.	Increase by 15% every 3 years from 2007-08 (As per the existing practice)	Increase by 30% every 3 years from 2007-08
3	Collection Performance	Collection performance for 2004-05 is: Arrears- 21% Current- 99%	The current level would continue	Arrears- Reach 75% Current- Maintain existing level of 99% (Both over a 5 year period)
D	**Trade Licences**			
1	Forecast based on:	⇒ Growth in trade licenses, ⇒ Minimum monthly charge, ⇒ Periodic tariff revisions and ⇒ Collection performance		
2	Growth in number of building licenses	Average number of licences over the period 2000-01 to 2004-05 – 2820 Current growth of 0.36%		
3	Minimum monthly charge per shop	Average demand in 2004-05 is Rs.19/license/ month.	The current level would continue	Increase by 30% every 3 years from 2007-08
4	Collection Performance	Collection performance for 2004-05 is: Arrear – 25% Current- 94%	The current level would continue	Arrears- Reach 75% Current- Maintain existing level of 94% (Both over a 5 year period)
E	**Building Related Taxes (Building License)**			
1	Forecast based on:	⇒ Growth in building licenses, ⇒ Minimum monthly charge, and ⇒ Periodic tariff revisions		
2	Growth in number of building licenses	Number of licences in 2004-05 - 562 Current growth of 0.36%		
3	Minimum monthly charge per shop	Average demand in 2004-05 is Rs.126/license/ month.	The current level would continue	Increase by 8% every 5 years from 2007-08
F	**Other Tax**			
1	Basis of Growth assumption	⇒ Base Case: Forecast adopting current average growth rate, subject to minimum of 7% and maximum of 10%. ⇒ Improved Case: Forecast adopting current average growth rate, subject to minimum of 8% and maximum of 12%.		
G	**Non-tax income**			
1	Income from comm. activity, Inst., fees and contribution, user charges & Others	⇒ Base Case: Forecast adopting current average growth rate, subject to minimum of 7% and maximum of 10% ⇒ Improved Case: Forecast adopting current average growth rate, subject to minimum of 8% and maximum of 12%.		

Item		Assumption Adopted for Forecast	Base Case	Improved case
H	**Revenue grants**			
1	SFC grant	⇒ Base Case: Forecast adopting current average growth rate, subject to minimum of 7% and maximum of 10% ⇒ Improved Case: Forecast adopting current average growth rate, subject to minimum of 8% and maximum of 12%. ⇒ Net grant after deduction is considered for projection		
2	Other grants and contributions	⇒ Base Case: Forecast adopting current average growth rate, subject to minimum of 7% and maximum of 10% ⇒ Improved Case: Forecast adopting current average growth rate, subject to minimum of 8% and maximum of 12%.		

Important assumptions made for Project terms

Project terms	
Ratio of loan: grant :ULB contribution	30% grant, 10% ULB contribution and 60% loan
Loan terms (flexibility to vary the rates)	Loan period: 20 years (5+15) Moratorium period: 5 years on principal repayment Year of disbursement: 2006-07 (1/4/2006) Repayment method: Equal annual instalments Interest rate: 8.5%
Sectoral deployment of investment	All sectors, as per the ratio in the CCP investment
Debt Service Coverage Ratio[25]	At least 1.25 in all years
O & M expenditure (arising from new assets)	
O & M expenditure rates as % of investments	Public health - 5% Others – 12%
Year additional O&M expenses commence	2008-09
Growth rate in expenditure	Based on the current CAGR with a min of 6% and max of 8%

The existing operation and maintenance cost has been projected based on the past trend (CAGR). In case of items showing inconsistent growth, the CAGR/ average growth rates adopted is subject to a minimum of 7 per cent to a maximum of 8 percent per annum.

[25] DSCR=(current year revenue- non-debt service expenses, but including addition O&M expenses)/debt service obligation.

The annual growth adopted for salaries is based on the CAGR/ average growth rates, subject to a minimum of 10 per cent to a maximum of 12 percent per annum. (With the Pay commission revision due, a growth of 15% is assumed in 2006-07)

The table in the annexure of each report presents the assumption adopted for projection of expenses.

Current Financials

To facilitate analysis, we have recast the financial statements provided by the Nagercoil Municipality. Hence the individual heads of accounts above may not match with the annual account statements of the municipality.

Items	2000-01	2001-02	2002-03	2003-04	2004-05
Opening balance	**0**	**410**	**795**	**1,759**	**2,877**
Municipal receipts	**957**	**958**	**1,634**	**1,716**	**1,329**
Municipal expenditure	**547**	**573**	**670**	**598**	**631**
Municipal Surplus/deficit for curren	410	385	964	1,118	698
Final closing balance	410	795	1,759	2,877	3,575
RECEIPTS					
Own Sources					
Revenue Fund	***483***	***538***	***573***	***597***	***601***
Property tax	181	214	229	228	225
Professional tax	59	75	69	65	65
Entertainment tax	0	1	1	1	0
Trade licenses	6	6	6	6	6
Building license fee	8	9	10	8	9
Shops & market rents	147	155	157	189	193
Development charges	0	0	0	0	0
Others	83	78	101	101	103
Water Supply and Drainage Fund	***126***	***179***	***194***	***221***	***241***
Water tax	61	107	115	133	152
Water Charges	65	72	79	88	89
New Charge- UGD	0	0	0	0	0
Fee from new UGD connections	0	0	0	0	0
Others	0	0	0	0	0
Elementry Education Fund	***0***	***0***	***0***	***0***	***0***
Revenue from education	0	0	0	0	0
Others	0	0	0	0	0
Sub-Total	**609**	**717**	**767**	**818**	**842**
Permanent Revenue Grants					
Devolution of funds (SFC)	160	178	348	542	276
Entertainment tax	68	27	136	96	59
Surcharge on Sales tax	120	36	383	259	153
TFC/EFC grants	0	0	0	0	0
Other grants	0	0	0	0	0
Sub-Total	**348**	**241**	**867**	**898**	**487**
TOTAL MUNICIPAL RECEIPTS	**957**	**958**	**1,634**	**1,716**	**1,329**

All figures in Rs. Lakhs

Items	2000-01	2001-02	2002-03	2003-04	2004-05
PAYMENTS					
Salaries					
General Administration	128	131	126	137	111
Water Supply	29	29	28	25	30
Sewerage	0	0	0	0	0
Public Health (Sanitation)	35	35	35	35	35
Conservancy	164	163	158	148	157
Public Works (Engg. Staff)	17	17	11	9	9
Street Lighting	8	8	8	8	10
Discretionary Services	0	0	0	0	0
Sub-Total	**382**	**384**	**367**	**364**	**352**
Operation and Maintenance					
General Administration	0	0	0	0	0
Water Supply	32	42	73	58	71
Sewerage	0	0	0	0	0
Conservancy	0	0	0	0	0
Roads	0	0	0	0	0
Storm Water Drains	0	0	0	0	0
Miscellaneous Items	6	15	52	3	1
Sub-Total	**146**	**174**	**289**	**225**	**270**
Loan & Interest Payments					
Loan repayment	19	16	15	8	9
Loan & Interest Payments	**19**	**16**	**15**	**8**	**9**
TOTAL MUNICIPAL PAYMENTS	**547**	**573**	**670**	**598**	**631**

