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# **Tamilnadu Urban Infrastructure Financial Services Limited**

## **Final Report - Nammakal Municipality**

### **Conversion of City Corporate Plan into Business Plan**

**February 2007**

# TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>2</b>
<b>1. BACKGROUND .....</b>	<b>8</b>
1.1 OBJECTIVES AND SCOPE .....	8
1.2 APPROACH TO CCP AND BP .....	10
1.3 REPORT STRUCTURE .....	11
1.4 DELIVERABLES.....	11
<b>2. REVIEW OF CCP - CITY PROFILE .....</b>	<b>12</b>
2.1 ECONOMIC PROFILE.....	12
2.2 PAST PLANNING EFFORTS .....	12
2.3 KEY DEVELOPMENT ISSUES.....	13
<b>3. REVIEW OF CCP - MUNICIPAL ASSESSMENT: INFRASTRUCTURE &amp; ORGANISATION.....</b>	<b>14</b>
3.1 WATER SUPPLY .....	14
3.1.1 Additional storage capacity not required .....	14
3.1.2 Distribution lines cover 100% roads .....	14
3.1.3 Water supply reaching 54% houses .....	15
3.1.4 Issues.....	15
3.2 SEWERAGE AND SANITATION .....	15
3.2.1 26% population devoid of any sanitation facility .....	15
3.2.2 Rs. 18.84 crores project proposed for a complete UGD scheme.....	15
3.3 ROADS COVER 62% OF THE TOWN .....	16
3.4 62.6% ROADS COVERED WITH STORM WATER DRAINS (SWD) .....	16
3.5 SOLID WASTE MANAGEMENT .....	16
3.5.1 100% collection of waste .....	16
3.5.2 Additional revenue generation from sale of vermi compost .....	17
3.6 STREET LIGHTS COVER 76% OF THE TOWN .....	17
3.7 INADEQUATE SOCIAL AND RECREATIONAL FACILITIES.....	17
3.8 SLUM INFRASTRUCTURE ASSESSMENT REQUIRED .....	17
3.9 THE ORGANISATION REQUIRES TRAINING IN KEY AREAS .....	18
3.9.1 Revenue section.....	18
3.9.2 Accounts & establishment section.....	18
3.9.3 Engineering section.....	20
3.9.4 Health section .....	21
3.9.5 Town planning section .....	21
3.9.6 Information technology section.....	21
3.9.7 Status of e-Governance .....	22
<b>4. REVIEW OF MUNICIPAL FINANCE.....</b>	<b>22</b>
4.1 NAMMAKAL 'S PER CAPITA SURPLUS HIGHER THAN THE STATE AVERAGE .....	22
4.2 REVENUE RECEIPTS .....	22
4.2.1 Revenue growth stifled due to fall in key non-tax revenues .....	22
4.2.2 Property tax and water tax contribute to 21% revenues.....	22
4.3 REVENUE EXPENDITURE.....	22
4.3.1 Salary expenses in control, but expenditure higher than other similar towns .....	22
4.3.2 No significant maintenance towards roads and SWD.....	22

4.4	OUTSTANDING LIABILITIES .....	22
4.4.1	Debt liabilities - 28% of 2004-05 closing balance.....	22
4.4.2	Non-debt liabilities – 6% of 2004-05 closing balance.....	22
4.5	47% CAPITAL EXPENSES MET FROM INTERNAL REVENUES .....	22
4.6	KEY PERFORMANCE INDICATORS .....	22
<b>5.</b>	<b>CAPITAL INVESTMENT PROGRAM.....</b>	<b>22</b>
5.1	CAPITAL INVESTMENT .....	22
5.2	DEPARTMENT WISE INVESTMENT IDENTIFIED FOR IMMEDIATE REQUIREMENT .....	22
5.2.1	Rs. 990 lakhs required for water supply projects .....	22
5.2.2	Rs. 1899 lakhs required for UGD project and sanitation systems.....	22
5.2.3	Rs 301 lakhs required for Solid Waste Management (SWM).....	22
5.2.4	Rs. 450 lakhs required for roads and drain service.....	22
5.2.5	Rs. 40 lakhs required for street lighting services.....	22
5.2.6	Rs. 1010 lakhs required for other services.....	22
<b>6.</b>	<b>FINANCIAL OPERATING PLAN.....</b>	<b>22</b>
6.1	NEED FOR A FOP.....	22
6.2	ASSUMPTIONS FOR FOP .....	22
6.2.1	Revenue Receipts Items.....	22
6.2.2	Revenue expenditure .....	22
6.2.3	Capital income and expenditure .....	22
6.3	PROPERTY TAX AND WATER TAX IMPROVEMENTS HAVE THE MAXIMUM IMPACT .....	22
6.4	PROPERTY TAX / GENERAL TAX.....	22
6.4.1	Rs. 406 collected per property per annum in 2004-05.....	22
6.4.2	Improvement measures can yield Rs. 1200 lakhs.....	22
6.4.3	Summary .....	22
6.5	WATER CHARGES .....	22
6.5.1	Low coverage of 54%, but high collection efficiency of 88%.....	22
6.5.2	Improvement measures can generate Rs. 912 lakhs .....	22
6.5.3	Summary .....	22
6.6	SHOPS & MARKET RENT .....	22
6.6.1	Improvement measures can generate Rs. 1247 lakhs .....	22
6.6.2	Summary .....	22
6.7	OTHER REVENUE SOURCES CAN GENERATE RS. 913 LAKHS .....	22
6.8	AREAS OF EXPENDITURE REDUCTION .....	22
6.9	ALTERNATIVE PAYMENT STRUCTURES AND INCENTIVE STRUCTURE .....	22
6.10	MAXIMUM INVESTMENT POTENTIAL OF THE TOWN IS RS. 4695 LAKHS .....	22
6.10.1	Summary – Improvement measures mandatory to sustain the required investment .....	22
<b>7.</b>	<b>ASSET MANAGEMENT PLAN.....</b>	<b>22</b>
7.1	CLASSIFICATION OF MUNICIPAL ASSETS .....	22
7.1.1	Activities of Asset Management Plan (AMP).....	22
7.1.2	The process .....	22
7.2	PLANNING OF NAMMAKAL MUNICIPAL ASSETS .....	22
7.2.1	Non-remunerative asset .....	22
7.2.2	Remunerative asset .....	22
7.2.3	Social and service related assets .....	22
<b>8.</b>	<b>ACTION AND IMPLEMENTATION PLAN.....</b>	<b>22</b>
8.1	IMPLEMENTATION SCHEDULE .....	22
8.1.1	Improved scenario without UGD project.....	22

8.1.2	<i>Improved scenario with UGD project</i> .....	22
8.2	ACTIVITIES AND RESPONSIBILITY .....	22
8.2.1	<i>Involvement of elected representatives</i> .....	22
8.2.2	<i>State government support</i> .....	22
8.3	ACTIONS REQUIRE DURING IMPLEMENTATION OF THE BUSINESS PLAN.....	22
8.3.1	<i>Land management, urban economy and environment</i> .....	22
8.3.2	<i>Performance targets for revenue section</i> .....	22
8.3.3	<i>Supervisory requirement for Revenue section to handle issues</i> .....	22
8.3.4	<i>HRD improvement measures</i> .....	22
8.3.5	<i>An integrated commercial approach</i> .....	22
8.4	SOME KEY MEASURES THAT COULD AID IN IMPLEMENTATION OF THE BUSINESS PLAN .....	22
8.4.1	<i>Professionalization of workforce – AMC</i> .....	22
8.4.2	<i>Slum sanitation with community Participation - PMC</i> .....	22
8.4.3	<i>Park management committees - MCL</i> .....	22
8.5	WAY FORWARD.....	22
<b>9.</b>	<b>DRAFT MEMORANDUM OF UNDERSTANDING BETWEEN NAMAKKAL MUNICIPALITY AND TNUIFSL .....</b>	<b>22</b>
	<b>ANNEX .....</b>	<b>22</b>
	ASSUMPTIONS ADOPTED FOR FOP .....	22
	CURRENT FINANCIALS .....	22
	BASE CASE PROJECTIONS .....	22
	IMPROVED CASE PROJECTIONS .....	22
	SOLID WASTE MANAGEMENT CHARGES COLLECTED BY THE MUNICIPALITY .....	22
	RECAST OF ANNUAL ACCOUNTS .....	22
	NORMS & BENCHMARKS FOR MUNICIPAL SERVICES .....	22
	BEST PRACTICES.....	22
	POSSIBLE KEY ACTIONS FOR INCREASING COLLECTION LEVELS.....	22
	COMPARISON OF CCP PROJECTS AND BP PROJECTS.....	22

## INDEX OF TABLES

TABLE 1: LAND USE PATTERN .....	13
TABLE 2: SUGGESTIVE LIST FOR MIS .....	19
TABLE 3: CLASSIFICATION OF REVENUE ITEMS.....	22
TABLE 4: 6.7% GROWTH IN PROPERTY TAX BETWEEN 2000-01 AND 2004-05 .....	22
TABLE 5: SALARY AND O&M EXPENSES OF SIMILAR TOWNS IN KARNATAKA .....	22
TABLE 6: RS. 138.27 LAKHS OF DEBT LIABILITIES .....	22
TABLE 7: RS. 30 LAKHS OF NON-DEBT LIABILITIES.....	22
TABLE 8: KEY PERFORMANCE INDICATORS (KPI).....	22
TABLE 9: PHASING OF INVESTMENT OVER FIVE YEARS .....	22
TABLE 10: PROPERTY TAX DETAILS – ASSESSMENT AND TAXPAYERS: 2000-01 TO 2004-05.....	22
TABLE 11: RS. 1200 LAKH REVENUE POTENTIAL THROUGH IMPROVEMENT IN PROPERTY TAX.....	22
TABLE 12: STATIC WATER CONNECTION OVER DURING 2000-01 TO 2004-05 .....	22
TABLE 13: WATER CHARGES DETAILS.....	22
TABLE 14: RS. 912 LAKH REVENUE POTENTIAL THROUGH IMPROVEMENT IN WATER TAX .....	22
TABLE 15: RS. 1247 LAKH REVENUE POTENTIAL THROUGH IMPROVEMENT IN SHOP RENT.....	22
TABLE 16: REVENUE POTENTIAL FOR OTHER SOURCES .....	22
TABLE 17: KEY AREAS FOR EXPENDITURE CONTROL .....	22
TABLE 18: INVESTMENT POTENTIAL SCENARIOS .....	22
TABLE 19: MOTOR VEHICLES OWNED BY MUNICIPALITY .....	22
TABLE 20: TYPICAL STRUCTURE OF THE REGISTER FOR MAINTENANCE CONTRACT .....	22
TABLE 21: DETAILS OF REMUNERATIVE ASSETS OWNED BY MUNICIPALITY .....	22
TABLE 22: SOCIAL INFRASTRUCTURE OWNED BY MUNICIPALITY .....	22
TABLE 23: PROJECT PHASING – INVESTMENT WITHOUT UGD .....	22
TABLE 24: KEY ACTIVITIES – INVESTMENT WITHOUT UGD.....	22
TABLE 25: PROJECT PHASING – INVESTMENT WITH UGD .....	22
TABLE 26: KEY ACTIVITIES – INVESTMENT WITH UGD .....	22
TABLE 27: BASIC TRAINING.....	22
TABLE 28: SPECIALIZED TRAINING .....	22
TABLE 29: INTEGRATED ACTIVITIES OF THE REVENUE SECTION .....	22

### 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), an asset-management company, 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 CRISIL 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. TNUIFSL, lending agencies, municipality, developers and users

### 1. Namakkal's economy and infrastructure

CRISIL Infrastructure Advisory broached the town visit with a study of Nammakal 's infrastructure. Nammakal has substantial growth potential, primarily due to its vantage position; it is a key tourist transit point and has an extensive poultry farming activity that is one of the largest in the country. On the land development front, currently 52% 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 100% of Nammakal 's roads, water supply reaches only 54% 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 and storm water drains covering 62% of the town. Street lighting facilities and the solid waste collection system cover larger areas; streetlights facilities have attained 76% coverage level, and the solid waste collections cover 100 per cent of the area under the Nammakal municipality's jurisdiction. In addition to having a strong collection system, service delivery with respect to other aspects of solid waste management (SWM) like transportation and disposal are also quite adequate.

## 2. Key functions and performance of Namakkal municipality

One of our first steps towards formulating a business plan was to study the functions and performance of the Namakkal municipality, which would be the chief executor of the plan. The Namakkal municipality covers an area of 10.24 sq. kms and is divided into 30 wards. Responsible for 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.

**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 20 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 Namakkal municipality, our team attended to the municipality's financial profile, vital to the formulation of a business plan.



### 3. Financial performance of Nammakal municipality

Nammakal municipality has maintained a healthy financial profile in the last five years, generating an average annual revenue surplus of 11% of its revenue. A reasonable tax rate, accounting for 18% of annual rental value, constitutes the chief reason for its buoyant performance. Also, revenue receipts have grown by 2.5% and salary expenses decreased by 1.6% over these last five years leading to positive financial performance. Consequently, the municipality has generated a per capita surplus of Rs. 253<sup>1</sup>, which is higher than the state average.

This favourable financial performance has been marginally offset by the municipality's outstanding liability of Rs. 168 lakhs (comprising debt and non-debt) that amounts to 34% of the closing balance of 2004-05. Also, more than one-third 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. 210 lakhs, which constitutes 42% of its revenues.

### 4. CRISIL Infrastructure Advisory's plans for Nammakal

Based on our detailed study of Nammakal's infrastructure requirements and the strengths and weaknesses of the Nammakal 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 Nammakal's total investment requirement to be of the order of Rs 4690 lakhs; 74% of this investment would be required for the underground drainage systems and 18% for improving the road and storm water drain conditions. 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	123.75	495.00	371.25	-	-	990.00
Storm Water Drain	-	25.00	100.00	75.00	-	200.00
Sanitation and Sewerage	237.38	949.50	712.13	-	-	1,899.00
Solid Waste Management	-	37.63	150.50	112.88	-	301.00
Roads	-	25.00	100.00	75.00	-	199.99
Transportation	-	-	-	25.00	25.00	50.00
Street lighting	-	5.00	20.00	15.00	-	40.00
Others	-	-	126.25	505.00	378.75	1,010.00
<b>Total</b>	<b>361.13</b>	<b>1,537.12</b>	<b>1,580.12</b>	<b>807.87</b>	<b>403.75</b>	<b>4,689.99</b>

All figures in Rs. lakhs

<sup>1</sup> For 2003-04

## 5. Financial Operating Plan

The Financial Operating Plan (FOP) assesses the financial strength of Namakkal and the financial feasibility of the identified investment projects. CRISIL 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<sup>2</sup>, new charges and rate revisions across revenue items are assumed. We concluded that Namakkal's investment sustenance capacity varies from 22% to 103% 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	10.55	22%
Improved without UGD	28.49	61%
Base with UGD	30.04	64%
Improved with UGD	48.16	103%

## 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 Namakkal 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<sup>3</sup> 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.

<sup>2</sup> Efficiency gains are gains resulting from increase in coverage of services and taxes.

<sup>3</sup> 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 project

### Implementation plan

Under this scenario, the UGD component has been removed.

