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# CITY DEVELOPMENT PLAN

## MARAIMALAI NAGAR

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### FINAL REPORT

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### MARCH 2009

**DARASHAW**  
1886  
ALL ABOUT TRUST



நகராட்சி நிர்வாகத்துறை  
Commissionerate of  
Municipal Administration

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## Disclaimer:

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The contents of this report are based primarily on discussions with Maraimalai Nagar Municipality and information, secondary data /Reports available with the Municipality including our discussions with the Stakeholders of the city.

Based on the available data and information provided to us, M/s Darashaw & Company Pvt. Ltd has prepared the Final report.

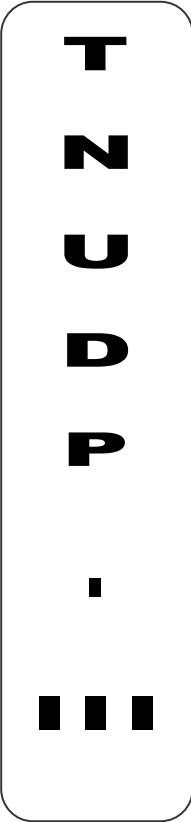
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Final  
Report

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For CMA

*Vision 2026 is to make Chennai a prime metropolis which will be more livable, economically vibrant and environmentally sustainable and with better assets for the future generations.*



**Final Report**

**I**

For Maraimalai Nagar

*Modern Satellite Township for Chennai with good quality of life*



## Table of Contents...

### I EXECUTIVE SUMMARY

<b>1 Project background.....</b>	<b>1-1</b>
1.1 THIRD TAMILNADU URBAN DEVELOPMENT PROJECT (TNUDP III) .....	1-1
1.2 BACKGROUND OF THE WORK ORDER .....	1-1
1.3 OBJECTIVES OF THE STUDY .....	1-2
1.4 SCOPE OF WORK .....	1-3
1.5 CITY DEVELOPMENT PLAN .....	1-5
1.5.1 Objectives of City Development plan .....	1-6
1.5.2 City Development Plan Process .....	1-6
1.6 STUDY APPROACH AND METHODOLOGY .....	1-7
1.7 CITY OPINION SURVEY .....	1-9
1.8 PRESENTATION AND DISCUSSION WITH REVIEW COMMITTEE ON INCEPTION REPORT .....	1-12
1.9 PRESENTATION AND DISCUSSION WITH REVIEW COMMITTEE ON INTERIM REPORT .....	1-13
1.10 PRESENTATION AND DISCUSSION WITH REVIEW COMMITTEE ON DRAFT FINAL REPORT .....	1-16
<b>2 Regional Outlook.....</b>	<b>2-1</b>
2.1 MASTER PLAN PROPOSALS .....	2-1
2.2 DEMOGRAPHIC PROFILE .....	2-2
2.3 ECONOMIC PROFILE .....	2-2
2.3.1 Industrial Scenario in Kancheepuram district.....	2-2
2.3.2 Industries in and around Chennai.....	2-3
2.3.3 Workforce.....	2-7
2.4 REGIONAL SETTING AND NETWORK LINKAGES .....	2-7
<b>3 Brief profile of the town .....</b>	<b>3-1</b>
3.1 DEMOGRAPHY .....	3-2
3.1.1 Population projections for Maraimalai Nagar.....	3-2
3.2 SOCIAL CHARACTERISTICS .....	3-3
3.2.1 Social Composition.....	3-3
3.2.2 Gender Ratio.....	3-4

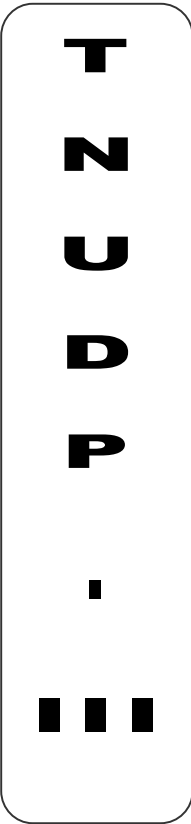
T  
N  
U  
D  
P  
.

Final  
Report

II



3.2.3 Literacy levels.....	3-4
3.3 ECONOMIC CHARACTERISTICS .....	3-5
3.3.1 Work Force Participation Rate.....	3-5
3.3.2 Worker Characteristics .....	3-5
3.4 INDUSTRIES IN MARAIMALAI NAGAR .....	3-6
3.5 TOURISM IN MARAIMALAI NAGAR.....	3-6
3.6 PHYSICAL CHARACTERISTICS.....	3-7
3.6.1 Land Use .....	3-7
<b>4 Physical Infrastructure.....</b>	<b>4-1</b>
4.1 WATER SUPPLY .....	4-1
4.1.1 Water Supply system .....	4-1
4.1.2 Water availability.....	4-3
4.1.3 Performance Indicators.....	4-3
4.1.4 Proposed projects.....	4-4
4.1.5 Issues.....	4-4
4.2 SEWERAGE AND SANITATION.....	4-4
4.2.1 Sewerage system in Maraimalai Nagar.....	4-4
4.2.2 Sanitation in Maraimalai Nagar.....	4-5
4.2.3 Proposed projects.....	4-5
4.2.4 Issues.....	4-5
4.3 STORM WATER DRAINAGE .....	4-5
4.3.1 Performance indicators .....	4-6
4.3.2 Issues.....	4-6
4.4 SOLID WASTE MANAGEMENT.....	4-6
4.4.1 Generation and Collection .....	4-7
4.4.2 Disposal and Treatment.....	4-7
4.4.3 Proposed projects.....	4-7
4.4.4 Performance Indicators.....	4-8
4.4.5 Issues.....	4-8
4.5 ROADS, TRAFFIC AND TRANSPORTATION.....	4-8
4.5.1 Municipal road network.....	4-8
4.5.2 Traffic and Transportation .....	4-9
4.5.3 Public Transport System.....	4-9
4.5.4 Performance indicators .....	4-9
4.5.5 Proposed projects at a glance.....	4-9



**Final Report**

**III**



4.5.6	Issues.....	4-10
4.6	STREET LIGHTING.....	4-10
4.6.1	Performance Indicators.....	4-11
4.6.2	Issues.....	4-11
4.7	DEMAND ASSESSMENT.....	4-11
<b>5</b>	<b>Socio-economic Infrastructure.....</b>	<b>5-1</b>
5.1	HEALTH INFRASTRUCTURE AT TOWN LEVEL.....	5-1
5.2	EDUCATIONAL INSTITUTIONS AT TOWN LEVEL.....	5-2
5.3	OTHER AMENITIES AT TOWN LEVEL.....	5-3
5.4	ISSUES.....	5-4
<b>6</b>	<b>Environmental Status.....</b>	<b>6-1</b>
6.1	NATURAL ENVIRONMENT.....	6-1
6.1.1	Topography.....	6-1
6.1.2	Geology and Soil Type.....	6-1
6.1.3	Climate and Rainfall.....	6-1
6.1.4	Water Sources.....	6-1
6.2	URBAN ENVIRONMENT.....	6-2
6.2.1	Urban Environment Quality.....	6-2
6.3	ISSUES.....	6-2
<b>7</b>	<b>Slums and Urban poverty.....</b>	<b>7-1</b>
7.1	SLUMS IN MARAIMALAI NAGAR.....	7-1
7.1.1	Service provision in Slums.....	7-1
7.1.2	Proposed projects at a glance.....	7-2
7.2	URBAN POOR.....	7-2
7.3	ISSUES.....	7-2
<b>8</b>	<b>Fiscal Status.....</b>	<b>8-1</b>
8.1	BACKGROUND.....	8-1
8.2	FINANCIALS.....	8-2
8.3	ANALYSIS OF INCOME.....	8-5
8.3.1	Own Sources.....	8-6
8.3.2	Non Tax Revenues.....	8-8
8.3.3	External Sources.....	8-9

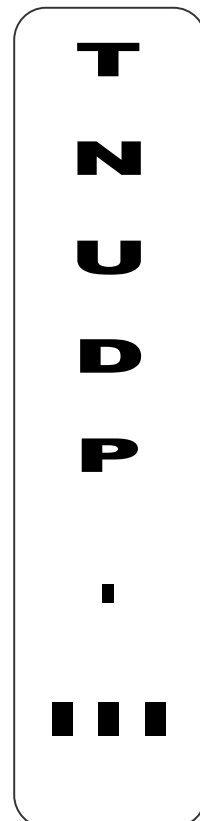
F  
I  
N  
A  
L  
R  
E  
P  
O  
R  
T

Final  
Report

IV



8.4 ANALYSIS OF EXPENDITURE .....	8-10
8.4.1 Personnel Costs .....	8-11
8.4.2 Operating Expenses / Repairs & Maintenance.....	8-11
8.4.3 Administrative Expenses .....	8-12
8.4.4 Finance Expenses .....	8-12
8.5 SOURCE & USE OF FUNDS.....	8-13
8.6 DEMAND, COLLECTION AND BALANCE FOR THE PAST 5 YEARS .....	8-16
8.7 OUTSTANDING LOAN AND NON-DEBT LIABILITY .....	8-18
8.8 KEY FINANCIAL INDICATORS .....	8-18
<b>9 Institutional status.....</b>	<b>9-1</b>
9.1 INSTITUTIONAL STRUCTURE .....	9-1
<b>10 Stakeholders Consultation .....</b>	<b>10-1</b>
10.1 FIRST STAKE HOLDER’S CONSULTATION .....	10-2
10.1.1 Problems highlighted .....	10-2
10.2 FINDINGS OF CITY OPINION SURVEYS .....	10-3
10.3 CITY OPINION SURVEYS .....	10-3
10.3.1 Problem areas - ranking .....	10-3
10.3.2 Sector Prioritization.....	10-5
10.4 SECOND STAKE HOLDER’S CONSULTATION .....	10-8
10.4.1 Projects Identified.....	10-8
<b>11 S W O T.....</b>	<b>11-1</b>
11.1 STRENGTHS.....	11-2
11.1.1 Base for many industries.....	11-2
11.1.2 Good Connectivity.....	11-2
11.1.3 Fairly good Physical and Social Infrastructure.....	11-2
11.2 OPPORTUNITIES .....	11-2
11.2.1 Scope for developing New Chennai.....	11-2
11.3 WEAKNESSES.....	11-3
11.3.1 Absence of water supply sources nearby .....	11-3
11.3.2 Absence / Inadequate infrastructure in revenue Villages .....	11-3
11.3.3 Connectivity is weak across railway line between East and West. ....	11-3
11.4 THREATS .....	11-3
11.4.1 Pollution and Encroachments.....	11-3



**Final Report**

**v**



<b>12 Strategic vision and development objectives.....</b>	<b>12-1</b>
<b>13 Consolidated Issues .....</b>	<b>13-1</b>
<b>14 Sectoral strategy and Action Plan .....</b>	<b>14-1</b>
14.1 SECTORAL STRATEGY .....	14-1
<b>15 Capital Investment Plan.....</b>	<b>15-1</b>
15.1 CIP FOR PHYSICAL INFRASTRUCTURE SECTORS .....	15-3
15.1.1 Water Supply.....	15-4
15.1.2 Sewerage and Sanitation.....	15-5
15.1.3 Storm Water Drainage.....	15-6
15.1.4 Solid Waste Management.....	15-7
15.1.5 Road works, Traffic and Transportation.....	15-8
15.1.6 Street Lighting.....	15-10
15.1.7 Socio-Economic Infrastructure.....	15-11
15.1.8 Environment, Slums and Urban Poverty.....	15-13
15.2 CONSOLIDATED CAPITAL INVESTMENT PLAN .....	15-14
15.2.1 First Phase Investment Plan (2008-09 to 2012 – 13).....	15-14
15.2.2 Second Phase Investment Plan (2013-14 to 2017 – 18) .....	15-17
15.2.3 Third Phase Investment Plan (2018-19 to 2022 – 23).....	15-19
<b>16 Asset management plan.....</b>	<b>16-1</b>
16.1 LIST OF ASSETS .....	16-1
16.2 OPERATIONS AND MAINTENANCE .....	16-4
16.2.1 O&M of social infrastructure assets.....	16-5
16.2.2 O&M Physical Infrastructure.....	16-8
16.3 ASSET MANAGEMENT PLAN-RECOMMENDATIONS .....	16-10
16.3.1 Asset Register.....	16-10
16.3.2 Asset Value and Life Cycle Management.....	16-10
16.3.3 Sustainability .....	16-11
16.3.4 Integration of Technical and Financial Plans.....	16-11
16.3.5 Condition Assessment Survey(CAS).....	16-11
16.3.6 Monitoring and Evaluation.....	16-11
16.3.7 Budgeting .....	16-12
16.3.8 Training in Database management.....	16-12

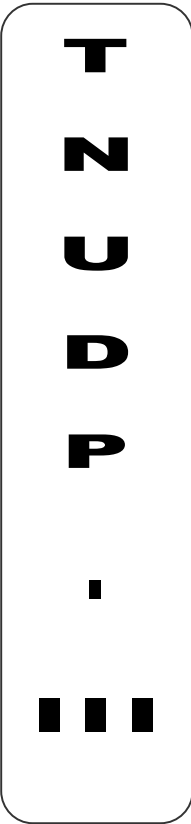
T  
N  
C  
D  
P  
.|||

Final  
Report

VI



<b>17 Reforms and resource mobilization.....</b>	<b>17-1</b>
17.1 OVERVIEW.....	17-1
17.2 REFORM MEASURES OF MARAIMALAI NAGAR MUNICIPALITY.....	17-2
17.2.1 Financial & Accounting reforms.....	17-2
17.2.2 Reforms in Physical Infrastructure.....	17-11
17.3 POSSIBILITIES OF ADDITIONAL RESOURCE MOBILISATION.....	17-14
<b>18 Financial Operating Plan .....</b>	<b>18-1</b>
18.1 BACKGROUND - NEED FOR AN FOP.....	18-1
18.2 FINANCIAL SUSTAINABILITY .....	18-3
18.2.1 Base Case Scenario.....	18-3
18.2.2 Full project Scenario.....	18-4
18.3 ASSUMPTIONS FOR FOP.....	18-5
18.3.1 Revenue Income.....	18-5
18.3.2 Revenue Expenditure.....	18-11
18.3.3 Funding Mechanism.....	18-12
18.4 OUTCOME OF FINANCIAL OPERATING PLAN.....	18-14
18.4.1 Base Case Scenario (“Business as Usual Scenario”).....	18-14
18.4.2 Full Project Scenario WITHOUT Reforms.....	18-15
18.4.3 Full Project Scenario WITH Reforms.....	18-17
18.5 CONCLUSION AND RECOMMENDATION.....	18-19



**Final Report**

**VII**

## List of Tables...

Table 2-A Demographic profile at regional level .....	2-2
Table 2-B Factories in Chennai Kancheepuram and Thiruvallur districts and its share .....	2-5
Table 2-C Employment of Organised sector in Chennai, Kancheepuram (including Thiruvallur District) .....	2-7
Table 3-A : Brief Profile of the town .....	3-2
Table 3-B Population growth in Maraimalai Nagar .....	3-2
Table 3-C Recommended population projections for Maraimalainagar .....	3-3
Table 3-D: Social composition in Maraimalai Nagar .....	3-3
Table 3-E: Gender ratio in Maraimalai Nagar and its comparison .....	3-4
Table 3-F: Literacy rate in Maraimalai Nagar and its comparison .....	3-4
Table 3-G : Work Force Participation Rate and its comparison .....	3-5
Table 3-H: Work force classification in Maraimalai Nagar .....	3-5
Table 3-I Industries in Maraimalai Nagar .....	3-6
Table 3-J Tourist destinations around Maraimalai Nagar .....	3-6
Table 4-A : Water Supply system in Maraimalai Nagar .....	4-3
Table 4-B Performance Indicators .....	4-3
Table 4-C Drainage Network in Maraimalai Nagar .....	4-5
Table 4-D Performance Indicators .....	4-6
Table 4-E : Waste Generation, Collection details .....	4-6
Table 4-F Vehicle availability and trips performed for waste disposal .....	4-7
Table 4-G Performance Indicators .....	4-8
Table 4-H Road network .....	4-8
Table 4-I Performance Indicators related to road .....	4-9
Table 4-J Street Lighting in Maraimalai Nagar .....	4-10
Table 4-K Performance Indicators regarding Street Lighting .....	4-11
Table 4-L Demand Assessment for Infrastructure works .....	4-11

**T  
N  
C  
D  
P  
.  
|||**

**Final  
Report**

**VIII**

Table 5-A Health infrastructure in Maraimalai Nagar.....	5-1
Table 5-B Educational Institutions.....	5-2
Table 5-C Amenities in Maraimalai Nagar .....	5-3
Table 6-A Urban Environment Quality Check.....	6-2
Table 7-A Slum Population in Maraimalai Nagar .....	7-1
Table 7-B Slum pockets in Maraimalai Nagar .....	7-1
Table 7-C BPL families in Maraimalai Nagar .....	7-2
Table 8-A Income & Expenditure Account.....	8-2
Table 8-B : Income Analysis.....	8-5
Table 8-C Property Tax Particulars.....	8-7
Table 8-D Profession Tax Particulars .....	8-8
Table 8-E : Expenditure Analysis .....	8-10
Table 8-F Balance Sheet .....	8-13
Table 8-G: Fixed Assets .....	8-14
Table 8-H: DCB for the Past 5 years .....	8-16
Table 8-I: Outstanding Loan and Non-Debt Liability .....	8-18
Table 8-J : Expenditure Management.....	8-19
Table 9-A : The Staff strength of the Maraimalai Nagar Municipality.....	9-2
Table 13-A Consolidated Issues.....	13-1
Table 14-A Action Plan for future development of the town.....	14-1
Table 15-A Consolidated Sector wise Capital Investment requirements .....	15-1
Table 15-B Cost estimates for slums and other areas in Maraimalai Nagar .....	15-3
Table 15-C Project List and Budget Estimates for Water Supply Works .....	15-4
Table 15-D Project List and Budget Estimates for Sewerage and Sanitation Works.....	15-6
Table 15-E Project List and Budget Estimates for Storm Water Drainage Works.....	15-7
Table 15-F Project List and Budget Estimates for Solid Waste Management Works.....	15-8
Table 15-G Project List and Budget Estimates for Road works, Traffic and Transportation Works.....	15-9

T

N

C

D

P

.

■ ■ ■

■ ■ ■

**Final  
Report**

**IX**

Table 15-H Project List and Budget Estimates for Street Lighting ..... 15-11

Table 15-I Project List and Budget Estimates for Socio-Economic Infrastructure ..... 15-12

Table 15-J Project List and Budget Estimates for Environment, Slums & Urban Poverty..... 15-14

Table 15-K First Phase Capital Investment Plan for Maraimalai Nagar Municipality ..... 15-15

Table 15-L First Phase Capital Investment Plan for Maraimalai Nagar Municipality (after considering escalation cost) ..... 15-16

Table 15-M Second Phase Capital Investment Plan for Maraimalai Nagar Municipality ..... 15-17

Table 15-N Second Phase Capital Investment Plan for Maraimalai Nagar Municipality (after considering escalation cost) ..... 15-18

Table 15-O Third Phase Capital Investment Plan for Maraimalai Nagar Municipality ..... 15-19

Table 15-P Third Phase Capital Investment Plan for Maraimalai Nagar Municipality (after considering escalation cost) ..... 15-20

Table 16-A:Details of various social & physical infrastructure assets of Maraimalai Nagar Municipality 16-2

Table 16-B Land requirements for executing e major infrastructure project identified in CIP ..... 16-4

Table 16-C : O&M and Revenue generation..... 16-5

Table 16-D Past Growth trends in O & M expenses relating to key physical infrastructure ..... 16-9

Table 16-E O & M for proposed capital works..... 16-9

Table 17-A Collection efficiency..... 17-3

Table 17-B Efficiency parameters of key taxes and water charges ..... 17-3

Table 17-C: Privatisation /outsourcing activities of Maraimalai Nagar Municipality..... 17-8

Table17-D :E Governance Status..... 17-10

Table 18-A : Key assumptions for forecasting income from Property Taxes..... 18-6

Table 18-B: Key assumptions for forecasting income from Water Charges..... 18-6

Table 18-C : Key assumptions for forecasting income from Sewerage Charges..... 18-8

Table 18-D : Assumption for Income ..... 18-10

**F  
I  
N  
A  
N  
C  
I  
A  
L  
R  
E  
P  
O  
R  
T**

**Final Report**

**X**



Table 18-E: Assumption for Revenue Expenditure ..... 18-11

Table 18-F: Key assumptions for forecasting future debt obligations..... 18-12

Table 18-G : Financing Pattern for Proposed projects as per prudent Funding norms..... 18-12

Table 18-H: Financial Operating Plan - No Projects,No REFORMS- Base Case Scenario

TABLE 18-I : Full Project Cash Flow , Full Projects WITHOUT REFORMS - As per Prudent Financial norms

Table No 18 J : Financial Operating Plan- With FULL PROJECT WITHOUT REFORMS- As per Prudent Financial Norms

Table No 18 K: Calculation of Debt Service Coverage Ratio (DSCR) With FULL PROJECT WITH OUT REFORMS -As per Prudent financial Norms

Table 18 L: FULL PROJECT SCENARIO WITH REFORMS -Funding requirements as per Suggesting Funding Norms

Table No 18 M : Full Project Cash Flow With FULL PROJECT WITH REFORMS - As per Suggested Financial Norms

Table No 18 N. : Financial Operating Plan -With FULL PROJECT WITH REFORMS - As Per Suggested Financial norms

Table No 18 O : Calculation of Debt Service Coverage Ratio (DSCR) With FULL PROJECT WITH REFORMS -As per Suggested financial Norms

Table 18 P: FULL PROJECT SCENARIO WITH REFORMS -Funding requirements as per Suggesting Funding Norms

**T  
N  
C  
D  
P  
.|||**

**Final Report**

**XI**

## List of Figures...

Figure 1-1 : Principles of CDP .....	1-6
Figure 1-2 : Approach and Methodology for Maraimalai Nagar CDP.....	1-11
Figure 2-1 Maraimalai Nagar in Regional Context .....	2-8
Figure 3-1: Map of Maraimalai Nagar.....	3-1
Figure 3-2 : Existing Development pattern 2007 .....	3-7
Figure 3-3 Existing Land Use Plan of the town – Maraimalai Nagar .....	3-7
Figure 3-4 Proposed Land Use Plan for Maraimalai Nagar .....	3-7
Figure 4-1 Water supplied by TWAD .....	4-4
Figure 5-1 SRM General Hospital .....	5-1
Figure 5-2 SRM Engineering College - Potheri .....	5-2
Figure 5-3 Government Higher Secondary School – MM Nagar .....	5-2
Figure 5-4 Periyar Park.....	5-3
Figure 5-5 Maraimalai Nagar Lake.....	5-4
Figure 5-6 Thirukatchur pond .....	5-4
Figure 8-1 Income & Expenditure Account .....	8-2
Figure 8-2: Break up of Income of Maraimalai Nagar Municipality for the year 2005-06 .....	8-6
Figure 8-3 Break up of Expenditure of Maraimalai Nagar Municipality for the year 2005-06.....	8-11
Figure 8-4 : Source and Use of Funds of Maraimalai Nagar Municipality as on 2005-06 .....	8-15
Figure 9-1 Organization chart of Maraimalai Nagar Municipality.....	9-1
Figure 10-1 Physical Infrastructure – Problems areas ranking .....	10-4
Figure 10-2 Social Infrastructure – Problem areas ranking.....	10-4
Figure 10-3 Environmental Status – Problem areas.....	10-4

Figure 10-4 Sector prioritization by the Stakeholders (Physical Infrastructure) ..... 10-6

Figure 10-5 Sector prioritization by the Stakeholders (Social Infrastructure) ..... 10-6

Figure 10-6 Sector prioritization by the Stakeholders (Environmental Issues) ..... 10-7

Figure 10-7 Second Stakeholders Consultation ..... 10-14

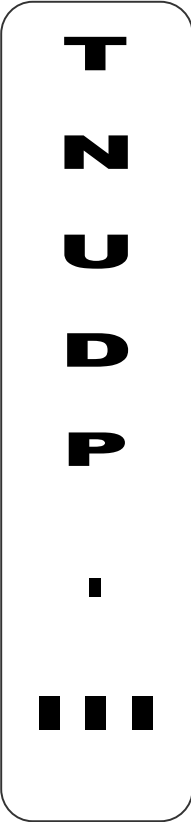
Figure 10-8 Review Meetings ..... 10-14

Figure 12-1: Development Vision model for Maraimalai Nagar City Development Plan2036 ..... 12-1

Figure 15-1 Sector wise percentage share ..... 15-2

Figure 18-1 Reform Implementation Schedule.....