All figures in Rs. Lakhs

Base Case Projections

Items	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Opening balance	3,574.9	4,155.1	6,154.2	6,501.8	6,823.7	7,175.7	7,638.8	7,867.2	8,152.4	8,662.4	9,254.8	9,925.6	11,016.0	12,201.4	13,666.3
Municipal receipts	**1,723.0**	**3,668.1**	**2,514.1**	**2,577.1**	**2,703.1**	**2,834.8**	**2,957.7**	**3,104.8**	**3,425.4**	**3,609.8**	**3,796.4**	**4,030.9**	**4,248.3**	**4,657.9**	**4,971.4**
Municipal expenditure	**1,142.8**	**1,186.7**	**1,233.7**	**1,242.4**	**1,268.4**	**1,325.6**	**1,368.5**	**1,433.8**	**1,503.5**	**1,577.9**	**1,657.5**	**1,442.3**	**1,533.2**	**1,630.3**	**1,734.1**
Impact of debt servicing	-	64.9	324.3	518.8	555.8	540.1	829.5	827.9	826.1	824.3	822.2	820.0	817.6	815.0	812.2
Impact of additional O&M	-	78.3	224.5	449.0	482.0	506.1	531.4	557.9	585.8	615.1	645.9	678.2	712.1	747.7	785.1
ULB contribution	-	339.1	384.0	44.9	44.9	-	-	-	-	-	-	-	-	-	-
Municipal Surplus/deficit for current year	**580.2**	**1,999.1**	**347.6**	**321.9**	**352.0**	**463.1**	**228.4**	**285.2**	**510.0**	**592.5**	**670.8**	**1,090.5**	**1,185.4**	**1,464.9**	**1,640.1**
Final closing balance	4,155.1	6,154.2	6,501.8	6,823.7	7,175.7	7,638.8	7,867.2	8,152.4	8,662.4	9,254.8	9,925.6	11,016.0	12,201.4	13,666.3	15,306.4
RECEIPTS															
Own Sources															
Revenue Fund	*830.6*	*828.4*	*860.6*	*878.6*	*900.8*	*941.6*	*960.9*	*984.7*	*1,038.7*	*1,065.5*	*1,093.7*	*1,157.4*	*1,189.2*	*1,222.7*	*1,298.0*
Property tax	495.8	480.9	477.8	480.9	487.2	492.7	497.2	501.8	506.4	511.0	515.6	520.3	525.0	529.8	534.6
Professional tax	69.6	74.4	79.6	85.2	91.2	97.5	104.4	111.7	119.5	127.9	136.8	146.4	156.6	167.6	179.3
Entertainment tax	0.6	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.6	1.7	1.9	2.1	2.3
Trade licenses	6.5	6.5	7.1	7.2	7.2	7.2	7.2	7.3	7.3	7.3	7.3	7.4	7.4	7.4	7.5
Building license fee	16.0	16.4	16.7	17.0	17.3	11.5	8.2	8.3	8.4	8.5	8.5	8.6	8.7	8.8	8.8
Shops & market rents	142.5	143.0	164.6	165.4	166.3	192.0	193.2	194.5	224.7	226.2	227.7	263.2	265.1	266.9	308.5
Others	99.7	106.6	114.1	122.1	130.6	139.8	149.5	160.0	171.2	183.2	196.0	209.8	224.4	240.1	257.0
Water Supply and Drainage Fund	*215.9*	*2,103.1*	*851.1*	*824.6*	*850.1*	*855.5*	*865.9*	*887.3*	*1,042.6*	*1,078.6*	*1,104.2*	*1,129.9*	*1,156.8*	*1,359.4*	*1,408.1*
Water tax	105.5	110.9	115.3	119.1	122.5	125.0	126.9	130.4	132.3	133.9	135.4	136.9	138.2	139.6	140.9
Water Charges	96.7	104.5	113.0	122.2	132.2	142.9	154.5	167.1	180.7	195.4	211.3	228.5	247.0	267.1	288.9
New Charge- UGD	-	449.6	521.9	538.6	549.9	557.5	562.8	568.0	703.9	723.4	731.4	738.2	744.9	921.0	946.3
Fee from new UGD connections	-	1,424.1	86.6	30.0	30.6	20.2	14.5	14.6	18.5	18.6	18.8	19.0	19.1	24.2	24.4
Sub-Total	*1,046.5*	*2,931.5*	*1,711.8*	*1,703.2*	*1,750.9*	*1,797.1*	*1,826.8*	*1,872.0*	*2,081.3*	*2,144.1*	*2,197.9*	*2,287.3*	*2,346.0*	*2,582.1*	*2,706.1*
Permanent Revenue Grants															
Devolution of funds (SFC)	427.5	470.2	517.2	569.0	625.9	688.4	757.3	833.0	916.3	1,008.0	1,108.7	1,219.6	1,341.6	1,475.7	1,623.3
Entertainment tax	84.9	90.8	97.1	103.9	111.2	119.0	127.3	136.3	145.8	156.0	166.9	178.6	191.1	204.5	218.8
Surcharge on Sales tax	164.1	175.6	187.9	201.0	215.1	230.2	246.3	263.5	282.0	301.7	322.8	345.4	369.6	395.5	423.2
Sub-Total	**676.4**	**736.6**	**802.3**	**874.0**	**952.2**	**1,037.6**	**1,130.9**	**1,232.8**	**1,344.1**	**1,465.7**	**1,598.5**	**1,743.7**	**1,902.3**	**2,075.7**	**2,265.3**
TOTAL MUNICIPAL RECEIPTS	**1,723.0**	**3,668.1**	**2,514.1**	**2,577.1**	**2,703.1**	**2,834.8**	**2,957.7**	**3,104.8**	**3,425.4**	**3,609.8**	**3,796.4**	**4,030.9**	**4,248.3**	**4,657.9**	**4,971.4**
PAYMENTS															
Salaries	372.8	395.2	418.9	444.0	470.7	498.9	528.8	560.6	594.2	629.8	667.6	707.7	750.2	795.2	842.9
Operation and Maintenance	290.6	312.2	335.4	360.4	387.3	416.3	447.4	481.0	517.0	555.9	597.6	642.6	691.0	743.1	799.2
Loan & Interest Payments	479.4	479.4	479.4	438.0	410.4	410.4	392.3	392.3	392.3	392.3	392.3	92.0	92.0	92.0	92.0
TOTAL MUNICIPAL PAYMENTS	**1,142.8**	**1,186.7**	**1,233.7**	**1,242.4**	**1,268.4**	**1,325.6**	**1,368.5**	**1,433.8**	**1,503.5**	**1,577.9**	**1,657.5**	**1,442.3**	**1,533.2**	**1,630.3**	**1,734.1**