Sector wise Phasing	I year	II year	III year	IV year	V year	Total
Water supply	123.75	495.00	371.25	-	-	990.00
Storm Water Drain	-	25.00	100.00	75.00	-	200.00
Sanitation and Sewerage	-	-	-	-	-	-
Solid Waste Management	-	37.63	150.50	112.88	-	301.00
Roads	-	25.00	100.00	75.00	-	199.99
Transportation	-	-	-	25.00	25.00	50.00
Street lighting	-	5.00	20.00	15.00	-	40.00
Others	-	-	126.25	505.00	378.75	1,010.00
<b>Total</b>	<b>123.75</b>	<b>587.62</b>	<b>868.00</b>	<b>807.87</b>	<b>403.75</b>	<b>2,790.99</b>

### Activity Chart

Stakeholders	Actions	Pre - Project	I year	II year	III year	IV year	V year	VI year onwards
<b>Financial</b>								
TUFIDCO/TUFISIL	Release of loans		86.6	275.1	471.3	565.5	282.6	
Govt. of Tamilnadu	Release of grants		37.1	176.3	260.4	242.4	121.1	
Nammakal municipality	ULB contribution		0.0	136.3	136.3			
Public	Initial contribution for new projects like UGD							
<b>Physical</b>								
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 investment capacity is based on the UGD charges with domestic connections charges Rs. 5187 for a new connection and a monthly charge of Rs. 76. For commercial connections, it would be Rs. 15847 and a monthly charge of Rs. 223. 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	123.75	495.00	371.25	-	-	990.00
Storm Water Drain	-	25.00	100.00	75.00	-	200.00
Sanitation and Sewerage	237.38	949.50	712.13	-	-	1,899.00
Solid Waste Management	-	37.63	150.50	112.88	-	301.00
Roads	-	25.00	100.00	75.00	-	199.99
Transportation	-	-	-	25.00	25.00	50.00
Street lighting	-	5.00	20.00	15.00	-	40.00
Others	-	-	126.25	505.00	378.75	1,010.00
<b>Total</b>	<b>361.13</b>	<b>1,537.12</b>	<b>1,580.12</b>	<b>807.87</b>	<b>403.75</b>	<b>4,689.99</b>

### Activity chart

Stakeholders	Actions	Pre - Project	I year	II year	III year	IV year	V year	VI year onwards
<b>Financial</b>								
TUFIDCO/TUFISIL	Release of loans		148.2	835.2	969.8	565.5	282.6	
Govt. of Tamilnadu	Release of grants		108.3	461.1	474.0	242.4	121.1	
Nammakal municipality	ULB contribution		104.6	240.8	136.3			
Public	Initial contribution for new projects like UGD							
<b>Physical</b>								
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							

The above activities, undertaken in the specified time frames, will enable Nammakal 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, Namakkal, 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

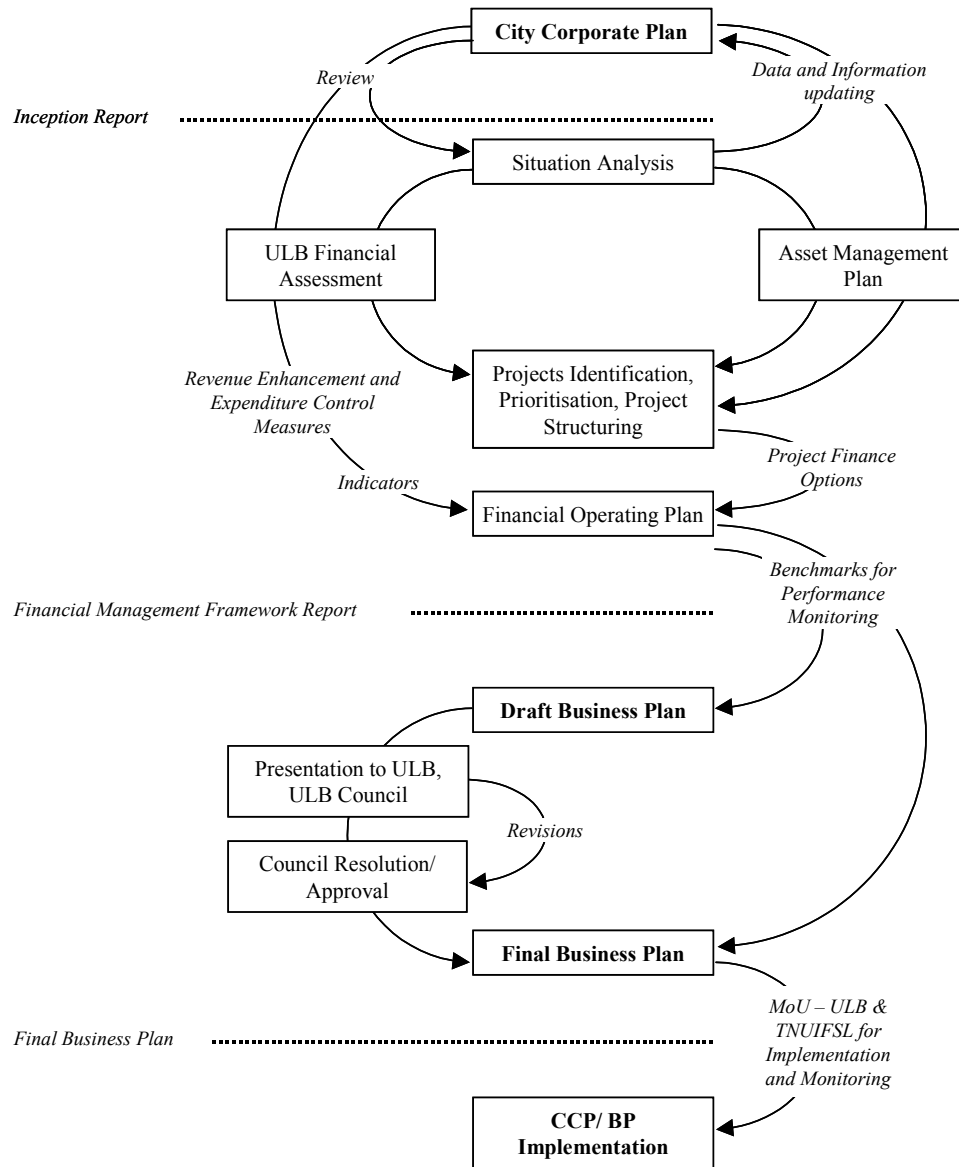
B. Indicative areas of reduction in expenditure:

- 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 Nammakal 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 Nammakal municipality and TNUIFSL



## 2. REVIEW OF CCP - CITY PROFILE

*Namakkal is a town with a substantial growth potential due to its inherent strength of geographical location that has key tourist spots and an extensive industrial and poultry farming activity. 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.*

Namakkal, the headquarters of Namakkal district is situated in the central part of Tamilnadu at a distance of 50 kms from Salem. The town has historic significance due to the hill fort and mosque built by Tipu Sultan. Its other landmark is the Anjenya temple that has a significant tourist interest. It was a town panchayat till 1943 and in 1970 it was upgraded to a Grade III municipality. Over the years, the town has been upgraded and in 1988, it was upgraded into a Selection Municipality. Its total coverage is 10.24 sq. kms and is divided into 30 wards. The town has a population of 0.53 lakhs as per 2001 census with a population density of 5176 persons per sq. km. The literacy rate has been increasing over the last 4 decades and as per 2001 census, 78.7% of its population is literate.

### 2.1 Economic profile

The main economic activities of the town are manufacturing of rigs, truck building and poultry farming. The town also has several places of tourist interest that include temples, fort and hill station (Kolli Hills). The town's revenue generation potential is primarily from industrial activities of truck building and poultry farming. The tourist attractions could also supplement the revenue generation capacity, if measures are taken to improve the ambiance of the spots. To aid the poultry farming activity, it has been proposed to develop the packaging material market in the town, which as of now is being imported. This would provide an impetus to the employment generation program.

### 2.2 Past planning efforts

There are 10 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 1998. The development of the town is as per this act, which is permitted by the Local Planning Authority (LPA), whose members are part of the Municipal Council and the existing land use is largely due to their directives. However, the efforts have not yielded the desired results, as there are 35 encroachments and 17 unauthorized layouts (Approximately 20 acres). The unauthorized layouts at strategic points like the foothills of the fort are adversely affecting the tourist activities as well.

Namakkal has proposed to extend the Municipal limits by including the nearby panchayats with a total area of 21.4 sq. km. The proposal includes laying of a ring road around the town with development of Auto Nagar – a specific area for truck building adjacent to this road. This move is expected to reduce the traffic congestion in the main area of the town, as all the truck-building activities in would be limited to this area and also limit the movement of the incoming trucks to the periphery of the town. However, this proposal is pending for approval. The existing land use in the town highlights the vast untapped potential of the town, as almost more than half of the town's area (52%) is unused. If proper efforts are taken, this could provide a good revenue source. The land use pattern details are mentioned below

**Table 1: Land use Pattern**

Use	Area (Hectare)	Percentage
Residential	199.60	19.49
Commercial	36.52	3.57
Industrial	48.28	4.7
Public-semi public	11.68	1.14
Education	26.32	2.57
Transportation	118.30	11.55
<b>Total (1)</b>	<b>440.70</b>	<b>43.03</b>
Wet Lands	25.92	2.53
Dry Lands	533.28	52.08
Parks & Burial Ground	5.30	0.52
Hillocks	5.28	0.52
Water Bodies	13.52	1.32
<b>Total (2)</b>	<b>583.3</b>	<b>56.97</b>
<b>Grand Total (1) + (2)</b>	<b>1024.00</b>	<b>100.00</b>

Source: City Corporate Plan, Nammakal

## 2.3 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 50% 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 54% of the houses in the town and almost 1/4<sup>th</sup> of the population lacks a proper sanitation facility. Roads and Storm Water drains are inadequate to cater to the existing population, while, street lighting infrastructure 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 also required*

#### 3.1 Water supply

The source of water supply to Namakkal municipality is from the river Cauvery near Mohanoor, which is located at a distance of 19kms from the town. The town is covered under the protected water supply scheme, which was commissioned in 1967 at an estimated cost of Rs. 24 lakhs. Subsequently, to cater to the increased requirements of the town, another scheme was commissioned in 1990 at an estimated cost of Rs. 200 lakhs. Despite these improvement measures, the town faces a deficit in supply to the extent of 1.9 MLD. In order to address the deficit and to provide for the increase in population (expected at 2.05 lakhs in 2026), a third scheme is being contemplated to increase the overall capacity to 90 LPCD, which is the norm for Daily per Capita Supply.

##### 3.1.1 Additional storage capacity not required

There are 5 Service Reservoirs with a total storage capacity of 21.44 ML that is 35.5 % of the daily requirement, higher than the norm of 33.33%. Hence there is no need for any additional service reservoirs. However, 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 23 MLD, which is 8.2 times the existing supply and hence adequate to cater to the current needs.

##### 3.1.2 Distribution lines cover 100% roads

The total length of the distribution system is 57 km covering the total road length. This is above the state average for municipalities (78%) and the norm of 85% and hence, there is no need for additional pipelines. However it is necessary to replace the old CI pipes in phased manner at the rate of 5km every year. Water is supplied on alternate days, which is inadequate to meet the needs of the town. The problem is compounded as a portion of the total supply is diverted to the 58 public stand posts in the town that is much above the accepted norm of 11 stand posts (1 per 150 Slum residents<sup>4</sup>). However, as per the government's policy, the public stand posts have to be eliminated completely, which the town has been attempting.

<sup>4</sup> As per TNUDP II accepted norms. There are 381 slum households with a population of 1598 in 4 locations.

### **3.1.3 Water supply reaching 54% houses**

The distribution system covers only 54% of the total households (8437 out of 15761 properties in the register). This could be even lesser, if the number of unassessed properties is taken into consideration. The non-coverage of almost half the households in the town highlights the poor operational efficiency level and moreover, this level has not improved over the last 4 years from 2000-01 to 2004-05.

### **3.1.4 Issues**

Nammakal 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 26% 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. The present system involves roadside drains carrying both the sullage and rainwater. Houses and other commercial establishments have their own septic tank arrangements for sullage disposal. The sullage from the houses as well as storm water is collected in open drainage and disposed in the Kosavampatti lake causing environmental degradation and spread of water borne diseases.

2.2% the town has access to public conveniences<sup>5</sup> and out of the 15761 properties in the town, almost 66% are covered with septic tanks while 6% households have access to low cost sanitation facility<sup>6</sup>, thus resulting in almost 26% of the population uncovered by any proper sanitation facilities

### **3.2.2 Rs. 18.84 crores project proposed for a complete UGD scheme**

To improve the poor sanitation situation in the town, a UGD scheme has been proposed as part of the integrated development initiated by the municipality. A technical study was conducted to assess the requirement of the town and a detailed project report was prepared. But the sewerage system could not be implemented due to limited financial capacity of the town. However, with the additional revenues being generated through the proposed new connection charges and monthly tariff, the sewerage scheme would be implemented in the next two to three years. These charges, in addition to the revenue surpluses would enable the town to absorb the capital cost plus the additional O&M and debt servicing costs. The project also envisages receiving aid from the state government in the form of grant.

The technical study has highlighted the requirement of 60 kms of sewer lines with 8.19 MLD water requirement. Rs. 24.44 crores is required for the completion of the project with an additional annual maintenance cost of Rs. 35 lakhs (including additional manpower requirement)<sup>7</sup>. However, the cost of project has been reduced due to reduction in the coverage of the town. Since the UGD scheme is designed to cover 90% of the town, only 5 new Public Conveniences/ Sanitary Complexes are required.

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<sup>5</sup> There are 20 'Pay & Use' public conveniences which is marginally below the norm of 26 (60 persons per seat of public convenience – slum population of 1598

<sup>6</sup> Septic Tanks: 10449 households, LCS: 950 households

<sup>7</sup> Based on the technical study of Dalal Matt Macdonald

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### 3.3 Roads cover 62% of the town<sup>8</sup>

The town has 8 major radial roads towards all directions leading to major cities like Salem and Trichy. The eight major roads radiating from the town are Salem road, Trichy road, Tiruchengode road, Mohanoor road, Rasipuram road, Thuraiur road, Sedhamangalam road and Nainamalai road. The total road length is 74 kms; 58 maintained by the municipality and the rest by the Department of Highways. However, as per the accepted norms, per capita municipal road length is 1.75 meters, while for Namakkal, it is only 1.09 meters implying a shortfall of 38%. Excluding earthen roads, the surfacing of the other roads is much above the prescribed norms<sup>9</sup> viz. 19% cement concrete, 80% Bitumen laid and 1% earthen roads.