Figure 18-2 Project Implementation Schedule.....



**Final  
Report**

**XIII**

## Annexure....

Annexure I Norms Vs Current Status.....

Annexure II Urban Performance Indicators.....

Annexure III Salaries of Municipal Staff.....

Annexure IV Water Test Sample.....

Annexure V Attendance.....

Annexure VI Draft Memorandum of Understanding.....

Annexure VII Council Resolution.....

**F**

**N**

**C**

**D**

**P**

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**|||**

**Final  
Report**

**XIV**

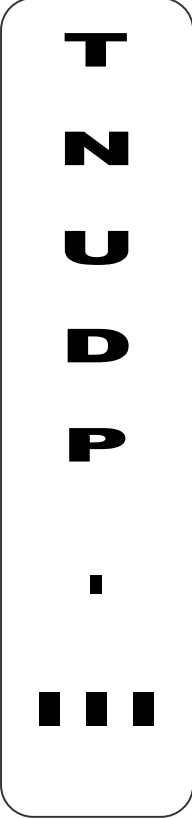
## Acronyms...

AMP	:	Asset Management Plan
BPL	:	Below Poverty Line
BOT	:	Build-Operate-Transfer
BOOT	:	Build-Own-Operate-Transfer
BOLT	:	Build-Own-Lease-Transfer
BT	:	Bitumen Tar
CAGR	:	Compounded Annual Growth Rate
CC	:	Cement Concrete
CIP	:	Capital investment Plan
CMA	:	Commissionerate of Municipal Administration
CMWSS	:	Chennai Metro Water Supply & Sewerage Board
B		
CPHEEO	:	Central Public Health & Environmental Engineering Organization
DSCR	:	Debt Service Coverage Ratio
DPR	:	Detailed Project Report
ESR	:	Elevated Storage Reservoir
ESA	:	Environmental and Social Assessment
FAS	:	Financial Accounting System
FOP	:	Financial Operating Plan
FY	:	Financial Year
GIS	:	Geographical Information System
Govt.	:	Government
G.O	:	Government Order
GSR	:	Ground Level Reservoir
HH	:	House hold
HP	:	Horse Power
HSC	:	House Hold Connections
HSS	:	Higher Secondary School
HUDCO	:	Housing and Urban Development Corporation
IHSDP	:	Integrated Housing & Slum Development Program

T  
N  
C  
D  
P  
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|||

Final  
Report

XV



**Final  
Report**

**XVI**

Kg	:	Kilo Gram
Km	:	Kilometer
JNNURM	:	Jawaharlal Nehru National Urban Renewal Mission
Sq.Km	:	Square Kilometer
Lpcd	:	Litre per capita per day
LL	:	Lakh Litre
LIC	:	Life Insurance corporation of India
OHT	:	Over Head Tanks
m	:	Meter
m <sup>2</sup>	:	Square Meter
m <sup>3</sup>	:	Cubic Meter
MIS	:	Management Information System
Mld	:	Million litres per day
MOA	:	Memorandum of Association
Mm	:	Millimeter
MRTS	:	Mass Rapid Transit System
MTC	:	Metropolitan Transport Corporation
MUDF	:	Municipal Urban Development Funds
MUDP	:	Madras Urban Development Project
NA	:	Not Available/Not Applicable
NGO	:	Non Government Organization
NH	:	National Highway
NHAI	:	National Highway Authority of India
O&M	:	Operations and Maintenance
PF	:	Public Fountains
PPP	:	Public Private Participation
PSP	:	Private Sector Participation
PWD	:	Public Works Department
SEZ	:	Special Economic Zone
Sq ft	:	Square Feet
Sq Km	:	Square Kilometer
SC/ST	:	Scheduled Castes/Schedule Tribes
SHG	:	Self Help Group

SH	:	State Highway
SWD	:	Storm Water Drains
SWM	:	Solid Waste Management
TOR	:	Terms of Reference
TNUDP	:	Tamil Nadu Urban Development Project
TNUIFSL	:	Tamil Nadu Urban Infrastructure Financial Services Limited
TUFIDC	:	Tamil Nadu Urban Finance & Infrastructure Development Corporation Limited
TWAD	:	Tamil Nadu Water Supply & Drainage Board
UDPFI	:	Urban Development Planning Formulation and Implementation
UIDSSM	:	Urban Infrastructure Development Scheme for Small & Medium Towns
UGD	:	Under Ground Sewerage
ULB	:	Urban Local Bodies
WBM	:	Water Bound Macadam
WFPR	:	Work Force Participation Rate
WS	:	Water Supply

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**Final  
Report**

**XVII**

## EXECUTIVE SUMMARY

### *Study Background*

The Third Tamilnadu Urban Development Project (TNUDP III) aims at improving the delivery of urban services through enhancing the quality of urban infrastructure and strengthening the institutional and financial framework.

Under TNUDP III, the Commissionerate of Municipal Administration (CMA) had initiated the process of preparing City Development plan for this Grade III Municipal town to enhance the vision of the stakeholders in the growth and development of the town.

### *Objectives of the study*

The objective of this exercise is to

- *Define the growth directions and service up-gradations in relation to the activity mix / growth;*
- *Assess the demand for the projects specified by the ULB, and come out with gap in services with respect to the vision;*
- *Broadly outline the infrastructure needs;*
- *Improve infrastructure facilities and to create durable public assets and quality oriented services in the ULB.*
- *Define specific rehabilitation of infrastructure and capital improvement needs with regard to provision of infrastructure in both slums and other areas;*
- *Indicate the priority of projects*
- *Define revenue enhancement and revenue management improvements required to sustain the rehabilitation proposed;*

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Final  
Report

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- Suggest reforms required in local administration and service delivery including public private partnership in infrastructure development
- Suggest Measures to address common growth and infrastructure issues and to promote integrated development
- Suggest Management changes required at the local level to improve O&M of assets.
- Assess possibilities of strengthening E-governance.

## ***Town Profile***

Maraimalai Nagar, popularly known as New Chennai located on NH-45 road network and on Chennai – Trichy Broad Gauge southern railway line. It is located in Kancheepuram district but is in close proximity to Chennai city and important religious towns like Acharapakkam and Melmaruvathur Temple town lies at 20Km and 15km south of this town respectively. It is situated at 12°41'30" latitude and 74°58'00" longitude and 28m elevated from Mean Sea Level.

## ***Performance of Maraimalai Nagar municipality***

On the infrastructure front, despite water supply distribution network covering 55% of Maraimalai Nagar roads, water supply individual service connections reaches only 26% of the houses in the town. Sewerage system exists in the town with sewer network coverage of 33.5% of the road length. The coverage of roads and storm water drains is below the prescribed norms, with surface roads covering only 63% of the town and storm water drains covering 51% of the road length. The solid waste collections cover 100% of the garbage generated. Service delivery with respect to other aspects of solid waste management (SWM) like Conservancy staff adequacy, waste transportation and disposal are inadequate whereas treatment facilities are under construction in Chithamanur village.

On the Financial front, Income of the Municipality has grown briskly from Rs.691.67 lakhs in the year 2002-03 to Rs.1032.71 lakhs in the year 2005-06 with a CAGR of 14.29% in the last four years. The healthy growth in the municipal revenue can be attributed to strong growth in the

municipality's own revenue including both tax and non tax revenue sources. These sources contributed close to 90% of the municipal's revenue. The Expenditure of the municipality has shown a declining trend from Rs.551.11 Lakhs in the year 2002-03 to Rs.460.16 Lakhs in the year 2005-06. The fall in the expenditure of the municipality over the last 4 years can be attributed to decline in the expenses relating to repairs and maintenance and lower depreciation figures during the year 2005-06. The municipality has shown a consistent surplus in the last 4 years.

**Table A: Performance Indicators for the Year 2007-08**

Sector	Indicators	Unit	Current Status	Norms/Standard
<b>Water Supply</b>	Daily per capita supply	Litres	60	135
	Roads covered with distribution network	Percent	55	> 100
	Storage capacity with respect to supply	Percent	71	33
	Service connection	Percent	26	85
	Current Collection efficiency in water charges	Percent	61	90
<b>UGD</b>	Service connection	Percent	30	70
	Pucca Roads covered with sewer network	Percent	33.5	85
	Collection efficiency in sewer charges	Percent	NA	90
<b>Storm Water Drainage</b>	Roads covered with Storm water drainage	Percent	51	130
<b>Solid Waste management</b>	Waste generation per Capita per day	Grams	320	350-450
	Collection efficiency	Percent	100	100
	Conservancy staff per Km	Persons	0.3	2
	Door-Door collection efficiency(Wards covered)	Percent	24	100
<b>Roads</b>	Per capita road length	Meters/Person	3.67	1.5
	Percentage of Surface roads	Percent	63	100
<b>Street Lighting</b>	Spacing between lamps	Meters	58	30
<b>Urban Finance</b>	Current Collection efficiency in Property taxes	Percent	75	90

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**Final Report**

**3**



	Revision in Property tax	Years	Once in 10 years	Once in 5 years
<b>Institutional Reforms</b>	Privatisation	Areas	1) Solid Waste Management, 2) Maintenance of Water Supply services & 3) Maintenance of Under Ground Drainage Services	Solid Waste Management, Street Light Maintenance, Pumping Station Maintenance, STP Maintenance and Hiring of Vehicles
	E-Governance	Modules	1	16

### **City Development Plan**

City Development Plan for Maraimalai Nagar Municipality for the next 15 years (2008-09 to 2022-23) was prepared in consultation at various stages with local stakeholders consists of wide range of representatives from

1. Administrative members of the Municipality
2. Elected members of the Municipality
3. Representatives from Slums /SC /ST
4. Senior Citizens
5. Self Help Groups
6. Women Groups
7. NGO members
8. Officials from Para-Statal agencies

### **Capital Investment Plan (Full Project Scenario)**

Based on this study, the Town's requirements in terms of investments for the next fifteen years for implementing all the proposed projects would be around Rs. 148.20 crores at current prices. 33.4% of the total investment is mainly for water supply and Sewerage projects. Majority of the projects are to be implemented in the next 5 years. Maraimalai Nagar Municipality is able to implement all the projects envisaged in the full project scenario.

Table B: Capital Investment Plan – Full Projects (Rs.in lakhs)

Sector	Total Investment	2008-09 to 2012-13	2013-14 to 2017-18	2018-19 to 2022-23
Water Supply	3373.89	833.39	2540.50	0.00
UGD	1578.34	486.34	0.00	1092.00
Sanitation	90.00	90.00	0.00	0.00
Storm Water Drainage	2440.00	2440.00	0.00	0.00
Solid Waste management	542.55	369.82	94.14	78.59
Roads, Traffic and transportation	3772.57	1859.46	1072.07	841.04
Street Lighting	138.09	66.46	35.82	35.82
Socio-economic Infrastructure	725.00	475.00	125.00	125.00
Slums and Urban poverty	2160.00	720.00	720.00	720.00
<b>Total Investment before escalation</b>	<b>14820.44</b>	<b>7340.47</b>	<b>4587.52</b>	<b>2892.45</b>
<b>% Share (Investment before escalation)</b>	<b>100.00</b>	<b>49.5</b>	<b>31.00</b>	<b>19.5</b>
<b>Total Investment after escalation</b>	<b>20782.91</b>	<b>8629.38</b>	<b>6699.99</b>	<b>5453.54</b>

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Final Report

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### ***Funding Pattern for projects (Full Project Scenario)***

The capital costs for implementing projects identified under full project scenario amounts to Rs. 207.83 crores (taking into account cost escalation). Here, the ULB is comfortable in taking up all the projects identified in the CDP. The ULB is able to service the O&M of new projects, repay the debt obligation, and contribute comfortably towards its share of funding to the projects identified under the CDP if they undertake all the reforms envisaged. The funding pattern under full project scenario is shown as under:

Table C: Possible funding pattern for the projects

Particulars	Suggested Funding Pattern (Rs.lakhs)
Loan Amount	7310.31
External Support	2985.13
ULB's Contribution	10179.67
Public Contribution	307.80
<b>Project Cost</b>	<b>20782.91</b>

### ***Asset Management Plan***

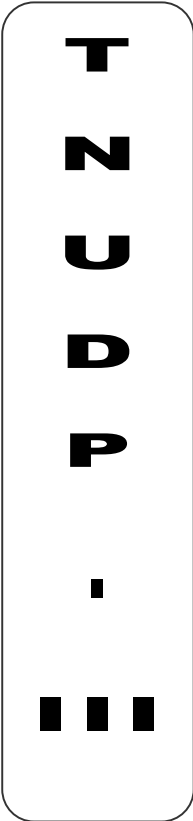
Maraimalai Nagar municipality has several assets that require regular maintenance for sustenance of reasonable service delivery levels. Given the high impact of the O&M expenses on the finances of the municipality, it is prudent to undertake a proper review of the assets under its control. This would aid in identifying the revenue generating assets as well as the ones that are causing a drain on municipal revenues. Various suggestions like maintaining Asset Register, determining Asset Value and Life Cycle Management, sustaining the existing and proposed assets, integrating technical and financial plans, undertaking Condition Assessment Survey, Budgeting, Monitoring, Evaluation and Imparting Training would help in managing the assets methodically.

### ***Municipal Reforms Suggested***

For improving the financial health of the municipality and for improving the service delivery, both qualitative and quantitative reforms with milestones have been spelt out. The quantitative reform for enhancing the revenue of the ULB to undertake projects has been summarized below:

Particulars	Reform suggested
• Revision in Property tax rates	• 25% increase every 5 years

Particulars	Reform suggested
• Service level Coverage (Water Supply- Number of assessments)	• 4% to 5% increase every year achieving 85% water service coverage by 2017-18
• Revision in Initial Deposit for New Water Connections	• Increase in deposit charges by Rs.2000 every 5 years for <b>the new connections</b> only.
• Revision in Water Charges	• 25% increase every 5 years
• Revision in Initial Deposit for New UGD Connections	• Increase in deposit charges by Rs.2000 every 5 years for <b>the new connections</b> only
• Revision in Monthly user charges for UGD	• 25% increase every 5 years
• User Charges for Door to Door Waste collection	<ul style="list-style-type: none"> <li>• Rs.50 per month from Non-Domestic assesses from the year 2011-12</li> <li>• Rs.15 per month from Domestic assesses from the year 2013-14. A 25% increase every 5 years in the user charges has been proposed.</li> </ul>



All the reforms suggested would help the municipality to meet some of the project capital requirements and meet the O & M expenses and also improve its borrowing capacity. The ULB would also be able to get external / Government support for financing a large share of the project investments

**Final Report**

All the reforms suggested here are to be implemented **after 5 years** except user charges for Door-Door waste collection from commercial and Institutional establishments which would be initiated in the third year (2011-2012). Hence adequate time is available to build public opinion on the reforms suggested.

7

Support of the local stakeholders including those of Chairman, Vice Chairman, ward councilors and all administrative members are required to bring in all the identified projects for the improvement and for the welfare of the town.

## ***Priority Projects to be implemented during the first five years (till 2012-13)***

### ***Water Supply***

- Developing 26 lakes in phases for tapping alternate water source with overflow weir and proper drainage channel
- Water Supply Improvement Scheme (Rs. 254 lakhs - ongoing)
- DPR for tapping palaveli water source
- Construction of Intake and Pump House for new water supply scheme - Palaveli water supply scheme
- Construction of 5.2 mld water treatment plant - Palaveli water supply scheme
- Laying of 400 mm dia PSC Pipe of 15 km length - Palaveli water supply scheme

### ***Sewerage and Sanitation***

- UGD improvement scheme (ongoing at a cost of Rs. 375 lakhs under UIDSSMT)
- Providing 14 public toilets in wards 01, 02, 09, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20 and 21
- 4 pay and use toilets in 3 Railway stations and one in Bus stand
- Laying 68 Km sewer network before 2017-18

### ***Storm Water Drains***

- 7 Culverts across National Highway 45 - Highway -Imp agency
- Laying 104 Km storm water drain before 2017-18

## ***Solid Waste Management***

- Protective gear for Conservancy worker (Workers will get safety gear once in two years)
- Procuring Separate bins for Waste Segregation at source for each household (with private sponsorship)
- SWM Infrastructure development works (Mini lorries (2 Nos), Dumper placer (1 No), Bio- pulverizer, Screener, Turner and Front –end loader)
- Purchasing Compactor (2 Nos) with bins
- Regional land filling

## ***Roads, Traffic and Transportation***

- CC Pavement to Pavender road (Tender called) - Rs. 298 lakhs
- CC Pavement to Anna road (Tender called) - Rs. 244 lakhs
- BT in Adikalar, Periyar, Kamaraj Nagar, Quide Millath road and BT with SWD in Thiruvalluvar road (Tender called) - Rs. 312 lakhs
- Converting 78.14 Km kutcha road into Pucca road
- Providing service road on both the sides of the National Highway from Goduvancherry to Singaperumal Koil for a length of 7 Kms - highway implementing agency - Rs. 210 lakhs
- Developing 100 feet parallel road (Periyar Salai) to NH – 45 from Guduvanchery – Valancheri – Potheri – Thinnakkattur – Thaiyal Nagar – MM Nagar – Ford – Chinga Perumal Koil for a length of 10 Kms.
- 4 Junction Improvement scheme in SRM college junction, Singa perumal Koil Junction, Potheri Junction and Kattankulathur Junction.
- Bus stand Improvement Scheme
- Separate Mouffsil Bus stand for Regional Transport System
- Station area improvement scheme for Potheri, Kattankulathur and Maraimalai Nagar Station - imp agency Railways
- Creating 6 RoBs in Thailavaram, Potheri, Kattankulathur, Maraimalai Nagar, Peramanur Samiyar gate, Peramanur Ford gate (Highway- imp agency)
- City Bus transport in road connecting Singa perumal koil, Industrial estate, W. No 08, 02, 01 connecting Guduvanchery - State transport Corporation - Imp agency

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**Final  
Report**

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- City bus transport connecting Guduvanchery, W. No.1, 2 connecting Kalivandapattu - State transport Corporation - Imp agency
- City Bus transport connecting Bus stand, 3 Railway stations and all revenue villages - State transport Corporation - Imp agency
- Relaying existing BT road once in three years (100.69 Km)
- Relaying existing CC road once in 15 years (12.85Km)
- Relaying 78.14 Km road once in three years after its conversion from Kutcha to Pucca road.

### ***Street lighting***

- Providing 761 additional energy saver lamps by 2012-13
- Installation of voltage controller & timers for 17 poles (150 poles have already been provided timers)
- Installation of electronic chokes in place of conventional copper chokes and 36 w tube lights (for existing 3344 tube lights which excludes existing 270 CFL lamps)
- 2 High Mast lights are required in Valancheri and Keelakarunai

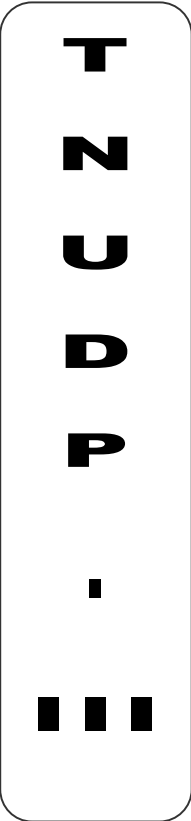
### ***Socio Economic Infrastructure***

- Converting Primary Health Centre into General Hospital - Health Department - Imp Agency
- Developing 150 approved layouts into parks and playgrounds in phases
- Developing Community hall
- Slaughter house (proposed under Part II scheme for 25 lakhs, 10 lakhs grant out of 25 lakhs)
- Creating New municipal office opposite to existing municipal building accommodating Municipal office, shopping complex, Municipal Commissioner and Municipal Engineer Quarters in a land of 1.79 acres.
- Creating 4 ward offices
- Gasifier Crematorium (proposed at NH -3 in an estimated cost of Rs. 50 lakhs), grant is Rs. 20 lakhs
- 10 burial grounds Infrastructure improvement scheme
- Renovating existing shops (12 shops) in Thayumanavar Street using General fund

- Developing Market Infrastructure through Private partnership
- Renovating 2 marriage halls
- Creating Entertainment center through private participation
- Establishing Multi-purpose Stadium through PPP
- Creating Truck terminus through PPP
- Consultancy services for Bid process management and selection of bidder for PPP projects (3 major projects)

### ***Environment, slums and Urban Poverty***

- Developing Recreational green spaces in 26 lakes
- Tree plantation scheme along lake banks, Bus stand and in Railway stations and all along roads (maintenance through private participation for first 5 years) engaging NGOs
- Creating Pollution checkup stations and kiosks through private participation
- Implementing IHSDP.



**Final Report**

**11**

## ***Projects for which DPR is required***

- Developing 26 lakes in phases with recreational spaces for tapping alternate water source with overflow weir and proper drainage channel
- DPR for tapping Palaveli water source
- Construction of Intake and Pump House for new water supply scheme, water treatment plant and approximately 15 Km main line from palaveli to MM nagar
- Regional Landfilling
- Developing 100 feet parallel road (Periyar Salai) to NH – 45 from Guduvanchery – Valancheri – Potheri – Thinnakkattur – Thaiyal Nagar – MM Nagar – Ford – Chinga Perumal Koil for a length of 10 Kms.
- Bus stand Improvement Scheme and separate bus stand for Mouffsil I buses
- Station area improvement scheme for Potheri, Kattankulathur and Maraimalai Nagar Station
- Developing 75 out of 150 approved layouts into parks and playgrounds
- Creating New municipal office opposite to existing municipal building accommodating Municipal office, shopping complex, Municipal Commissioner and Municipal Engineer Quarters in a land of 1.79 acres
- Developing Market Infrastructure through Private partnership
- Creating Entertainment center
- Creating Truck terminus
- Establishing Multi-purpose Stadium

**Final  
Report**

**12**

# 1 PROJECT BACKGROUND

## 1.1 Third Tamilnadu Urban Development Project (TNUDP III)

The Third Tamilnadu Urban Development Project aims at improving the delivery of urban services through enhancing the quality of urban infrastructure and strengthening the institutional and financial framework. The Project consists of two complementary components:

- *Component 1: to provide support for management improvements and institutional changes, including provision of goods, technical assistance, workshops, and staff training to support the implementation and sustainability of urban policy reforms, organizational performance, and urban services delivery.*
- *Component 2: aim at developing sustainable urban investments such as water supply, waste water collection, solid waste management, storm water drains, roads and common facilities such as transportation networks, and sanitation facilities, based on demand driven investment plans developed by Urban Local Bodies (ULBs).*

## 1.2 Background of the Work Order

The Commissionerate of Municipal Administration (CMA), Government of Tamil Nadu, Chennai (under TNUDP III project) intended to assist in strengthening and improving the financial position for effective capital investment management and Urban Service Delivery in Maraimalai Nagar Municipality.

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Further, this ULB has a very good potential for future growth and immediate implementation of financial reforms, which is necessary to make them join the main stream of urban development in the State. For such purpose, it is essential to formulate City Development Plan (CDP).

Accordingly, the Commissionerate of Municipal Administration (CMA) had initiated the process of preparing City Development plan for this Grade III Municipal town to enhance the vision of the stakeholders in the growth and development of the town.