Improved Case Projections

Items	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Opening balance	3,574.92	4,314.88	6,531.37	7,024.03	7,474.62	7,961.67	8,793.07	9,251.01	9,716.22	10,509.62	11,446.14	12,528.82	14,410.98	16,579.44	19,146.81
Municipal receipts	**1,862.63**	**3,878.32**	**2,810.66**	**2,901.28**	**3,048.12**	**3,245.66**	**3,560.04**	**3,633.91**	**4,032.28**	**4,249.37**	**4,473.49**	**5,054.87**	**5,427.77**	**5,917.94**	**6,400.69**
Municipal expenditure	**1,122.67**	**1,145.04**	**1,168.75**	**1,152.50**	**1,151.52**	**1,179.76**	**1,191.55**	**1,223.28**	**1,256.91**	**1,292.56**	**1,330.35**	**1,070.16**	**1,112.62**	**1,157.63**	**1,205.34**
Municipal Surplus/deficit for current year	739.96	2,216.49	492.66	450.59	487.06	831.40	457.93	465.21	793.40	936.52	1,082.68	1,882.16	2,168.46	2,567.37	2,953.94
Final closing balance	4,314.88	6,531.37	7,024.03	7,474.62	7,961.67	8,793.07	9,251.01	9,716.22	10,509.62	11,446.14	12,528.82	14,410.98	16,579.44	19,146.81	22,100.75
RECEIPTS															
Own Sources															
Revenue Fund	*864.22*	*980.04*	*1,058.12*	*1,086.17*	*1,111.37*	*1,191.93*	*1,374.41*	*1,408.28*	*1,517.98*	*1,554.83*	*1,592.92*	*1,969.67*	*2,031.89*	*2,088.11*	*2,271.85*
Property tax	530.04	635.65	653.61	664.42	671.63	677.14	837.73	848.65	857.67	865.98	874.05	1,120.60	1,146.71	1,163.50	1,176.62
Professional tax	70.20	75.82	81.88	88.43	95.51	103.15	111.40	120.31	129.94	140.33	151.56	163.68	176.78	190.92	206.19
Entertainment tax	0.72	0.80	0.90	1.01	1.13	1.26	1.41	1.58	1.77	1.99	2.23	2.49	2.79	3.13	3.50
Trade licenses	6.46	6.62	7.90	7.97	7.99	7.98	7.96	7.89	8.65	8.72	8.75	8.79	8.82	9.51	9.58
Building license fee	13.72	7.86	8.57	8.64	8.72	8.80	8.88	8.96	9.77	9.86	9.95	10.04	10.13	11.06	11.16
Shops & market rents	142.50	144.66	187.95	188.98	189.55	245.81	247.41	248.50	324.00	326.89	329.23	429.55	433.37	436.44	569.36
Others	100.58	108.63	117.32	126.71	136.84	147.79	159.61	172.38	186.17	201.07	217.15	234.52	253.28	273.55	295.43
Water Supply and Drainage Fund	*252.93*	*2,235.50*	*1,023.10*	*1,011.41*	*1,050.27*	*1,074.96*	*1,103.96*	*1,029.22*	*1,189.88*	*1,227.32*	*1,254.00*	*1,280.80*	*1,393.00*	*1,605.37*	*1,657.02*
Water tax	109.16	141.50	148.38	164.67	178.90	192.93	207.85	256.91	263.97	266.85	269.33	271.79	351.14	362.04	366.11
Water Charges	47.10	115.81	153.21	155.90	158.63	161.40	164.25	22.59	22.80	23.00	23.21	23.41	30.77	31.04	31.31
New Charge- UGD	-	449.59	521.89	538.59	549.94	557.46	562.80	567.96	703.94	723.44	731.35	738.15	744.89	920.99	946.33
Fee from new UGD connections	-	1,424.07	86.59	30.02	30.63	20.24	14.52	14.65	18.47	18.63	18.83	18.99	19.15	24.17	24.41
Sub-Total	*1,117.14*	*3,215.54*	*2,081.22*	*2,097.57*	*2,161.64*	*2,266.89*	*2,478.38*	*2,437.49*	*2,707.86*	*2,782.15*	*2,846.92*	*3,250.48*	*3,424.89*	*3,693.49*	*3,928.87*
Permanent Revenue Grants															
Devolution of funds (SFC)	435.24	487.47	545.97	611.49	684.86	767.05	859.09	962.18	1,077.65	1,206.96	1,351.80	1,514.02	1,695.70	1,899.18	2,127.08
Entertainment tax	85.64	92.50	99.90	107.89	116.52	125.84	135.91	146.78	158.52	171.20	184.90	199.69	215.67	232.92	251.55
Sub-Total	*745.49*	*579.97*	*645.86*	*719.37*	*801.38*	*892.89*	*995.00*	*1,108.96*	*1,236.17*	*1,378.17*	*1,536.70*	*1,713.71*	*1,911.36*	*2,132.10*	*2,378.64*
TOTAL MUNICIPAL RECEIPTS	**1,862.63**	**3,878.32**	**2,810.66**	**2,901.28**	**3,048.12**	**3,245.66**	**3,560.04**	**3,633.91**	**4,032.28**	**4,249.37**	**4,473.49**	**5,054.87**	**5,427.77**	**5,917.94**	**6,400.69**
PAYMENTS															
Salaries	372.80	395.17	418.88	444.01	470.65	498.89	528.83	560.56	594.19	629.84	667.63	707.69	750.15	795.16	842.87
Operation and Maintenance	270.47	270.47	270.47	270.47	270.47	270.47	270.47	270.47	270.47	270.47	270.47	270.47	270.47	270.47	270.47
Loan & Interest Payments	*479.40*	*479.40*	*479.40*	*438.01*	*410.39*	*410.39*	*392.25*	*392.25*	*392.25*	*392.25*	*392.25*	*92.00*	*92.00*	*92.00*	*92.00*
TOTAL MUNICIPAL PAYMENTS	**1,122.67**	**1,145.04**	**1,168.75**	**1,152.50**	**1,151.52**	**1,179.76**	**1,191.55**	**1,223.28**	**1,256.91**	**1,292.56**	**1,330.35**	**1,070.16**	**1,112.62**	**1,157.63**	**1,205.34**

Recast of Annual Accounts

Analysing the financial strength and making long-term financial projections for ULBs is complicated by the following:

- Budgets are not prepared in a standard format. Variations are observed between ULBs and from year to year within the same ULB. Thus, the financial reports/budgets need to be standardised before analysis.
- The budgets are the only financial document/report prepared by ULBs. The budget is more a statement of receipts and payments than a statement of income and expenses.
- Separate capital and revenue accounts are not maintained.
- The different funds of a ULB are not clearly demarcated. Some receipts and payments of a municipal body do not represent or do not affect its financial health. Hence, these need to be ignored for the purposes for making long-term projections.

Owing to the variations in the preparation of budgets, we have recast them in a standard format as explained below:

Receipts/Income/Revenue

The objective of recasting the income side is to estimate the receipts that are under the control of the ULB and/or which are utilised for meeting the core expenditure of the ULB. The ULB receives funds from various sources such as:

Own tax and non-tax revenues

Items under these heads, among others, include property tax and water charges, which the ULB levies and appropriates. It has more or less complete freedom on exploiting these sources, subject only to certain restrictions by the state in the form of maximum tax rates, etc.

Grants and transfers from the state

Grants that are utilised towards meeting the core expenditure of the ULB are included under this head. Examples are TFC, EFC, SFC grants, city development grants, transfer of stamp duty, etc.

Tied/specific grants

These include items like funds under MP/MLA grant, IDSMT, SJSRY, Housing scheme, etc. These funds are received from external entities and are used for non-core activities like constructing shops, houses. In the absence of these grants, the ULB is unlikely to incur any expenditure on these activities. Hence, they are not included in the core receipts and payments. A qualification is that some of these tied grants (Low Cost Sanitation Scheme) are for core functions. In such cases, a case-by-case approach is employed.

Loans, deposits, advances, extraordinary items, accounting items

Deposits and advances are amounts that have to be repaid and hence cannot be considered as ULB receipts. *Notional receipts* include receipts from the SFC deducted towards dues owed to EB, TWAD and so on. The subcomponents of property tax like Library Cess, Health Cess etc. that are transferred to the state are shown under the head of *Extraordinary Items*. Similarly, *Loans* are not considered as income for the ULB and hence their receipt should be distinguished from other receipts.