In order to decongest the traffic, the ring road around the town has been constructed. However, the ring road connects only 3 of the 8 main arterial roads and hence the traffic from Trichy road, Mohanoor road and Sedhamangalam road has to pass through 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 due to its increased economic activities. The key areas of concern are insufficient roads, insufficient and improper maintenance and non-connectivity of the ring road to all the arterial roads

### 3.4 62.6% roads covered with Storm Water Drains (SWD)

The existing Storm Water Drain (SWD) infrastructure is poor as it has only 92 kms, which is below the required level of 110 kms.<sup>10</sup> 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

## 3.5 Solid Waste Management

### 3.5.1 100% collection of waste

The town has the unique distinction of being the only town in the state to privatise its complete Solid Waste Management (SWM) activities. The entire chain of activities viz. from door-to-door collection to selling of vermin compost has been outsourced. The town has achieved 100% collection efficiency along with source segregation, which is as per the required norm. This is possible due to the co-operation of the citizens who segregate the organic and inorganic waste into 2 different bins, as advised by the municipality. 90 Pushcarts collect the waste from every residential, commercial and industrial property and dump it at the transfer points, from where the lorries and tippers clear it on a daily basis that has obviated the need for any dustbins in the town. The bio-medical waste is collected separately and transported to the disposal site

<sup>8</sup> As per the norm of 1.75m of per capita municipal road

<sup>9</sup> Concrete: 5%, Black Top: 85%, WBM: 10%, Earthen: 0%

<sup>10</sup> As per the norm of 150% road length (including non-municipal roads)

### 3.5.2 Additional revenue generation from sale of vermi compost

The existing fleet of vehicles consisting of 3 Lorries, 2 Tippers and 7 Rubbish Carts handle a capacity of 18.5 MT per day and make 3 trips per day (Above the existing norm of 3.5 trips per day) to transport the waste from the transfer point to the disposal site. This is a 8.53-acre site located at Kosavampatti at a distance of 3km from the town. The municipality has purchased another site of 13.41 acres at Lathuvadi at a distance of 10km from the town for disposal, as the earlier site's capacity is exhausted. The private player has set up a vermin compost plant at the Kosavampatti site where the organic waster is converted into compost and sold, while the recyclable inorganic waste like iron, plastic etc are sold and the remaining inorganic waste is buried in the compost yard. The municipality has been able to generate approximately Rs. 4 lakhs per annum through the sale of Vermi compost

### 3.6 Street lights cover 76% of the town<sup>11</sup>

There are 1878 streetlights; 29.3% of which are Sodium Vapour and the rest are Tube lights. The existing spacing is 39 m between lampposts, implying 76% 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. It has undertaken an energy audit exercise and identified the gaps in the existing system.

### 3.7 Inadequate social and recreational facilities

The social infrastructure consists of Educational centres including Schools, Colleges & Training Institutes and Health Care centres. Nammakal 's educational facilities are inadequate for the existing population and needs additional infrastructure. The deficiency in the number of primary and secondary school is 2 and 4 respectively, while the number of colleges is adequate.<sup>12</sup> The Health Care infrastructure also is deficient as there is a deficiency of 27 beds in the government hospital and 6 beds in the maternity centres, while the number of nursing homes and number of beds are more than the required levels.<sup>13</sup> Hence, despite a deficient situation, the private players have provided a reasonable level of health care facility in the town.

In addition to the low coverage of educational and 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

Nammakal municipality provides basic amenities like Water, Public conveniences, Drainage and Street lighting to the 8 slum areas, 4 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 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.<sup>14</sup>

<sup>11</sup> As per the norm of 1 street light per 30m

<sup>12</sup> As per the norm of 1 primary school per 300 students, 1 secondary school for a 7500 population and 1 college for 1.25 lakh

<sup>13</sup> 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

<sup>14</sup> 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 9 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 statement. The payment is made by the users directly at the 4 collection centres and hence, the earlier collection work has been eliminated.

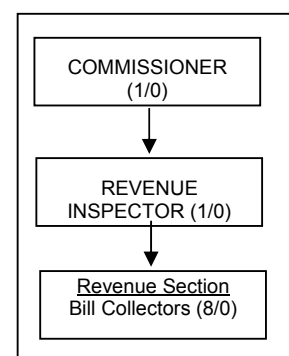
#### Operation and Maintenance (O&M) issues

##### 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 20-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	%	

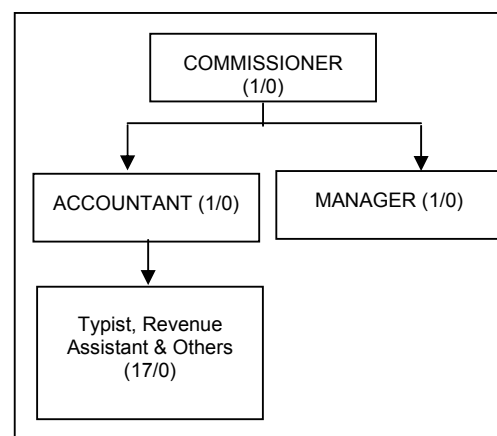


## O&M issues

### 1. Adequacy of strength

Currently, the accounts section consists of 1 accountant only. The staff strength in accounts is inadequate for the current functioning and requires additional permanent staff with adequate skill and qualification. If it is not possible to take additional staff, the municipality may contract individual activities (e.g. Budget preparation) on a case-to-case basis. Increased automation through computerisation would also relieve the pressure for additional staff.

Given the inadequate staff, both the budgeting and regular accounting functions are under pressure. No independent verification of reports submitted by other departments related to revenue / cost items takes place.



### 2. Business process/system issues

Despite being vested with powers to increase the rate, the administration has not initiated efforts with the council to increase the property rates, which is only 18% of the Annual Rental Value. However, poor service delivery levels have added to the municipality's inability to raise the rates

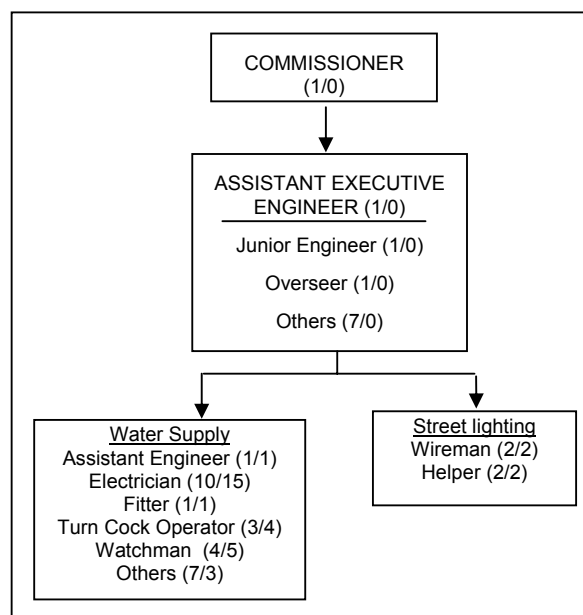
## 3.9.3 Engineering section

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. An Assistant Executive Engineer heads the department. 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.

## 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. With the UGD project being implemented, there would be additional manpower recruited towards it



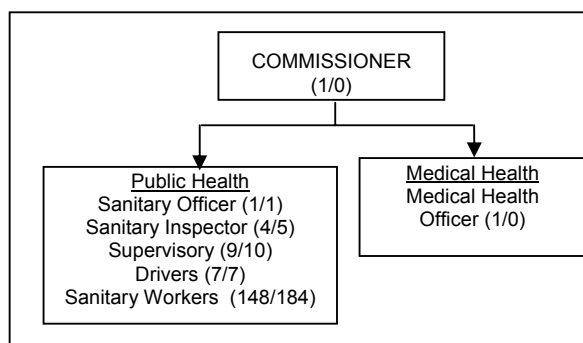
### 2. Business process/system issues

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 Sanitary Officer heads the department and he also has a Medical Officer to support him in his functions. The key functions are:

- Solid Waste Management
- Town assessment to 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

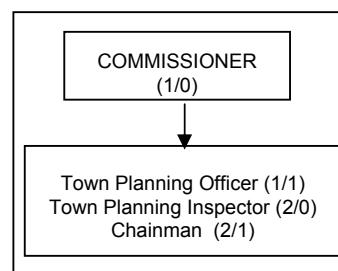
The staff is sufficient for the existing projects and works, as most of the work has been privatised and only certain works like night sweeping, co-ordination with the private player etc remains and hence additional staff would not be required.

#### 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

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

There are four on-line collection centres, but are not interconnected. These are located at Indian Overseas Bank, maternity centre, municipal office and old municipal office centre. 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

*Nammakal municipality has performed quite efficiently during the period 2000-01 to 2004-05. Similar to other municipalities, Nammakal too over-estimates its revenues due to the incorrect accounting policy of projecting its demand as the actual collection. Nammakal has maintained a an average revenue surplus of 11% of its revenues for the above period, due to an 2.5% increase in its revenue receipts combined with a 1.6% decrease in salary expenses. However, its outstanding liability of Rs. 170 lakhs (including debt and non-debt) could be a minor cause for concern, as it is 28% of the closing balance of 2004-05*

The review<sup>15</sup> 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 Nammakal 's per capita surplus higher than the state average

Over the past five years (2000-01 to 2004-05) Nammakal municipality has consistently generated revenue surpluses with an operating ratio<sup>16</sup> of 0.83 (5 year average). The town had a Rs. 494 lakhs cumulative surplus at the end of 2004-05. The per capita revenue and expenditure is Rs. 1090 and Rs. 837 respectively in FY2003-04, implying a revenue surplus of Rs. 253 per capita, both of which are above the state average for municipalities for that year (Rs. 174)<sup>17</sup>. Over the last 5 years (2000-01 to 2004-05), the town has also maintained an average per capita revenue surplus of Rs. 164 that signifies a steady performance. The detailed financial statements are provided in Annex

<sup>15</sup> 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.

<sup>16</sup> Revenue expenditure /Revenue receipts

<sup>17</sup> Per Capita Revenue Income: Rs. 702, Per Capita Revenue Expenditure: Rs. 528

**Table 4: 6.7% growth in Property tax between 2000-01 and 2004-05<sup>18</sup>**

	2000-01	2001-02	2002-03	2003-04	2004-05	CAGR
Opening balance	15	134	185	246	387	
Municipal receipts	481	409	569	599	535	
<i>Property tax</i>	50	55	63	65	65	6.7%
<i>Water tax</i>	50	42	48	50	49	(0.2%)
<i>Revenue from education</i>	33	32	37	38	38	3.8%
Municipal expenditure	361	358	507	458	428	
<b>Municipal Surplus/deficit for current year</b>	<b>119</b>	<b>51</b>	<b>62</b>	<b>141</b>	<b>106</b>	
<b>Final closing balance</b>	<b>134</b>	<b>185</b>	<b>246</b>	<b>387</b>	<b>494</b>	

All figures in Rs. Lakhs

## 4.2 Revenue receipts

### 4.2.1 Revenue growth stifled due to fall in key non-tax revenues

Namakkal municipality had a revenue receipt growth of 2.5% and a favourable operating ratio averaging 0.83 during 2000-01 to 2004-05 due to growth in own revenue sources (property tax, revenue from education). The growth in revenues has been stifled due to stagnant revenues from water tax, reduction in non-tax revenues and permanent revenue grants and inability to collect development charges

One of the main reasons for the slow growth is the drop in water taxes by 0.2% in 2004-05. The decrease in non-tax revenue items has also limited the growth. In 2004-05, the shop and market rent and entertainment tax decreased drastically by 76% and 65% respectively, while the surcharge on sales tax decreased by 8%

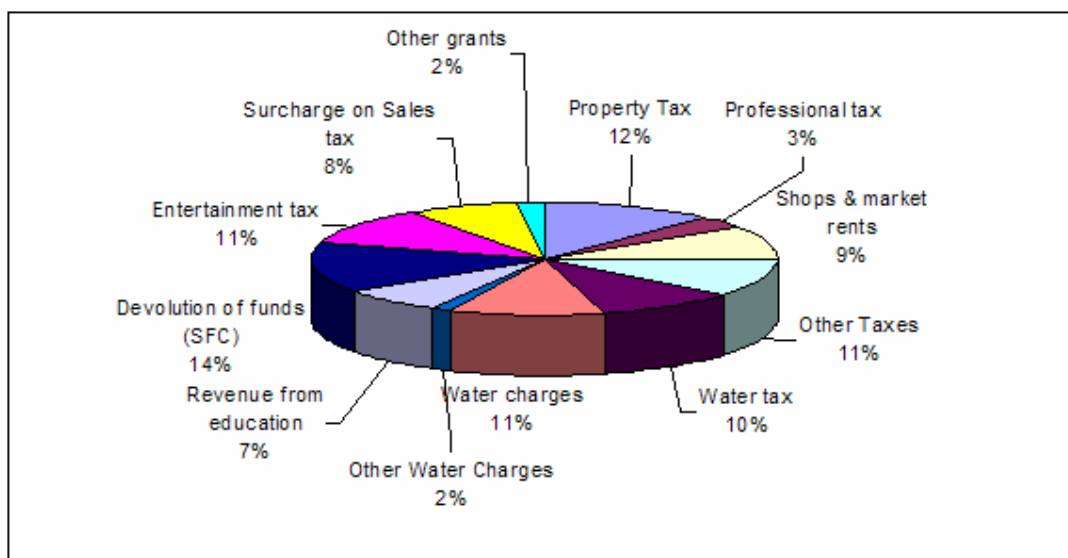
The growth would have been higher, if the town had been able to tap into the **betterment charges**, which it is losing out due to the issue of unauthorized layouts. Currently, to develop any new property, the approval of the Registrar is required. However, the Registrar does not co-ordinate with the 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 20 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

<sup>18</sup> The financial statements provided by Namakkal municipality have been recast by us to facilitate analysis

## 4.2.2 Property tax and water tax contribute to 21% revenues

Property tax, shop and water tax are the major revenue sources, comprising 21% of the total revenues receipts, while water charges and shop rent contribute to 20% of the revenues. This highlights the equal impact of tax and non-tax revenues on the town that contribute to 32% and 33% 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 62% and 88%, which is below the state's average of 74% and 90% respectively. Despite a robust own revenue source, Namakkal, like other ULBs in the state relies significantly on state grants. The state grants contribute to almost 37% of the revenues, which is marginally higher than the state average for municipalities - 34.8%.

## 4.3 Revenue expenditure

### 4.3.1 Salary expenses in control, but expenditure higher than other similar towns

The municipality's expenditure pattern is in line with the state average with salaries and O&M comprising 44% and 49% respectively (five year average)<sup>19</sup>. The overall revenue expenditure has grown at a CAGR of 4.3% p.a. during 2000-01 to 2004-05, which is higher than revenue growth of 2.7% p.a. during same period resulting in a decreasing revenue surplus. This increase is due to 16% growth in O&M expenses over the above period, during which, the salary expenses have decreased by 1.7%.