This CDP is prepared keeping in view of the tool kits, guidelines and instructions provided by the Ministry of Urban Development (www.urbanindia.nic.in) under JNNURM.

### 1.3 Objectives of the study

The objective of this exercise is to visualize the town in the next 25-30years and to

- Define the growth directions and service up-gradations in relation to the activity mix / growth;
- Assess the demand for the projects specified by the ULB, and come out with gap in services with respect to the vision;
- Broadly outline the infrastructure needs;
- Improve infrastructure facilities and to create durable public assets and quality oriented services in the ULB.
- Define specific rehabilitation of infrastructure and capital improvement needs with regard to provision of infrastructure in both slums and other areas;
- Indicate the priority of projects
- Define revenue enhancement and revenue management improvements required to sustain the rehabilitation proposed;

Final Report

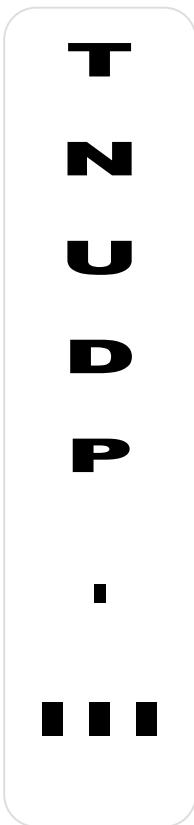
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- Suggest reforms required in local administration and service delivery including public private partnership in infrastructure development
- Suggest Measures to address common growth and infrastructure issues and to promote integrated development
- Suggest Management changes required at the local level to improve O&M of assets.
- Assess possibilities of strengthening E-governance.

### **1.4 Scope of work**

The scope of the work as given by Commissionerate of Municipal Administration broadly covered the following aspects:

- Study of existing setup of ULBs, analysis of various projects executed or taken in hand to formulate the background. The Consultants shall prepare the CDP with a future vision as envisaged by Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) Scheme Agenda.
- A situation analysis, with regard to demographic and economic trends in the town and their implications for ULB governance and service delivery systems and structures referring to the jurisdiction of Town level agencies involved in provision and regulation of urban public services (i.e. water supply, sewerage, sanitation, solid waste management, road network, urban transport, street lighting, redevelopment of inner (old) area of the town, basic services to urban poor and other social infrastructure) should be carried out. The financial status of the municipality and agencies concerned with service provision including an analysis of their credit worthiness and efficiency of the institutional framework.
- A future perspective for the town clearly showing the direction of change as well as economic and basic services vision. (Sectoral agenda, reform agenda, quality of life, urban services, social inclusion etc)
- Alternatives and Development strategies for Economic development, Governance, Land use, Urban Poor, Core Municipal Infrastructure, Urban Environment and Cultural heritage with proper prioritization criteria and linkage with Reform



*Agendas. Preparation of a phased action plan with targets for physical and financial investments, reforms, capacity building project identification and prioritization*

- *Assess the demand for the projects listed out by the Municipality and analyze demand for the next 25-30 years*
- *Financial Assessment of the ULBs- an assessment of local finances (past 5 years) in terms of sources and uses of funds, base and basis of levy, revision history and Impacts. State assignments and transfers- base and basis of transfer and its Predictability; uses of funds outstanding liabilities (loans, power dues, pension etc) and, a review of revenue and service management arrangements; Levels of Service, coverage and quality of municipal services in both poor and non-poor localities; Staffing and management arrangements in delivery of services.*
- *Outline the 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 town level investment requirement for up gradation of infrastructure.*

**Final Report**

- *To improve service coverage and asset quality:*
- *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*

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- *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.*
- *Assess the impact of upgrading this ULB as municipality from Town Panchayat.*

- *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.*
- *Draft Report and Final reports must be presented to the council.*
- *Finalize Action Plan for the City, with a resolution from the council on the priorities and commitment to implement revenue and management improvement measures.*
- *To prepare MOU between ULB and State Level Nodal Agency to implement UIDSSMT/IHSDP.*

## ***1.5 City Development Plan***

A City Development Plan (CDP) is both a perspective and a vision for the future development of a city. It presents the current stage of the city's development. It sets out the directions of change. It identifies the thrust areas. It also suggests alternative routes, strategies, and interventions for bringing about the change.

It provides a framework and vision within which projects need to be identified and implemented. It establishes a logical and consistent framework for evaluation of investment decisions. Commissionerate of Municipal Administration under Third Tamilnadu Urban Development Project (TNUDP III) initiates the City Development Plan (CDP) for Maraimalai Nagar.

The City Development Plan is both a planning process and a product, which promotes partnership among the various stakeholders in a city- the city government, the private business sector, civil society, academic, and national government agencies- to jointly analyze growth issues, develop a vision for the future, formulate development strategies, design programmes, prioritize projects, mobilize resources, implement, monitor and evaluate implementation.

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**Final  
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### 1.5.1 Objectives of City Development plan

The objectives of the CDP are to:

- Guide the city direction for economic development with the aim of creating more employment opportunities;
- A consensus building process to establish the city's priority, strategies and actions;
- Assist local authorities outline their financing and investment strategies; and,
- Build local capacity for more effective urban management.

The goals of a City Development Plan include a collective city vision and action plan aimed at improving urban governance and management, increasing investment to expand employment and services, and systematic and sustained reductions in urban poverty. Ultimately, it is expected that the CDP will result in strategic platform, which facilitates development, decision-making, investment programming, the engagement of out side partners and the efficient allocation of resources and, in city ownership of their own economic and social development process.

**Final  
Report**

### 1.5.2 City Development Plan Process

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The CDP process has established a creative dialogue between Governmental, non-governmental stakeholders and Citizens, in identifying the priority activities to be undertaken to improve service provision within Maraimalai Nagar. These dialogues have helped in developing a vision for strategic development of the town in the future.

**Figure 1-1 : Principles of CDP**



The CDP is anchored on the following principles of a sustainable city:

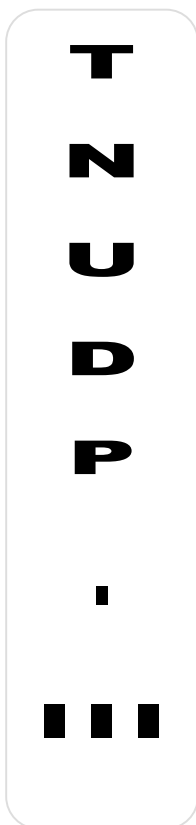
- *Livability - what can be done to ensure a healthy and dignified standard of living for the city's residents?*
- *Competitiveness - how can the cities be more competitive in the global economy?*
- *Bankability - how can the cities be more sustainable? How can public-private partnerships be promoted and/or enhanced?*
- *Good Governance - how can a city's management be improved? How can accountability, integrity and transparency be made an integral part of a city's management?*

## ***1.6 Study Approach and Methodology***

The CDP exercise has been carried out through consistent stakeholder participation at various stages. Focus Group Discussion has been organized in all the stakeholder meetings to familiarize them with the purpose, process, and expected outcomes, and to build enthusiasm, understanding and commitment to the CDP. This has helped in arriving at a consensus between Municipality and other stakeholders in confirming the process of CDP.

Preparation of a CDP is a multi-stage exercise, involving:

- ***In-depth analysis of the existing situation, covering the demographic, economic, financial, infrastructure, physical, environmental and institutional aspects:*** *The purpose of this stage is to review and analyze the current status of the city with regard to the state of its development, systems and procedures, as equally its institutional and financial context. This stage is meant to identify the strengths and weaknesses in the city's development and to provide an understanding of what impedes service delivery and management within the existing set-up and what contributes to better service provision. This stage offers an opportunity to bring out the unique features of the city that may distinguish it from other cities.*



Final Report

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- *Detailed Profile of the city is developed based on the analysis of both the primary and secondary data and stakeholder consultation on the following focus areas like*
  - *Urban Economic Development*
  - *Social Assessment*
  - *Urban Infrastructure*
  - *Human Resources and Institutional Issues*
  - *Financial Management*
  - *Urban Performance Indicators, and*
  - *Environmental Management*
- ***Development of a perspective and a vision of the city:*** *Using the results of the first stage of analysis combined with consultations with key stakeholders and civil society, this stage is meant to develop a vision for the future development – a shared vision of where the city wants to be in a medium term perspective. It is a collective vision of the future direction expressed in terms of expectations and often-even goals, such as “water for all”.*
- ***Formulating a strategy for bridging the gap between where the city is and where it wishes to go:*** *It is in this stage that strategies and interventions are identified for attaining the vision and future development perspectives. This stage is used to first identify the options and strategies and second, to evaluate the strategies from the perspective of their contribution to the goals and objectives of the JNNURM. The chosen strategies are translated into programmes and projects in this stage. This is the phase where the city needs to decide which programmes would contribute most to the vision and medium–term perspectives. It is at this stage where criteria are selected, with appropriate consultative processes for prioritizing the strategies, programmes and projects.*
- ***Preparing a City Investment Plan (CIP) and a Financial Operating Plan (FOP):*** *City Investment Plan and a Financial Operating Plan are an integral part of the CDP. Crucial to this stage is a plan that considers the alternative sources of financing, the vision and the accompanying strategy and programmes.*

- **The Final report covers the following aspects:**
  - Identification of SWOT, Problems and Issues
  - Formulation of a Development Vision for the target year 2036
  - Project identification for implementation
  - Preparation of Capital Investment Plan (CIP) for Core Urban Services
  - Preparation of Comprehensive Asset Management plan
  - Preparation of funding options for proposed investments.
  - Preparation of Financial Operating Plan for prioritization of financial investment.
  - Preparation fiscal Impact Analysis of proposed Investments
  - Preparation of Strategies for energy savings and revenue rising.
  - Preparation of Draft Memorandum of Understanding (MoU) for Policy Interventions and Technical Assistance required for effective implementation of the City Development Plan.

In the Final Report, comments and suggestions of the Review Committee on the Draft Final Report has been considered and incorporated.

## 1.7 City Opinion Survey

Commissionerate of Municipal Administration had circulated the City Opinion forms to all the consultants to seek the opinion from the local stakeholders for future development of the town. The aspects covered in the City Opinion form were as follows:

- Personal Information
- General Information
- Problem areas and its severity
- Problem Prioritization
- Problems and projects to solve it

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**Final  
Report**

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- *Future vision and Options for city Sustainability*

The main objective of the survey with the local stakeholders was as follows:

- *To understand existing situation of the city*
- *To assess City Infrastructure status*
- *Stake holder's opinion on future vision and development objectives of the city*

Consultants had identified following sample groups as critical while conducting the Survey. The major groups identified were:

- *Elected and Administrative Staff*
- *Slums / SC/ ST population*
- *Commercial / industrial employees and Entrepreneurs*
- *Educational and Religious Institutions*
- *General Public / Residential*
- *Builders and developers, Senior Citizens, NGOs, Self Help Groups and others*

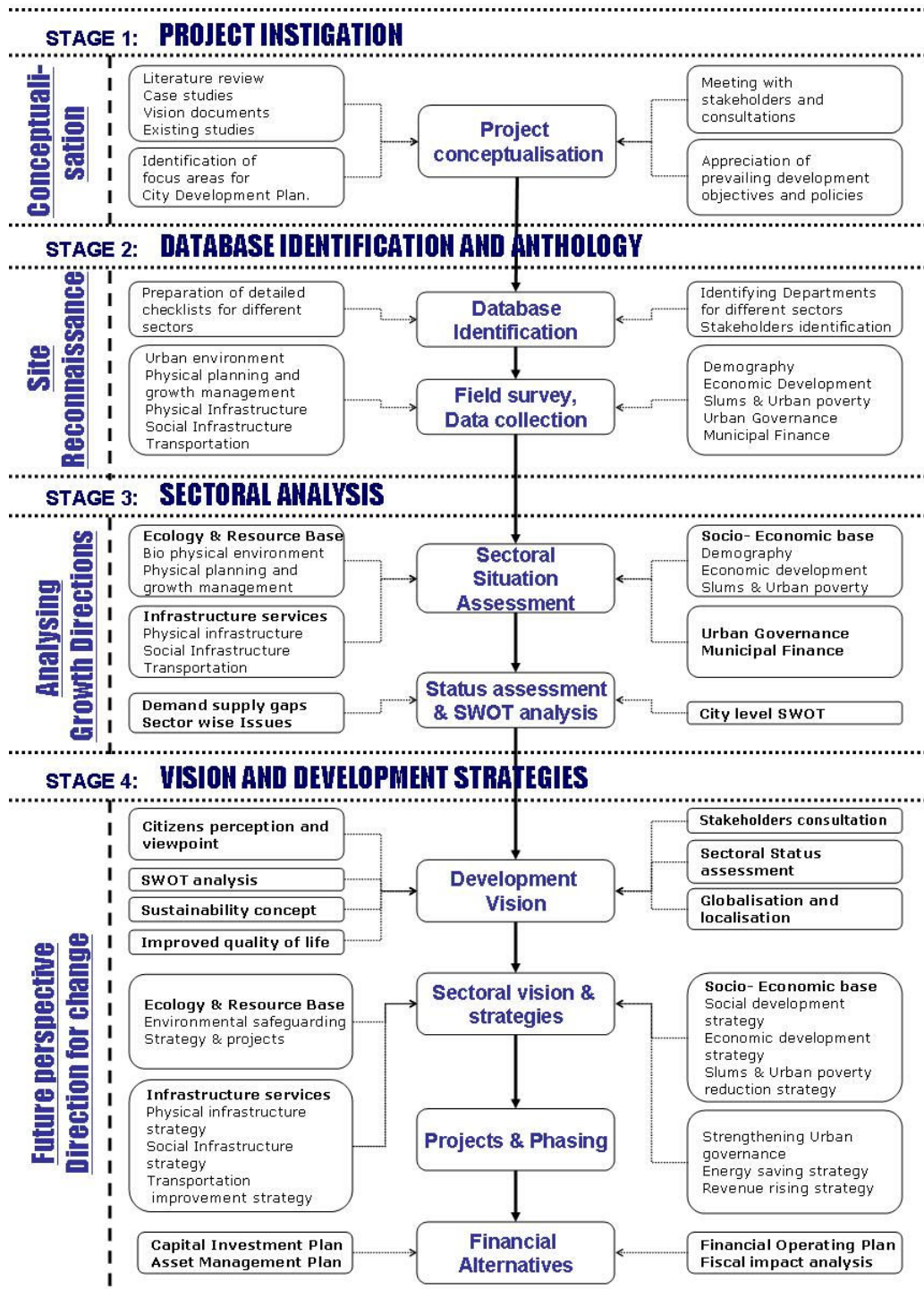
The City Opinion form Survey has already been completed and the findings were reported in the Interim Report.

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**Final  
Report**

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Figure 1-2 : Approach and Methodology for Maraimalai Nagar CDP



P U B L I S H E D

Final Report

1-11

## **1.8 Presentation and discussion with Review Committee on Inception Report**

Our initial assessment and findings during the initial phase of this City Development Plan was presented before the Review Committee meeting held on 11.10.2007. The Review Committee's inputs and comments on the Inception Report submitted and suggestions and recommendations for the Interim report are given as under:

The following suggestions were given by the Review Committee and are listed as below:

- *Most of the municipal towns (8 out of 10) are situated within Chennai Metropolitan Area and close to Chennai City, it was conveyed that the focus of the study should be with reference to Chennai metro region as a whole rather than the individual settlements. The master plan of the CMDA covering these areas should be studied carefully and the proposal must be properly dovetailed. Vision of these towns should be taken into consideration of the overall development of the metropolitan area*
- *The consultants should also study the various new initiatives/projects already taken by the ULBs and also the proposed developmental projects by State and Central Governments.*
- *The employment opportunities, social infrastructure are to be assessed from the regional perspective. However, provision of physical infrastructure should be considered at the specific ULB level to meet the present gap and priority.*
- *Census data is of 2001 is almost 7 years old and hence updating of the data is needed and is to be taken from the records of ULBs.*
- *Level of urbanization and population increase in the municipalities is to be compared and population projection should be done not only at the local level but should be seen from regional perspective.*
- *The consultants could explore the possibilities of merging the adjoining areas with ULBs for efficient administration.*

**Final Report**

**1-12**

- *Capacity building and Institutional strengthening component for the ULBs need to be critically considered in the first draft. The best practices in India for ULBs shall also be highlighted.*
- *The revenue enhancement through new initiatives and also funding the new Remunerative projects in this area should be considered. The opportunities of optimum utilization of municipal assets should be explored.*
- *Protection of water bodies and inter linking of water ways in these towns should be focused.*
- *The consultants should contact the Chairman , councilors and other stake holders of the development of the towns to understand the priority issues*
- *The consultants should hold ward level/ town level and regional level consultative meetings and collect city opinions forms (at least 100 forms) to formulate realistic proposals.*

The consultants had taken into consideration all the important suggestions suggested by the Review Committee and included in the Interim Report.

## ***1.9 Presentation and discussion with Review Committee on Interim Report***

The Interim Report was presented before the Review Committee meeting held on 01-02-2008. The Review Committee's inputs and comments on the Interim Report submitted and suggestions and recommendations for the Draft Final Report are given as under:

- *Regarding growth of population, the consultants should not project the population of the towns for the plan period based on the existing trend in the town. The urbanization trend in the region as a whole must be taken into account while projecting the population of the towns.*

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Final  
Report

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- *At the regional workshops, officers from PWD, TWAD Board, and Highway & Rural works Department should be invited. It would be better to conduct the workshop with the assistance of the District Administration.*
- *Study of Urban Performance Indicators should form part of the study report in the next stage.*
- *At every stage the municipal council must be consulted. The Draft Final Report and the Final report must be approved by the Council.*
- *The employment opportunities, social infrastructures are to be assessed in each town not only for the present population but also for the future population. Provision of physical & social infrastructure should be considered at each ULB level to meet the present and future demands.*
- *The revenue enhancement through new initiatives and also funding the new remunerative projects in these ULBs should be explored. The opportunities of optimum utilization of municipal assets should be examined.*
- *Capacity building and Institutional strengthening component for the ULBs need to be critically considered in the next report. The present strength of ULB staff and the posts vacant must be high lighted in the next report.*
- *While formulating projects under ULBs, projects for integrated development of the region may also be considered.*
- *CDPs prepared for Grade-III municipalities by the consultants, will be posed to various agencies for funding the projects, and not necessarily under TNUDF/UIDSSMT Programs. Hence a holistic proposal must be made based on the vision of the stakeholders of the development of the town.*
- *The Consultant should consult the Second Master Plan for the Chennai Metropolitan Area and Detailed Development Plans prepared by the Chennai Metropolitan Development Authority for getting the details on the proposed, land use and road network.*
- *The Consultant has to collect details on the assets of the ULB including the unutilized and vacant lands.*

- *The Consultant was asked to include the implementation framework, strategies for the prioritized project, institutional strengthening and capacity building measures for the ULBs, and urban reforms in the next reports.*
- *Consultant to hold discussions with the officials of the CMWSSB and TWAD Board on water supply sources and discuss with each municipality regarding the alternate source within the region to augment the water supply.*
- *Anna University (Institute of Remote Sensing) is carrying out studies for landfill sites in the State. The Consultant could use the data /information if the same is available there.*
- *Consultant should broadly view the technological options for power related projects since power costs are significant for the municipality. A pilot study for 29 municipalities was undertaken by TNUIFSL with the help of Private sector for installation of energy saving devices. The Consultant has to study them and suggest suitable proposal.*
- *The Consultant need to check with each municipality and get details from the Asset registers maintained by them including details on vacant land.*
- *The MRTS latest alignment to be studied and incorporated in the next report.*
- *Town maps appended to the report have to be presented in A3 size for clarity in the next stage.*
- *The CMA was requested to address the CMDA for furnishing required information regarding projects identified in the second master plan of Chennai Metropolitan Area, land use maps and land use pattern in the 8 towns falling within the jurisdiction of Chennai Metropolitan Area.*
- *The E.O, Grade-III Municipalities have to provide the latest figures on DCBs to the Consultant for financial analysis.*
- *It was suggested that instead of electrical crematorium, gassifier could be adopted in the ULBs for which grant to the extent of 50% would be given by the Government to the ULBs.*

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**Final  
Report**

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- While offering solutions to the issues consultants were asked to give specific suggestions in their next report.

Comments related to Maraimalai Nagar Municipality:

- The Consultant has to get information on the quality of water supplied by the municipality/TWAD Board.
- The Consultant has to furnish details on the estimate for upgrading the 300kms road stretch within the town.
- The JCMA suggested that since Maraimalai Nagar is virtually a debt free municipality, suitable projects, which could be taken up immediately, must be indicated in the next report. The Consultant has to furnish the details on property tax, the number of assesseses and the amount collected/demanded for domestic and industrial customer's arrears, number of court cases pending on property tax, and issues involved in collection of property tax etc.
- Multilevel parking and other parking options for the town need to be explored.

Final Report

The consultants have taken into consideration all the important suggestions suggested by the Review Committee and included in the Draft Final Report.

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### ***1.10 Presentation and discussion with Review Committee on Draft Final Report***

The Draft Final Report was presented before the Review Committee in the meeting held on **24<sup>th</sup> September 2008 in RDMA office, Chengalpattu**. The Review Committee's inputs and comments on the Draft Final Report submitted and suggestions and recommendations for the Final Report are given as under:

**Comments/Suggestions from RDMA and CMA:-**

- *The consultants were requested to give emphasis for the critical projects which are required to be undertaken for the next 5 years.*
- *The Capital Investment Plan (CIP) and Financial Operating Plan (FOP) needs to be framed for a period of 15 years instead of the 30 year period mentioned in the TOR. While working out the FOP the consultants were requested to highlight the list of projects that the ULB could take up with their present financial capacity.*
- *The consultants were requested to focus on the following projects for all the ULBs:-*
  - *Projects for Urban Poor as there is a sectoral allocation of 25 % of the budget being provided for this sector.*
  - *Remunerative projects like Vegetable and Fish market, commercial complexes etc*
  - *Transfer station for each ULB*
  - *Temple Development projects*
  - *E-Governance, Communication System and Facilitation Center for Tax collection.*
  - *Improvement/Setting up of Slaughter house*
  - *Setting up a Gassifier crematorium*
- *The consultants were requested to prepare a list on the status of the current availability and requirement of land for executing the projects suggested for all the municipalities.*
- *The consultants were asked to give importance to the millennium development goals of the World Bank to make each and every municipality an Open defecation free town.*
- *While appreciating the efforts of the consultant in identifying projects relating to heritage structure in some of the municipalities, the consultants were requested to explore the possibility of similar projects in other municipalities.*
- *Park development projects for un approved lay outs to be undertaken after ensuring the completion of all the necessary formalities with regard to the transfer of ownership to the ULBs.*

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**Final  
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- It was suggested to all the municipalities that they should compulsorily maintain a record of Contour level study in their offices which could be obtained from their Water Supply/ Sewerage DPR consultants.
- The consultants were requested to include the Urban Performance indicators for each municipality in the Final Report.
- The consultants were requested to remove the projects relating to improvement of green spaces from the CIP of the ULB as they could execute it only if the space is of their own. The same could be included in the list of projects identified to be executed by the para-statal agencies.
- The consultants were requested to obtain the copy of the report relating to road links prepared by Wilbur Smith within CMA area from TNUIFSL
- The consultants were requested to obtain the council resolution for the list of projects for which DPR needs to be prepared and send the same to the RDMA office for further action in co-ordination with CMA

Comments specifically for Maraimalai Nagar:-

- The consultants were requested to remove the project on constructing ROBs from the ULB's list and include the same in the list of projects identified to be undertaken by the para-statal agencies
- The consultants were requested to include a separate note on the specific development proposed for the industrial area in the final report.
- Storm water drain provision has to be given in 2008-09 –to- 2012-13.
- Sewerage line also provision has to be given in 2008-09 –to- 2012-13.