Only items 1 and 2 are considered while making projections.

Payments/Expenditure

The objective of recasting the expenditure figures is to estimate the expenditure that is under the control of the ULB, or is incurred in meeting the cost of core functions of the ULB.

The ULB incurs expenditure on the following broad categories of expenditure

General municipal expenditure, salaries and capital expenditure

Administrative expenses (revenue collection, etc.) and cost in providing services (water supply, street lighting) are included under this head.

Expenditure on government schemes

Non-core expenditure items like IDSMT, SJSRY, Housing scheme, etc are included under this head.

Extraordinary expenditure

Items like repayment of loans, deposits, advances, transfer of cesses collected as sub-component of property tax and so on are included under this head. Repayment of debt is an exception in this category, as it has to be factored into long-term projections.

Only item 1, as given above, is considered while projecting a ULB's expenses.

Norms & Benchmarks for municipal services

Solid Waste

Parameters	NIUA norms	Remarks
Per Capita Waste generated/day (grams)	250-450	• ORG has stated a norm of 380 grams • KCL adopted a norm of 700 grams
Collection Performance	100%	• KCL adopted a norm of minimum 90%
Vehicle Capacity adequacy ratio	68%	
Staffing	2.8 *	

* Sanitary workers per 1000 population

Public Works department

Parameters	NIUA	Remarks
Road Density (km/sq. km.)	17.50%	
Black Topped (BT)/Concrete Surface	92.93%	
Street Lighting	N.A.	Norm of 25-30 mts spacing between posts

Water Supply and Sewerage

Parameters	Zakaria Committee	CPHEEO	MoUAE	COPP	NIUA	TCPO	National Master Plan	Eight Five Year Plan	Remarks
Water Supply									
Water Supply daily per capita (LPCD)	270 LPCD (202.5 LPCD)	150-200 LPCD (125-200 LPCD)	150 LPCD	180-225 LPCD	170-210 LPCD	180 LPCD	70-250 LPCD	125 LPCD	ORG has suggested a norm of 180 LPCD
Population coverage	N.A.	N.A.	N.A.	N.A.	100%	N.A.	N.A.	N.A.	
Distribution network coverage	N.A.	N.A.	N.A.	N.A.	79%	N.A.	N.A.	N.A.	
Total storage required	N.A.	N.A.	N.A.	N.A.	40%	N.A.	N.A.	N.A.	
Storage capacity ratio	N.A.	N.A.	N.A.	N.A.	199	N.A.	N.A.	N.A.	KCL adopted a storage norm of 35% of supply
Total treatment	N.A.	N.A.	N.A.	N.A.	100%	N.A.	N.A.	N.A.	KCL adopted a norm of 100% of supply
Sewerage									
Coverage of sewerage system (With treatment facilities)	100%	N.A.	N.A.	N.A.	100%	N.A.	100%	N.A.	ORG has also suggested a min norm of 100%
% Water supply expected to reach the sewers	Domestic-80% Industrial-90%	80%	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	WHO norm is 130LPCD water supply for effective functioning of the sewer system
Minimum Capacity of underground sewerage (LPCD)	N.A.	150 LPCD water supply level	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
Storm Water Drains	N.A.	N.A.	N.A.	N.A.	130% *	N.A.	N.A.	N.A.	KCL adopted a norm of 130% *
UGD network coverage (% area)					78%				

* Of road length where UGD is available

Expenditure

(Rs/capita/annum)

Parameters	Zakaria Committee *	NIUA	Remarks
Core Civic Services (1990-91 prices) (per capita /annum)	560.55	Rs.351.55	
Water Supply (treatment storage and distribution)	193.70	N.A.	HUDCO** has suggested a norm of Rs. 150-200/Capita
Sewerage and Sewerage disposal and storm water drainage	225.98	N.A.	
Underground Drainage System (unit cost/capita)	N.A.	Rs. 2,500	
Construction of Roads and Paths	41.77	N.A.	
Street lighting and Electric distribution	54.12	N.A.	
Education	94.95	N.A.	
Medical & Health Services	37.98	N.A.	
Fire Services	7.59	N.A.	
Horticulture operations	7.22	N.A.	
General Municipal Administration	75.96	N.A.	

*Adjusted at 1994-95 prices by using consumer price Index for Urban Non-manual Workers **in its study of cost analysis of urban infrastructure projects

Primary Education and Health Care

Agency	Physical standard
Primary Education and Health Care	
COPP	⇒ One primary school for 3500 population ⇒ Area: 3 acres ⇒ Seats: 400-500 per school
Bureau of Public Enterprises	⇒ One primary School for 3000-4000 population ⇒ Area: 3 acres ⇒ Seats: 300-400 per school
TCPO	⇒ One nursery school for 1250-1500 population ⇒ Area:0. 25 acres ⇒ Seats: 75-90 per school
	⇒ One primary school for 4000 population ⇒ Area: 2-2.5 acres ⇒ Seats: 450-500 per school
Primary Education and Health Care	
Minimum Needs Programme & Report of the Working Group on district Planning (1984)	⇒ One PHC for 30,000 population in plains and 20,000 pop. in tribal and hill areas ⇒ One sub-centre for 5,000 pop. in plains and 3,000 in tribal and hilly areas ⇒ Distance: +5 kms. ⇒ One Community Health Centre for 1 lakh pop.
COPP	⇒ One Health Centre for 20,000 pop. ⇒ Area: 1-1.5 acres ⇒ 3 beds for every 1000 persons
TCPO	⇒ One health centre for 36,000 pop. ⇒ Area: 1-1.5 acres ⇒ One Health clinic for 12,000 pop. ⇒ Area: 1-1.5 acre

Source: NIUA (August, 1996), Kanpur Municipal Corporation A Study of its Finances

Best practices

Introduction

This section lists the Best Practices undertaken by various Urban Local Bodies or as proposed by various nodal agencies. The Best Practices have been classified into the following categories:

- Planning Processes
- Governance
- Financial Management
- Service Delivery
- Support Systems
- Legal/Tax/Tariff reforms

Planning Processes

An Urban Local Body should ideally prepare the following plans:

a) Development/Master Plan for each major urban service provided by the Corporation

These are long-term spatial plans (for a period of ten to twenty years) and include a projected land use plan for the city. These plans are based on detailed socio-economic surveys and population projections.

Case Studies

(i) Physical Development and Financial Planning - Baroda Municipal Corporation (BMC)[26]

BMC has taken a number of steps to create a formal long-term planning machinery. In 1991, the corporation carried out an exhaustive exercise of listing all the ongoing and proposed work to know the pending development work and the resource gap. On the basis of this information, the corporation prepared a long-term development plan for the period 1991-2001.

This plan was then broken down into annual plans. The corporation worked out the resource requirements for undertaking changes for each service. This planning exercise also developed a long-term financial plan wherein it assessed the funds available from external (loan, subsidy etc.) as well as internal (savings/surplus) financial sources; it also contained a resources augmentation plan, which included increase in tax rates and other measures to bridge the resource gap.

- In April 1994, the corporation created a formal 'Planning and Estimates Cell', headed by the executive engineer, and co-supported by the chief accountant, under the direct control and supervision of the Municipal commissioner, which was responsible for:
- Preparation of long-term development plans for all the services and their revision every year
- Preparation of estimates of each development work pertaining to basic urban services
- Scrutiny of budget, financial outlay required etc
- Creation of database on all the urban services
- Review of all the works in progress
- Preparation and submission of loan proposals to outside agencies etc

[26] Best Practices Catalogue, CMAG/September, 1999

Governance

Good governance implies inclusion of all groups in urban society and accountability, integrity and transparency of local government actions, in defining and pursuing shared goals.