Despite the control in salary expenses, it is still high compared to other similar towns in Karnataka. The town's salary expense and O&M expense is 1.8 times and 2.3 times higher than the average for similar towns respectively. A comparison of the salary and O&M expenses for the similar towns in Karnataka is highlighted below

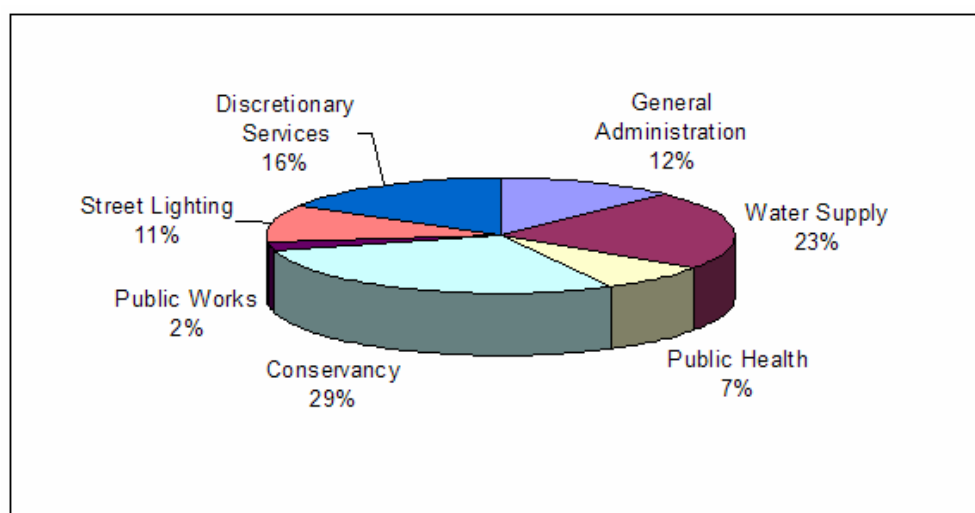
<sup>19</sup> The state's average for municipalities is 45% each

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

Town	No. Of Properties	Population	Expenses (Rs. Lakhs)	
			O&M	Salary
Sagar	10,789	50,131	76.56	74.12
Kollegal	10,717	52,607	42.70	52.71
Tiptur	11,562	53,104	257.03	83.98
Dandeli	11,121	53,290	128.55	108.90
Chikballapur	11,581	54,968	131.62	115.07
Haveri	10,873	55,913	70.34	68.12
Koppal	9,962	56,160	29.92	58.84
Jamakhundi	10,629	57,883	96.51	94.26
Nippani	11,821	58,081	71.63	157.11
Sirsi	12,613	58,702	58.74	87.19
Karwar	14,528	62,973	60.40	63.89
Doddaballapur	14,917	71,606	98.36	113.17
Ranebennur	16,041	89,618	103.09	129.52
Average			94.26	92.84

### 4.3.2 No significant maintenance towards roads and SWD

Unlike other poorly performing towns, its expenses towards general administration are only 12% and the largest share of expenses is towards Conservancy contributing 29% of the total expenditure. However maintenance of roads and SWD have been neglected. The figure below highlights the sector wise expenditure.

**Water supply and conservancy contribute to 52% expenses**

Nammakal has been successful in reducing its financing costs. In 2004-05, it had spent only Rs. 3.8 lakhs, which had been as high as Rs. 75.7 lakhs, the previous year.

## 4.4 Outstanding liabilities

### 4.4.1 Debt liabilities - 28% of 2004-05 closing balance

The town's outstanding debt liability is Rs. 138.27 lakhs, which is 28% of the closing balance of 2004-05. (Rs.494 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. 100 lakhs. Moreover, there are no overdue payments indicating the town's prompt repayment. The details of the loan are highlighted below

**Table 6: Rs. 138.27 lakhs of debt liabilities**

Lending Agency	Loan (Rs. Lakhs)	Interest Rate	Repayment period (Years)	Purpose / Scheme	Total loan repaid as on 31.03.2005 (Rs. Lakhs)			Outstanding Loan (Rs. Lakhs)
					Principal	Interest	Total	
Govt. Loan	179.82	9.75%	20	Water Supply	131.55	159.88	291.43	48.27
TNUDF Phase I	30.00	15.50%	20	Special Road Works		6.56	6.56	30.00
Phase II	60.00	15.70%	20	Special Road Works				60.00
<b>Total</b>	<b>269.82</b>				<b>131.55</b>	<b>166.44</b>	<b>297.99</b>	<b>138.27</b>

### 4.4.2 Non-debt liabilities – 6% of 2004-05 closing balance

Nammakal's non-debt liabilities include a few items that amount to Rs. 30 lakhs. The details are highlighted below.

**Table 7: Rs. 30 lakhs of non-debt liabilities**

Item	Amount (Rs. Lakhs)
Library Cess collected but not transferred	16.51
Group Insurance not paid	7.03
Survey charges	6.68
<b>Total</b>	<b>30.22</b>

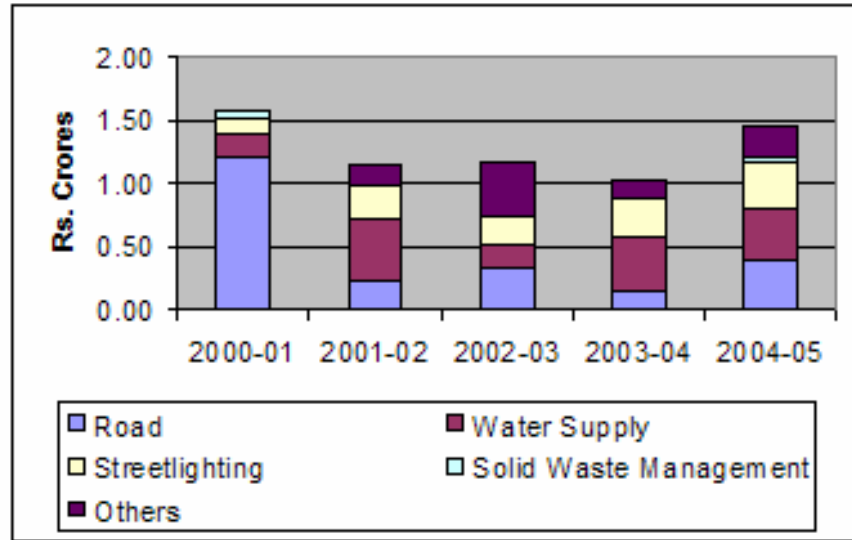
Overall, the liabilities would not have a financial impact on the town, as these constitute less than 30% of the town's annual revenues. All other loans are deducted from the SFC devolutions and hence the town is relieved of those liabilities

## 4.5 47% capital expenses met from internal revenues

For the period under review (2000-01 to 2004-05), Nammakal municipality has to met 47% of its capital expenditure from its revenue surplus. However, over the years, while its capital expenditure decreased by 2% (from 2000-01 to 2004-05), its operating revenue surplus decreased by 1.6% (from 2000-01 to 2004-05). Hence, for future requirements, the town's reliance on external source might increase. Despite investing more than 80% in roads, streetlight and water supply, the existing service levels are from satisfactory. This is a serious issue and has to be looked into immediately. The following chart summarizes the past trend in capital expenditure



**Investments in Roads decrease by 24% during 2000-01 to 2004-05**



## 4.6 Key Performance Indicators

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

**Table 8: Key Performance Indicators (KPI)**

Area	Item	Measure	Existing levels (2004-05) / Growth over previous year	Unit
<b>Revenue Improvement</b>	<i>Per Capita Income</i>		924.6	Rupees
	<i>Source of Funds</i>	Share of Taxes	32.40	%
		Share of Non Tax	33.76	%
		Share of Grants	33.84	%
	<i>Growth in Income Sources</i>	Growth in Taxes	4.4	% p.a.
		Growth in Non Tax	(4.1)	% p.a.
		Growth in Grants	34.2	% p.a.
		Growth in Own Sources	0.1	% p.a.
<b>Expenditure Management</b>	<i>Per Capita Expenditure</i>		771.2	Rupees
	<i>Functional Allocation</i>	Share of Salaries	42.76	%
		Share of O&M expenses	56.35	%
	<i>Growth in Items of Expenses</i>	Growth in Salaries	6.6	% p.a.
		Growth in O&M expenses	14.8	% p.a.
		Growth in Total Expenditure	(6.4)	% p.a.
<b>Performance</b>	<i>Operating Ratio</i>		0.83	Ratio
	<i>Per-capita performance Assessment</i>	Per Capita Own Income	561.9	Rs. p.a.
		Per Capita Grants	362.8	Rs. p.a.
		Growth in Per Capita Revenue Income	(0.1)	% p.a.
		Per Capita Salaries	329.8	Rs. p.a.
		Per Capita O&M expenses	434.6	Rs. p.a.
		Growth in Per Capita Revenue expenses	(0.1)	% p.a.
<b>Taxation</b>	<i>No. of Property Tax Assessments</i>		16066	
	<i>Current Tax Rate (Weighted Average)</i>		18.19	% of ARV
	<i>Tax Per Assessment (excluding Vacant Land)</i>		406.15	Rs. p.a.
<b>Efficiency</b>	<i>Property Tax</i>	Growth in Assessments	2	% p.a.
	<i>Collection Performance-Property Tax</i>	Arrears as % of Total Demand	37	%
		Demand per Assessment	419.2	Rs. p.a.
	<i>Water Supply</i>	Growth in Water Connections	0	% p.a.
		Average Expenditure/Connection/ month	91.82	Rupees
		Average Revenue / Connection/ month	105.42	Rupees
		Cost Recovery on Water Supply	115	%
	<i>Collection Performance-Water Charges</i>	Arrears as % of Total Demand	12	%

## 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). Namakkal 's investment requirement is Rs 4690 lakhs with 40% of the investment in the UGD scheme. 21% of the outlay is invested in water supply systems.

The town's CIP is a multi-year scheduling of prioritised physical 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. 4690 lakhs over the next five years. The phasing of the investment is given below:

**Table 9: Phasing of investment over five years**

Sector wise Phasing	I year	II year	III year	IV year	V year	Total
Water supply	247.5	247.5	247.5	247.5		990.0
Storm Water Drain	100.0	100.0				200.0
Sanitation and Sewerage	379.8	379.8	379.8	379.8	379.8	1899.0
Solid Waste Management	150.5	150.5				301.0
Roads				100.0	100.0	200.0
Transportation	50.0					50.0
Street lighting	40.0					40.0
Others	336.7	336.7	336.7			1010.0
<b>Total</b>	<b>1304.5</b>	<b>1214.5</b>	<b>964.0</b>	<b>727.3</b>	<b>479.8</b>	<b>4690.0</b>

All figures in Rs. Lakhs

### 5.2 Department wise investment identified for immediate requirement

#### 5.2.1 Rs. 990 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 Cauvery river under 3 schemes - 1 original and 2 improvement scheme with a design capacity of 26.23 MLD. Till recently, this scheme also catered to 63 villages beside the town due to which, the town receives only 4.4 MLD. However, the recent implementation of a water supply scheme at the veterinary college also included de-linking the supply

to the villages that ensured an increase in supply to the town. Now, the town would receive 4.4 MLD, which would provide a service level of 73 LPCD and 66 LPCD for the population expected in the year 2013 and 2023. However, proper preventive maintenance of the transmission main is required to extract the maximum quantity from the source. There are five service reservoirs with a total storage capacity of 21.44 ML, which is 35.5 % of the daily requirement, higher than the norm of 33.33%. Hence there is no need for any additional service reservoirs.

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 Namakkal might 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. The study would require approximately Rs. five lakhs

**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	15	Km	2	30
Source					880
Capacity building studies					
	Consultancy				5
Others					
	Others				75
<b>Total</b>					<b>990</b>

**Total project cost: Rs.990 lakhs**

### 5.2.2 Rs. 1899 lakhs required for UGD project and sanitation systems

Department-in-charge – Tamilnadu Water Supply and Drainage Board (TWAD)/ Engineering department

Project title – Implementation of sewerage project and constructing public conveniences

Project manager – Municipal engineer

**Description:**

Underground Drainage scheme, public conveniences

**Justification:**

The sewerage scheme has been prepared at an estimated cost of Rs. 2444 lakhs, which has been reduced to 1660 lakhs, as certain areas of the town has been excluded. Due to the implementation of this scheme, the investment in this sector towards other projects like public conveniences, septic tanks, Low Cost Sanitation (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, 5 additional Public Conveniences (PCs)/ Sanitary Complexes would be required. This would require an investment of Rs.15 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)
Pumping & Treatment					
	Pumping station				1884
	Pumping main				
	Treatment plant				
Public conveniences					
	Sanitary complexes	5	Nos	3	15
<b>Total</b>					<b>1899</b>

**Total project cost: Rs.1899 lakhs**

### 5.2.3 Rs 301 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, 21 tons per day of solid waste is generated with a per capita waste generation of 400 g/day. The municipality has achieved 100% collection due to its efficient collection system. The solid waste is disposed at the site located at Kosavampatti, which is 8.53-acre land, at a distance of 3km from the town. However, the capacity of the site has exhausted and hence another site of 13.41 acres has been identified at Lathuvadi, at a distance of 10 km from the town, which is yet to be acquired.

#### Investment requirements in different areas:

Area	Description of works	Quantity	Unit	Unit cost (In Rs. Lakhs)	Total cost (In Rs. Lakhs)
Primary collection					
	Push carts	300	Nos	0.1	30
Secondary collection					
	Dumping stations/Bins	1000	Nos	0.007	7
	Trucks/Lorries	2	Nos	11	22
	Tipppers	6	Nos	8	48
Secondary transportation					
	Compactors	1	Nos	23	23
	FEL/JCB	1	Nos	21	21
Disposal site					
	Scientific landfill				108
	Compost yard (Roads, drains, compost wall, office room)				20
Others					
	Weigh bridge				22
<b>Total</b>					<b>301</b>

**Total Project Cost: Rs. 301 lakhs**

### 5.2.4 Rs. 450 lakhs required for roads and drain service

Department-in-charge – Engineering department

Project title – Improving the road and drain service

Project manager – Municipal engineer

#### Description:

Bye-pass roads, resurfacing Black Top (BT) roads, upgrading earthen roads to BT, widening of roads, traffic management systems

#### Justification:

The total municipal road is 53.97 km with 80% BT, 18% cement concrete surface. Since the implementation of the sewerage scheme is to be taken up, excavation of trenches for the construction is likely to affect the roads to greater extent and hence, the upgrading of roads and resurfacing of roads should be delayed for a period of at least 3 years or till the completion of the UGD scheme. As a short-term measure, the following projects could be taken up to improve the roads and traffic situation

#### Investment requirements in different areas of roads:

Area	Description of works	Quantity	Unit	Unit cost (In Rs. Lakhs)	Total cost (In Rs. Lakhs)
Black Top Roads					
	Restoration	20	Km	5	100
Earthen road					
	Upgradation to Black top	11.11	Km	9.0	100
Traffic Management					
	Upgradation of existing systems	1	Nos	50	50
<b>Total</b>					<b>250</b>

#### Total Project Cost for roads: Rs. 250 lakhs

However, after the completion of the UGD projects, an additional investment of Rs. 400 lakhs is required to reconstruct the roads that have been dug up and provide cement concrete roads.

Currently, the length of storm water drains is only 46 km, which is 62.6 % of the total length of the roads of 73.47 km (Including State Highways). Hence additional drains of at least 25 km are required. Construction and up gradation of the existing Kutchra drains should be given priority. This would require an investment of Rs.200 lakhs. 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 at key locations.

#### Investment requirements in different areas of SWD:

Area	Description of works	Quantity	Unit	Unit cost (In Rs. Lakhs)	Total cost (In Rs. Lakhs)
Pucca					
	New construction	25	Km	8	200
<b>Total</b>					<b>200</b>

#### Total Project Cost for SWD: Rs. 200 lakhs

#### Total Project Cost for roads and SWD: Rs. 450 lakhs

### 5.2.5 Rs. 40 lakhs required for street lighting services

Department-in-charge – Engineering department

Project title – Improving the streetlights

Project manager – Municipal engineer

#### Description:

Energy saving lamps, providing lightings at strategic locations

#### Justification:

There are 1878 streetlights; 29.3% of which are Sodium Vapour (SV) lamps and the rest are tube lights. Solar lamps and energy saving lamps could be installed in place of conventional lamps. Possibility of identification of sponsors for providing and maintaining lamps at strategic location should also be explored. A nominal investment of Rs.40 lakhs to improve the quality of lighting and spacing between lights is provided.