The consultants have taken into consideration all the important suggestions suggested by the Review Committee and included in the Final Report.

Final  
Report

1-18

## 2 REGIONAL OUTLOOK

Maraimalai Nagar, popularly known as New Chennai located on NH-45 road network and on Chennai – Trichy Broad Gauge southern railway line. It is located in Kancheepuram district but is in close proximity to Chennai city and important religious towns like Acharapakkam and Melmaruvathur Temple town, lies at 20Km and 15km south of this town respectively. It is situated at 12°41'30" latitude and 74°58'00" longitude and 28m elevated from Mean Sea Level.

### 2.1 Master plan proposals

Master Plan for CMA approved in 1976 has proposed the development of Satellite towns beyond CMA at Maraimalai Nagar, Gumidipoondi and Thiruvallur. The Master Plan for CMA approved in 1976 proposed the structure of the Metropolis taking into account of various factors. The structure proposed was of radial pattern with City as hub. The main elements of the strategy were:

1. Restriction of density and population growth in the city;
2. Restriction of industrial and commercial developments within CMA.
3. Encouragement of growth along the major transport corridors and development of urban nodes at Manali, Minjur, Ambattur, Avadi, Alandur and Tambaram.
4. Dispersal of certain activities from Central Business District (CBD).
5. Development of satellite towns, beyond CMA at **Maraimalai Nagar**, Gumidipoondi and Thiruvallur.

The main elements of the strategy were encouragement of growth along the major transport corridors and development of urban nodes at Manali, Minjur, Ambattur, Avadi, Alandur and Tambaram., dispersal of certain activities from CBD and

development of satellite towns beyond CMA at Maraimalai Nagar, Gumidipoondi and Thiruvallur.

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## 2.2 Demographic profile

Maraimalai Nagar due to its proximity to Chennai Metropolitan area and also due to policy interventions (Satellite town envisaged in Master Plan) has shown a higher growth rate between 1991 and 2001. Share of Maraimalai Nagar's population to the total district population has shown an increase which is shown in *Table 2-A*.

*Table 2-A Demographic profile at regional level*

Place	Pop 1991	Pop 2001	Growth rate 1991-2001	Area in Sq.Km	Density per Sq.Km
Tamilnadu	558.59	624.05	1.11	130058	480
Kancheepuram District	24.15	30.38	2.32	4433	685
Maraimalai Nagar municipality	0.34	0.48	3.72	58.08	834
% to total Kancheepuram district	1.39	1.60			

Source : Census publications

**Final Report**

## 2.3 Economic Profile

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### 2.3.1 Industrial Scenario in Kancheepuram district

1. One of the largest industrial areas of Tamil Nadu, Kancheepuram has the pride in being home to vital production bases of international industrial groups like: Ford, Hyundai, Saint Gobain as well as many export houses in and around the Madras Export Processing Zone.

The industrial products from Kancheepuram district extend to the following range:

1. Cars (Hyundai of S. Korea and Ford Motors of the USA)

2. Auto parts (Sona Steering, Rane-TRW restraint systems, DAEWHA, Brakes India, AUDCO, etc.)
3. Float Glass (Saint Gobain of France)
4. Air conditioners (National of Japan)
5. Leather Industries in Pallavaram
6. Information Technology Industries on the IT Highway (TCS, Cognizant, Infosys, American Megatrends, Wipro Infotech, etc.)
7. Sugar Industry (Madurantakam Coop Sugar Mills at Padalam & SV Sugars at Palayaseevaram)
8. Fashion Garments (at MEPZ and surrounding areas)
9. Pharmaceuticals, Chemicals and Dyes (ORCHID Chemicals, Maruti Marine, White House Dyes, Kanchi Karpooram, etc.)
10. Dies & Forgings (FOMAS)
11. Optic Fibers (Fujikura-TTL at MM Nagar)
12. Blood bags

### ***2.3.2 Industries in and around Chennai***

The economic base of the Chennai City had shifted from trade and commerce to administration and services by the early part of the 20th Century. In the post independence period, manufacturing became an important sector and CMA continues to be the most important industrial center in the State. Recent trend shows that the economic structure of the city is tertiarised with growing contribution by Information Technology/Information Technology Enabling Service/Business Process Outsourcing Industries.

Chennai, the capital of Tamilnadu is called as Detroit of India. Chennai is emerging as a major export hub in the South East Asia. International car manufactures such as Ford, Hyundai, and General Motor etc. have established around Chennai their manufacturing bases to cater to domestic and international markets. New testing and homologation centre for automobile sector with an investment over Rs. 1000 cr. is being established in this region. Saint Gobin glass factory, Nokia cell phone manufacturing industry at Sriperumpudur, and Mahindra Industrial Park developed

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**Final  
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over 1700 acres; near Maraimalai Nagar new town are some of the major developments around Chennai.

Chennai has two distinct automotive clusters and corridor which is listed below:

1. Maraimalai Nagar - Situated on NH 45 - the growth path of New Chennai; Maraimalai Nagar is located 40 km from Chennai City and just 5 minutes away from Mahindra World City. Maraimalai Nagar is well connected through both road and rail transport and has easy access to the Chennai International airport & seaport.
2. Sriperembudur - Located on NH 4 (Bangalore Highway), Sriperembudur is located around 45km from Chennai City. Hyundai Motors, India is located in Sriperembudur apart from a large number of auto & auto ancillary units. With access to skilled & trained manpower, Sriperembudur is connected to the CBD and the Chennai airport & seaport through a well developed road network.

Chennai, Kancheepuram and Thiruvallur districts combined have more than 50 percent share of the state industries which produce the following products.

1. Wearing apparel; Dressing and Dyeing
2. Coke, Refined petroleum products and Nuclear Fuel
3. Fabricated metal products, except Machinery and equipments
4. Office, accounting and computing machinery
5. Electrical Machinery and apparatus
6. Radio, Television & Communication Equipment and apparatus
7. Medical Precision & Optical instruments watches and Clocks
8. Motor vehicles, trailers and semi-trailers
9. Other Transport Equipments
10. Retail trade except of motor vehicles and motor cycles; repair of personal and household goods
11. Supporting & Auxiliary transport activities; Activities of travel agencies
12. Computer and Related activities
13. Recreational cultural and sporting activities and in
14. Other service activities

Table 2-B Factories in Chennai Kancheepuram and Thiruvallur districts and its share

S. No.	Type	Chennai	Thiruvallur	Kanchipuram	Total	Tamil Nadu	% to State
1	Food Products and Beverages	85	130	113	328	4166	7.87%
2	Tobacco Products	19	3	5	27	237	11.39%
3	Textiles	42	44	73	159	6565	2.42%
4	Wearing apparel; Dressing and Dyeing	1067	383	258	1708	2105	81.14%
5	Tanning& Dressing of Leather products	181	100	279	560	1486	37.69%
6	Wood and products of wood and cork, except furniture; Straw and Plating Materials	11	14	16	41	331	12.39%
7	Paper and Paper Products	53	92	56	201	707	28.43%
8	Publishing, Printing and Reproduction of Recorded Media	273	31	14	318	927	34.30%
9	Coke, Refined petroleum products and Nuclear Fuel	9	18	10	37	67	55.22%
10	Chemicals and chemical products	133	182	162	477	2441	19.54%
11	Rubber and Plastic Products	121	164	115	400	976	40.98%
12	Non-Metallic mineral products	22	132	185	339	1119	30.29%
13	Basic Metals	79	238	79	396	921	43.00%
14	Fabricated metal products, except Machinery and equipments	233	278	156	667	1263	52.81%
15	Machinery and Equipments	170	284	150	604	1536	39.32%
16	Office, accounting and computing machinery	6	6	11	23	29	79.31%
17	Electrical Machinery and apparatus	96	95	74	265	497	53.32%

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**Final Report**

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T N C D P I I I	S. No.	Type	Chennai	Thiruvallur	Kanchipuram	Total	Tamil Nadu	% to State
	18	Radio, Television & Communication Equipment and apparatus	63	18	69	150	215	69.77%
	19	Medical Precision & Optical instruments watches and Clocks	27	22	27	76	108	70.37%
	20	Motor vehicles, trailers and semi-trailers	96	199	134	429	585	73.33%
	21	Other Transport Equipments	61	67	41	169	293	57.68%
	22	Furniture	35	16	45	96	279	34.41%
	23	Sale, Maintenance & Repair of Motor vehicles and Motor cycles, retail sale of automotive fuel	168	36	40	244	881	27.70%
	24	Retail trade except of motor vehicles and motor cycles; repair of personal and household goods	25	7	3	35	61	57.38%
	25	Supporting & Auxiliary transport activities; Activities of travel agencies	6	0	2	8	16	50.00%
	26	Computer and Related activities	1	0	0	1	2	50.00%
27	Recreational cultural and sporting activities	7	0	2	9	9	100.00%	
28	Other service activities	10	5	0	15	15	100.00%	

Source: Draft Master plan II for CMA for the year 2026

### 2.3.3 Workforce

Chennai and Kancheepuram (including Thiruvallur district) together contribute 26 percent of employment in organized sector to the state total in 2002-03. Of the total public sector employment, the employment opportunity in Chennai and Kancheepuram district is 20 and 7 percent respectively in 2002-2003. In private sector it is around 7.8 and 15.9 percent respectively. Employment in organized sector in Chennai and Kancheepuram district including Thiruvallur is shown in Table 2-C.

**Table 2-C Employment of Organised sector in Chennai, Kancheepuram (including Thiruvallur District)**

Year	Chennai District			Kancheepuram & Thiruvallur Districts		
	Public	Private	Total	Public	Private	Total
2000-01	281287	102358	383645	100491	124626	225117
2001-02	316553	94674	411227	108013	136234	244247
2002-03	314743	64914	379657	109678	132298	241976
2003-04	322961	69280	392241	100163	112341	212504
2004-05	323221	68785	392006	81032	118461	199493

Source: Draft Master plan II for CMA for the year 2026

### 2.4 Regional Setting and Network Linkages

Maraimalai Nagar is well connected through both road and rail transport and has easy access to the Chennai International airport & seaport. Regional Setting and Network Linkages are shown in *Figure 2-1*.

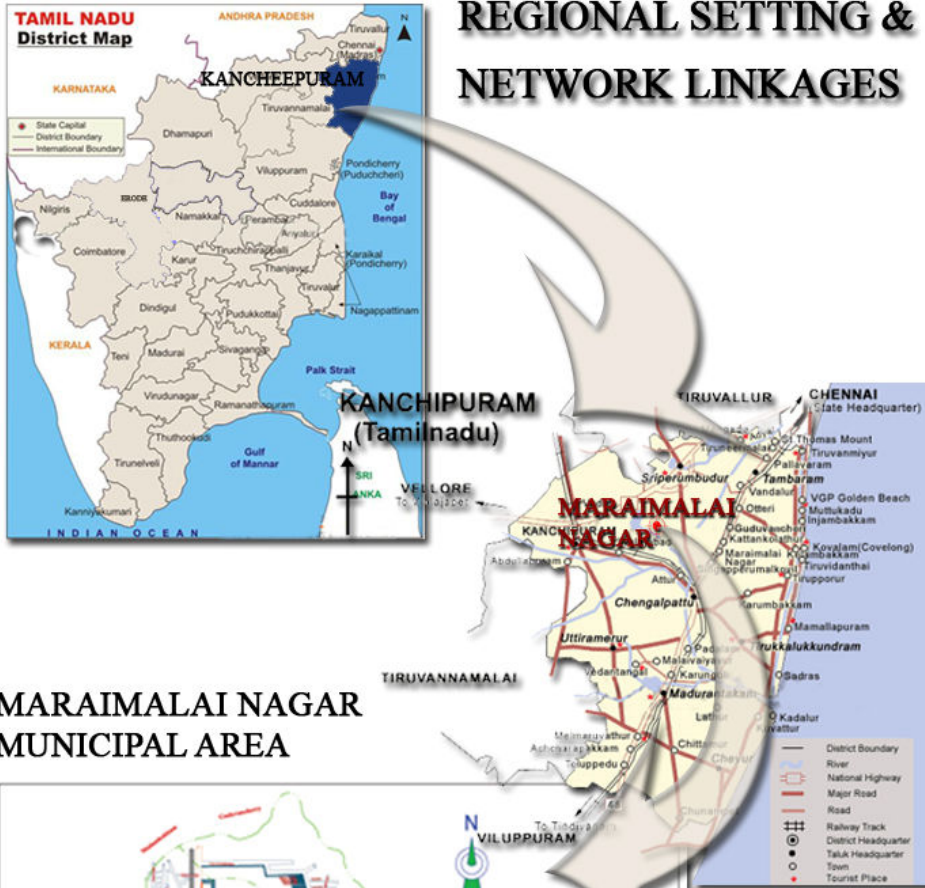
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**Final  
Report**

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Figure 2-1 Maraimalai Nagar in Regional Context

**REGIONAL SETTING & NETWORK LINKAGES**



**MARAIMALAI NAGAR MUNICIPAL AREA**

**MARAIMALAI NAGAR - SATELLITE TOWN FOR CHENNAI LOCATED IN KANCHEEPURAM DISTRICT**  
**AREA : 58.08 SQ.KM**  
**POPULATION AS PER 2001 CENSUS : 48463**  
**MUNICIPAL WARDS : 21**  
**NEAREST AIRPORT : CHENNAI**  
**NATIONAL HIGHWAY : NH 45**

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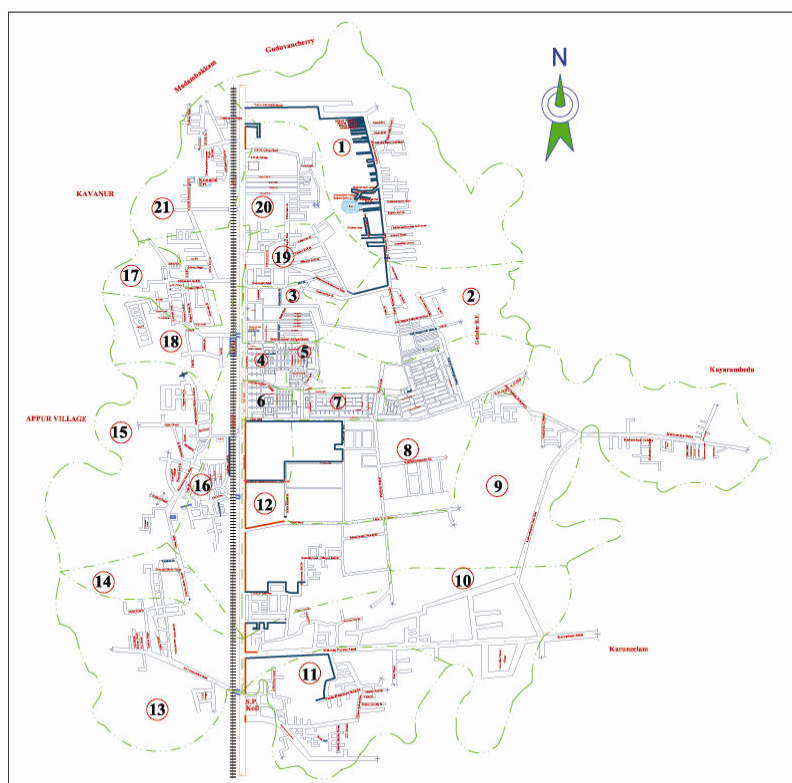
**Final Report**

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# 3 BRIEF PROFILE OF THE TOWN

Maraimalai Nagar is the Head quarters of Maraimalai Nagar taluk in Kancheepuram district. Maraimalai Nagar is also referred as the growth nuclei of New Chennai. Maraimalai Nagar is in close proximity to Mahindra World City. Home to the prestigious Ford India, Maraimalai Nagar also has a large number of automotive ancillary units. A peaceful belt with very little trade union activity, there is adequate availability of trained & skilled manpower apart from a large number of educational & technical institutions. The town is divided in to 21 wards. There are seven revenue villages, namely, Kattankulathur, Ninnaiakarai, Potheri, Kalivantapatu, Peramanoor, Thirukachur and Senkundram.

Figure 3-1: Map of Maraimalai Nagar



Source : Maraimalai Nagar

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Final Report

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**Table 3-A : Brief Profile of the town**

Parameters	Maraimalai Nagar
Population 2001	48463
Household Size	4.4
Municipal area in Sq.Km	58.08
Population Density (persons/Sq.Km)	834.41
Literacy rate	80
Male Literacy rate	88
Female literacy rate	72
Total WFPR	39.4
Administrative unit	III Grade Municipality with 21 wards

Source: Data Compiled from Census of India, 2001

### 3.1 Demography

Maraimalai Nagar has a population of about 48,463 as per Indian Census 2001. The town has attained a growth rate of 44 percent between 1991 and 2001 period. Population details of Maraimalai Nagar are shown in Table 3-B.

**Table 3-B Population growth in Maraimalai Nagar**

Census Year	Population	Increment	Growth rate
1991	33640		
2001	48463	14823	44.06%

Source : Census publications

#### 3.1.1 Population projections for Maraimalai Nagar

CMDA has proposed to develop 2100 acres in Maraimalai nagar in phases to accommodate one lakh population in a time span of 20 years i.e by 2021. CMDA has developed so far 1400 acres. The development consists of mainly developed plots for residential and industrial purposes.



Maraimalai Nagar has shown a growth rate of 3.688 percent between 1991 and 2001. By taking into consideration, 2021 population in the town as 1 lakh, population in the intermediate phase have been worked out. Similarly, population for the next phases up to 2037 has been worked out taking into the consideration the same growth rate. The recommended population for Maraimalai Nagar till 2037 is shown in Table 3-C.

**Table 3-C Recommended population projections for Maraimalainagar**

Year	Population
1991	33640
2001	48463
2008	62448
2012	72183
2017	86513
2022	103688
2027	124273
2032	148944
2037	178514

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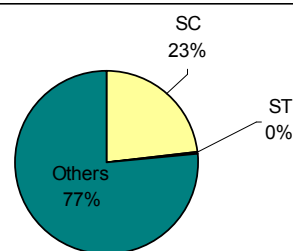
## 3.2 Social Characteristics

### 3.2.1 Social Composition

Maraimalai Nagar has 23 percent Scheduled Caste Population out of the total population whereas the Scheduled tribe population is a meager less than 1 percent. The social composition in Maraimalainagar is shown in Table 3-D.

**Table 3-D: Social composition in Maraimalai Nagar**

Social Composition	Population
SC	11128
ST	242
Others	37093
<b>Total</b>	<b>48463</b>



Source: Data Compiled from Census of India. 2001

Final Report

3-3

### 3.2.2 Gender Ratio

Maraimalai Nagar gender ratio is on the lower side in comparison to Kancheepuram district urban gender ratio and Tamilnadu Urban. Gender ratio in Maraimalai Nagar between 0-6 age group is also on the lower side compared to both Kancheepuram urban and Tamilnadu Urban, which is shown in Table 3-E.

**Table 3-E: Gender ratio in Maraimalai Nagar and its comparison**

Gender Ratio	Overall	0-6 age group
Maraimalai Nagar	915	917
Kancheepuram District Urban	965	961
Tamilnadu Urban	982	955

Source: Data Compiled from Census of India. 2001

### 3.2.3 Literacy levels

Overall, the literacy rate (Male, Female and Total literacy rate) in Maraimalai Nagar is lower than that of District, State Urban Literacy rates as shown in Table 3-F.

**Table 3-F: Literacy rate in Maraimalai Nagar and its comparison**

Literacy rate	Male	Female	Total
Maraimalai Nagar	88.3	72	80
Kancheepuram District Urban	91.0	79	85
Tamilnadu Urban	89.0	76	83

Source: Data Compiled from Census of India. 2001

### 3.3 Economic Characteristics

#### 3.3.1 Work Force Participation Rate

Work Force Participation Rate (WFPR) in Maraimalainagar is low while compared to Kancheepuram Urban and Tamilnadu Urban Work Force Participation Rate as per Census of India 2001 which is shown in Table 3-G. The Work Force Participation Rate among women is very low.

**Table 3-G : Work Force Participation Rate and its comparison**

WFPR	%
Maraimalai nagar WFPR	39.4
Male WFPR	59.4
Female WFPR	17.6
Kancheepuram District Urban	39.56
Tamilnadu Urban	42.1

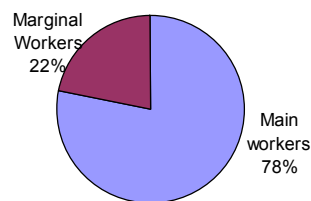
Source: Census of India. 2001

#### 3.3.2 Worker Characteristics

The 2001 census has classified workers into four categories that include cultivators, agricultural labourers, Household industry and all other workers. Workforce classification into aforesaid categories among main and marginal workers is shown in Table 3-H.

**Table 3-H: Work force classification in Maraimalai Nagar**

Worker classification	Main workers	Marginal workers	Main % to total	Marginal % to total
Cultivators	313	71	2.4	1.9
Agricultural Laborers	483	1029	3.7	27.8
HH industries	446	383	3.4	10.3
Others	11878	2218	90.5	59.9
<b>Total</b>	<b>13120</b>	<b>3701</b>	<b>100.0</b>	<b>100.0</b>



Source: Data Compiled from Census of India. 2001

Nearly 22 percent of the total workers are marginal workers and among them, 27.8% are agricultural laborers. Among main workers category, 3.7% constitutes of agricultural laborers.

### 3.4 Industries in Maraimalai Nagar

Maraimalai Nagar has two industrial associations. There are two SIDCO industrial estates. Home to the prestigious Ford India, Maraimalai Nagar also has a large number of automotive ancillary units. Other major industries are KIWI polish, TAFE (battery unit), Indian Piston, AUDCO Valves etc. There are many forging and casting companies, plastic units, fabrication units, food processing units and pharmaceutical units. There is water pollution due to electro fabrication units. Ground water table has also gone down in the last few years and contamination of the same has occurred.

**Table 3-I Industries in Maraimalai Nagar**

S.No	Type of industries	Nos
1	Industrial estate	247
2	Floor mills	5
3	Hardware	2
4	Rice mill	1
5	Wood works	1
6	Crushers	3
7	Welding shop	2

Source : Maraimalai Nagar Municipality

### 3.5 Tourism in Maraimalai Nagar

**Final Report**

This Town is formed and named as Maraimalai Nagar for the remembrance of Maraimalai Adigalar. Hence it is named Maraimalai Nagar. Maraimalai nagar is located around a number of religious and tourist spots which is listed below:

**Table 3-J Tourist destinations around Maraimalai Nagar**

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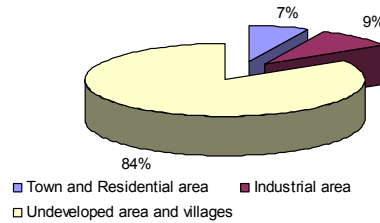
S. No	Tourist Destination	Features
1	Kancheepuram	Kanchipuram is a Spectacular Temple city known as city of thousand temples which reflects the Glorious Traditions of South India with its noted temples
2	Sadras beach	This fine beach is located 16 kms from Mamallapuram. Originally this was a Dutch settlement but now it is coming up as a beach resort.
3	Mamallapuram	It was a flourishing port town during the time of Pallavas. This is one of the main tourist places in Kanchipuram. The monuments of Mamallapuram are excellent specimen of Dravidian temple architecture and Pallava art.
4	Vedantangal	It is one of the major Water Bird Sanctuaries in India.

### 3.6 Physical Characteristics

#### 3.6.1 Land Use

CMDA has prepared Development Plan for the Satellite Town – Maraimalai Nagar which is shown in Figure 3-4. Municipal officials indicate that the current town and residential area is around 4 Sq Km, Industrial area is around 5.42 Sq Km whereas the remaining 48.66 Km land is still undeveloped having revenue village settlements with inadequate Infrastructure facilities.