Case Studies

(i) Report Card on Urban Services[27]

Report Card on Public Services is a strategic tool developed by a Bangalore based not-for-profit institution, Public Affairs Centre (PAC), with an aim to help citizens provide direct feedback to improve public service delivery and governance. Feedback is collected from users of each service about key issues such as availability and quality of service, problems or deficiencies encountered, effectiveness of grievance redressed mechanisms, behaviour of the staff with whom they interact etc. This has led to increased public awareness, stakeholder responsiveness and public accountability. The Report Card system has now been introduced in Ahmedabad, Bangalore, Chennai, Delhi, Kolkotta, Mumbai and Pune.

(ii) Participatory budgeting in Porto Alegre, Brazil[28]

The history of the performance of public budgeting and accounting in Brazil shows severe problems related to waste of resources, political interference and corruption. For decades, due to the presence of high inflation rates municipal budget estimates proved unrealistic. The citizens were not in a position to exercise control. This trend changed in Porto Alegre due to the innovations carried out by the municipality. The municipality created an innovative system to adopt and execute the municipal budget. The city was divided into 16 regions based on geographic, social and community organisation criteria. For each region, a popular council, consisting of representatives of community associations and other local groups, was set up. A citywide organisation of residents and the council of representatives with two representatives from each of the popular councils were formed.

The council of representatives sets the agenda for municipal spending after preparing a list of priorities for public works. This is done in close coordination with the popular council, which also compiles a list of demands for projects in their region. Then the popular council and the council of representatives meet with the municipal officials and they assign a weight age to each project request and make the final decision on public spending. Community representatives who actively monitor the spending of the funds supervise the progress of each project.

In the 'participatory budget' system, the technicians and the leaders are responsible for making decisions about public revenues and expenditures. Also, the population decides on investment priorities, actions and public works that should be implemented by the government. This is done through a process of debates and consultations. The participatory budget has proved that the democratic and transparent management is the best way to avoid corruption and mismanagement of public resources. Popular participation has favoured an efficient management of public expenditure resulting in important investments and action plans to the benefit of the population.

Since its implementation, projects approved by the Participatory Budget have represented investments of more than US$ 700 million, which has been applied primarily in urban infrastructure and to the improvement of quality of life of the population.

[27] Good Urban Government Campaign-September, 2001

[28] Good Urban Governance Campaign-September, 2001

Financial Management

Most Urban Local Bodies in India do not have up-to-date accounts or records of assets owned by the ULB. Further, the budgeting exercise is based on historical rather than futuristic projections. The cash management and resource mobilisation processes also require drastic improvements. In this section, the accounting and budgeting-related best practices have been listed.

a) Accounting Reforms

The traditional accounting system followed by ULBs is based on single-entry cash-based accounting, which poses the following three problems:

a. It does not facilitate a clear understanding of the actual position of debits and credits and hence matching of accounts becomes difficult.
b. It does not support the maintenance of ledgers and income and expenditure statements. Hence it is difficult to analyse the financial performance of a period.
c. The traditional accounting system also does not support the assessment of assets and liabilities at any point of time.

These flaws are overcome by the fund-based accounting system adopted by certain municipal bodies in India such as Jaipur and Vadodara. The fund-based accounting system allows the municipalities to maintain funds in accordance with their specific characteristics including sources, purposes and statutory requirements and supports double-entry accounting system. This system improves the bank ability and fund-raising capabilities of the municipality.

Case Studies

(i) Fund Based Accounting System following Double-entry accrual method of accounting-Vadodara Municipal Corporation (VMC)[29]

VMC reformed its accounting system from the single entry method of accounting to a fund based accounting system following the double entry accrual method of accounting.

The fund based accounting system also yielded various operational benefits to VMC as it facilitated the division of accounting work into homogenous, manageable and identifiable units, which could be handed over to a specific person or group of persons.

A matrix structure of budget and accounting heads was also evolved such that for every account code there was at least one budget code or more. At the same time, there was no more than one accounting code for a single budget code/item. This avoided duplication of work.

This reform has facilitated a proper understanding of the financial position of the corporation.

b) Budgeting Reforms

The current budgeting system of ULBs possesses a number of drawbacks:

- Absence of scientific budgeting methods like performance budgeting and zero based budgeting
- Reliance on incremental method for budgeting,
- Lapse of unutilised budget allocation,
- Expenditure independent of resource realisation

[29] Municipal Accounting Reforms-Dr. Ravikant Joshi

Case Studies

(i) Budgetary cum financial reforms undertaken by Vadodara Municipal Corporation (VMC)[30]

VMC undertook a number of budgetary cum financial reforms over a period from 1992-2002, which entailed the adoption of performance budgeting coupled with zero-based budgeting that brought about scientific approach to the budgeting exercise. Also, expenditure was made contingent to actual resource realisation. This implied that capital/development works was to be undertaken as per actual receipts.

- Centralised financial control was introduced which required all the payment bills to be routed through the accounts department to the audit department. Every payment was scrutinised from the point of view of budget availability, appropriateness of expenditure and financial availability. This measure ensured that actual expenditure remained within the limits of budgetary allocation. Advances were brought under centralized budgetary and financial control. Earlier, advances taken for purchase or payment of works were not booked against the respective budget items. As per the new system, each and every advance taken is debited against the respective budget item. Thus, budget availability reduces, whenever an advance is drawn. Advances are allowed only if sufficient budget allocation is available; if not, advances can be drawn only after the prior permission of the general board of the corporation.
- This reform ensured that all expenditure incurred by the corporation, whether by the regular budget mode or by the advances mode, had to be made within the budgetary allocation. The tendering procedure was improved with a switch to a system of item-rate tendering and consolidated annual works tendering. Earlier, each time any work had to be carried out, tenders were called for the same. Thus, the corporation was required to carry out the entire tender-sanctioning procedure every time.

Under the new system, tenders are called for a particular type of work, to be carried out throughout the city or in a particular area of the city during the year. Once a contract is finalised with a particular contractor, he is simply asked to carry out the works at various places in the city as and when the need arises and he is paid as per the itemised rates finalised in the original common tender. This not only reduced administrative work and time lag but also brought uniformity in prices and costs.

Service Delivery

The principal function of any ULB is provision of basic services to its citizens. Municipal services have a direct and immediate effect on the quality of the lives of the people in the city. Poor municipal service can also make it difficult to attract business or industry to an area and thus limit job opportunities for residents. Capability building, corporatization and partnerships in municipal services are some of the key reforms, recommended for improving municipal service delivery.

a) Capability building

It is possible for a municipality to improve and expand the delivery of services by improving its own ability to do so. By improving a number of skills, municipalities may be able to deliver services effectively and more efficiently. These skills are explained below:

1. Better **communication** between the municipality and citizens will help the municipality determine the needs of the community and decide whether these are being met.
2. Improved **financial planning** will help in finding the best possible way to use available funds.
3. Better **technical skills** will improve delivery of municipal services.

[30] Municipal Budgetary and Financial Control Reforms-Dr. Ravikant Joshi

Case Studies

(i) Professionalization of workforce – Ahmedabad Municipal Corporation (AMC)[31]

AMC took an important step towards the professionalization of its workforce by recruiting certified Chartered Accountants and graduates with Masters' degree in Business Administration.