#### Investment requirements in different areas:

Area	Description of works	Quantity	Unit	Unit cost (In Rs. Lakhs)	Total cost (In Rs. Lakhs)
Sodium vapour					
	Installation	500	Nos	0.08	40
<b>Total</b>					<b>40</b>

**Total Project Cost: Rs. 40 lakhs**

### 5.2.6 Rs. 1010 lakhs required for other services

Department-in-charge – Engineering department

Project title – Setting up bus stand, 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. This includes setting up of bus stands, improving the conditions of the hospitals and schools, providing parking spaces, setting up parks etc.

#### Investment requirements in different areas:

Area/Description of works	Quantity	Unit	Unit cost (In Rs.Lakhs)	Total cost (In Rs.Lakhs)
Bus stand construction	1	Nos	1000	1000
Hospital - Improvement	1	Nos	10	10
<b>Total</b>				<b>1010</b>

**Total Project Cost: Rs. 1010 lakhs**

**Overall investment required for Namakkal: Rs. 4690 lakhs**

## 6. FINANCIAL OPERATING PLAN

*The Financial Operating Plan (FOP) assesses the financial strength of the town that can sustain the identified investments. The assessment is done under 2 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, new charges and rate revision across the revenue items is assumed. Along with this scenario, the UGD scheme implementation scenario is envisaged and a matrix of investment capacity has been arrived. This would ensure that the town is able to evaluate the various options available to it. In case of Namakkal, the town can sustain the identified investment, only under the 'Improved scenario with the implementation of UGD scheme,*

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. 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. 406 collected per property per annum in 2004-05

Out of the 12793 residential and 2968 commercial properties in the property register, on an average 94% of properties have paid tax during the last five years. This highlights efficient coverage and the potential to increase the total tax collected under this head is dependent on the increase in the number of properties. The property tax (general tax) collection for the year 2004-05 was Rs. 64 lakhs, with an average collection per property of Rs.406 per annum. Taxes are also collected from the vacant land, Central/ State Government and PSU entities. The detail of the properties for the last five years is presented in table below.

**Table 10: Property Tax details – Assessment and Taxpayers: 2000-01 to 2004-05**

<b>No of Properties in the register</b>	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05</b>
<i>Residential Properties</i>	11,763	12,008	12,203	12,513	12,793
<i>Non-Residential Properties</i>	2,745	2,782	2,829	2,893	2,968
<i>Vacant Land Sites</i>	308	308	308	308	305
<b>Total</b>	<b>14,816</b>	<b>15,098</b>	<b>15,340</b>	<b>15,714</b>	<b>16,066</b>
<b>No of Properties that Paid Tax During the Year</b>	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05</b>
<i>Residential Properties</i>	11,617	11,695	11,701	11,632	11,022
<i>Non-Residential Properties</i>	2,720	2,757	2,799	2,838	2,873
<i>Vacant Land Sites</i>	86	75	58	47	32
<b>Total No of Tax Payees</b>	<b>14,423</b>	<b>14527</b>	<b>14558</b>	<b>14517</b>	<b>13927</b>
<b>Tax payers as a % of properties in register</b>	<b>97%</b>	<b>96%</b>	<b>95%</b>	<b>92%</b>	<b>87%</b>

## 6.4.2 Improvement measures can yield Rs. 1200 lakhs

The increase in revenues would be due to increase in average tax collection per property and the efficiency improvement envisaged over the years. A town-wide survey was conducted in 2004-05, where 1725 additional properties have been added and hence the increase in the number of the properties would be on account of new properties rather than existing properties coming into the tax net.

**Improvement in collection efficiency:** The efficiency of property tax collection in 2004-05 was 61%, which is very low. If the efficiency increases to 90 % and 60% (For Current and Arrears) from the existing 81% and 27% (For Current and Arrear), over a five- year period from 2006-07 to 2011-12, it would generate additional Rs.660 lakhs<sup>20</sup> (in current value terms).

**Inclusion of unauthorized properties:** The existing number of person per property is 3.37, which is much above the benchmark of 5 indicating a very high level of coverage. 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. 740 lakhs (in current value terms).

**Rate increases:** Property tax in Namakkal 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 18% 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. 960 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. 1200 lakhs (in current value terms)

**Table 11: Rs. 1200 lakh revenue potential through improvement in Property tax**

Improvement Measure	Revenue (In Rs. Lakhs)
Increase the efficiency from 79% (Current) and 29% (Arrears) to 90% (Current) and 60% (Arrears)	660
Inclusion of unauthorized properties in the tax net	740
Rate increase by 30% every 5 year	960
All of the above measures combined	1200

Revenue: In current value terms

<sup>20</sup> 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

## 6.5 Water charges

### 6.5.1 Low coverage of 54%, but high collection efficiency of 88%

At the end of 2004-05, there were 8437 connections (7611 domestic and 826 non-domestic connections) generating Rs.57 lakhs. The coverage of water connections (Number of water connection to Number of properties) is very low – 54%. Despite the distribution pipelines covering the entire road length, the low levels of water connections coverage could be attributed to the poor operational efficiency. All non-domestic connections are metered, while the domestic connections are unmetered and only fixed rates are charged to all connections. Currently, this is beneficial to the town, as it generates more revenues<sup>21</sup>. However, this itself could be a deterrent to the users to take up the connections, as they would be aware of increased charges they would have to pay, when the connections are taken. This could also be a reason for the low coverage levels.

The monthly per capita water collection in 2004-05 was Rs.56.65. Despite the low levels of coverage and per capita collection, the collection efficiency was quite high – 88% (five year average for both arrears and current). The municipality has tried to improve the situation by increasing the water rates by 50% in 2005. However, this is a case of imposing more burden on the regular payers, which could have an adverse impact, if the supply situation is not improved

**Table 12: Static water connection over during 2000-01 to 2004-05**

Connection details	2000-01	2001-02	2002-03	2003-04	2004-05
<i>Domestic</i>	7611	7611	7611	7611	7611
<i>Commercial</i>	826	826	826	826	826
<b>Total</b>	<b>8437</b>	<b>8437</b>	<b>8437</b>	<b>8437</b>	<b>8437</b>

The monthly charges for Non-Domestic connections are 2.5 times the Domestic rates. The details are highlighted below

**Table 13: Water Charges details**

Water rates (Rs.)	Domestic	Commercial
<i>Connection Charges</i>	2000	5,000
<i>Monthly rates</i>	64	154
<i>Reconnection charges</i>	250	250

### 6.5.2 Improvement measures can generate Rs. 912 lakhs

**Increase in connections:** If the coverage (Number of water connection to Number of properties) increases to 80 % over a five-year period from 2007-08 from the current level of 54% with the increase in properties as per the ‘Improved Case’ scenario<sup>22</sup>, it would generate additional revenue of Rs. 746 lakhs (in current value terms).

**Collection efficiency gains:** If the collection efficiency increases to 90% (For Current and Arrear) from the existing 89% and 67% (For Current and Arrear), over a five-year period from 2007-08, it would generate additional revenue of Rs. 560 lakhs (in current value terms).

**Rate increase:** The rates have been increase by 50% recently (2005). 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. 666 lakhs (in current value terms).

<sup>21</sup> The revenue generated through metered connections would be proportional to the water supplied. Since, the current supply of water is limited, the revenues would be less as compared to a fixed rate

<sup>22</sup> In this case, the number of properties growth is as per the existing level of 3.37 persons per household, which is higher than the existing growth rate of 2.05%

### 6.5.3 Summary

If all improvement measures are undertaken as per the above assumptions, the total additional revenue would to be Rs. 912 lakhs (in current value terms)

**Table 14: Rs. 912 lakh revenue potential through improvement in Water tax**

Improvement Measure	Revenue (In Rs. Lakhs)
Increase in number of connections	746
Increase the efficiency from 89% (Current) and 67% (Arrears) to 90% (Current and Arrears)	560
Rate increase by 30% every five year	666
All of the above measures combined	912

Revenue: In current value terms

## 6.6 Shops & market rent

### 6.6.1 Improvement measures can generate Rs. 1247 lakhs

Currently, the municipality generates approximately Rs 76 lakhs from 252 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 increases to 90% and 75% (For Current and Arrear) from the existing 79% and 9% (Current and Arrear), over a five-year period from 2007-08, it would generate additional revenue of Rs. 855 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. 1087 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. 1247 lakhs (in current value terms)

**Table 15: Rs. 1247 lakh revenue potential through improvement in shop rent**

Improvement Measure	Revenue (In Rs. Lakhs)
Increase the efficiency from 79% and 9% (Current and Arrears) to 90% and 75% (Current and Arrears)	855
Rate increase by 30% every 3 year	1087
Both the above measures combined	1247

Revenue: In current value terms

## 6.7 Other revenue sources can generate Rs. 913 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 0.7% 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. 86 lakhs in current value terms. Unlike other municipalities, Namakkal imposes a Solid Waste Management charge for its collection services, which is included in others. The monthly collection for each category is highlighted in Annex. The main components of 'Others' include Bus stand fees, Library Cess collection charges, Fees from land and buildings. The details of the charges are mentioned below:

**Table 16: Revenue potential for other sources**

Category	Revenue (In Rs. Lakhs)
Trade Licenses	20.92
Building License fees	65.02
Others	827.57
Total	913.51

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 Nammakal. 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 17: Key areas for expenditure control**

Department	Sector	Area	Estimated reduction in O&M cost
Engg. Department	Water	<ol style="list-style-type: none"> <li>1. The possible activities for reducing water losses include water leakage audit, installation of leak detection equipment and replacement of pipes</li> <li>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</li> </ol>	20%
	Roads and drains	<ol style="list-style-type: none"> <li>1. Private Sector Participation (PSP) could be envisaged in project management at two levels viz. contract management and contract execution <ol style="list-style-type: none"> <li>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.</li> <li>b. Contract execution – This includes the selection of highly technical and experienced contractors with state-of-art technology and on time execution capability.</li> </ol> </li> <li>2. Municipal officials should be trained on the latest contract allocation and project monitoring techniques.</li> <li>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</li> </ol>	Roads: 25% SWD: 20%
	Sanitation	<ol style="list-style-type: none"> <li>1. Savings in usage of materials for sanitation works</li> </ol>	30%
	Street lighting	<ol style="list-style-type: none"> <li>2. Introducing telemetry system</li> </ol>	25%
Health department		<ol style="list-style-type: none"> <li>1. Energy conservation measures through higher usage of solar/wind energy, public awareness program on fuel efficiency, purchase of latest infrastructure</li> <li>2. Study tour of several similar municipalities to identify potential reforms by adopting the specific best practices</li> <li>3. Training sweepers on hygiene standards; medical professionals and other specialists in the department on the latest technology and equipment</li> <li>4. Public awareness program on town cleanliness and citizens' responsibilities</li> </ol>	15%
Revenue department		<ol style="list-style-type: none"> <li>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</li> </ol>	



Department	Sector	Area	Estimated reduction in O&M cost
		<p>departments on the basis of functionality, costs could be substantially reduced as well as pilferage in collection could be tracked.</p> <ol style="list-style-type: none"> <li>2. PSP involvement in computerization, billing, collections and survey of properties.</li> <li>3. Study to assess systems such as effective enforcement, out of court settlements, effective auctions.</li> <li>4. Study to formulate an encroachment reduction and rehabilitation plan.</li> <li>5. Training of employees</li> <li>6. Computerisation of records of encroached properties, action taken, list of encroachers that would enable the linking to a comprehensive MIS/GIS system.</li> </ol>	
Town Planning		<p>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.</p>	

## 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 for 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.

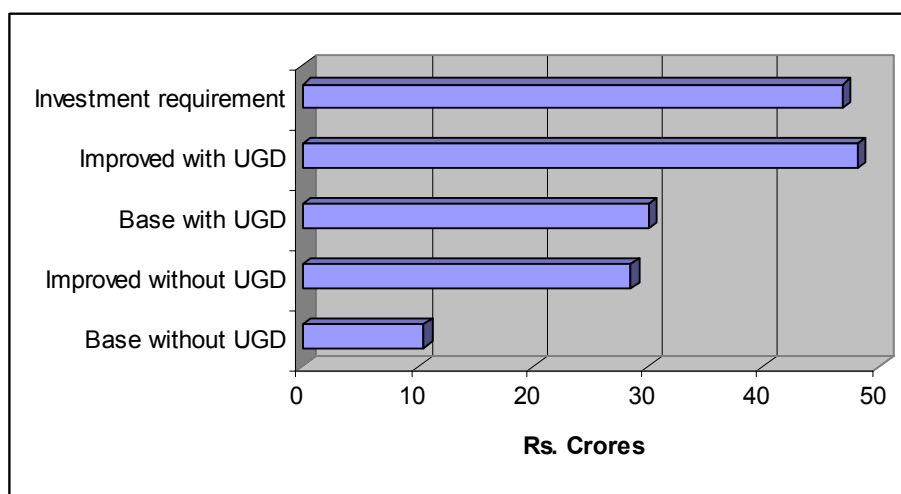
We have highlighted a list of actions in Annexure VIII that could be incorporated to increase the collection efficiencies.

## 6.11 Maximum investment potential of the town is Rs. 4695 lakhs

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. 4690 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 103% of the investment requirement.

**Table 18: Investment potential scenarios**

Scenario	Investment Capacity (Rs. Crores)	% of required investment
Base without UGD	10.55	22%
Improved without UGD	28.49	61%
Base with UGD	30.04	64%
Improved with UGD	48.16	103%

**The town can sustain the complete investment****6.11.1 Summary – Improvement measures mandatory to sustain the required investment**

It is observed that Nammakkal 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

*Namakkal municipality has several assets that require regular maintenance for sustenance of reasonable service delivery levels. Namakkal's average O&M cost during the period 2000-01 to 2004-05 was Rs.210 lakhs, which is almost 42% 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 compiled 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

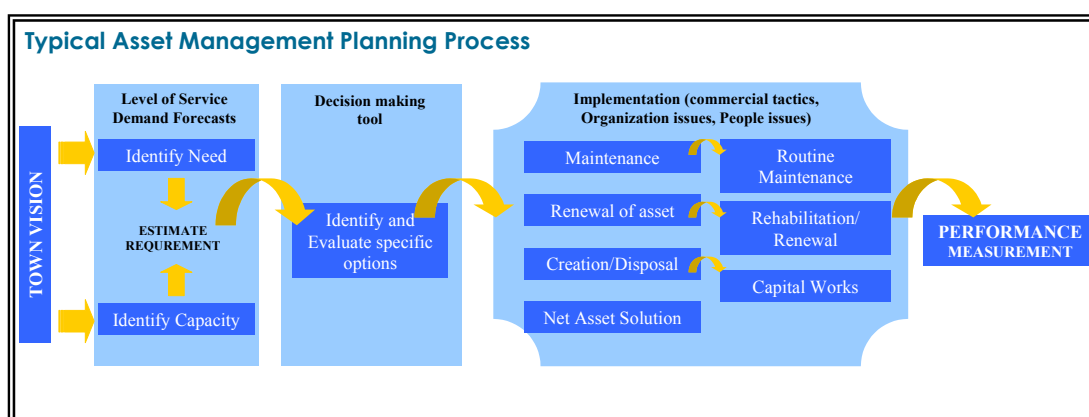
Training is the most important part of an asset management plan. Training should emphasize methods of simplified updation of data, and methods of monitoring and follow-up, relating to infrastructure facilities management, land use, litigation, encroachment, values, expenditure and revenue flows.