Figure 3-2 : Existing Development pattern 2007



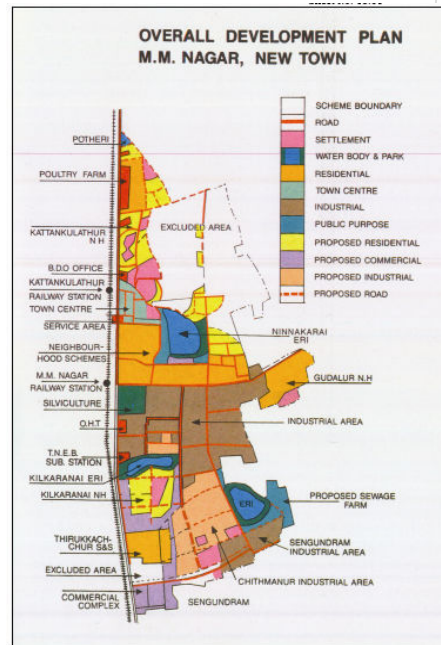
Source : Maraimalai Nagar Municipality

Figure 3-3 Existing Land Use Plan of the town – Maraimalai Nagar



Source: CMDA, Chennai

Figure 3-4 Proposed Land Use Plan for Maraimalai Nagar



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Final Report

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# 4 PHYSICAL INFRASTRUCTURE

Infrastructure facilities play an important role in fostering economic growth and enhancing public welfare. By and large, the infrastructure may be divided into two categories:

- (a) Physical Infrastructure including Water Supply, Storm Water Drainage, Sewerage and Sanitation, Solid Waste Management, Roads, Traffic and Transportation and Street Lighting etc;
- (b) Socio-Economic Infrastructure including Education, Health and Other Amenities.

This chapter deals with assessment of Physical Infrastructure in Maraimalai Nagar.

## 4.1 Water Supply

Maraimalainagar Municipality supplies 1.26 MLD water to the residents of the town from own bore wells and sumps. Further, TWAD supplies Palar water from Ayapakkam near Kalpakkam which is about 43 Kms from Maraimalai Nagar. TWAD Board supplies 2.5 MLD in normal season whereas it gets reduced to 2 MLD during summer months. However, the water supplied by TWAD is yellow in color due to high iron content. No other treatment other than Chlorination is done at Head works (TWAD) and at Municipality level.

### 4.1.1 Water Supply system

#### 4.1.1.1 Water supply from Palar River by TWAD

Water from 10 bore wells placed along the Palar river bed near Ayyapakkam is being stored in a sump of capacity 3.3 lakh litres. It is further pumped to a sump of capacity 6 lakh litres in Nerumbur. Water, being gathered from 2 additional bore wells placed in Nerumbur is also stored in the sump. Water from Nerumbur is further pumped to Kerappakkam sump of 3.3 lakh litres capacity and from Kerappakkam it is pumped to

Maraimalai Nagar sump of 5 lakh litres capacity. Water gathered in Maraimalai Nagar sump is then distributed to Gandhi Nagar, Ward Nos. 3, 4, 5, 6, 7, 8 and to the Industrial areas with the help of 3 OHTs placed in these wards.

#### **4.1.1.2 Nandivaram Gudovanchery combined water supply scheme**

Nandivaram Gudovanchery combined water is being supplied to 7 villages. Water gathered from Mamundur village Palar river bed under this scheme is being supplied to Ward Nos.13, 14, 15, 17, 18, 19, 20 and 21 with the help of 7 OHTs placed in these wards. This source is located at a distance of 20 Kms from the town. Due to low pressure problem, water is directly supplied through public fountains to the areas listed below:

1. Thirukatchur
2. Thailavaram Colony
3. Thailavaram Village
4. Kattankulathur village
5. Kattankulathur Colony
6. Ninnaikarai village
7. Potteri west.

Water from local sources is being supplied to Peramanur, Panankotur village and Panankotur Colony. Further, water is being supplied with the help of two tanker Lorries of 9000 litres and 6000 litres capacity making four trips to areas un served by pipe connections. Water Supply system in Maraimalai Nagar is shown in Table 4-A.

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Final  
Report

4-2

**Table 4-A : Water Supply system in Maraimalai Nagar**

Population 2008	62448
Total quantity of water supplied(MLD)	3.76
Per capita supply (lpcd)	60
No. of Distribution zone	4
No. of OHT and its total capacity(in lakes liters)	26 (Including OHT for local sources)
No. of under Ground sump and its total capacity(in liters)	1 No, 5 lakhs lits
No. of streets covered by piped water supply	1402 streets
Total length covered by piped water supply	72 Km
Number of House service connections	3701
Power pumps	96
Public Fountains	1850
Open wells	67
Hand Pumps	652 +45 new

Source: [http://municipality.tn.gov.in/Maraimalai Nagar/salient\\_watersupply.html](http://municipality.tn.gov.in/Maraimalai%20Nagar/salient_watersupply.html)

### 4.1.2 Water availability

Water is supplied daily for 2 hours. The gross water supply to the town is 3.76 MLD during monsoon and normal days whereas the supply gets drastically reduced to 3.3 MLD during summer months. Water supply quantity includes both surface water supplied by TWAD and ground water supplied by the Municipality.

### 4.1.3 Performance Indicators

**Table 4-B Performance Indicators**

S.No	Indicators	Unit	Current Status	Normative Standard
1	Daily per capita supply (Normal Season)	Litres	60	135
2	Pucca Roads covered with distribution network	Percent	55	> 100
3	Storage capacity with respect to supply	Percent	71	33
4	Available Treatment capacity with respect to supply	Percent	66	100
5	Assessments covered by service connections	Percent	26	85
6	Proportion of non domestic service connections	Percent	2.05	>5
7	Slum population per stand post	Persons	50	150

Source : Analysis based on the data collected from Maraimalai Nagar Municipality

#### 4.1.4 **Proposed projects**

Projects have been proposed to replace existing distribution network and construction of one Over Head Tank at an estimated cost of Rs. 2.54 crores which got sanctioned from TUFIDCO under UIDSSMT scheme. Tender process has already been completed.

#### 4.1.5 **Issues**

1. Water supplied by TWAD is yellow in color due to high iron content.
2. 74 percent of the assessments are uncovered by Household Service Connections
3. 45 percent of the roads are still uncovered by distribution network
4. Distribution problem in some areas like Thirukatchur, Thailavaram Colony and Thailavaram Village.
5. No treatment other than Chlorination

*Figure 4-1 Water supplied by TWAD*



Final  
Report

### 4.2 **Sewerage and Sanitation**

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Sewage is mostly the waste water of the community draining into the sewer system with some ground water infiltration. Generally 80 percent of the water supplied gets drained into the sewerage system.

#### 4.2.1 **Sewerage system in Maraimalai Nagar**

Maraimalai Nagar has underground sewerage and drainage system designed and implemented by CMDA about 25 years back but available only in wards 4, 5, 6, 7 and 8 and not available in remaining wards. Maraimalai nagar has privatized the maintenance work of the sewerage system from 2007 onwards to a private agency. Currently, 1.6 MLD sewage gets collected from these wards. Sewage generated is collected and pumped with the help of pumping stations located at NH1, NH2 and

other two stations at Industrial belt to the Oxidation pond for treatment. The pond is located at 0.5 Km from the town and the clear water is disposed into the lake. Maraimalai Nagar has 44 Km sewer pipe length connecting 4250 assessments.

#### 4.2.2 Sanitation in Maraimalai Nagar

Maraimalai Nagar has 2 public convenience units provided in ward 5 and ward 16 in the town. Village wards are using either Septic tank as a safe mode of disposal or practicing open defecation.

#### 4.2.3 Proposed projects

Projects have been proposed to replace existing sewer network, to construct one new pump room and to set up one treatment plant at an estimated cost of Rs. 375 lakhs under UIDSSMT. Tender process has already been over and the work order has already been issued for implementation. This UGD up gradation is proposed for wards 3 to 8.

#### 4.2.4 Issues

1. No UGD in village wards
2. Industrial effluents and Sewage disposed into the lake causing water pollution.

### 4.3 Storm Water Drainage

The existing pucca road length in Maraimalai Nagar is 131.3 Km whereas roads having Storm water drains are only 67 Km. Storm Water Drainage details are shown in Table 4-C. Remaining WBM I, WBM II and earthen roads have either kutchra Storm Water drains or no drainage system.

Table 4-C Drainage Network in Maraimalai Nagar

Road type	Length	Drainage single	Drainage double	Gap
Bitumen road	100.69	40	5	55.69
Cement Concrete	12.85	20	2	nil
<b>Total</b>	<b>113.54</b>	<b>60</b>	<b>7</b>	<b>46.54</b>

Source : Maraimalai Nagar Municipality

### 4.3.1 Performance indicators

Table 4-D Performance Indicators

S.No	Indicators	Unit	Current Status	Standards	Remarks
1	Road length covered with storm water drainage	Percent	51	130	Existing Pucca road length of 131.3 Km is considered
2	Proportion of Kutchha drains to total drainage length	Percent	NA	0	

Source : Maraimalai Nagar Municipality

### 4.3.2 Issues

1. Nearly 64.3 Km existing pucca roads have no Storm water drains
2. 37 percent of the total roads in Maraimalai Nagar are either WBM or Kutchha which have no drainage system.

## 4.4 Solid Waste Management

Final Report

4-6

The collection, transportation and disposal of Municipal Solid Waste are an obligatory function of the Maraimalai Nagar Municipality. The health department of the municipality is responsible for the solid waste management of the

Table 4-E : Waste Generation, Collection details

Description	Details
Waste Generated	20 t/day
Waste Collected	12 t/day
Per Capita Waste	320 gm/day
Lorry	2 Nos
Tractor	1 Nos
Power Tiller	1 Nos
Auto for Mosquito eradication	1 Nos
Tractor (Private)	2
Tricycles (Private)	8

Source : Maraimalai Nagar Municipality

town. For the efficient administration and for day to day operation purposes, 5 wards in the Municipal area have been privatized.

### 4.4.1 **Generation and Collection**

Maraimalai Nagar town generates around 20 ton of waste every day at a rate of 320 grams per capita per day. Town area (5 Wards - 4, 5, 6, 7, 8) and Industrial area itself generates 12 Ton of waste whereas remaining 8 ton gets generated from villages. Door to Door collection is adopted in all the 5 wards managed by the private agency whereas the remaining wards are covered by the Municipality.

Currently, garbage Collections in Ward No.4, 5,6,7,8 & Industrial area has been entrusted to Private Concern Srinivasa Waste Management Service, Chennai. Waste segregation has not been done by both private body and municipality. 200 waste collection bins have been placed in the developed town area (5 wards) whereas around 50 bins have been placed in the remaining wards. Municipality has 39 sanitary workers other than 1 sanitary inspector and 1 sanitary supervisor, engaged in Solid Waste management System. In addition, Private agency has engaged their own workers for primary collection of waste in the areas allotted.

### 4.4.2 **Disposal and Treatment**

The waste is collected by 3 Municipal vehicles and 2 private vehicles on a regular basis. Disposal site is located in Chittamannur Village to an extent of 5.56 acres where waste is being dumped without treatment. However, Compost yard is under implementation in Chithamanur village.

*Table 4-F Vehicle availability and trips performed for waste disposal*

<b>Vehicles</b>	<b>Nos</b>	<b>Trips</b>	<b>Vehicle capacity in ton</b>	<b>Capacity after 0.4 adjustment factor</b>	<b>Total waste collected in Ton</b>
Lorry	2	1	4	1.6	3.2
Tractors	1	2	3	1.2	2.4
Private tractor	2	2	4	1.6	6.4
<b>Total</b>	<b>3</b>	<b>3</b>	<b>7</b>	<b>2.8</b>	<b>12</b>

Source : Maraimalai Nagar Municipality

### 4.4.3 **Proposed projects**

SWM infrastructure works is proposed at an estimated cost of Rs. 206 lakhs to be funded through ULB's own funds.

#### 4.4.4 Performance Indicators

Table 4-G Performance Indicators

Indicators	Unit	Current Status	Norms / Standards
Waste generation per Capita per day	Grams	320	350-450
Collection efficiency (excluding 8T waste gets generated from villages)	Percent	100	100
Conservancy staff per Km	Persons	0.3	2
% capacity of Fleet vehicles to waste generated	Percent	38	

Source : Analysis based on the data collected from Maraimalai Nagar Municipality

#### 4.4.5 Issues

1. No segregation of waste by both private body and municipality.
2. Inadequate staff
3. Village wards are not covered by Solid Waste Management System.

### 4.5 Roads, Traffic and Transportation

#### 4.5.1 Municipal road network

Maraimalai Nagar has total 209.44 Km road network maintained by the municipality whereas 20 Km additional road network is maintained by the Highways. Nearly 37.3 percent of the roads are yet to be developed in Maraimalai Nagar which is shown in Table 4-H.

Table 4-H Road network

Road Type	Length in Kms	% share
Earthen road	33.77	16.1
WBM 1 layer	42	20.1
WBM II layer	2.37	1.1
BT	118.45	56.6
CC	12.85	6.1
Others (highways)	20	
<b>Total</b>	<b>229.44</b>	<b>100.0</b>

Source : Maraimalai Nagar Municipality

Final Report

4-8

### 4.5.2 Traffic and Transportation

Maraimalai Nagar has connectivity problem across railway line connecting east and west Maraimalai Nagar. Roads connecting revenue villages are not in good shape which needs to be widened and strengthened. Town has no Share Auto system to connect Maraimalai Nagar town area with the revenue villages.

### 4.5.3 Public Transport System

Maraimalai Nagar is very well connected by National Highway - 45 and Southern Railway line. It has also very good rail connectivity connecting Chengalpattu region and Chennai Metro area. It has Maraimalai Nagar Station and the train service is available once in every half an hour. The frequency has to be increased considering the future growth of the Maraimalai Nagar. Airport (Meenambakkam) is around 25 Km from the Municipal area.

Maraimalai Nagar has fairly good bus transport facilities connecting surrounding areas. There is a bus terminus at Periyar Salai - Kamarajar Street junction near Primary Health centre. The depot requires up gradation as facilities are very primitive.

### 4.5.4 Performance indicators

Table 4-1 Performance Indicators related to road

Performance indicators	Unit	Current status
Road density	Km/ Sq.Km	3.95
Per capita road length	meters/person	3.67
Percentage of Surface roads	percent	62.7

Source : Analysis based on the data collected from Maraimalai Nagar Municipality

### 4.5.5 Proposed projects at a glance

Detailed project Report for Road improvement works in Maraimalai Nagar municipal area has already been prepared and submitted to TUFIDCO for project approval and loan sanction and the proposal is under examination. Some other road works proposed are as follows:

1. CC Pavement to Pavender road – Rs. 298 lakhs (Tender called)
2. CC Pavement to Anna road – Rs. 244 lakhs (Tender called)

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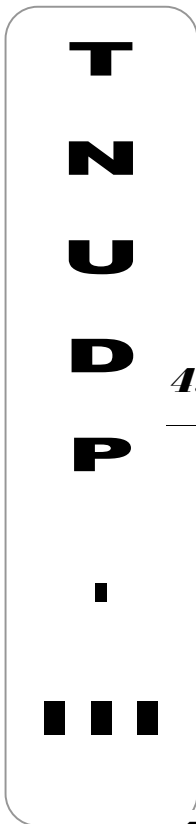
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Final Report

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- BT in Adikalar, Periyar, Kamaraj Nagar, QUIDE Millath road and BT with SWD in Thiruvalluvar road at an estimated cost of Rs. 312 lakhs (Tender called)

Bus stand Improvement Scheme is proposed at an estimated cost of Rs. 200 lakhs (proposed facilities include Bus bays, Waiting hall, Tax Collection center, Restaurants, 20 shops, Pay and Use Toilets, CC pavement) with the help of Rs. 100 lakh grant from CMA in an area of 1.5 acre land.

### 4.5.6 Issues

- 37.3 percent of the roads need up gradation
- Railway line acts as a barrier for East and West Connectivity
- Bus Stand and Railway Station infrastructure facilities are inadequate
- Roads connecting revenue villages are narrow and needs widening.
- No Parking spaces created for Autos, Cars and Two Wheelers
- Connectivity by rail transit would be inadequate (in terms of frequency) considering future demand.

## 4.6 Street Lighting

Final Report

4-10

There are total 3614 street lights. Out of which, 872 streetlights are Sodium Vapor 250 W lamps, 150 are Sodium Vapor 150 W lamps, 150 are Sodium Vapor 70 W lamps, 315 lights are CFL lights, 3 Mast lights and the remaining 2124 are tube lights. Street lighting details in Maraimalai Nagar is shown in Table 4-J.

Table 4-J Street Lighting in Maraimalai Nagar

Type of lights	Number	%
Tube Lights	2124	58.8
Sodium Vapor 250 W	872	24.1
Sodium Vapor 150 W	150	4.2
Sodium Vapor 70 W	150	4.2
CFL lights	315	8.7
Mast lights	3	0.1
<b>Total</b>	<b>3614</b>	<b>100</b>

Source : Maraimalai Nagar Municipality

### 4.6.1 Performance Indicators

Table 4-K Performance Indicators regarding Street Lighting

Indicators	Unit	Current status	Norms/Standards
Spacing between lamps	Meters	58	30
Spacing between lamps (excluding kutcha roads)	Meters	31.4	30
Proportion of tube lights W.R.T to total	Percent	59	60
Proportion of high power fixtures W.R.T to total	Percent	41	40

Source : Analysis based on the data collected from Maraimalai Nagar municipality

### 4.6.2 Issues

1. Village wards are not covered by Street Lighting.
2. Spacing between lamps are around 58 meters against the standard norm of 30 meters.

### 4.7 Demand Assessment

Table 4-L Demand Assessment for Infrastructure works

Particulars	2008-09	2012-13	2017-18	2022-23
Projected Population	62448	69615	83436	100000
<b>Water Supply MLD</b>	<b>2008-09</b>	<b>2012-13</b>	<b>2017-18</b>	<b>2022-23</b>
Potable water demand @90 lpcd	5.6	6.3	7.5	9.0
Existing Supply	3.76	3.76	3.76	3.76
<b>Gap</b>	<b>1.9</b>	<b>2.5</b>	<b>3.7</b>	<b>5.2</b>
Water demand for non domestic usage @45 lpcd	2.8	3.1	3.8	4.5
Current supply of 3.76 MLD is taken for analysis				
Assuming 135 LPCD				
<b>Water Treatment Plant capacity in MLD</b>	<b>2008-09</b>	<b>2012-13</b>	<b>2017-18</b>	<b>2022-23</b>
Demand for treatment plant capacity	5.6	6.3	7.5	9.0
Existing treated water supply	2.5	2.5	2.5	2.5
<b>Gap</b>	<b>3.1</b>	<b>3.8</b>	<b>5.0</b>	<b>6.5</b>
Current supply of 2.5 MLD treated water is taken for analysis				

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Final Report

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<b>Particulars</b>	<b>2008-09</b>	<b>2012-13</b>	<b>2017-18</b>	<b>2022-23</b>
<b>Water Distribution Network in Kms</b>	<b>2008-09</b>	<b>2012-13</b>	<b>2017-18</b>	<b>2022-23</b>
Existing distribution length	72.0	72.0	72.0	72.0
Road length (existing and proposed)	131.3	209.4	209.4	209.4
<b>Gap</b>	<b>59.3</b>	<b>137.4</b>	<b>137.4</b>	<b>137.4</b>
Assuming Earthen, WBM I, WBM II road length of 78.14 Km would be converted to CC/BT by 2012-13				
<b>Water Service connections in Nos</b>	<b>2008-09</b>	<b>2012-13</b>	<b>2017-18</b>	<b>2022-23</b>
No of Assessments	14074	15689	18804	22537
No of service connections	3701	7845	15984	19157
% service connections existing & proposed	26.3	50	85	85
<b>Gap</b>	<b>73.7</b>	<b>50</b>	<b>15</b>	<b>15</b>
Assessments projected by assuming assessment/population ratio will remain same in future years				
Service connections projected by assuming that by 2017-18 the norm of 85 % assessments will be covered				
<b>Storage capacity in MLD</b>	<b>2008-09</b>	<b>2012-13</b>	<b>2017-18</b>	<b>2022-23</b>
Existing Storage Capacity	2.66	2.66	2.66	2.66
Storage capacity demand	2.8	3.1	3.7	4.5
<b>Gap</b>	<b>0.1</b>	<b>0.4</b>	<b>1.1</b>	<b>1.8</b>
33 percent of water demand is assumed for storage demand				
<b>Sewage generation in MLD</b>	<b>2008-09</b>	<b>2012-13</b>	<b>2017-18</b>	<b>2022-23</b>
Sewage generation	6.7	7.5	9.0	10.8
Sewage collection	1.6	1.6	1.6	1.6
<b>STP capacity in MLD</b>	<b>2008-09</b>	<b>2012-13</b>	<b>2017-18</b>	<b>2022-23</b>
Existing Capacity	1.6	1.6	1.6	1.6
<b>Gap</b>	<b>5.1</b>	<b>5.9</b>	<b>7.4</b>	<b>9.2</b>
<b>Sewer connections in Nos</b>	<b>2008-09</b>	<b>2012-13</b>	<b>2017-18</b>	<b>2022-23</b>
Existing connections	4250.0	4250.0	4250.0	4250.0
Demand for sewer connections	9852	10983	13163	15776
<b>Gap</b>	<b>5602</b>	<b>6733</b>	<b>8913</b>	<b>11526</b>
Assuming 70 % of the assessment is covered under sewer connection				
<b>Sewer Network in Kms</b>	<b>2008-09</b>	<b>2012-13</b>	<b>2017-18</b>	<b>2022-23</b>
Sewer length existing	44	44	44	44
Road length existing and proposed	131	209	209	209
Sewer length demand	112	178	178	178
<b>Gap</b>	<b>68</b>	<b>134</b>	<b>134</b>	<b>134</b>
assuming 85% of the roads is covered by UGD				
<b>Road network in Kms</b>	<b>2008-09</b>	<b>2012-13</b>	<b>2017-18</b>	<b>2022-23</b>
Existing road network	131.3	209.4	209.4	209.4

**Final Report**

**4-12**



Particulars	2008-09	2012-13	2017-18	2022-23
Road length demand @ 1.5 meter per person	93.7	104.4	125.2	150.0
<b>Gap</b>	<b>-37.6</b>	<b>-105.0</b>	<b>-84.2</b>	<b>-59.4</b>
Assuming Kutcha roads would be converted into Pucca by 2012-13				
Storm water drainage in Kms	2008-09	2012-13	2017-18	2022-23
Existing Storm Water Drainage	67.0	67.0	67.0	67.0
Storm water drain demand	171	272	272	272
<b>Gap</b>	<b>104</b>	<b>205</b>	<b>205</b>	<b>205</b>
Demand estimated by assuming 130 percent of the road length will be having SWDs				
Solid waste generation in M Ton	2008-09	2012-13	2017-18	2022-23
Per capita waste in grams per day	320	340	366	394
Waste generation	20.0	23.7	30.6	39.4
Waste collection	12.0	23.7	30.6	39.4
<b>Gap</b>	<b>8.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Growth rate assumed 1.5 percent, assuming 8 ton gets generated in villages				
Assuming 100 collection by 2012-13 with D-D collection, segregation and treatment				
Street Lighting	2008-09	2012-13	2017-18	2022-23
Existing lights	3614	3614	3614	3614
Road length in Kms	131.3	209.4	209.4	209.4
Street light demand @ one light per 30 m	4375	6980	6980	6980
<b>Gap</b>	<b>761</b>	<b>3366</b>	<b>3366</b>	<b>3366</b>

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Final Report



# 5 SOCIO-ECONOMIC INFRASTRUCTURE

Infrastructure is the basic requirement of any society, and its provision is a basic necessity. Socio-economic infrastructure facilities play an important role for development of society and its economic condition. Thus, the Social Infrastructure status determines the development status of any City. This chapter deals with Social infrastructure namely Health, Education and recreational areas as well as Economic Infrastructure like Banks and Markets.