Corporatization of departments/utilities[32]

In some cases, a municipality can improve the delivery of a service through corporatization of some of its utilities, such as the water department can benefit from the creation of a municipal company that would provide the service. In this set up, the company belongs to the council and is accountable for its performance. The council usually appoints a board to oversee the work of the company management.

The company is able to function more independently than a municipal department whilst acting under the overall control and supervision of the council. As municipalities have to deliver different services, it is not always possible to focus on the best way to deliver certain specialised services. A company acting independently, would experiment with new techniques and technology and be able to provide better services at lower costs.

Support Systems

To enable municipal bodies to function effectively and efficiently, its support systems need to be improved and strengthened. The organisation structure should be streamlined for effective and efficient working. Computerisation, MIS and GIS that aid decision-making are some of the support systems that need to be developed within ULBs today.

Case Studies

(i) Computerisation of Property Tax records - Vishkapatnam Municipal Corporation (VMC)[33]

In 2000, the VMC computerised property assessment records and transferred them to the server in the corporation office. The server is linked to the local bank branches where assesses not only pay their dues but also get full updated information of demand as well as arrears (along with the interest). The system also enables the corporation to get demand and collection ward wise.

This resulted in the increase of VMC's tax collection by over 50 per cent in one year and enabled clear monitoring of pending cases.

(ii) Computerisation of Records – Indore Municipal Corporation (IMC)[34]

Since 1999, the IMC has computerized records of property tax, water charges, trade licenses, rental properties, and municipal accounts. IMC contracted a private computer agency to computerise its records on a build-operate-transfer basis. Using information from the newly computerized programme and special collection drives, IMC increased its own revenues by nearly 45% during 2000-2002.

[31] Urban Finance-NIUA

[32] www.etu.org.za

[33] Urban Finance-NIUA/June, 2002

[34] *ibid*

(iii) Computerisation by Mirzapur municipality[35]

The Mirzapur municipality developed a new information system with the Indo-Dutch integrated community development project. It computerized all existing property assessment and demand registers, and set them up on the local area network. By the third year, tax revenue had more than doubled. The municipality created property tax maps for the first time in the city and this tool increased the number of registered properties by 44%.

Legal/Tax/Tariff Reforms

Taxes and tariffs are the main source of revenue for ULBs, apart from government grants. However, most of these taxes and tariffs are set without understanding their full implications or without any justification. Therefore, there is a need to analyse the present system and rationalise procedures, tariff rates and structures for improving revenues.

Case Studies

(i) Unit Area Method base for Property Tax Collection-Patna Municipal Corporation[36]

The Patna Municipal Corporation applied the Unit Area Method (UAM) to replace the Annual Rental Value (ARV) method. Under the ARV method, the concept of 'standard rent' froze the rateable value at historical value. As a result, gross variation in the tax burden was observed within the same premises for identical use and between old and new buildings on the same street. Collection costs were mostly higher than the revenue yields. Excessive use of discretionary powers by the tax officials for individual assessment was also observed under the ARV method. The application of UAM as base for Property Tax computation brought about transparency in assessment and also increased tax compliance. Even with a reduction in tax rate from 43.75% to 9% of ARV, the tax demand went up from Rs. 4 crores to Rs. 17 crores. In appreciation of this method, MoUDPA issued detailed guidelines to all the state governments. Based on these guidelines, the governments of Madhya Pradesh and Tamilnadu have simplified the property tax following the area-based approach.

(ii) Self-Assessment System for Property Tax – Bangalore Mahanagar Palike[37]

For the Bangalore Mahanagar Palike (BMP), after the abolition of octroi, the property tax became the single largest revenue source. An optional Self-Assessment System (SAS) was introduced in April 2000. Under this scheme, the citizens were allowed to determine their property tax on the basis of explicit guidelines. The purpose of this scheme was to provide user friendly, transparent tax assessment to citizens as well as to augment corporation's revenue. Approximately 60% of the taxpayers took this option. Coupled with rate revision, it contributed to a quantum jump in tax collection from Rs.113 crores in 1999-2000 to Rs.157 crores in 2000-01.

(iii) Self-Assessment System for Property Tax – Municipal Corporation of Hyderabad (MCH)[38]

MCH introduced SAS for property tax in 1999-2000. The corporation published advertisements in newspapers about the new system and involved the public in determining the tax by consulting resident welfare associations. Through this measure, the city increased its property tax collection from Rs. 57 lakhs in 1998-99 to Rs. 100 lakhs in 2000-01.

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[35] *ibid*

[36] Good Urban Governance Campaign-September, 2001

[37] Urban Finance-NIUA/June, 2002

[38] *ibid*

Possible key actions for increasing collection levels

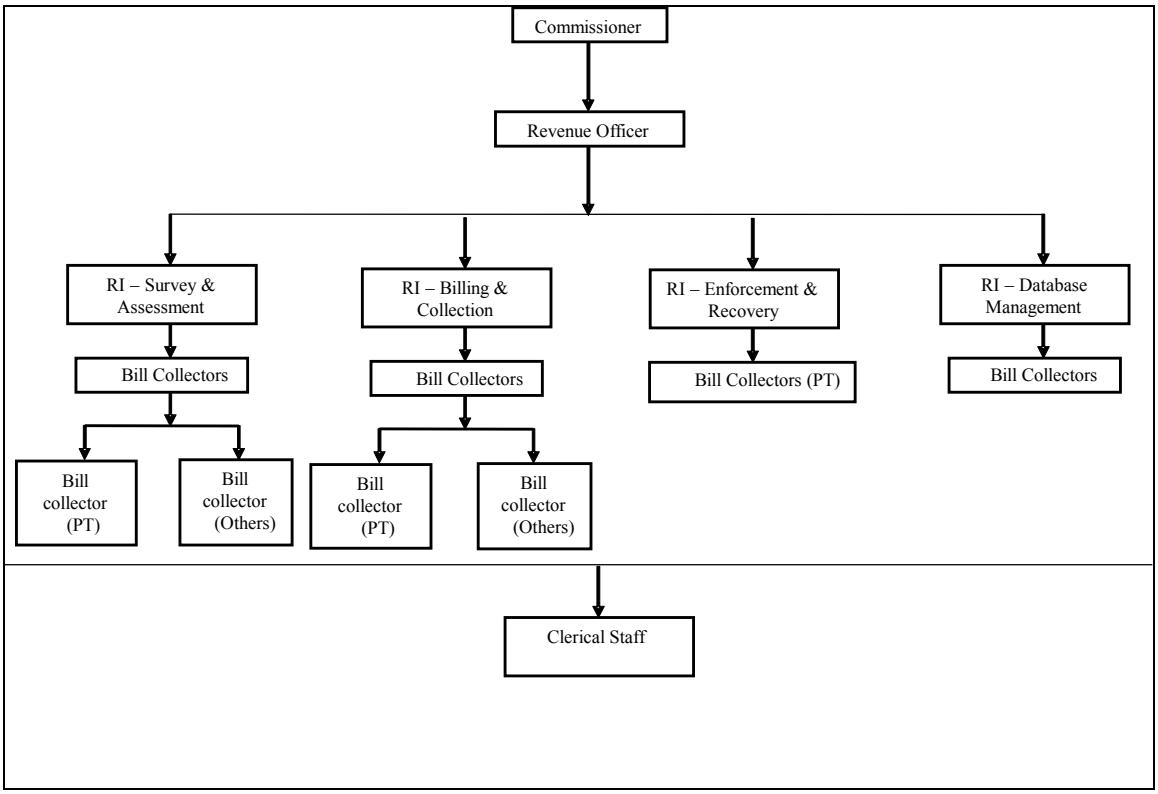
There are certain action points highlighted below for establishing a strong tax administration process in the municipality to cover the entire value chain of property tax right from coverage, assessment, billing and collection to enforcement and are detailed in the following sub-sections. This section provides some key points on improving the property tax collection, as it is the primary source of any ULB's own revenue source. Even a marginal improvement in this area would improve the revenues significantly. The action points provides for reorganising the revenue department as the first activity, followed by recommendations on the measures to be followed for improving all areas of tax administration.