## 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 ISO 9000 concept

### Asset Management Plan - process



## 7.2 Planning of Namakkal municipal assets

In order to prepare the AMP, it is imperative to know the potential of these assets. The details of assets in Namakkal 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 municipality**

Number of Motor Vehicles owned	Number	Original Value (In Rs. Lakhs)
General Administration	2	7.5
Water Supply	1	6.5
Public Health	10	
Street Lighting	1	3.25
Sanitation (Cess Pool Cleaning)	11	10.00
Details of Conservancy Vehicles	Number	Age (Years)
Mini Auto	2	2
Tippers	2	6
Push carts	90	1
Sullage Tanker	1	6
Vacuum Sucker	1	1
Other mini Lorry	4	14

### 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 municipality**

Description	Number	Area
Kalyana Mandapam	1	690
Bus Stand	1	
Office Buildings	2	2400
Commercial Complexes	3	1980
Taxi Stand	1	110
Auto Stand	1	40
Pay and Use latrines	6	1340
Slaughter House	1	62
Markets – Local Body		
Daily	1	450
Weekly	1	13360

Note: Area in sq. meter

### 7.2.3 Social and service related assets

**Table 22: Social infrastructure owned by municipality**

Social infrastructure	Number	Area
School Buildings	4	9050
Office Buildings	2	1097
Pumping Stations	2	3000
<b>Service Oriented Assets</b>		
Maternity Centres / Homes	1	72
Noon Meal Centres	5	135
Reading Rooms	3	125
Common bathrooms	16	9060
Parks & Play Grounds	3	19055
Integrated Sanitary Complex	5	2000

Note: Area in sq. meter

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 in 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.<sup>23</sup> 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 UGD component has been removed.

**Table 23: Project phasing – Investment without UGD**

Sector wise Phasing	I year	II year	III year	IV year	V year	Total
Water supply	123.75	495.00	371.25	-	-	990.00
Storm Water Drain	-	25.00	100.00	75.00	-	200.00
Sanitation and Sewerage	-	-	-	-	-	-
Solid Waste Management	-	37.63	150.50	112.88	-	301.00
Roads	-	25.00	100.00	75.00	-	199.99
Transportation	-	-	-	25.00	25.00	50.00
Street lighting	-	5.00	20.00	15.00	-	40.00
Others	-	-	126.25	505.00	378.75	1,010.00
<b>Total</b>	<b>123.75</b>	<b>587.62</b>	<b>868.00</b>	<b>807.87</b>	<b>403.75</b>	<b>2,790.99</b>

<sup>23</sup> 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 24: Key activities – Investment without UGD**

Stakeholders	Actions	Pre - Project	I year	II year	III year	IV year	V year	VI year onwards
<b>Financial</b>								
TUFIDCO/TUFISIL	Release of loans		86.6	275.1	471.3	565.5	282.6	
Govt. of Tamilnadu	Release of grants		37.1	176.3	260.4	242.4	121.1	
Nammakal municipality	ULB contribution		0.0	136.3	136.3			
Public	Initial contribution for new projects like UGD							
<b>Physical</b>								
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 investment capacity is based on the UGD charges with domestic connections charges Rs. 5187 for a new connection and a monthly charge of Rs. 76. For commercial connections, it would be Rs. 15847 and a monthly charge of Rs. 223. Under this scenario, the town can sustain the complete investments and would have a surplus.

**Table 25: Project phasing – Investment with UGD**

Sector wise Phasing	I year	II year	III year	IV year	V year	Total
Water supply	123.75	495.00	371.25	-	-	990.00
Storm Water Drain	-	25.00	100.00	75.00	-	200.00
Sanitation and Sewerage	237.38	949.50	712.13	-	-	1,899.00
Solid Waste Management	-	37.63	150.50	112.88	-	301.00
Roads	-	25.00	100.00	75.00	-	199.99
Transportation	-	-	-	25.00	25.00	50.00
Street lighting	-	5.00	20.00	15.00	-	40.00
Others	-	-	126.25	505.00	378.75	1,010.00
<b>Total</b>	<b>361.13</b>	<b>1,537.12</b>	<b>1,580.12</b>	<b>807.87</b>	<b>403.75</b>	<b>4,689.99</b>

**Table 26: Key activities – Investment with UGD**

Stakeholders	Actions	Pre - Project	I year	II year	III year	IV year	V year	VI year onwards
<b>Financial</b>								
TUFIDCO/TUFISIL	Release of loans		148.2	835.2	969.8	565.5	282.6	
Govt. of Tamilnadu	Release of grants		108.3	461.1	474.0	242.4	121.1	
Nammakal municipality	ULB contribution		104.6	240.8	136.3			
Public	Initial contribution for new projects like UGD							
<b>Physical</b>								
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							

## 8.2 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 (58) 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 Namakkal 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 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 27: 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.
Position/Designation	Area
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 28: 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.<sup>24</sup>

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:

<sup>24</sup> To some extent property tax and water connection data can be integrated. But the utilisation is presently very limited.

**Table 29: Integrated activities of the revenue section**

	<b>Water supply related</b>	<b>Revenue section related</b>	<b>Health section related</b>
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. Namakkal 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 NAMAKKAL 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  
Nammakal 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	%							
	Population covered by sewerage system	%							

Category	Description	Unit	Target - Year 5	Year 1	Year 2	Year 3	Year 4	Year 5	Reforms and Action Required by the ULBs
SWM									
	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							
SWD									
	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	%							

Category	Description	Unit	Target - Year 5	Year 1	Year 2	Year 3	Year 4	Year 5	Reforms and Action Required by the ULBs
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	%							

Category	Description	Unit	Target - Year 5	Year 1	Year 2	Year 3	Year 4	Year 5	Reforms and Action Required by the ULBs
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

Item	Assumption Adopted for Forecast	Base Case	Improved case
<b>A General Purpose/ property tax</b>			
1	Forecast based on.	⇒ Growth in assessments ⇒ Tax demand ⇒ Periodic revisions and ⇒ Collection performance	
2	Growth in assessments	Current CAGR of 2.05%	Minimum of current CAGR or population/Household size (6)
4	Average Property tax demand	Computed based on current average demand per assessment- Rs.419. Last revision in demand was implemented in 1998.	Assumed to be increased by 30 per cent in 2006-07 and every five years thereon
5	Collection Performance	Collection performance in 2004-05 is: Arrears- 27% and Current- 81%	The current level would continue
<b>B Water tax/ charges</b>			
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 54%	The current level would continue
3	Minimum monthly charge	Average demand in 2004-05 is Rs. 57 per connection per month.	Gradual increase in number of connections from 2006-07 and would reach a coverage of 80%
4	Collection Performance	Collection performance in 2004-05 is: Arrears- 67% Current- 89%	The current level would continue
5	New connection charge	New connection fee Domestic – Rs.2295/- Non-Domestic – Rs.5000/- Average – Rs.3647/-	Upward revision of 30% assumed in 2007-08 and every five years thereon
			Arrears and Current - Over a five year period, reach 90%
			To increase by 30% at every five years from 2007-08

<b>C Shops and Market rent</b>				
	Forecast based on:	⇒ Growth in shops, ⇒ Minimum monthly charge, ⇒ Periodic tariff revisions and ⇒ Collection performance		
1	Growth in number of shops	Current level – 252 (CAGR of 1.23%)	Current level of growth in number of shops CAGR – 1.23%	Increase with respect to growth in non-residential properties – CAGR- 1.97%
2	Minimum monthly charge per shop	Average demand for the last five years is Rs.3050/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 in 2004-05 is: Arrears- 2% Current- 79%	The current level would continue	Arrears- Reach 75% Current- Reach 90% or current level, which ever is higher (Both over a five year period)
<b>D Trade Licences</b>				
1	Forecast based on:	⇒ Growth in trade licenses, ⇒ Minimum monthly charge, ⇒ Periodic tariff revisions and ⇒ Collection performance		
2	Growth in number of building licenses	Current level – 1718	Growth with respect to increase in no of properties	
3	Minimum monthly charge per shop	Average demand in 2004-05 is Rs.10/license/ month.	The current level would continue	Upward revision of 8% assumed in 2007-08 and every five years thereon
4	Collection Performance	Collection performance is: Current- 100%	The current level would continue	
<b>E Building Related Taxes (Building License)</b>				
1	Forecast based on:	⇒ Growth in building licenses, ⇒ Minimum monthly charge, and ⇒ Periodic tariff revisions		
2	Growth in number of building licenses	Current level – 105	New properties based on growth in no of properties.	
3	Minimum monthly charge per shop	Current average demand: Rs.152/license/ month.	The current level would continue	Upward revision of 12% assumed in 2007-08 and every five years thereon
<b>F Other Tax</b>				
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%.		
<b>G Non-tax income</b>				
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%.		

<b>H Revenue grants</b>		
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: Moratorium period: Year of disbursement: Repayment method: Interest rate:	20 years (5+15) 5 years on principal repayment 2006-07 (1/4/2006) Equal annual instalments 8.5%
Sectoral deployment of investment	All sectors, as per the ratio in the CCP investment	
Debt Service Coverage Ratio <sup>25</sup>	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%	

		Costing Rs. Lakhs
<b>A</b>	<b>Roads</b>	
1	Upgradation	
i	BT to Concrete	50.00
ii	WBM to Black Top	4.50
iii	Earthen to Black Top	10.00
2	New Formation	
i	Concrete	60.00
ii	Black Top	10.00
iii	WBM	7.00

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

## Current Financials

To facilitate analysis, we have recast the financial statements provided by the Namakkal 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
<b>Opening balance</b>	<b>15</b>	<b>119</b>	<b>170</b>	<b>175</b>	<b>293</b>
<b>Municipal receipts</b>	<b>465</b>	<b>409</b>	<b>513</b>	<b>575</b>	<b>514</b>
<b>Municipal expenditure</b>	<b>361</b>	<b>358</b>	<b>507</b>	<b>458</b>	<b>428</b>
Municipal Surplus/deficit for curren	104	51	6	117	85
Final closing balance	119	170	175	293	378
<b>RECEIPTS</b>					
<b>Own Sources</b>					
<b>Revenue Fund</b>	<b>173</b>	<b>170</b>	<b>193</b>	<b>201</b>	<b>167</b>
General tax	50	55	63	65	65
Professional tax	14	14	16	19	22
Entertainment tax	0	0	0	0	0
Trade licenses	2	2	2	2	2
Building license fee	1	1	2	2	2
Shops & market rents	56	54	54	55	13
Development charges	0	0	0	0	0
Others	51	44	55	60	64
<b>Water Supply and Drainage Fund</b>	<b>105</b>	<b>107</b>	<b>116</b>	<b>106</b>	<b>107</b>
Water tax	50	42	48	50	49
Water charges	49	57	55	52	53
New Charge- UGD	0	0	0	0	0
Fee from new UGD connections	0	0	0	0	0
Others	6	8	13	4	5
<b>Elementary Education Fund</b>	<b>33</b>	<b>32</b>	<b>37</b>	<b>38</b>	<b>38</b>
Revenue from education	33	32	37	38	38
Others	0	0	0	0	0
<b>Sub-Total</b>	<b>311</b>	<b>309</b>	<b>346</b>	<b>345</b>	<b>312</b>
<b>Permanent Revenue Grants</b>					
Devolution of funds (SFC)	27	63	67	102	88
Entertainment tax	69	16	84	73	25
Surcharge on Sales tax	54	16	15	55	51
TFC/EFC grants	0	0	0	0	0
Other grants	4	5	1	0	38
<b>Sub-Total</b>	<b>155</b>	<b>99</b>	<b>167</b>	<b>230</b>	<b>201</b>
<b>TOTAL MUNICIPAL RECEIPTS</b>	<b>465</b>	<b>409</b>	<b>513</b>	<b>575</b>	<b>514</b>

Note: All figures in Rs. Lakhs



Items	2000-01	2001-02	2002-03	2003-04	2004-05
<b>PAYMENTS</b>					
<b>Salaries</b>					
<i>General Administration</i>	39	28	32	28	32
<i>Water Supply</i>	16	15	15	13	14
<i>Sewerage</i>	0	0	0	0	0
<i>Public Health (Sanitation)</i>	29	21	27	17	19
<i>Conservancy</i>	84	80	88	86	89
<i>Public Works (Engg. Staff)</i>	6	6	8	9	9
<i>Street Lighting</i>	4	3	3	3	3
<i>Discretionary Services</i>	18	17	18	17	18
<b>Sub-Total</b>	<b>195</b>	<b>170</b>	<b>193</b>	<b>172</b>	<b>183</b>
<b>Operation and Maintenance</b>					
<i>General Administration</i>	10	14	19	19	20
<i>Water Supply</i>	59	64	93	75	79
<i>Sewerage</i>	0	0	0	0	0
<i>Conservancy</i>	10	12	22	42	46
<i>Roads</i>	0	0	0	4	0
<i>Storm Water Drains</i>	0	0	0	1	1
<i>Miscellaneous Items</i>	23	44	101	27	39
<b>Sub-Total</b>	<b>135</b>	<b>174</b>	<b>291</b>	<b>210</b>	<b>241</b>
<b>Loan &amp; Interest Payments</b>					
<i>Loan repayment</i>	31	14	24	76	4
<b>Loan &amp; Interest Payments</b>	<b>31</b>	<b>14</b>	<b>24</b>	<b>76</b>	<b>4</b>
<b>TOTAL MUNICIPAL PAYMENTS</b>	<b>361</b>	<b>358</b>	<b>507</b>	<b>458</b>	<b>428</b>