## 5.1 Health infrastructure at Town level

Both Government and private health infrastructure facilities are available in this town. Four Hospitals, Seven clinics and one Primary Health Center (having 6 beds) are functioning in this town. SRM has recently constructed a state of art general Hospital at Potheri enhances the health infrastructure facility available in this town.

Figure 5-1 SRM General Hospital



Table 5-A Health infrastructure in Maraimalai Nagar

Sl.No	Hospital	street	Ward
1	Government Hospital	Hospital road	8
2	Surya Hospital	Rangan street	6
3	J.S.Hospital	Thiruvalluvar street	4
4	Rotary Hospital	Pavendhar salai	5
5	S.R.M. Hospital	Potheri	

Source : Maraimalai nagar Municipality

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III

Final Report

5-1

## 5.2 Educational Institutions at Town level

Three Higher Secondary Schools, one High School, 23 Middle Schools, Twelve Primary and Secondary Schools are functioning in this town. SRM and Valliammal group has colleges ranging from Medical, Dental, Engineering, Polytechnic, Arts in Maraimalai Nagar and in its vicinity. Nearly 19 colleges are functioning in and around Maraimalai Nagar. Some of the Schools and Colleges in Maraimalai Nagar and in its vicinity are shown in Table 5-B.

**Figure 5-2 SRM Engineering College - Potheri**



**Figure 5-3 Government Higher Secondary School – MM Nagar**



**Table 5-B Educational Institutions**

Sl.No	Name	Street
1	SRM College	Potheri
2	St.Joseph Higher Secondary School	Thiruvalluvar Salai
3	JRK Matriculation School	Kattankulathur
4	Government Higher Secondary School	Maraimalai Nagar
5	TMS Matriculation School	Rail nagar
6	Sathy School	Pallavan street
7	Vaani Bhodhana Mandhir School	Valla pari street
8	Shankara Vidhyalaya School	NH-2
9	Dr.Mangalam High School	Kattankolathur GST Road

Source : Maraimalai Nagar Municipality

### 5.3 Other Amenities at Town level

Out of the 13 open spaces hand over by CMDA to the Municipality, 5 open spaces are developed as parks, 3 are developed as parks with playgrounds.

Parks developed in various places are listed below:

1. Gandhi Park
2. Periyar Park
3. Maraimalai Adigalar park
4. Park in Office premises
5. Indira park

Parks with playgrounds are developed in places listed below:

1. Indira park
2. Nehru park
3. Bharathiyar Park

In addition, 7 more parks are proposed which are listed below:

1. Anna Park
2. MGR Park
3. Rajivgandhi Park
4. Kannadasan Park
5. Kamarajar Park
6. Ambedkar Park
7. Nehru Park

Town has 4 water bodies (3 on the eastern side and one on the western side of the railway line) which could be developed for water harvesting and recharging. Municipality has no market area under its administration. Four National Banks and one Co-operative Bank are available in this Town. Ten Churches and 15 Hindu Temple and one Mosque are there in this town. The other amenities are listed in Table 5-C.

Figure 5-4 Periyar Park



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Final Report

5-3

Table 5-C Amenities in Maraimalai Nagar

Social Infrastructure	Nos	Ownership
Theatres	1 theatre and one touring theatre	Private
Grave yards/burial ground	40	Municipality
Shopping complexes	12	Not in usage
Community Hall	2	Municipality
Kalyana Mandabam	Plenty	Private
Public toilets	2 (5 seats each). Total 10	Municipality
Slaughter House	Nil	
Markets	Nil	Proposed

Source : Maraimalai Nagar Municipality

Sl.No	Bank details	Location
1	State Bank of India	Chengalpat
2	Indian Bank	Thiruvalluvar Street
3	Syndicate Bank	M.G.R Street
4	Indian Overseas Bank	Anna Salai
5	Central Bank of India	Adigalar Salai
6	Thenmelpakkam Co-operative Bank	Thiruvalluvar Salai

Figure 5-5 Maraimalai Nagar Lake



Figure 5-6 Thirukatchur pond



## 5.4 Issues

1. Town has no Slaughter house
2. Town has no Commercial complexes for revenue generation
3. 12 shops owned by the Municipality are not in usage
4. Water bodies are not properly maintained and are getting polluted.
5. Encroachments in Maraimalai Nagar lake
6. Town has no Municipal markets
7. Inadequate Infrastructure facilities in Primary health center.
8. Absence of Big Playground / Stadium.
9. 150 Approved layouts are yet to be developed as parks and playgrounds.

Final  
Report

5-4

# 6 ENVIRONMENTAL STATUS

## 6.1 Natural Environment

### 6.1.1 Topography

It is located at 10 20' North latitude and 18 30' East longitude. The town is situated in relatively steep terrain with a gradual slope on the eastern side of the town draining towards CTO Colony. The topography varies from 20 m to 30m in the East and 34 m in the West.

### 6.1.2 Geology and Soil Type

The predominant soil in the town is red / black soil extends to a depth of 0.30m to 1.0m and the sub soil, which is porous in nature, extends from 3 to 4m.

### 6.1.3 Climate and Rainfall

The town is temperate as a whole except during the months of March to June. The annual average temperature is about 30<sup>0</sup> C while the relative humidity reaches up to 90 percent during monsoon. The town receives maximum rain fall from Northeast Monsoon between October to December and the Southwest Monsoon between July to August brings some light rainfall. The annual rainfall is about 1024 mm.

### 6.1.4 Water Sources

There is no perennial river source available nearby other than ponds and lakes. Water bodies (4 in numbers) are used currently for waste water disposal and are encroached. . The ground water table varies from 9.0 m to 18.0 m as maximum during summer while in rainy seasons; the depth of groundwater table varies from 4.5 m to 5.0m. Water supplied by TWAD board is yellowish in color due to high iron content as discussed in earlier chapters. The water quality test details of Maraimalai Nagar are enclosed in the Annexure

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III

Final  
Report

6-1

## 6.2 Urban Environment

### 6.2.1 Urban Environment Quality

Urban environment Quality check has been done with the help of urban environment components like access to water, access to Sewerage and Sanitation, availability of open spaces and Waste management practices. Selected parameters related to each component are assessed with the help of information obtained from the municipality and from Secondary sources and compared with the norms/ standards. The Urban Environment Quality check is shown in Table 6-A.

*Table 6-A Urban Environment Quality Check*

Urban Environment Quality check	Parameters	Unit	Coverage	Norm
Access to drinking Water	Per Capita Supply	percent	60	135
Access to sewerage and Sanitation	Assessments having sewer connections	Percent	30	70
Availability of open spaces	Number of parks developed	Number	8	
Waste Management system	Door-Door collection efficiency (% of wards covered)	Percent	24	100
Waste Management system	Waste Segregation efficiency	Percent	nil	100
Waste Management system	Treatment plant capacity to waste generated (organic)	Percent	nil	100

*Source : Analysis based on the data collected from Maraimalai Nagar municipality*

6-2

### 6.3 Issues

Stakeholders during consultation have indicated the problem areas regarding the Environment and are listed below:

- Water gets polluted due to disposal of liquid waste and Industrial waste into lakes.
- Water bodies are not properly managed and utilized for ground water recharge.
- Air pollution due to industrial belt
- Land Pollution due to disposal of solid waste without treatment

# 7 SLUMS AND URBAN POVERTY

## 7.1 Slums in Maraimalai Nagar

Maraimalai Nagar has nearly 33 percent of the total population living in slums. In 1991, it was 40 percent of the total population which is shown in Table 7-A. Vallancheri has the maximum share of slum population which comes around 17 percent of the total slum population. Ward wise slum details are shown in Table 7-B.

*Table 7-A Slum Population in Maraimalai Nagar*

Particulars	1991	2001
Slum Population	13600	15950
Total Population	33640	48463
% share of slum Population	40.4	32.9

Source: IHSDP. Maraimalai Nagar Municipality

*Table 7-B Slum pockets in Maraimalai Nagar*

Name of the slum	Ward No	Population	% share
Vallancheri	1	2800	17.54
Gudalur	9	1100	6.89
Kadambur	9	1400	8.77
Keelakaranai	12	1700	10.65
Sengundram	11	1650	10.33
Malaimettu Colony	10	1615	10.11
Thirukatchur Annanagar	13	675	4.22
Peramanur Colony	16	650	4.07
Peramanur	15	1650	10.33
Kattankulatthur	18	1620	10.15
Thailavaram	21	1100	6.89
<b>Total</b>		<b>15960</b>	<b>100</b>

Source : Maraimalai Nagar Municipality

### 7.1.1 Service provision in Slums

Slum areas have been given 1100 individual service connections, 316 public fountains for water supply. Slum areas overall has 46 Km road network with 34 Km Pucca roads and 12 Km Kutcha roads. 2120 assessments have septic tanks as safe mode of

waste disposal. Remaining households are practicing Open defecation for waste disposal.

### 7.1.2 Proposed projects at a glance

IHSDP project has been proposed at an estimated cost of Rs. 600 lakhs covering all the slums and the proposal has been sent to the government for approval and sanction.

### 7.2 Urban Poor

Maraimalai Nagar has more than 5000 families living Below Poverty Line. Ward Nos. 09 and 21 has the maximum share of BPL families which comes around 9%. Ward wise BPL families are shown in Table 7-C.

Table 7-C BPL families in Maraimalai Nagar

Ward No	BPL families	% to total	Ward No	BPL families	% to total
1	237	4.67	12	119	2.35
2	287	5.66	13	365	7.20
3	256	5.05	14	230	4.54
4	50	0.99	15	284	5.60
5	30	0.59	16	303	5.98
6	104	2.05	17	200	3.94
7	144	2.84	18	256	5.05
8	136	2.68	19	221	4.36
9	449	8.85	20	328	6.47
10	301	5.94	21	457	9.01
11	314	6.19	Total	5071	100.00

Source : Maraimalai Nagar Municipality

### 7.3 Issues

1. Vallancheri has the maximum slum population
2. Slum areas have inadequate sanitation facilities like public toilets
3. 12 Km roads are Kutchha in slum areas.

# 8 FISCAL STATUS

## 8.1 Background

Municipal Corporation Acts and the District Municipalities Act of the Tamil Nadu authorizes Urban local bodies to levy, collect and appropriate such taxes, duties, tolls and fees in accordance with the procedures subject to limits as specified by the legislature. Besides these, the urban local bodies are also empowered with certain other financial powers.

The Sources of income for a municipality can be broadly categorized as own sources (Includes both Tax and Non Tax Revenues), and External Sources (Assigned Revenues, Devolution Funds, Grants and Contribution). Besides municipalities also can avail of loans/Grants/Contribution from Government(Central and State) and loans from various funding agencies such as TUFIDCO, TNUIFSL, HUDCO, LIC and Banks etc, for undertaking specific projects based on their credit worthiness.

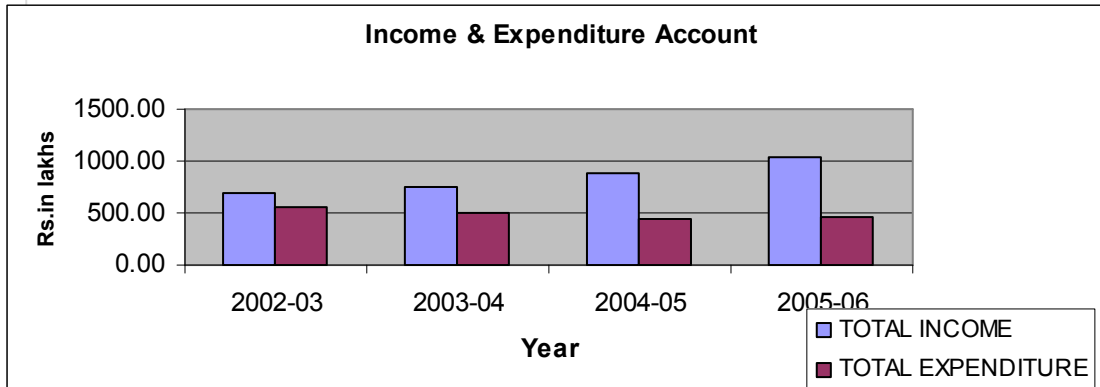
Final Report

The municipality's Revenue expenditure can be broadly categorized into Personnel cost and Terminal and Retirement benefits, Operating Expenses, Repairs & Maintenance Expenses, Programme Expenses Administrative Expenses, Finance Expense, Provision for Depreciation. Besides the above, significant amount are required for undertaking up capital works.

8-1

## 8.2 Financials

Figure 8-1 Income & Expenditure Account



Source : Annual Accounts of Maraimalai Nagar Municipality

Final Report

Table 8-A Income & Expenditure Account

Rs.in lakhs

8-2

Particulars	2002-03	2003-04	2004-05	2005-06
<b>INCOME</b>				
Property Tax	381.47	424.06	416.31	477.66
Other Taxes ( Profession Tax + Compensation for Toll)	33.52	39.48	38.95	72.00
Assigned revenue (duty on transfer of property + Entertainment Tax))	101.20	87.23	161.38	54.98
Devolution Fund	43.87	30.40	58.86	56.96
Service Charges & Fees	45.42	87.10	61.71	70.90
Trade License Fees	19.94	20.56	21.56	22.42
Building License Fees	11.76	52.12	19.08	30.44
Advertisement Fees	0.00	0.02	0.00	0.00
Parking fees	0.77	0.00	0.00	0.00
Fees for Fishery Fees	0.06	0.00	0.02	0.03

<b>Particulars</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>
<i>Copy Application Fees</i>	0.29	1.75	2.09	0.10
<i>Initial Amount For New Water Supply and drainage</i>	1.46	3.30	6.12	5.03
<i>Water Supply Connection Charges</i>	0.00	0.00	2.70	1.32
<i>Metered/Tap Rate water Charges</i>	7.74	7.90	8.20	8.13
<i>Septic tank cleaning charges</i>	0.33	0.00	0.00	0.00
<i>Sewerage connection Charges</i>	0.00	0.00	0.56	0.76
<i>Other Fees</i>	3.06	1.46	1.38	2.66
<i>Grants and Contribution</i>	0.04	0.04	0.04	0.00
<i>Other Income</i>	86.16	75.23	151.96	300.20
<i>Market Fees-Daily Market</i>		0.00	0.71	
<i>Cinema theater Income</i>	0.15	0.00	0.00	0.00
<i>Development Charges</i>	23.82	41.47	94.38	217.80
<i>Road Cut Restoration Charges</i>	2.55	1.44	0.39	1.26
<i>Avenue Receipts</i>	0.05	0.07	0.06	0.01
<i>Hire Charges</i>	0.00	0.00	0.61	
<i>Sale of Scraps</i>	0.00	0.00	0.05	
<i>Interest from Bank</i>	8.01	6.21	7.40	29.91
<i>Projects overhead Appropriation-Expenses</i>	26.67	22.70	42.92	39.77
<i>Rent on Community Hall</i>	0.41	0.45	0.25	0.43
<i>Specific Maintenance Grant/Contribution</i>	0.00	0.00	0.02	
<i>Other Income</i>	24.50	2.89	5.17	11.02
<b>Total Income</b>	<b>691.67</b>	<b>743.55</b>	<b>889.20</b>	<b>1032.71</b>
<b>EXPENDITURE</b>				
<i>Personnel Cost</i>	41.00	42.32	47.19	53.67
<i>Salaries</i>	40.34	42.28	45.25	50.22
<i>Terminal and retirement benefits</i>	0.00	0.00	0.00	0.34
<i>Others</i>	0.67	0.04	1.94	3.11
<i>Operating Expenses</i>	71.99	73.16	72.24	86.79
<i>Power Charges for Sewerage System/Pumping</i>	0.00	0.00	3.38	1.50
<i>Power Charges for Street Lights</i>	30.44	32.91	39.30	36.39
<i>Power Charges for Head Water Works</i>	0.00	1.87	0.00	8.06
<i>Maintenance Expenses for Street Lights</i>	32.02	10.82	24.16	27.61

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**Final Report**

**8-3**



	<b>Particulars</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>
<b>P</b>	<i>Sanitary and conservancy expenses</i>	0.34	0.00	0.00	0.00
	<i>Wages</i>		0.09	0.00	0.25
	<i>Pauper charges</i>	0.00			
	<i>Anti-filaria/Anti -Malaria Operations</i>	0.00	0.00	0.09	0.00
	<i>Hire charges for supply of water</i>	0.66	0.00	0.00	0.00
	<i>Maintenance of Gardens/parks</i>	0.00	0.07	0.00	0.00
	<i>Removal of Debris</i>	0.00	0.00	0.81	2.26
	<i>Expenses of Sanitary Materials</i>	8.53	27.41	4.49	10.73
	<i>Repairs and Maintenance</i>	71.35	118.09	92.51	59.41
	<i>Light Vehicles- Maintenance</i>	0.46	2.63	0.71	0.00
	<i>Heavy Vehicles - Maintenance</i>	2.15	7.50	40.58	12.94
	<i>R&amp;M - Buildings</i>	0.29	0.13	0.02	0.00
	<i>R&amp;M-Bridges</i>		0.00	0.00	0.24
	<i>R&amp;M Roads &amp; Pavements</i>		0.27	1.12	0.00
	<b>Final Report</b>	<i>R&amp;M - Instruments, Plants &amp; Machinery</i>		0.19	0.03
<i>Restoration of road Cuts</i>				0.00	0.23
<i>Maintenance Charges for Railway</i>				0.00	1.77
<i>Maintenance Water Supply/sewerage</i>		13.90	31.58	11.12	7.10
<i>Maintenance Charges to TWAD Board Metro</i>		54.55	75.73	38.23	30.86
<i>Petrol/Diesel Evaporation</i>				0.54	0.00
<i>R&amp;M Office Tools</i>			0.06	0.16	0.00
<i>Programme Expenses</i>		0.00	0.00	0.00	0.00
<i>Administrative Expenses</i>		5.42	7.90	28.18	14.35
<i>Finance Expenses</i>		15.89	0.00	0.00	1.26
<i>Depreciation</i>		345.45	249.44	197.17	244.66
<b>Total Expenditure</b>		<b>551.11</b>	<b>490.91</b>	<b>437.28</b>	<b>460.16</b>
<i>SURPLUS / DEFICIT(-)</i>		140.56	252.64	451.92	572.55

Source: Maraimalai Nagar Municipality

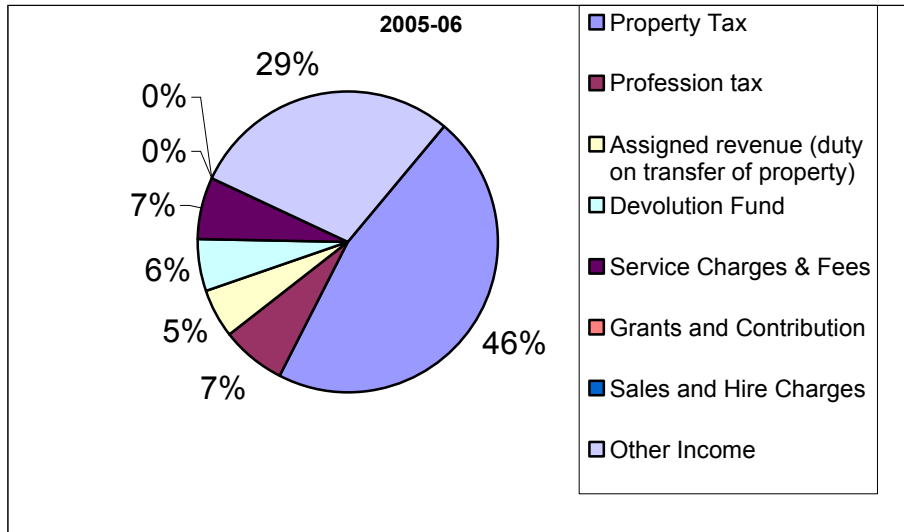
### 8.3 Analysis of Income

Table 8-B : Income Analysis

Particulars	2002-03	2003-04	2004-05	2005-06
<b>Sectoral Contribution to the Total Income</b>				
Property Tax	55.15%	57.03%	46.82%	46.25%
Other Taxes ( Profession Tax + Compensation for Toll)	4.85%	5.31%	4.38%	6.97%
Assigned revenue (duty on transfer of property + Entertainment Tax))	14.63%	11.73%	18.15%	5.32%
Devolution Fund	6.34%	4.09%	6.62%	5.52%
Service Charges & Fees	6.57%	11.71%	6.94%	6.87%
Grants and Contribution	0.01%	0.01%	0.07%	0.00%
Other Income	12.46%	10.12%	17.09%	29.07%
<b>Growth Trend in (%)</b>				
Property Tax		11.17%	-1.83%	14.74%
Other Taxes ( Profession Tax + Compensation for Toll)		17.78%	-1.34%	84.86%
Assigned revenue (duty on transfer of property + Entertainment Tax))		-13.80%	84.99%	-65.93%
Devolution Fund		-30.70%	93.59%	-3.22%
Service Charges & Fees		91.77%	-29.15%	14.90%
Grants and Contribution		0.00%	2.50%	-100.00%
Other Income		-12.68%	101.99%	97.55%

Source: Analysis based on data provided by Maraimalai Nagar Municipality

Figure 8-2: Break up of Income of Maraimalai Nagar Municipality for the year 2005-06



Source : Accounts of Maraimalai Nagar Municipality

Income of the Municipality has grown briskly from Rs.691.67 lakhs in the year 2002-03 to Rs.1032.71 lakhs in the year 2005-06 with a CAGR of 14.29% in the last four years. The healthy growth in the municipal revenue can be attributed to strong growth in the municipality's own revenue including both tax and non tax revenue sources. These sources contributed close to 90% of the municipal's revenue during the year 2005-06.

Final Report

8-6

### 8.3.1 Own Sources

#### 8.3.1.1 Municipal Taxes

Municipal taxes consisting of Property and Other Taxes (Professional Tax +compensation for toll) have contributed more than half of the total income of Maraimalai Nagar Municipality in the last 4 years. The Municipal taxes have been growing at a CAGR of 9.82% over the last 4 years.

**Property Tax:**

The most important category in the own sources of income is the property tax. This tax is imposed on land and buildings depending upon their nature of use. Over the last 4 years the share of property taxes has accounted for more than 90% of the total municipal tax revenue except for the year 2005-06 when its share fell to 86.90% due to increase in revenue relating to profession tax and compensation received on account of toll.

**Table 8-C Property Tax Particulars**

<b>Categories</b>	<b>Rate per Sq .ft(Rs.)</b>
A	1.00
B	0.70
C	0.40
No. of Assessment 2007-08	14074
No. of Assessment 2002-03	12146
% Increase in Number Assessments for the Past 6 years	2.49%
CAGR in revenue from property taxes over the Last 5 years	7.78%
Total Property Tax collection(Rs.in Lakhs) in 2005-06)	477.66
Number of Staff in Revenue Department	1
Revenue per person (Rs.in Lakhs)	477.66
Number of Vacancies of Revenue Assistant	2
Average Tax Demand per property(Rs.)	NA
Average annual P.T Collection per Property(Rs.)	NA
% of arrears pending more than 6 years	90.59%

*Source: Maraimalai Nagar Municipality and Urban Performance Indicators data.*

The municipality can look to enhance its collection by focusing on identifying newer assesses and improving the collection efficiency from the existing assesses. In the accounts proper provisioning should be made for writing off the arrears pending for more than 5-6 years. Reforms at the state level such as revision of property tax rates; fast track methods to overcome litigation delays, introduction of GIS to identify and mapping of unassessed properties can further enhance the income from property tax.

**Other Taxes:**

Profession Tax and compensation received on account of toll are other important taxes of the municipality. It has contributed about 10% of the total Municipal taxes in the last few years. The revenue from these taxes which was around Rs.33.52 Lakhs in the year 2002-03 jumped to Rs.72 Lakhs in the year 2005-06.