Reorganising the revenue department

There are several inefficiencies in the existing structure of the revenue department. The thrust area identified is that the structure should be reorganised based on the functions of the department, which are:

- Assessment
- Billing and collection
- Database management and MIS
- Dispute resolution
- Enforcement

Although the activities of the revenue department extends beyond property tax collection (to include water charges, other fees and levies), it would be appropriate to suggest a reorganised structure keeping in view the large contributions of property tax to the total revenue of the municipality. The revenue department could be restructured as given below.



It can be seen from the above figure that the hierarchy remains the same while the assigned functions for the Revenue Inspectors have been modified. In addition, the role of the Revenue Inspector has been

enhanced. The overall number of people and posts remain the same, while the functions of the bill collectors are delineated from the existing roles.

The important functions are grouped into the following: a) Survey and assessment, b) Billing, collection and receivables, c) Enforcement and recovery and d) Database management. Each of the Revenue Inspectors would be responsible for a particular function who would report to the Revenue Officer. The Revenue Officer would oversee all the functions and would report to the Commissioner.

A separate division for enforcement is warranted in order to tackle the arrears. While the collections division would be involved in collecting property tax for the current year, the enforcement and recovery division would concentrate on arrears. For the purpose of role clarity, it can be assumed that non-payment for over two years (consecutive or otherwise) would be deemed as defaulters and the enforcement and recovery division would be responsible for collections from this category.

The above structure takes into account the tax calendar. Upon completion of the survey, each function would become robust as a result of increase in number of properties and since each revenue officer would handle multiple wards, the workload for each function would almost be equal throughout the year.

As the proposed structure is based on the functions of the department and there are no modifications to the hierarchy/ number of posts, government approvals for effecting the same are not envisaged. It may however be necessary to obtain a council resolution.

In addition to the above, the municipality could undertake the following measures.

Area	Recommendation	Activities
Employment status	Introduce incentive system of payment. Incentives are to be linked directly to collections as a percentage of collections. Refer note below.	Ascertain the amount of incentive based on discussions with the revenue department staff
Allowances	Increase reimbursement limits for conveyance	Prepare monthly budget for conveyance Decide limits in consultation with survey engineers and bill collectors
Job rotation	Shift to systematic rotation. Undertake job rotation on a yearly basis for bill collectors based on the proposed department structure	Initiate discussions with bill collectors Effect rotation at the start of every financial year

Note:

The ULB could look at the option of creating an incentive fund that would be a surplus pool created from a part of the own revenues. This could be shared amongst the revenue department personnel such that it provides an incentive to all the employees to contribute to increase in revenues. However, this needs to be backed by a proper control system that measures the revenue with proper monthly and yearly targets. Incentives could be paid upon reaching the targets. A 0.25% of the own revenues (of the last financial year) could be looked at.

The **Municipal Corporation of Hyderabad** has adopted this type of incentive system for the revenue department. The monthly targets for all the bill collectors could be based on a carry-forward system, where the previous months balance gets carried forward in the event of not achieving the targets.

Assessment system

The following measures could be looked at for improving the assessment system.

Area	Actions	Tasks
Work flow	Define the work flow process for the department	• Define objectives, functions and role of this department • Draw the work flow for the division • Allocate tasks amongst the people • Prepare job description for each cadre and circulate the same amongst the revenue department staff
Vacant land assessment	Trace vacant land owners by devising a communication strategy	• Advertise through national newspapers giving specification of area, ward number and neighbouring property details. Indicate time limit for payment as 90 days, failing which owner would be treated as defaulter. • Extend the same methodology used for enforcement
Widening the assessment base	Link property database to other departments like water supply	• Provide inputs while database is created such that automatic triggers are created to identify new properties
	Initiate periodic survey (on a half-yearly or yearly basis) to check increase in number of properties	• Assign the role to Bill collector, one each for survey and updation of database
	Link additions to number of properties to town planning	• Ensure town planning department in the municipality collects a building plan from the property owner and provides information to the revenue department • Until such time the computerised database is complete, a format for providing the details can be given to the town planning department • To motivate the town-planning department to provide all information on all newly added properties, work out an incentive structure based on the number of additions every month. This can be done consultatively with the town planning department official.
	Tie up with utilities for database sharing on a regular basis	• Prepare a format of information requirement / use utilities formats if found appropriate • Initiate dialogue with TNEB, BSNL, Sub-registrar, Slum Clearance Board and TWAD for all properties • Additionally initiate dialogue with Registrar of Companies (ROC) for industrial properties • In case these utilities are reluctant to share information, arrange to procure data on a 'subscription' basis for a monthly / yearly fee

Billing, collection and receivables management

The tax collection activity needs to be carried out as a commercial function. Although other tools like database and MIS are lacking in the municipality, the lack of a commercial approach is not highlighted. With the proposed revenue department structure, the Revenue Inspector in charge of billing, collection and receivables management would now be able to closely follow up collections for every tax demand. It is expected that with this background and by drawing valuable inputs from entities that have successfully implemented collection mechanisms, a commercial orientation can be initiated in the municipality. The action plan for the billing, collection and receivables function could be on line as mentioned in the following table.

Area	Action	Tasks
Work flow	Define the work flow process for the department	• Define objectives, functions and role of this department • Draw the work flow for the division • Allocate tasks amongst the people • Prepare job description for each cadre and circulate the same amongst the revenue department staff
Despatch of demand notices	Outsource despatch activity (if already not in place)	• Employ a courier agency for despatching notices to the properties • Direct the courier agency to note the change of address (where applicable) and inform the same to the revenue department
Collection efficiency	Define specific targets for this division including the Revenue Officer for increasing collection efficiency	• Discuss and debate allocation of targets taking the bill collectors, revenue inspector and revenue officers into confidence. • Communicate the agreed mechanism to all the department staff (considering the opportunities for job rotation)
Collection	Target high potential tax payers and ensure regular follow-up Identify additions at the time of registration / transfer itself	• Prepare list of high potential clients like industries and major commercial establishments. • Attach responsibility to the Revenue officer to personally involve in collection • Create a separate property tax counter39 at the sub-registrar's office to ensure that all properties are verified for tax compliance at the time of registration/transfer. • Hire one or two people on a contract basis for this purpose.
Payment mechanism	Simplify payment process by ensuring that payment at any of the collection counters is deemed as the final payment (if not practised now)	• Intimate the collecting bank regarding change in process • Put up a communication notice in banks informing citizens of the change • Put up a communication notice in the premises of the municipality • Reiterate the need for regular updation of information to the collecting banks
	Extend reach to citizens	• Initiate dialogue with postal department to facilitate in collections. • Share the existing processes and formats for banks with the postal department • Put up notices in the postal department, banks and municipality premises regarding additional collection centres

[39] This method has been adopted by Indore Municipal Corporation and has yielded favourable results

Database management

As computerisation of property database is underway, the MIS generated using this database would be a good starting point in effecting tax administration measures. Leveraging on this, the following action points are recommended for utilising the database in an efficient manner.