Note: All figures in Rs. Lakhs

## Namakkal Business Plan

### Base Case Projections

All figures in Rs. Lakhs	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	377.79	508.14	1,628.26	1,769.75	1,941.95	2,116.63	2,273.59	2,330.91	2,401.59	2,485.39	2,584.43	2,700.26	2,834.53	2,990.15	3,169.08
Municipal receipts	629.08	1,794.29	954.37	969.02	1,026.59	1,088.15	1,153.73	1,224.73	1,299.58	1,380.89	1,468.41	1,562.58	1,665.04	1,775.19	1,893.54
Municipal expenditure	498.73	555.63	592.73	622.43	665.08	710.82	759.86	812.46	868.88	929.40	994.32	1,063.96	1,138.67	1,218.84	1,298.15
Impact of debt servicing		13.99	69.95	111.92	119.90	116.50	228.44	228.10	227.73	227.32	226.88	226.41	225.89	225.33	224.72
Impact of additional O&M				16.80	66.93	103.88	108.09	113.49	119.17	125.13	131.38	137.95	144.85	152.09	159.70
ULB contribution		104.55	150.21	45.66											
Final closing balance	508.14	1,628.26	1,769.75	1,941.95	2,116.63	2,273.59	2,330.91	2,401.59	2,485.39	2,584.43	2,700.26	2,834.53	2,990.15	3,169.08	3,380.06
<b>RECEIPTS</b>															
Own Sources	235.14	245.79	256.79	268.23	280.17	292.71	305.63	319.35	333.94	349.46	366.00	383.64	402.76	423.19	445.04
General tax	66.15	67.93	69.63	71.28	72.91	74.53	75.87	77.28	78.76	80.29	81.87	83.50	85.17	86.88	88.63
Professional tax	24.05	26.45	29.10	32.01	35.21	38.73	42.60	46.86	51.54	56.70	62.37	68.61	75.47	83.01	91.31
Trade licenses	2.09	2.11	2.14	2.16	2.19	2.22	2.25	2.27	2.30	2.33	2.36	2.39	2.42	2.45	2.48
Building license fee	5.88	6.00	6.12	6.25	6.38	6.51	6.64	6.78	6.91	7.06	7.20	7.35	7.50	7.65	7.81
Shops & market rents	78.39	80.61	82.72	84.75	86.69	88.55	90.35	92.08	93.75	95.38	96.95	98.48	100.26	102.02	103.74
Others	58.59	62.69	67.08	71.77	76.80	82.17	87.93	94.08	100.67	107.71	115.25	123.32	131.95	141.19	151.07
Water Supply and Drainage Fund	127.12	1,258.95	383.30	359.59	375.90	393.00	410.89	430.29	449.26	470.04	491.97	514.99	539.97	566.03	593.05
Water tax	58.80	60.09	61.14	62.39	63.66	64.96	66.29	67.65	69.03	70.44	71.88	73.35	74.85	76.38	77.94
Water charges	56.45	60.40	64.63	69.16	74.00	79.18	84.72	90.65	97.00	103.79	111.05	118.83	127.14	136.04	145.57
New water connection fee	3.97	4.04	4.11	4.22	4.29	4.38	4.47	4.58	4.67	4.76	4.85	4.97	5.06	5.15	5.27
New Charge- UGD		152.96	181.91	192.46	201.52	210.81	220.50	230.64	241.24	252.33	263.93	276.06	288.75	302.02	315.91
Fee from new UGD connections		973.00	62.47	21.69	22.08	22.59	23.05	24.09	23.75	24.20	24.71	25.16	26.38	27.39	27.99
Others	7.90	8.45	9.05	9.68	10.36	11.08	11.86	12.69	13.58	14.53	15.54	16.63	17.79	19.04	20.37
Revenue from education	40.64	43.48	46.53	49.78	53.27	57.00	60.99	65.26	69.82	74.71	79.94	85.54	91.53	97.93	104.79
Permanent Revenue Grants															
Devolution of funds (SFC)	117.59	129.35	142.29	156.52	172.17	189.39	208.32	229.16	252.07	277.28	305.01	335.51	369.06	405.97	446.56
Entertainment tax	57.15	61.15	65.43	70.01	74.91	80.15	85.76	91.77	98.19	105.07	112.42	120.29	128.71	137.72	147.36
Surcharge on Sales tax	41.00	43.87	46.94	50.22	53.74	57.50	61.52	65.83	70.44	75.37	80.65	86.29	92.33	98.79	105.71
Other grants	10.44	11.69	13.10	14.67	16.43	18.40	20.61	23.08	25.85	28.95	32.43	36.32	40.68	45.56	51.03
<b>TOTAL MUNICIPAL RECEIPTS</b>	<b>629.08</b>	<b>1,794.29</b>	<b>954.37</b>	<b>969.02</b>	<b>1,026.59</b>	<b>1,088.15</b>	<b>1,153.73</b>	<b>1,224.73</b>	<b>1,299.58</b>	<b>1,380.89</b>	<b>1,468.41</b>	<b>1,562.58</b>	<b>1,665.04</b>	<b>1,775.19</b>	<b>1,893.54</b>
<b>PAYMENTS</b>															
Salaries															
General Administration	33.61	35.63	37.77	40.03	42.44	44.98	47.68	50.54	53.57	56.79	60.20	63.81	67.64	71.69	75.99
Water Supply	14.86	15.75	16.70	17.70	18.76	19.89	21.08	22.35	23.69	25.11	26.61	28.21	29.90	31.70	33.60
Sewerage	11.58	12.27	13.01	13.79	14.61	15.49	16.42	17.40	18.45	19.56	20.73	21.97	23.29	24.69	26.17
Public Health (Sanitation)	19.72	20.90	22.15	23.48	24.89	26.38	27.97	29.65	31.42	33.31	35.31	37.43	39.67	42.05	44.58
Conservancy	94.64	100.32	106.33	112.71	119.48	126.65	134.24	142.30	150.84	159.89	169.48	179.65	190.43	201.85	213.96
Public Works (Engg. Staff)	9.38	9.94	10.54	11.17	11.84	12.55	13.31	14.11	14.95	15.85	16.80	17.81	18.88	20.01	21.21
Street Lighting	2.97	3.15	3.33	3.53	3.75	3.97	4.21	4.46	4.73	5.01	5.32	5.63	5.97	6.33	6.71
Discretionary Services	18.97	20.11	21.32	22.60	23.95	25.39	26.91	28.53	30.24	32.06	33.98	36.02	38.18	40.47	42.90
Operation and Maintenance															
General Administration	21.06	22.74	24.56	26.53	28.65	30.94	33.42	36.09	38.98	42.10	45.47	49.10	53.03	57.28	61.86
Water Supply	84.95	91.41	98.37	105.85	113.91	122.57	131.90	141.94	152.74	164.36	176.87	190.33	204.81	220.40	237.17
Sewerage		24.08	26.01	28.09	30.33	32.76	35.38	38.21	41.27	44.57	48.14	51.99	56.15	60.64	65.49
Public Health (Sanitation)	12.60	13.61	14.70	15.88	17.15	18.52	20.00	21.60	23.33	25.19	27.21	29.39	31.74	34.28	37.02
Conservancy	49.72	53.70	58.00	62.64	67.65	73.06	78.90	85.22	92.03	99.40	107.35	115.94	125.21	135.23	146.05
Roads	0.05	0.06	0.06	0.06	0.07	0.07	0.08	0.08	0.08	0.09	0.09	0.10	0.11	0.11	0.12
Storm Water Drains	1.02	1.08	1.14	1.21	1.28	1.36	1.44	1.53	1.62	1.72	1.82	1.93	2.05	2.17	2.30
Street Lighting	48.96	52.87	57.10	61.67	66.60	71.93	77.69	83.90	90.61	97.86	105.69	114.15	123.28	133.14	143.79
Miscellaneous Items	42.00	45.36	48.99	52.91	57.14	61.71	66.65	71.98	77.74	83.96	90.68	97.93	105.77	114.23	123.37
Loan & Interest Payments	32.65	32.65	32.65	22.57	22.57	22.57	22.57	22.57	22.57	22.57	22.57	22.57	22.57	22.57	15.87
<b>TOTAL MUNICIPAL PAYMENTS</b>	<b>498.73</b>	<b>555.63</b>	<b>592.73</b>	<b>622.43</b>	<b>665.08</b>	<b>710.82</b>	<b>759.86</b>	<b>812.46</b>	<b>868.88</b>	<b>929.40</b>	<b>994.32</b>	<b>1,063.96</b>	<b>1,138.67</b>	<b>1,218.84</b>	<b>1,298.15</b>

## Improved Case Projections

All figures in Rs. Lakhs	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	377.79	676.99	1,932.89	2,174.66	2,442.09	2,773.92	3,069.96	3,163.11	3,278.64	3,467.73	3,690.57	3,948.54	4,355.00	4,866.31	5,439.26
Municipal receipts	797.93	1,930.07	1,144.77	1,187.14	1,267.09	1,380.82	1,497.24	1,584.73	1,727.75	1,835.64	1,949.88	2,182.82	2,377.84	2,535.75	2,786.35
Municipal expenditure	498.73	555.63	592.25	621.40	663.43	708.46	756.71	808.41	863.82	923.21	986.86	1,055.09	1,128.24	1,206.66	1,284.02
Impact of debt servicing	-	13.99	69.95	111.92	119.90	116.50	372.61	372.27	371.90	371.49	371.05	370.57	370.06	369.50	368.89
Impact of additional O&M	-	-	-	50.14	151.94	259.81	274.78	288.52	302.95	318.09	334.00	350.70	368.23	386.64	405.98
ULB contribution	-	104.55	240.80	136.25	-	-	-	-	-	-	-	-	-	-	-
Final closing balance	676.99	1,932.89	2,174.66	2,442.09	2,773.92	3,069.96	3,163.11	3,278.64	3,467.73	3,690.57	3,948.54	4,355.00	4,866.31	5,439.26	6,166.73
<b>RECEIPTS</b>															
Own Sources	325.62	299.07	350.09	374.81	393.46	441.09	486.10	497.13	561.09	585.35	608.61	742.28	780.23	813.38	932.68
General tax	82.90	109.64	115.88	120.14	122.77	124.35	154.67	157.60	160.24	162.78	165.30	213.27	219.56	224.14	228.05
Professional tax	24.44	27.33	30.55	34.16	38.19	42.70	47.74	53.37	59.67	66.72	74.59	83.40	93.24	104.25	116.55
Trade licenses	2.10	2.13	2.33	2.36	2.38	2.41	2.44	2.67	2.70	2.74	2.77	2.80	3.07	3.10	3.14
Building license fee	78.07	5.63	6.40	6.50	6.60	6.70	6.81	7.74	7.86	7.98	8.10	8.23	9.36	9.50	9.65
Shops & market rents	78.97	90.48	125.95	137.16	143.06	178.04	180.60	174.39	221.16	226.93	230.18	296.70	306.08	311.56	401.59
Others	59.14	63.87	68.98	74.49	80.45	86.89	93.84	101.35	109.46	118.21	127.67	137.88	148.92	160.83	173.70
Water Supply and Drainage Fund	202.06	1,304.62	438.24	422.77	447.54	473.35	500.28	527.63	552.46	576.17	600.92	626.97	703.05	738.19	770.32
Water tax	71.81	80.06	89.03	97.08	105.21	113.51	122.03	158.66	164.58	167.46	170.07	172.70	223.20	231.42	235.46
Water charges	56.98	61.54	66.46	71.78	77.52	83.72	90.42	97.66	105.47	113.90	123.02	132.86	143.49	154.97	167.36
New water connection fee	68.31	31.70	32.59	33.52	34.47	35.42	36.41	8.10	8.25	8.37	8.49	8.64	8.76	8.91	9.03
New Charge- UGD	-	152.96	181.91	192.46	201.52	210.81	220.50	230.64	241.24	252.33	263.93	276.06	288.75	302.02	315.91
Fee from new UGD connections	-	973.00	62.47	21.69	22.08	22.59	23.05	24.09	23.75	24.20	24.71	25.16	26.38	27.39	27.99
Others	4.96	5.35	5.78	6.24	6.74	7.28	7.87	8.50	9.18	9.91	10.70	11.56	12.48	13.48	14.56
Revenue from education	41.02	44.30	47.84	51.67	55.81	60.27	65.09	70.30	75.92	82.00	88.56	95.64	103.29	111.55	120.48
Permanent Revenue Grants															
Devolution of funds (SFC)	119.73	134.10	150.19	168.21	188.40	211.01	236.33	264.69	296.45	332.03	371.87	416.49	466.47	522.45	585.14
Entertainment tax	57.68	62.30	67.28	72.66	78.48	84.75	91.54	98.86	106.77	115.31	124.53	134.50	145.26	156.88	169.43
Surcharge on Sales tax	41.38	44.69	48.26	52.13	56.30	60.80	65.66	70.92	76.59	82.72	89.33	96.48	104.20	112.54	121.54
Other grants	10.44	11.69	13.10	14.67	16.43	18.40	20.61	23.08	25.85	28.95	32.43	36.32	40.68	45.56	51.03
New Charge SWM	-	29.30	29.76	30.21	30.68	31.15	31.63	32.12	32.61	33.11	33.62	34.14	34.67	35.20	35.74
<b>TOTAL MUNICIPAL RECEIPTS</b>	<b>797.93</b>	<b>1,930.07</b>	<b>1,144.77</b>	<b>1,187.14</b>	<b>1,267.09</b>	<b>1,380.82</b>	<b>1,497.24</b>	<b>1,584.73</b>	<b>1,727.75</b>	<b>1,835.64</b>	<b>1,949.88</b>	<b>2,182.82</b>	<b>2,377.84</b>	<b>2,535.75</b>	<b>2,786.35</b>
<b>PAYMENTS</b>															
Salaries															
General Administration	33.61	35.63	37.77	40.03	42.44	44.98	47.68	50.54	53.57	56.79	60.20	63.81	67.64	71.69	75.99
Water Supply	14.86	15.75	16.70	17.70	18.76	19.89	21.08	22.35	23.69	25.11	26.61	28.21	29.90	31.70	33.60
Sewerage	11.58	12.27	13.01	13.79	14.61	15.49	16.42	17.40	18.45	19.56	20.73	21.97	23.29	24.69	26.17
Public Health (Sanitation)	19.72	20.90	22.15	23.48	24.89	26.38	27.97	29.65	31.42	33.31	35.31	37.43	39.67	42.05	44.58
Conservancy	94.64	100.32	106.33	112.71	119.48	126.65	134.24	142.30	150.84	159.89	169.48	179.65	190.43	201.85	213.96
Public Works (Engg. Staff)	9.38	9.94	10.54	11.17	11.84	12.55	13.31	14.11	14.95	15.85	16.80	17.81	18.88	20.01	21.21
Street Lighting	2.97	3.15	3.33	3.53	3.75	3.97	4.21	4.46	4.73	5.01	5.32	5.63	5.97	6.33	6.71
Discretionary Services	18.97	20.11	21.32	22.60	23.95	25.39	26.91	28.53	30.24	32.06	33.98	36.02	38.18	40.47	42.90
Operation and Maintenance															
General Administration	21.06	22.74	24.56	26.53	28.65	30.94	33.42	36.09	38.98	42.10	45.47	49.10	53.03	57.28	61.86
Water Supply	84.95	91.41	98.37	105.85	113.91	122.57	131.90	141.94	152.74	164.36	176.87	190.33	204.81	220.40	237.17
Sewerage		24.08	25.52	27.06	28.68	30.40	32.22	34.16	36.21	38.38	40.68	43.12	45.71	48.45	51.36
Public Health (Sanitation)	12.60	13.61	14.70	15.88	17.15	18.52	20.00	21.60	23.33	25.19	27.21	29.39	31.74	34.28	37.02
Conservancy	49.72	53.70	58.00	62.64	67.65	73.06	78.90	85.22	92.03	99.40	107.35	115.94	125.21	135.23	146.05
Roads	0.05	0.06	0.06	0.06	0.07	0.07	0.08	0.08	0.08	0.09	0.09	0.10	0.11	0.11	0.12
Storm Water Drains	1.02	1.08	1.14	1.21	1.28	1.36	1.44	1.53	1.62	1.72	1.82	1.93	2.05	2.17	2.30
Street Lighting	48.96	52.87	57.10	61.67	66.60	71.93	77.69	83.90	90.61	97.86	105.69	114.15	123.28	133.14	143.79
Miscellaneous Items	42.00	45.36	48.99	52.91	57.14	61.71	66.65	71.98	77.74	83.96	90.68	97.93	105.77	114.23	123.37
Loan & Interest Payments	32.65	32.65	32.65	22.57	22.57	22.57	22.57	22.57	22.57	22.57	22.57	22.57	22.57	22.57	15.87
<b>TOTAL MUNICIPAL PAYMENTS</b>	<b>498.73</b>	<b>555.63</b>	<b>592.25</b>	<b>621.40</b>	<b>663.43</b>	<b>708.46</b>	<b>756.71</b>	<b>808.41</b>	<b>863.82</b>	<b>923.21</b>	<b>986.86</b>	<b>1,055.09</b>	<b>1,128.24</b>	<b>1,206.66</b>	<b>1,284.02</b>

**Solid Waste Management charges collected by the municipality**

<b>Category</b>	<b>Rs/ month</b>
Restaurant	100 or 200
Mess	100
Night restaurant	75
Tea and Snacks stall	50
Tea stall	25
Plantain leaf business	100
Flower shop	25
Kalyana Mandapam	300 or 500
Meat shop	25
Liquor shop	250

## 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.*

**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's expenditure can be divided into the following broad categories

**General municipal expenditure, salaries and capital expenditure**

Administrative expenses (revenue collection, etc.) and cost of 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 and transfer of cesses, which are collected as sub-component of property tax are included under this head. Repayment of debt is an exception in this category, as it has to be factored into long-term projections.