**Table 8-D Profession Tax Particulars**

<b>Particulars</b>	
Total Professional Tax Collection(Rs.in Lakhs 2006-07)	3.94
<b><u>Slab for Professional Tax ( Half yearly)</u></b>	
Up to Rs.21000	NIL
Rs.21000 to Rs.30000	Rs.75
Rs.30001 to Rs.45000	Rs.190
Rs.45001 to Rs.60000	Rs.375
Rs.60001 to Rs.75000	Rs.565
Above Rs.75001	Rs.750

Source: Maraimalai Nagar Municipality

**8.3.2 Non Tax Revenues**

The Municipality earns significant revenue from Non-Tax sources such as revenue from Service Charges and Fees, and Other Income. The main reason for the significant increase in the municipality’s own revenue has been due to the increased share from these Non-Tax sources. The share of non tax revenue to the total income of the municipality has increased from 19.02% during the year 2002-03 to 35.94% during the year 2005-06

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**Final Report**

**8-8**

**8.3.2.1 Service Charges and Fees**

The share of Service Charges and Fees to the total income of the municipality has ranged between 6.57% in the year 2002-03 to 11.71% during the year 2003-04. The major sources of income under this head are Building License Fees, trade license fee, and initial amount from new water supply, metered/tap water charge. This income has witnessed a robust CAGR of 16 % in the last 4 years. Building license fee and trade license fee accounted for close to 75% of the municipality’s revenue from service charges and fees for the year 2005-06.

**8.3.2.2 Other Income**

The Municipality earns significant revenue through earnings from “other income” namely Development Charges, project over head appropriation expenses, interest from bank etc. Overall the CAGR for “other income “has been 51.60% in the last 4 years. The revenue from development charges has been quite significant with revenue increasing from Rs.23.82 Lakhs in the year 2002-03 to Rs.217.80 Lakhs in the year 2005-06. The steep increase has resulted in a high CAGR of 109.11% for development charges in the last four years



**Final Report**

**8.3.3 External Sources**

**8.3.3.1 Assigned Revenue**

Assigned revenues include revenues transferred to the municipalities by the GoTN under specific acts. These are transferred to the municipalities as their share of taxes levied and collected by the GoTN. These include duty on transfer of property, entertainment tax, surcharge on sales tax, and other assigned revenues if any. Among all these, duty on transfer of property and entertainment tax is the most significant ones .The contribution from Assigned Revenue has declined from Rs.101.20 Lakhs in the year 2002-03 to Rs.54.98 Lakhs in the year 2005-06. The share of assigned revenue to total income of the municipality has declined from 14.63% in the year 2002-03 to 5.32% in the year 2005-06.

### 8.3.3.2 Devolution Fund

Based on the Second State Finance Commission recommendations, GOTN transfers 8% of its state revenue to the local government. The contribution through devolution funds has increased from Rs.43.87 Lakhs in the year 2002-03 to Rs.56.96 Lakhs in the year 2005-06. Its share in the total income of the municipality has ranged between 4.09% to 6.62% in the last four years.

## 8.4 Analysis of Expenditure

The Revenue Expenditure of the ULB has been analyzed based on expenditure heads which can be broadly classified under the major heads outlined below:

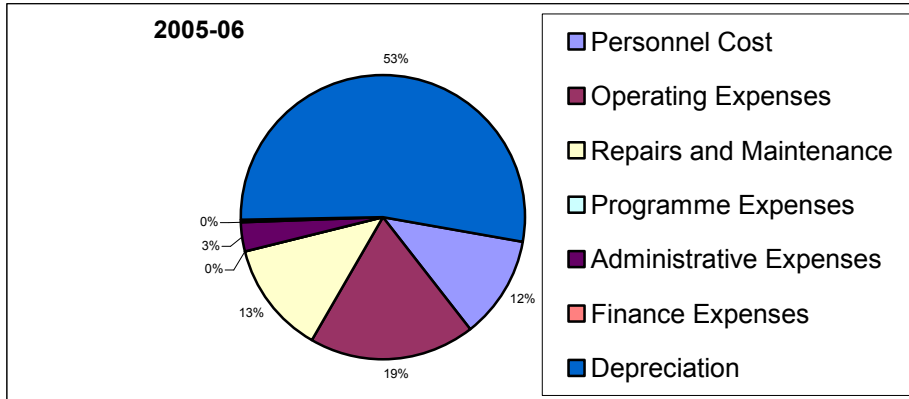
- Personal costs
- Operating Expenses
- Repairs & Maintenance Expenses
- Programme Expense
- Administrative Expenses
- Finance Expenses
- Depreciation

*Table 8-E : Expenditure Analysis*

<b>EXPENDITURE</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>
<b>Sectoral Utilization in Total Expenditure</b>				
Personnel Cost	7.44%	8.62%	10.79%	11.66%
Operating Expenses	13.06%	14.90%	16.52%	18.86%
Repairs and Maintenance	12.95%	24.06%	21.16%	12.91%
Programme Expenses	0.00%	0.00%	0.00%	0.00%
Administrative Expenses	0.98%	1.61%	6.44%	3.12%
Finance Expenses	2.88%	0.00%	0.00%	0.27%
Depreciation	62.68%	50.81%	45.09%	53.17%
<b>Growth Trend in (%)</b>				
Personnel Cost		3.22%	11.50%	13.73%
Operating Expenses		1.63%	-1.27%	20.15%
Repairs and Maintenance		65.50%	-21.66%	-35.78%
Administrative Expenses		45.64%	256.91%	-49.06%
Depreciation		-27.79%	-20.96%	24.09%

*Source: Analysis based on data provided by Maraimalai Nagar Municipality*

**Figure 8-3 Break up of Expenditure of Maraimalai Nagar Municipality for the year 2005-06**



Source : Annual Accounts of Maraimalai Nagar Municipality

The Expenditure of the municipality has shown a declining trend from Rs.551.11 Lakhs in the year 2002-03 to Rs.460.16 Lakhs in the year 2005-06. The fall in the expenditure of the municipality over the last 4 years can be attributed to decline in the expenses relating to repairs and maintenance and lower depreciation figures. The municipality has shown a consistent surplus in the last 4 years.

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Final Report

### 8.4.1 Personnel Costs

This expense mainly includes the staff salaries, Terminal and retirement benefits and allowances paid to the employees of the ULB. This expense has grown by 9.39% in the last 4 years. Salaries being the key component of personnel costs have grown by 7.58% in the last 4 years

8-11

### 8.4.2 Operating Expenses / Repairs & Maintenance

Expenses relating to operations and Repairs and Maintenance are very critical indicators of the service management and maintenance capabilities and performance of the ULB. For Maraimalai Nagar Municipality these expenses accounted for about 26.01%-38.96% of the total expenses in the last 4 years.

**8.4.2.1 Operating Expenses**

The Operating expense mainly consists of such expenses, which are met towards the infrastructure facilities provided by the ULB like Power charges for Street Lights, Maintenance Expenses for Street Lights, Sanitary Conservancy Expenses, and Expenses on sanitary material etc. The operating expenses accounted for about 13.06% – 18.86% of the total expenditure in the last four years. The CAGR of this expenditure however has been rather moderate at around 6.43% over the last 4 years.

**8.4.2.2 Repairs & Maintenance**

Repairs & Maintenance expenses mainly consist of such expenses such as Heavy Vehicle Maintenance, Maintenance charges to TWAD, Maintenance expenses on account of water supply. Out of this, Maintenance charges to TWAD Board are a major component of this expenditure. Repairs and maintenance expenses have shown a fluctuating trend over the last 4 years mainly due to fall in maintenance charges to TWAD, which has declined, from Rs. 75.73 Lakhs in the year 2003-04 to Rs.30.86 Lakhs in the year 2005-06

**8.4.3 Administrative Expenses**

Administrative Expenses of the municipality has increased from Rs.5.42 Lakhs in the year 2002-03 to Rs.14.35 Lakhs in the year 2005-06. However the administrative expenses were Rs. 28.18 Lakhs in the year 2004-05 mainly due to expenses on account of electricity consumption charges of office for Rs.13.26 Lakhs and municipal contribution to other funds for Rs.6.42 Lakhs.

**8.4.4 Finance Expenses**

The Finance Expenses are very low for the municipality on account of loan outstanding of just Rs.15 Lakhs for the year 2005-06.

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**Final Report**

**8-12**

## 8.5 Source & Use of Funds

Table 8-F Balance Sheet

Rs.in Lakhs

Particulars	2002-03	2003-04	2004-05	2005-06
<b>ASSETS</b>				
Fixed Assets	943.69	1196.03	1610.96	2013.70
Cash & Bank Balances	708.75	888.69	1113.34	1676.21
Stock	0.00	0.00	0.00	7.61
Taxes & Fee Receivable	479.09	570.75	640.88	729.35
Staff Advances	0.65	0.62	0.29	0.64
Other Advances	20.64	5.55	2.30	19.55
Investment & Interest	134.38	103.85	105.15	154.42
Interfund Transfer Out	0.60	0.00	0.00	19.31
Other Bank Balances ( SJSRY Scheme)	17.27	0.00	0.00	0.00
<b>TOTAL ASSETS</b>	<b>2305.07</b>	<b>2765.49</b>	<b>3472.93</b>	<b>4620.79</b>
<b>LIABILITIES</b>				
Grants & Contribution	28.43	68.13	60.37	99.49
Loan From The Government	0.00	0.00	0.00	15.00
Recoveries From Staff Pay Bill	0.03	0.02	0.02	0.05
Deposit Repayable	123.60	82.94	128.32	184.52
Other Liabilities	58.68	10.10	6.99	153.40
Provision For Doubtful Collection Of Revenue Items	0.00	0.00	0.00	112.93
Others	58.68	10.10	6.99	40.47
Tax Deducted Payable	0.00	0.00	1.35	4.52
Other Bank Balances ( Sjsry Scheme)	17.27	0.00	0.00	19.23
Accumulated Depreciation	345.45	592.68	789.85	1043.45
Accumulated Surplus	1731.63	2011.63	2486.04	3101.14
<b>TOTAL LIABILITIES</b>	<b>2305.07</b>	<b>2765.49</b>	<b>3472.93</b>	<b>4620.79</b>

Source : Annual Accounts of Maraimalai Nagar Municipality

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Final  
Report

8-13

**Table 8-G: Fixed Assets**

*Rs.in Lakhs*

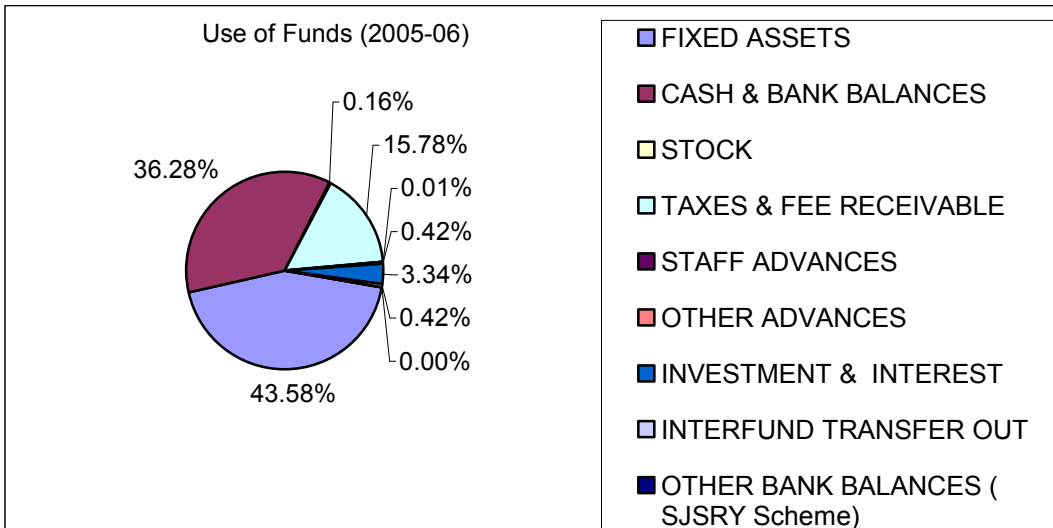
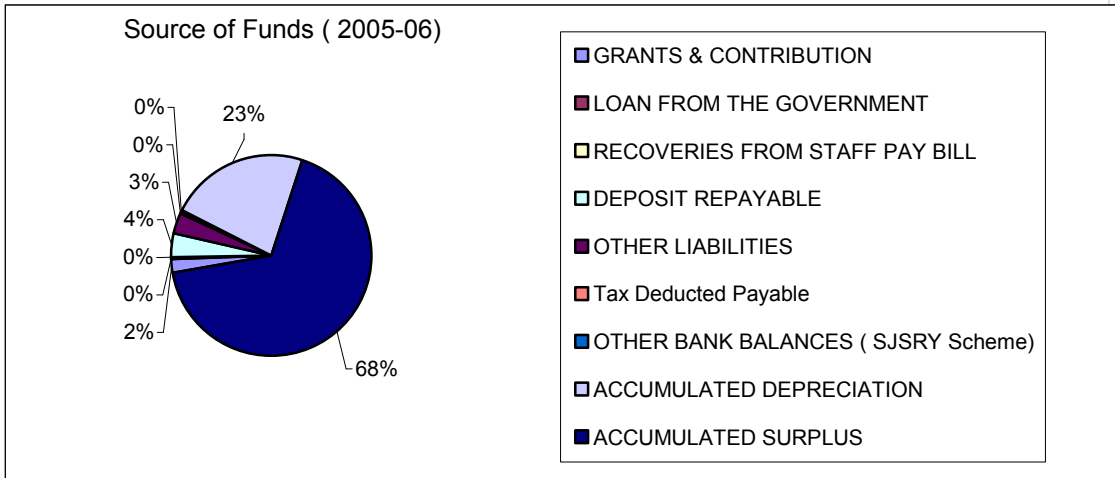
<b>Fixed Assets</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>
Water Supply Head Works, OHT	54.25	83.79	162.94	232.86
Drainage and Sewerage Pipes	23.23	23.09	26.11	84.84
Ground Water Wells/Deep Bore well	11.54	22.18	113.97	229.28
Hand Pumps- India Mark-II	0.00	39.02	17.02	29.87
Land-Gross Block	45.59	45.59	45.59	45.59
Building-Gross Block	23.08	44.04	106.19	103.37
Bridges & Flyover-GB	0.00	0.00	1.54	1.54
Storm Water Drains, Open Drains	54.68	59.03	95.20	96.85
Heavy Vehicles- GB	19.11	19.11	19.11	19.11
Light Vehicles- GB	3.00	3.00	3.00	3.00
Furniture's, Fixtures & Office equip	1.77	1.35	1.93	2.11
Electrical Installation- L	24.84	24.84	30.22	32.72
Electrical Installation- O	0.00	0.00	6.25	9.04
P&M- GB	3.43	3.65	7.00	6.78
Roads & Pavements- Concrete	86.48	86.48	103.80	103.80
Roads & Pavements- Black T	225.80	373.96	503.10	541.93
Roads & Pavements- Others	366.24	366.24	366.24	404.70
Tools and Plant-GB	0.00	0.00	1.09	5.41
Public Fountain	0.00	0.00	0.00	60.24
Trees	0.65	0.65	0.65	0.65
<b>TOTAL</b>	<b>943.69</b>	<b>1196.03</b>	<b>1610.96</b>	<b>2013.70</b>

Source: Maraimalai Nagar Municipality

**Final Report**

8-14

Figure 8-4 : Source and Use of Funds of Maraimalai Nagar Municipality as on 2005-06



Source : Maraimalai Nagar Municipality

**Our Observations:-**

- The accumulated surplus of the municipality, which was Rs.1731.63 Lakhs in the year 2002-03, increased to Rs.3101.14 Lakhs in the year 2005-06.
- More than 40% of the funds have been deployed in creation of Fixed Assets.
- Significant amounts have been invested in Infrastructure relating to road works and water works

## 8.6 Demand, Collection and Balance for the past 5 years

Table 8-H: DCB for the Past 5 years

Rs.in lakhs

Particulars	2003-04	2004-05	2005-06	2006-07	2007-08(AUG)
<b>Property Tax - Demand, Collection and Balance</b>					
Total Number of Assessment	12537	12985	13194	13597	14074
<b>Demand</b>					
1.Arrears	432.67	517.62	572.48	676.71	536.89
2.Current	424.06	418.64	467.36	482.00	241.66
<b>3.Total</b>	<b>856.73</b>	<b>936.26</b>	<b>1039.84</b>	<b>1158.71</b>	<b>778.55</b>
<b>Collection</b>					
1.Arrears	87.54	117.32	72.92	258.44	175.47
2.Current	226.48	246.45	309.70	363.38	56.44
<b>3.Total</b>	<b>314.02</b>	<b>363.78</b>	<b>382.62</b>	<b>621.82</b>	<b>231.91</b>
<b>Balance</b>					
1.Arrears	345.13	400.29	499.56	418.27	361.42
2.Current	197.59	172.19	157.66	118.62	185.22
<b>3.Total</b>	<b>542.71</b>	<b>572.48</b>	<b>657.22</b>	<b>536.89</b>	<b>546.64</b>
<b>Water Tax- Demand, Collection and Balance</b>					
<b>Demand</b>					
1.Arrears	10.47	10.20	9.80		
2.Current	0.00	0.00	0.00		
<b>3.Total</b>	<b>10.47</b>	<b>10.20</b>	<b>9.80</b>	<b>0.00</b>	<b>N.A</b>
<b>Collection</b>					
1.Arrears	0.00	0.40	0.15		
2.Current	0.00	0.00	0.00		
<b>3.Total</b>	<b>0.00</b>	<b>0.40</b>	<b>0.15</b>	<b>0.00</b>	<b>N.A</b>
<b>Balance</b>					
1.Arrears	10.47	9.80	9.65	0.00	
2.Current	0.00	0.00	0.00	0.00	
<b>3.Total</b>	<b>10.47</b>	<b>9.80</b>	<b>9.65</b>	<b>0.00</b>	<b>N.A</b>
<b>Profession Tax- Demand, Collection and Balance</b>					
<b>Demand</b>					
1.Arrears	11.08	19.22	21.01	3.79	5.66
2.Current	39.48	47.19	72.00	72.00	36.00
<b>3.Total</b>	<b>50.55</b>	<b>66.41</b>	<b>93.02</b>	<b>75.79</b>	<b>41.66</b>
<b>Collection</b>					
1.Arrears	11.08	19.22	0.00	3.59	5.66
2.Current	27.67	38.08	48.40	66.54	6.08
<b>3.Total</b>	<b>38.75</b>	<b>57.30</b>	<b>48.40</b>	<b>70.13</b>	<b>11.74</b>

<b>Balance</b>					
1.Arrears	0.00	0.00	21.01	0.20	0.00
2.Current	11.81	9.11	23.60	5.46	29.92
<b>3.Total</b>	<b>11.81</b>	<b>9.11</b>	<b>44.61</b>	<b>5.66</b>	<b>29.92</b>
<b>Water charges- Demand, Collection and Balance</b>					
Total Number of Assessment	3185	3431	3595	3664	
<b>Demand</b>					
1.Arrears	22.60	26.65	27.36	17.69	16.89
2.Current	7.90	8.13	8.13	8.52	4.26
<b>3.Total</b>	<b>30.50</b>	<b>34.78</b>	<b>35.49</b>	<b>26.21</b>	<b>21.15</b>
<b>Collection</b>					
1.Arrears	20.88	4.06	4.00	4.11	1.09
2.Current	6.13	3.35	4.18	5.21	1.30
<b>3.Total</b>	<b>27.01</b>	<b>7.41</b>	<b>8.19</b>	<b>9.32</b>	<b>2.39</b>
<b>Balance</b>					
1.Arrears	1.73	22.59	23.36	13.58	15.80
2.Current	1.77	4.78	3.94	3.31	2.96
<b>3.Total</b>	<b>3.50</b>	<b>27.36</b>	<b>27.30</b>	<b>16.89</b>	<b>18.76</b>
<b>Non -Tax- Demand, Collection and Balance</b>					
<b>Demand</b>					
1.Arrears	1.31	0.56	1.31	0.00	559.44
2.Current	282.16	223.50	378.27	541.13	604.12
<b>3.Total</b>	<b>283.47</b>	<b>224.06</b>	<b>379.58</b>	<b>541.13</b>	<b>1163.56</b>
<b>Collection</b>					
1.Arrears	0.00	0.00	0.00	0.00	182.22
2.Current	282.16	223.50	378.27	541.13	386.02
<b>3.Total</b>	<b>282.16</b>	<b>223.50</b>	<b>378.27</b>	<b>541.13</b>	<b>568.24</b>
<b>Balance</b>					
1.Arrears	1.31	0.56	1.31	0.00	377.22
2.Current	0.00	0.00	0.00	0.00	218.10
<b>3.Total</b>	<b>1.31</b>	<b>0.56</b>	<b>1.31</b>	<b>0.00</b>	<b>595.32</b>

Source: Maraimalai Nagar Municipality

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Final Report

8-17

## 8.7 Outstanding Loan and Non-Debt Liability

The Outstanding Loan balance and Non-Debt Liability of key components of Maraimalai Nagar Municipality is represented in the table below:

**Table 8-I : Outstanding Loan and Non-Debt Liability**

Rs.in Lakhs

Sl.No	Particulars	2007-08
<i>1. Outstanding Principal on Loans</i>		
1	Loan from the Government	15.00
	TUFIDCO (special road scheme)	16.88
	<b>Total Loan Outstanding</b>	<b>31.88</b>
<i>Source: Maramalai Nagar Municipality/TUFIDCO</i>		
<i>2 Non-Debt Liability</i>		<b>2005-06</b>
1	Library cess	19.84
2	Sales Tax Payable	0.51
3	Income Tax Payable	0.66
4	Interest Payable	0.00
5	Group Insurance Schemes	0.69
6	Contribution to CMDA	4.02

Source: Maraimalai Nagar Municipality

Final Report

## 8.8 Key Financial Indicators

8-18

To assess the financial situation and performance of the Maraimalai Nagar Municipality, certain key financial indicators have been taken from Urban Efficiency Indicators provided by the municipality. Following are the heads under which specific indicators of financial status and performance of the municipality has been assessed.

- **Resource Mobilization;**
- **Expenditure Management; and**
- **Debt and Liability Management.**

- **Resource Mobilization**

Indicators related to resource mobilization comprise of specific financial indicators that reflect financial status of the Municipality. The financial indicators related to sources of finances, their contribution and growth trends are outlined in Table 8B: Income Analysis

- **Expenditure Management**

Indicators pertaining to expenditure management comprise of specific indicators that reflect the utilization pattern of local body. The growth trends and utilization have been outlined in Table 8E: Expenditure Analysis. The other expenditure management indicators include per capita expenditure, operating ratio etc that give an indication of the financial performance/ management in the municipality are given below:

**Table 8-J : Expenditure Management**

<b>Particulars</b>	<b>2005-06</b>	<b>2006-07</b>
Per Capita Expenditure (Rs.)	994	1144
Operating Ratio (times)	1:2	1:2

*Source: Urban Performance Indicators provided by Maraimalai Nagar Municipality.*

- **Debt and Liability Management.**

Debt management is a significant issue that needs to be addressed, by every municipality for planning their borrowing from financial Institutions and the open market. In this regard Maraimalai Nagar municipality has a very minimal loan outstanding as a large % of its requirements are met through its own sources of funds. However during 2008-09, this position would change on account of schemes for water supply, UGD and road projects for which municipality proposes to undertake for which funds have been sought under UIDSSMT schemes and TUFIDCO. Once the loans materialize the outstanding of the municipality would be around Rs 11.10 crs

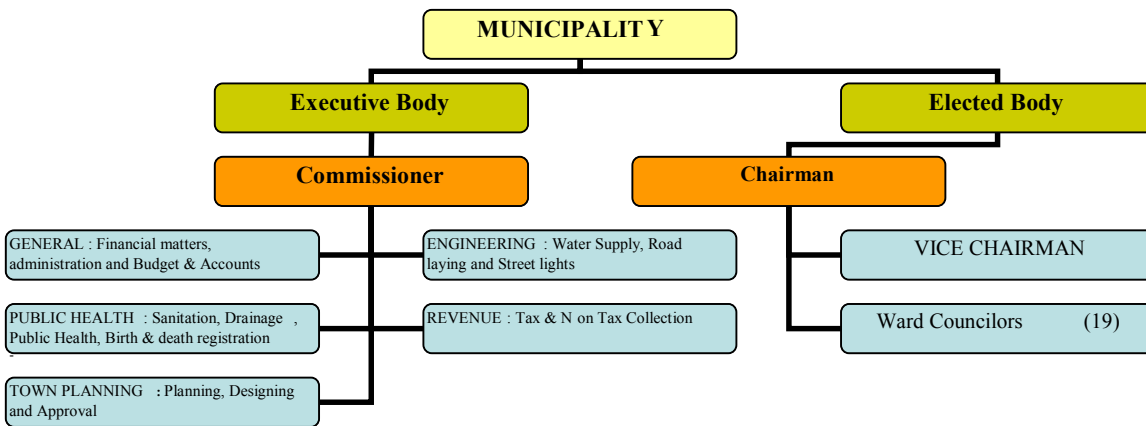


# 9 INSTITUTIONAL STATUS

The Organizational structure of Maraimalai Nagar Municipality and its staff strength are shown in *Figure 9-1* and *Table 9-A* respectively.