Area	Action	Tasks
Work flow	Define the work flow process for the department	• Define objectives, functions and role of this department • Draw the work flow for the division • Allocate tasks amongst the people • Prepare job description for each cadre and circulate the same amongst the revenue department staff
Scoping	Define the contours of database management system	• Include all the functions of the revenue department and certain key departments for establishing linkages (like engineering division, accounts, town planning department) • Initiate dialogue with CMA to assess the modules of the computerised database and MIS that is being developed • Identify gaps and agree on standardisation, inclusions / deletions
Interim measures for creating database	Initiate a MIS as an intermediary step until such time the computerised database is complete	• Classify and categorise properties ward wise and potential wise • Prepare formats for listing the top potential payers / largest defaulters that would act as a MIS tool (See note below)

Note: A sample format that could be used to maintain list of top 50 or 100 defaulters is given below.

Ward No	Type of property	PIN[40]/Name of the owner/property	Demand per year (Rs. Lakhs)	Arrears status

Enforcement and recovery

The enforcement and recovery department as per the proposed structure would be responsible for implementing the following action plan relating to their department

Area	Action plan	Tasks
Work flow	Define the work flow process for the department	• Define objectives, functions and role of this department • Draw the work flow for the division • Allocate tasks amongst the people • Prepare job description for each cadre and circulate the same amongst the revenue department staff
Delay in payment and arrears	Initiate measures to follow the methodology for enforcement as prescribed at the	• Initiate dialogue with the software vendor to include provision for creating automatic triggers in the form of notices of default and warrants for delayed payment • Create a communication strategy for dissemination of information on the existing enforcement mechanism, its

[40] Property Identification Number

	time of SAS implementation	benefits and its implications ▪ Advertise in newspapers, local cable network, journals ▪ Put up notices in collection banks, sub registrar office, major utility offices, ROC and municipality
Arrears recovery	Introduce categorisation, based on value of property tax	• Prepare list of defaulters • Divide database of properties (when complete) into categories A – Very high value B- High value customers C – Medium value customers D- Low value customers • Allocate recovery responsibility based on the value of property tax. Recovery from very high value defaulters may require the Commissioner's involvement

Others

There are some additional action points not specifically falling into any of the categories of tax administration specifically, but could aid in improving the collection levels.

Area	Action plan
Grievance redressal	Establish a separate grievance redressal cell outside the scope of revenue department such that the cell functions independently without the influence of any divisions
Internalise communication as an activity	Communication within the revenue department personnel needs to get internalised as if it is a regular activity of the department. This would enable information dissemination and clarification to the grievance cell to aid redressal of complaints
Capacity building	• Impart training to the revenue department regularly such that the objective is well understood and the concept of commercial orientation gets ingrained as a system within the department • Organise workshops every time a new system of tax is introduced or the state government carries out major changes to the processes. • Conduct open house sessions to discuss best practices in tax revenue
Communication strategy	• Outsource the activity of developing a communication strategy to an NGO or similar organisations. • Define the objective of communication strategy to include dissemination of information on property tax related matters to the citizens • The scope should cover necessary tools for communication: ▪ Within the municipality ▪ Between the government and DCMC ▪ Between other departments / utilities ▪ With the citizens • Define the areas where there is a need to communicate to the citizens - like assessment, change in system, new procedures, enforcement measures and recovery methodology

Comparison of projects identified in the CCP and CCP to projects

Sector	Description	Cost (Rs. Lakhs)	
		CCP	BP
Water supply			
	Desilting of dam	750.0	750.0
	Storage	5.0	105.0
	Maintenance of OHT	*5.0*	
	OHT (2 ML capacity)		*100.0*
	Chlorination plant		*5.0*
	Transmission network		
	Distribution network	52.0	340.0
	Replacement of old lines	*52.0*	*60.0*
	Installation of new line – 60 kms		*180.0*
	Borewell		*75.0*
	Pumpsets		*5.0*
	Pumping main		*20.0*
	Others	6.0	
	Leak detection study/Consultancy	10.0	15.0
Total (including escalation)		**943.2**	**1210.0**
Sewerage and Sanitation			
	UGD	4000.0	6732.0
	Public convenience	50.5	50.0
	Septic tanks		
Total (including escalation)		**4708.2**	**6782.0**
Road & Traffic management			
	Formation of roads	90.0	
	Resurfacing of roads	420.0	
	Upgrading of roads	96.0	
	BT roads		325.0
	Formation		*25.0*
	Restoration		*300.0*
	Upgradation to CC		
	Widening		
	Restoration of flood affected roads		
	WBM roads		
	Formation		
	Restoration		
	Upgradation to BT		*89.6*
	Upgradation to CC		
	CC roads		
	Formation		
	Restoration		
	Flyover	400.0	100.0
	Bye pass road	435.0	470.0
	Pedestrian subway	40.0	
	Parking sites	5.0	

	CC pavement		
	Grade separators		
	Raised footpath	30.0	
	Traffic signals and intersection improvement	45.0	50.0
Total (including escalation)		**1697.6**	**1034.6**
Storm Water Drains			
	Kutcha drains	229.5	68.0
	Construction	*229.5*	*68.0*
	Pucca	350.0	476.0
	Construction	*120.0*	*472.0*
	Improvement		
	Cover slabs	*230.0*	*4.0*
Total (including escalation)		**716.1**	**544.0**
Street lighting			
	Installation of new lights	90.0	150.0
	Tube lights		*30.0*
	Sodium Vapour	*70.0*	*120.0*
	High mast	*20.0*	
	Mini Mast		
	Timer switches	1.0	40.0
	Telemetry system		
Total (including escalation)		**95.8**	**190.0**
Solid Waste Management			
	Primary collection	8.0	65.0
	Source segregation		
	Tricycles		
	Plastic buckets	*8.0*	*65.0*
	Secondary collection	20.0	20.0
	Dumping stations		
	Vehicles for eliminating manual handling	*20.0*	*20.0*
	Secondary transportation	8.0	125.0
	Dumper Placer		*25.0*
	JCB/Compactors	*8.0*	*100.0*
	Dumper Placer Bin		
	Disposal site	138.5	200.0
	Facilities at disposal site	*49.5*	
	Incineration plant for disposal of bio-medical waste	*50.0*	*50.0*
	Compost yard	*10.0*	
	Black topping of inner roads	*3.0*	
	Construction of service station	*5.0*	
	Vehicles management at yard	*6.0*	
	Procurement of mechanical sprayers	*15.0*	
	Engineering study for design of scientific landfill	*3.0*	
	Scientific landfill		*30.0*
	Compost yard		*120.0*
Total (including escalation)		**194.3**	**410.0**

Others			
	Slaughter houses		84.0
	Parks and playfields	25.0	60.0
	Transport terminal	5.0	
	Hospitals – Improvement	110.0	20.0
	School buildings –Improvement		25.0
	Windmill		525.0
	Gas based crematorium		30.0
	Parking space		5.0
	Others like E – Governance	100.0	
Total (including escalation)		**240.0**	**749.0**
Grand total (In Rs. Crores)		**89.95**	**109.2**

Source: CCP details – CCP for Nagercoil town prepared by DHV consultants – November 2004. Extract from chapter 4 and chapter 10 (section 10.5).