## Norms & Benchmarks for municipal services

### Solid Waste

Parameters	NIUA norms	Remarks
Per Capita Waste generated/day (grams)	250-450	<ul style="list-style-type: none"> <li>• ORG has stated a norm of 380 grams</li> <li>• KCL adopted a norm of 700 grams</li> </ul>
Collection Performance	100%	<ul style="list-style-type: none"> <li>• KCL adopted a norm of minimum 90%</li> </ul>
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
<b>Water Supply</b>									
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
<b>Sewerage</b>									
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
<b>Primary Education and Health Care</b>	
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
<b>Primary Education and Health Care</b>	
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)<sup>26</sup>

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

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<sup>26</sup> 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<sup>27</sup>**

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<sup>28</sup>**

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.

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<sup>27</sup> Good Urban Government Campaign-September, 2001

<sup>28</sup> 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)<sup>29</sup>

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

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<sup>29</sup> Municipal Accounting Reforms-Dr. Ravikant Joshi

## Case Studies

### (i) Budgetary cum financial reforms undertaken by Vadodara Municipal Corporation (VMC)<sup>30</sup>

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.

<sup>30</sup> Municipal Budgetary and Financial Control Reforms-Dr. Ravikant Joshi

### ***Case Studies***

#### **(i) Professionalization of workforce – Ahmedabad Municipal Corporation (AMC)<sup>31</sup>**

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<sup>32</sup>**

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)<sup>33</sup>**

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)<sup>34</sup>**

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.

#### **(iii) Computerisation by Mirzapur municipality<sup>35</sup>**

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%.

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<sup>31</sup> Urban Finance-NIUA

<sup>32</sup> [www.etu.org.za](http://www.etu.org.za)

<sup>33</sup> Urban Finance-NIUA/June, 2002

<sup>34</sup> *ibid*

<sup>35</sup> *ibid*



## 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<sup>36</sup>

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<sup>37</sup>

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)<sup>38</sup>

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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<sup>36</sup> Good Urban Governance Campaign-September, 2001

<sup>37</sup> Urban Finance-NIUA/June, 2002

<sup>38</sup> *ibid*

## Possible key actions for increasing collection levels

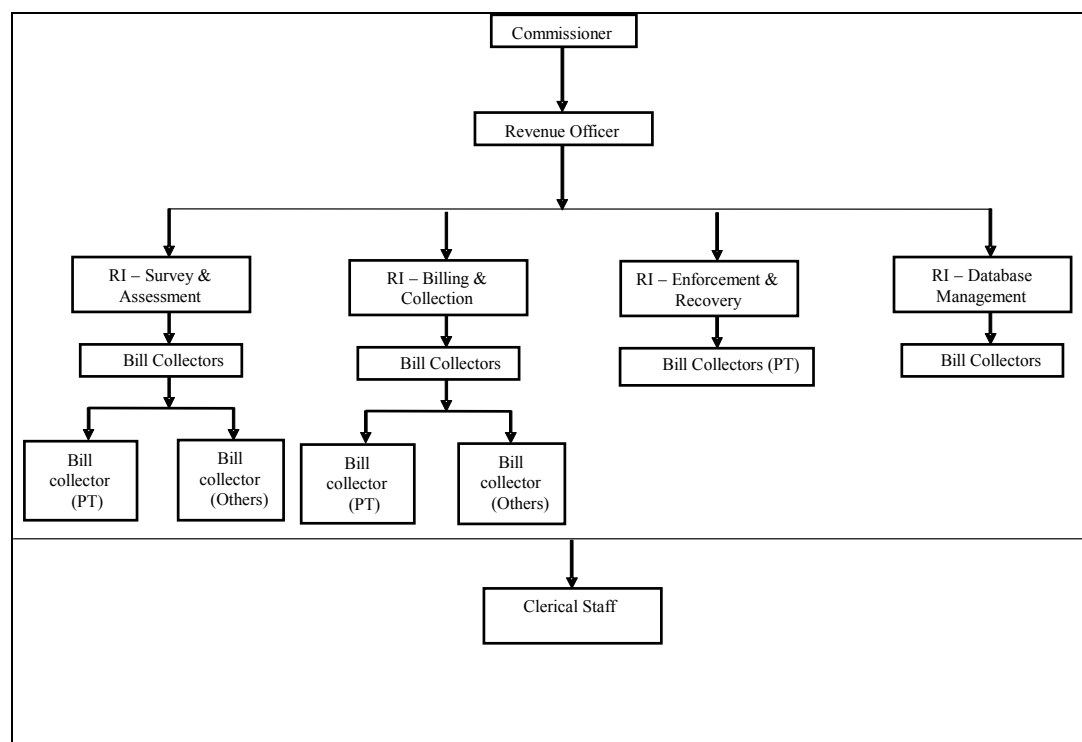
There are certain action points highlighted below for establishing a strong tax administration process in the municipality to cover the entire value chain of property tax right from coverage, assessment, billing and collection to enforcement and are detailed in the following sub-sections. This section 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	<ul style="list-style-type: none"> <li>Define objectives, functions and role of this department</li> <li>Draw the work flow for the division</li> <li>Allocate tasks amongst the people</li> <li>Prepare job description for each cadre and circulate the same amongst the revenue department staff</li> </ul>
Vacant land assessment	Trace vacant land owners by devising a communication strategy	<ul style="list-style-type: none"> <li>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.</li> <li>Extend the same methodology used for enforcement</li> </ul>
Widening the assessment base	Link property database to other departments like water supply	<ul style="list-style-type: none"> <li>Provide inputs while database is created such that automatic triggers are created to identify new properties</li> </ul>
	Initiate periodic survey (on a half-yearly or yearly basis) to check increase in number of properties	<ul style="list-style-type: none"> <li>Assign the role to Bill collector, one each for survey and updation of database</li> </ul>
	Link additions to number of properties to town planning	<ul style="list-style-type: none"> <li>Ensure town planning department in the municipality collects a building plan from the property owner and provides information to the revenue department</li> <li>Until such time the computerised database is complete, a format for providing the details can be given to the town planning department</li> <li>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.</li> </ul>
	Tie up with utilities for database sharing on a regular basis	<ul style="list-style-type: none"> <li>Prepare a format of information requirement / use utilities formats if found appropriate</li> <li>Initiate dialogue with TNEB, BSNL, Sub-registrar, Slum Clearance Board and TWAD for all properties</li> <li>Additionally initiate dialogue with Registrar of Companies (ROC) for industrial properties</li> <li>In case these utilities are reluctant to share information, arrange to procure data on a 'subscription' basis for a monthly / yearly fee</li> </ul>

*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	<ul style="list-style-type: none"> <li>Define objectives, functions and role of this department</li> <li>Draw the work flow for the division</li> <li>Allocate tasks amongst the people</li> <li>Prepare job description for each cadre and circulate the same amongst the revenue department staff</li> </ul>
Despatch of demand notices	Outsource despatch activity (if already not in place)	<ul style="list-style-type: none"> <li>Employ a courier agency for despatching notices to the properties</li> <li>Direct the courier agency to note the change of address (where applicable) and inform the same to the revenue department</li> </ul>
Collection efficiency	Define specific targets for this division including the Revenue Officer for increasing collection efficiency	<ul style="list-style-type: none"> <li>Discuss and debate allocation of targets taking the bill collectors, revenue inspector and revenue officers into confidence.</li> <li>Communicate the agreed mechanism to all the department staff (considering the opportunities for job rotation)</li> </ul>
Collection	Target high potential tax payers and ensure regular follow-up  Identify additions at the time of registration / transfer itself	<ul style="list-style-type: none"> <li>Prepare list of high potential clients like industries and major commercial establishments.</li> <li>Attach responsibility to the Revenue officer to personally involve in collection</li> <li>Create a separate property tax counter<sup>39</sup> at the sub-registrar's office to ensure that all properties are verified for tax compliance at the time of registration/transfer.</li> <li>Hire one or two people on a contract basis for this purpose.</li> </ul>
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)	<ul style="list-style-type: none"> <li>Intimate the collecting bank regarding change in process</li> <li>Put up a communication notice in banks informing citizens of the change</li> <li>Put up a communication notice in the premises of the municipality</li> <li>Reiterate the need for regular updation of information to the collecting banks</li> </ul>
	Extend reach to citizens	<ul style="list-style-type: none"> <li>Initiate dialogue with postal department to facilitate in collections.</li> <li>Share the existing processes and formats for banks with the postal department</li> <li>Put up notices in the postal department, banks and municipality premises regarding additional collection centres</li> </ul>

<sup>39</sup> 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	<ul style="list-style-type: none"> <li>Define objectives, functions and role of this department</li> <li>Draw the work flow for the division</li> <li>Allocate tasks amongst the people</li> <li>Prepare job description for each cadre and circulate the same amongst the revenue department staff</li> </ul>
Scoping	Define the contours of database management system	<ul style="list-style-type: none"> <li>Include all the functions of the revenue department and certain key departments for establishing linkages (like engineering division, accounts, town planning department)</li> <li>Initiate dialogue with CMA to assess the modules of the computerised database and MIS that is being developed</li> <li>Identify gaps and agree on standardisation, inclusions / deletions</li> </ul>
Interim measures for creating database	Initiate a MIS as an intermediary step until such time the computerised database is complete	<ul style="list-style-type: none"> <li>Classify and categorise properties ward wise and potential wise</li> <li>Prepare formats for listing the top potential payers / largest defaulters that would act as a MIS tool (See note below)</li> </ul>

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 <sup>40</sup> /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	<ul style="list-style-type: none"> <li>Define objectives, functions and role of this department</li> <li>Draw the work flow for the division</li> <li>Allocate tasks amongst the people</li> <li>Prepare job description for each cadre and circulate the same amongst the revenue department staff</li> </ul>
Delay in payment and arrears	Initiate measures to follow the methodology for enforcement as prescribed at the time of SAS implementation	<ul style="list-style-type: none"> <li>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</li> <li>Create a communication strategy for dissemination of information on the existing enforcement mechanism, its benefits and its implications <ul style="list-style-type: none"> <li>Advertise in newspapers, local cable network, journals</li> <li>Put up notices in collection banks, sub registrar office, major utility offices, ROC and municipality</li> </ul> </li> </ul>

<sup>40</sup> Property Identification Number

Arrears recovery	Introduce categorisation, based on value of property tax	Prepare list of defaulters <ul style="list-style-type: none"> <li>• Divide database of properties (when complete) into categories             <ul style="list-style-type: none"> <li>A – Very high value</li> <li>B- High value customers</li> <li>C – Medium value customers</li> <li>D- Low value customers</li> </ul> </li> <li>• Allocate recovery responsibility based on the value of property tax. Recovery from very high value defaulters may require the Commissioner's involvement</li> </ul>
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### 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	<ul style="list-style-type: none"> <li>• 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</li> <li>• Organise workshops every time a new system of tax is introduced or the state government carries out major changes to the processes.</li> <li>• Conduct open house sessions to discuss best practices in tax revenue</li> </ul>
Communication strategy	<ul style="list-style-type: none"> <li>• Outsource the activity of developing a communication strategy to an NGO or similar organisations.</li> <li>• Define the objective of communication strategy to include dissemination of information on property tax related matters to the citizens</li> <li>• The scope should cover necessary tools for communication:             <ul style="list-style-type: none"> <li>▪ Within the municipality</li> <li>▪ Between the government and DCMC</li> <li>▪ Between other departments / utilities</li> <li>▪ With the citizens</li> </ul> </li> <li>• 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</li> </ul>

### Comparison of CCP projects and BP projects

Sector	Description	Cost (Rs. Lakhs)	
		CCP	BP
<b>Water supply</b>			
	Source		880.0
	Distribution network	104.5	30.0
	<i>Installation of new line – 15 kms</i>		30.0
	Others		75.0
	Consultancy		5.0
<b>Total</b>		<b>339.0</b>	<b>990.0</b>
<b>Sewerage and Sanitation</b>			
	UGD		1884.0
	Public convenience	16.0	15.0
<b>Total</b>		<b>158.0</b>	<b>1899.0</b>
<b>Road &amp; Traffic management</b>			
	BT roads	643.0	100.0
	<i>Restoration</i>	425.0	100.0
	<i>Widening</i>	111.0	
	Earthen road		100.0
	<i>Upgradation to BT</i>		100.0
	Ring Road	1200.0	
	Traffic management systems		50.0
<b>Total</b>		<b>396.3</b>	<b>250.0</b>
<b>Storm Water Drains</b>			
	Kutcha drains	15.0	
	<i>Construction</i>	15.0	
	Pucca	550.0	200.0
	<i>Construction</i>	550.0	200.0
<b>Total</b>		<b>51.0</b>	<b>200.0</b>
<b>Street lighting</b>			
	Installation of new lights	30.4	40.0
	<i>Tube lights</i>	30.4	
	<i>Sodium Vapour</i>		40.0
	Timer switches	12.2	
<b>Total</b>		<b>46.0</b>	<b>40.0</b>
<b>Solid Waste Management</b>			
	Primary collection		30.0
	<i>Source segregation</i>		30.0
	<i>Tricycles</i>		
	<i>Storage bins</i>		
	Secondary collection		77.0
	<i>Dumping stations</i>		7.0
	<i>Trucks/Lorries</i>		22.0
	<i>Tippers</i>		48.0
	Secondary transportation		44.0
	<i>Compactor</i>		23.0
	<i>FEL/JCB</i>		21.0
	Disposal site		150.0
	<i>Facilities at disposal site</i>		



	<i>Scientific landfill</i>		108.0
	<i>Compost yard</i>		20.0
	<i>Weigh bridge</i>		22.0
<b>Total</b>		<b>72.0</b>	<b>301.0</b>
<b>Others</b>			
	Transport terminal		1000.0
	Hospitals – Improvement		10.0
<b>Total</b>		<b>50.0</b>	<b>1010.0</b>
<b>Grand total (In Rs. Crores)</b>		<b>11.12</b>	<b>46.90</b>

Source: CCP details – CCP for Namakkal municipality prepared by Matt Macdonald consultants in 2002.  
Extract from chapter 5 and 6. The totals as per section 13.1