## 9.1 Institutional Structure

*Figure 9-1 Organization chart of Maraimalai Nagar Municipality*



Source: Maraimalai Nagar Municipality

**Table 9-A : The Staff strength of the Maraimalai Nagar Municipality**

	<b>Executive Staff</b>	<b>Sanctioned</b>	<b>Appointed</b>	<b>Post Vacant</b>
	<b>Administrative/General</b>			
	Executive Officer*	1	0	1
	Head Clerk	1	0	1
	Junior Assistant	3	2	1
	Typist	1	1	Nil
	Office Assistant	1	1	Nil
	Data entry operator	1	0	1
	Record clerk	1	1	Nil
	Night Watchman	1	1	Nil
	Jeep Driver	1	0	1
	<b>Engineering</b>			
	Municipal Engineer	1	1	Nil
	Overseer	2	2	Nil
	Water Work supervisor/Junior Engineer	1	1	Nil
	Fitter	1	1	Nil
	Tap Inspector	1	1	Nil
	Water supply Helper	5	5	Nil
	Pipe line maintenance	6	0	6
	Hand Pump maintenance	2	0	2
	OHT operator	14	14	Nil
	Electrician Grade 1	1	1	Nil
	Electrician Grade II	2	2	Nil
	Wire man	1	1	Nil
	Water supply tanker lorry driver	1	1	Nil
	Wireman Helper	2	2	Nil
	<b>Revenue</b>			
	Bill collector	3	1	2
	<b>Public Health</b>			
	Sanitary Inspector	1	1	Nil
	Sanitary Supervisor	1	1	Nil
	Sanitary worker**	1	1	0
	Tractor driver	1	1	Nil
	Public Health lorry driver	1	1	Nil
	Sanitary Worker	67	45	27
	<b>Town Planning</b>			
	Town Planning Inspector	1	1	Nil
	Town Planning Officer	2	2	Nil
	Chinaman	1	1	Nil
	Junior Assistant	1	1	Nil
	<b>Others</b>			
	Community Officer	1	1	Nil
	Data Entry operator	1	1	Nil

Source : Maraimalai Nagar Municipality

- As seen from the above table the vacancies are few against the sanctioned limit. However the vacancies in the public health section could be attributed to privatization of SWM service.

# 10 STAKEHOLDERS CONSULTATION

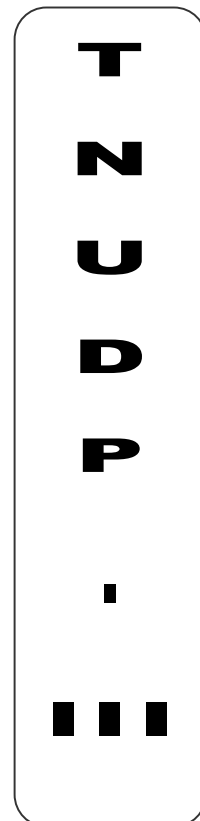
People perception and views should be given an important position in any development programme as the whole exercise is done for the common good of the people. Such perception and views have been obtained through continuous interactive and consultative process targeting various stakeholders of the town in all the stages of this project exercise as per the Terms of Reference (TOR).

<b>Stakeholders meeting</b>	<b>Held on</b>
Initial Stakeholders Consultation	30 <sup>th</sup> August 2007
I Review Committee meeting	11 <sup>th</sup> October 2007
I formal Stakeholders Consultation	2 <sup>nd</sup> November 2007
II Review Committee meeting	1 <sup>st</sup> February 2008
II formal Stakeholders Consultation	4 <sup>th</sup> April 2008
III Review Committee meeting	24th September 2008
City Opinion Survey	50 % survey during Inception stage
City Opinion Survey	Remaining 50% survey during Interim Stage

During the Inception stage, preliminary sectoral analysis of the town as well as the initial findings of the surveys conducted were discussed in the I Review Committee meeting and during the first formal stake holder's consultation held in the municipality.

During the Interim stage, sectoral analysis and issues, detailed survey findings through City Opinion Surveys, findings from the I formal stakeholders Consultation and the action plans to address various issues identified were discussed in the II Review Committee meeting and during II formal Stakeholders Consultation held in the Municipality. Further in the II formal Stakeholders consultation, projects already proposed by the Municipality as well as the projects and reforms required based on the analysis done by the consultants were put forward for getting feedback from the local stakeholders.

During the Draft Final Stage, development projects identified for various sectors and the Capital Investment requirements for each development project identified were discussed in the III Review Committee meeting held in RDMA Office, Chengalpattu.



**Final Report**

**10-1**

## **10.1 First Stake Holder's Consultation**

### **10.1.1 Problems highlighted**

The problems and issues identified by the elected representatives and administrative staff and NGO/Woman Groups/SHGs are encapsulated as under:

1. Need for road widening and road upgradation in some main roads and upgradation of interior roads. The proposals for the same are already under way.
2. Though UGD is present in industrial and town areas, they need upgradation as the scheme is very old. There is a need to bring in UGD in village areas which has no such facilities
3. Unsatisfactory quality of water supply provided by TWAD and Municipality as the water colour is reddish yellow hence receiving lot of complaints on the same
4. Poor quality ground water due to depletion of underground sources and also due to pollution and effluents from industrial belt affecting ground water supply
5. Bus terminus facilities are primitive and need upgradation. There is a proposal for the same.
6. Limited intra transport facilities especially for interior areas.
7. Limited recreational facilities such as parks, playgrounds, libraries etc
8. City needs sports academy and stadiums.
9. City lacks public toilets, community hall benefiting the public
10. Lacks solid waste treatment plan facilities and no segregation of waste done
11. Air and water pollution due to industrial activity and encroachments near the water bodies
12. Though many water bodies are present due to encroachment and pollution from industrial activity and hence there is a need to bring in project for maintaining the developing these water bodies for conservation and recreation purposes
13. Kambar street in Maraimalai nagar is heavily congested

Suggestions given by the elected representatives and administrative staff and NGO/Woman Groups/SHGs are encapsulated as under:

1. Household Service connections to all
2. Street Lighting to all villages
3. Closed drainage
4. Health Infrastructure facilities
5. Flyover / Subway between East and West at 6 points
6. Service road should be free from encroachments
7. Desilting Water bodies and it should be free from encroachments
8. Public playgrounds and Stadium has to be developed
9. Palaveli near Chengalpattu region is an alternate source for water supply
10. Comprehensive Local Water tapping scheme can be initiated
11. Approach road to village areas has to be widened.

## ***10.2 Findings of City opinion surveys***

As explained above, the surveys were conducted in 2 phases, 50% during inception stage and 50% during the interim stage. Overall 100 surveys were conducted with stake holders of Maraimalai Nagar to ascertain their views on the problems and prospects and vision for Maraimalai Nagar city. The findings of the survey during the first phase have already been covered in the Inception report. The overall findings covering 100 respondents (Phase I & Phase II of the survey) are discussed below:

## ***10.3 City Opinion Surveys***

### ***10.3.1 Problem areas - ranking***

During City Opinion Surveys, Stakeholders have been asked to rank problem areas pertaining to Physical infrastructure, Social Infrastructure and Environmental issues, which is presented in a scale of 0-100<sup>1</sup> scores.

<sup>1</sup> High score represents sector having problem of high intensity and low score represents sector having problem of less intensity.

**Figure 10-1 Physical Infrastructure – Problems areas ranking**

Physical Infrastructure	Anankaputhur	Maraimalai Nagar	Pammal	U Puzhuthivakkam	Madhuravoyal	Manali	Poonamallee	Thiruverkadu	Thiruthani	Valasaravakkam
Roads	4	2	3	2	2	3	2	3	4	1
Drinking Water	3	1	2	3	3	2	6	5	2	2
Underground Drainage	1	3	1	1	1	1	3	1	1	7
Storm Water Drainage	2	4	4	4	4	4	1	2	3	5
Solid Waste Management	7	6	6	5	5	6	4	4	3	3
Street Lighting	6	5	7	6	6	7	7	6	6	6
Parking facilities	5	7	5	7	7	5	5	7	5	4

**Figure 10-2 Social Infrastructure – Problem areas ranking**

Public amenities	Anankaputhur	Maraimalai Nagar	Pammal	U Puzhuthivakkam	Madhuravoyal	Manali	Poonamallee	Thiruverkadu	Thiruthani	Valasaravakkam
Health Facilities	1	4	3	1	1	2	5	1	2	3
Schools and Colleges	4	6	4	6	5	4	4	6	5	5
Parks and Playgrounds	3	3	5	5	2	5	1	3	3	4
Markets	5	2	6	4	4	6	6	2	6	6
Community Hall	2	5	1	3	3	3	2	5	4	1
Public Toilets	2	1	2	2	1	1	3	4	1	2

**Figure 10-3 Environmental Status – Problem areas**

Environmental Status	Anankaputhur	Maraimalai Nagar	Pammal	U Puzhuthivakkam	Madhuravoyal	Manali	Poonamallee	Thiruverkadu	Thiruthani	Valasaravakkam
Water Bodies	3	2	5	1	1	5	2	1	1	4
Air Pollution	5	3	2	3	2	1	1	2	4	1
Water Pollution	1	1	1	4	3	2	4	4	2	2
Land Pollution	4	5	3	2	4	3	3	3	3	3
Industries in the surroundings	2	4	4	5	5	4	5	5	NA	5

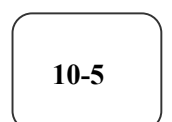
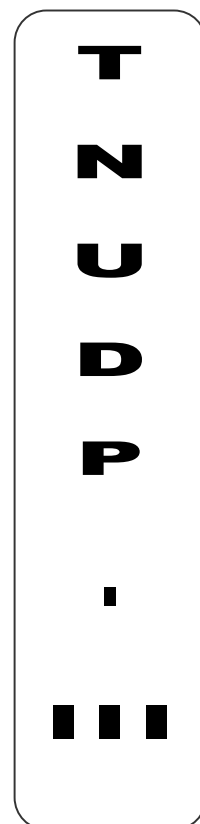
### 10.3.2 Sector Prioritization

Projects identified in the city development plan cannot be taken at one step for implementation due to constraints like finance, institutional capabilities etc. Thus, phasing of the projects based on stake holder's priority could be a viable option for implementing projects. During City Opinion Surveys, Stakeholders have been asked to prioritize the sectors pertaining to Physical infrastructure, Social Infrastructure and Environment and is presented in a scale of 0-100<sup>2</sup> scores.

#### 10.3.2.1 Physical infrastructure priority

Based on City Opinion Survey findings, Stakeholders have given priority to the sectors related to Physical infrastructure on the following order:

1. Drinking Water Supply
2. Road Network
3. Under Ground Drainage
4. Storm Water Drainage
5. Transport
6. Street lighting
7. Solid Waste Disposal
8. Parking facilities



<sup>2</sup> Sector is highly prioritized by the Stakeholders if it gets 100 score and least prioritized if it gets 0 score.

Figure 10-4 Sector prioritization by the Stakeholders (Physical Infrastructure)

Physical Infrastructure	Anankaputhur	Maraimalai Nagar	Pammal	U Puzhuthivakkam	Madhuravoyal	Manali	Poonamallee	Thiruverkadu	Thiruthani	Valasaravakkam
Roads	3	2	3	1	1	4	1	3	3	1
Drinking Water	2	1	2	3	3	2	7	4	2	2
Underground Drainage	1	3	1	2	2	1	3	1	1	8
Transport	5	5	6	5	6	3	5	6	8	3
Storm Water Drainage	4	4	4	4	4	5	2	2	4	5
Solid Waste Management	6	7	7	6	5	6	4	5	5	4
Street Lighting	7	6	8	7	7	8	8	7	7	7
Parking facilities	8	8	5	8	8	7	6	8	6	6

Source : Survey findings

### 10.3.2.2 Social infrastructure priority

Based on City Opinion Survey findings, Stakeholders have given priority to the sectors related to Social infrastructure on the following order:

1. Public Conveniences
2. Health facilities
3. Market
4. Parks, Playfields
5. Schools and Colleges
6. Public Transport
7. Community Hall
8. Recreation

Figure 10-5 Sector prioritization by the Stakeholders (Social Infrastructure)

Public Amenities	Anankaputhur	Maraimalai Nagar	Pammal	U Puzhuthivakkam	Madhuravoyal	Manali	Poonamallee	Thiruverkadu	Thiruthani	Valasaravakkam
Parks and Playfields	2	4	6	3	2	5	1	2	3	4
Transport Infrastructure	5	6	4	2	6	4	4	5	6	5
Schools and Colleges	4	5	3	6	7	3	7	4	5	6
Health Facilities	1	2	2	1	1	1	6	1	2	1
Community hall	2	7	1	4	4	-	2	7	4	2
Recreation	7	8	8	8	8	6	5	8	7	7
Markets	6	3	7	7	5	7	-	3	8	-
Public Toilets	3	1	5	5	3	2	3	6	1	3

Source : Survey findings

### 10.3.2.3 Environmental Issues

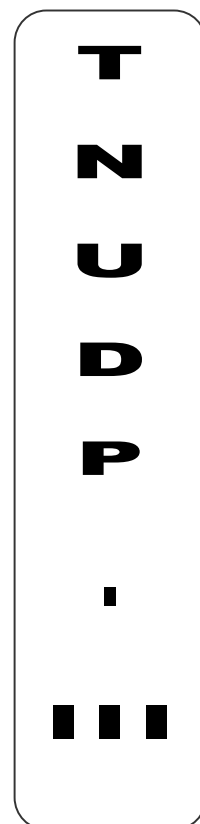
Based on City Opinion Survey findings, Stakeholders have given priority to the Environmental Issues on the following order:

1. Water Pollution
2. River/Lake
3. Air pollution
4. Land Pollution
5. Flood problem (water logging)
6. Open drainage
7. Noise Pollution
8. Open space (unavailability)

Figure 10-6 Sector prioritization by the Stakeholders (Environmental Issues)

Environmental Status	Anankaputhur	Maraimalai Nagar	Pammal	U Puzhuthivakkam	Madhuravoyal	Manali	Poonamallee	Thiruverkadu	Thiruthani	Valasaravakkam
River / Lake redevelopment	2	2	5	1	1	4	3	1	1	-
Air pollution control	6	3	2	5	2	1	1	2	5	1
Water pollution control	1	1	1	4	4	2	5	3	3	2
Land pollution control	4	4	4	2	3	3	4	4	4	4
Noise pollution control	7	7	6	8	7	5	6	7	8	3
Closing Open drains	3	6	3	6	5	7	2	5	2	5
Creating Open spaces	8	8	-	7	6	8	7	8	6	7
Flood control	5	5	-	3	-	6	-	6	7	6

Source : Survey findings



Final Report

10-7

## 10.4 Second Stake holder's Consultation

### 10.4.1 Projects Identified

Physical Infrastructure	Sector Components	Key Suggestions / Projects identified
Water Supply	Water Sources	<ul style="list-style-type: none"> <li>Palaveli (Palar river source) can be tapped</li> <li>26 lakes within Municipal area can be developed for alternate water source.</li> </ul>
	Head works and Pumping main	<ul style="list-style-type: none"> <li>WSIS under UIDSSMT is ongoing at a cost of Rs. 254 Lakhs</li> </ul>
	ESR / GSR	<ul style="list-style-type: none"> <li>14 OHTs of 1 lakh capacity each is proposed to supply water to uncovered areas (thought process)</li> </ul>
	Distribution Network	<ul style="list-style-type: none"> <li>Laying distribution network to connect proposed OHTs (thought process)</li> </ul>
	Operation & Maintenance	<ul style="list-style-type: none"> <li>Already privatized.</li> </ul>
Sewerage and Sanitation	Underground Drainage	<ul style="list-style-type: none"> <li>UGD improvement scheme is ongoing at a cost of Rs. 375 lakhs under UIDSSMT</li> </ul>
	Public Toilets / Pay & Use	<ul style="list-style-type: none"> <li>Required public toilets (14 Nos) in Ward No. 01, 02, 09, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20 and 21 each.</li> <li>Pay and Use can be provided in Potheri, Kattankulathur and Maraimalai Nagar Railway station. One Pay and Use proposed under Bus Stand Improvement Scheme.</li> </ul>

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N

C

D

P

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III

Final Report

10-8

Storm Water Drainage	New Drain Provision	<ul style="list-style-type: none"> <li>• 7 Culverts across National Highway 45 are required to drain Storm water.</li> <li>• Overflow weir with proper drainage channel is required for all the 26 existing lakes</li> </ul>
Roads	Kutchra road up gradation	<ul style="list-style-type: none"> <li>•</li> </ul>
	Pucca road improvement	<ul style="list-style-type: none"> <li>• CC Pavement to Pavender road – Rs. 298 lakhs (Tender called)</li> <li>• CC Pavement to Anna road – Rs. 244 lakhs (Tender called)</li> <li>• BT in Adikalar, Periyar, Kamaraj Nagar, Quide Millath road and BT with SWD in Thiruvalluvar road at an estimated cost of Rs. 312 lakhs (Tender called)</li> <li>• Converting kutchra road into Pucca</li> </ul>
	Bye pass / Highway projects	<ul style="list-style-type: none"> <li>• Providing service road on both the sides of the National Highway from Goduvancherry to Singaperumal Koil for a length of 7 Kms.</li> <li>• Developing 100 feet parallel road (Periyar Salai) to NH – 45 from Guduvanchery – Valancheri – Potheri – Thinnakkattur – Thaiyal Nagar – MM Nagar – Ford – Chinga Perumal Koil for a length of 10 Kms.</li> </ul>
Traffic and Transportation	Traffic Management / Junction Improvement	<ul style="list-style-type: none"> <li>• Junction Improvement scheme in SRM college junction, Singa Perumal Koil Junction, Potheri Junction and Kattankulathur Junction.</li> </ul>

**T  
N  
C  
D  
P  
.III**

**Final Report**

**10-9**

**INDEX**

**Final Report**

**10-10**

	<p>Bus stand / railway station Imp</p>	<ul style="list-style-type: none"> <li>• Bus stand Improvement Scheme is proposed at an estimated cost of Rs. 200 lakhs ( proposed facilities include Bus bays, Waiting hall, Tax Collection center, Restaurants, 20 shops, Pay and Use Toilets, CC pavement with the help of Rs. 100 lakh grant from CMA (Request has already been sent) in an area of 1.5 acre land</li> <li>• Separate Mouffsil Bus stand is required for Regional Transport System.</li> <li>• Railway Station Improvement Scheme is required for Potheri, Kattankulathur and Maraimalai Nagar Station.</li> <li>• RoBs required in Thailavaram, Potheri, Kattankulathur, Maraimalai Nagar, Peramanur Samiyar gate, Peramanur Ford gate.</li> </ul>
	<p>Public Transport</p>	<ul style="list-style-type: none"> <li>• City Bus transport in road connecting Singa Perumal Koil, Industrial Estate, W. No 08, 02, 01 connecting Guduvanchery</li> <li>• City bus transport connecting Guduvanchery, W. No.1, 2 connecting Kalivandapattu</li> <li>• City Bus transport connecting Bus Stand, 3 Railway stations and all revenue villages</li> <li>• Parking spaces can be created at 3 Railway stations, Bus stand &amp; near Commercial complex proposed</li> </ul>

Solid Waste Management	Door to Door collection and Segregation	<ul style="list-style-type: none"> <li>Waste segregation can be adopted after proposed Compost yard works are implemented.</li> <li>Segregation bins can be purchased with the help of private sponsorship.</li> </ul>
	Vehicle requirements	<ul style="list-style-type: none"> <li>Mini lorries (2 Nos), Dumper placer (1 No), Bio- Pulverizer, Screener, Turner and Front –end loader are proposed under SWM Infrastructure development works</li> </ul>
	Dumping site / Compost yard	<ul style="list-style-type: none"> <li>SWM infrastructure works proposed at an estimated cost of Rs. 206 lakhs (General funds).</li> </ul>
	User Charges	<ul style="list-style-type: none"> <li>User charges can be collected from main residential areas, Industrial units, Marriage halls and Commercial areas after creating public awareness.</li> </ul>
Street Lighting	Energy Saving Initiatives	<ul style="list-style-type: none"> <li>Adopted. 270 CFL lamps are already installed.</li> <li>150 timer switches have already been installed out of 167 overall switches</li> <li>1 timer Switch – Rs. 7190</li> <li>CFL lamp – Rs. 5500</li> <li>Mini High Mast with CFL lamps – 2.3 lakhs</li> <li>High Mast with CFL lamps – 5 lakhs</li> </ul>
	Street light requirements	<ul style="list-style-type: none"> <li>Additional 100 CFL lamps required for each ward.</li> <li>Additional High Mast lights are required in main road – Valancheri and Keelakarunai.</li> </ul>

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III

Final Report

10-11

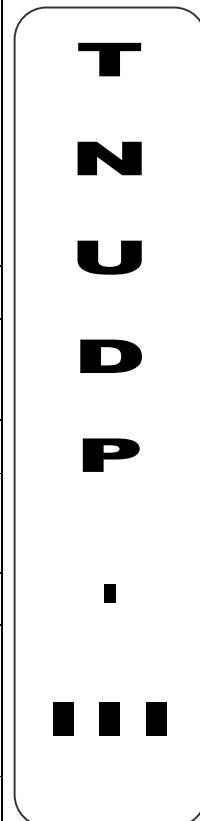
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**Final Report**

**10-12**

<b>Social Infrastructure</b>	<b>Sector Components</b>	<b>Key Suggestions</b>
Hospitals / Primary Health centers	General Hospital	<ul style="list-style-type: none"> <li>Existing Primary Health Centre can be converted into General Hospital ( 10 acre land can be purchased for the same)</li> </ul>
Parks and Playgrounds	Approved layout for parks and playgrounds	<ul style="list-style-type: none"> <li>Currently 150 approved layouts for parks and playgrounds are existing which can be developed.</li> <li>Parks and Playgrounds required especially in 12<sup>th</sup> ward since it is predominantly an industrial area.</li> </ul>
Community hall	Community hall	<ul style="list-style-type: none"> <li>Required Community hall (Land is available)</li> </ul>
Slaughter House	Slaughter house	<ul style="list-style-type: none"> <li>Slaughter house has already been proposed at an estimated cost of Rs. 25 lakhs in Kamarajar Road under Part II Scheme (Rs. 10 lakhs grant)</li> </ul>
Municipal building	Creating new blocks	<ul style="list-style-type: none"> <li>Renovation required at a cost of Rs. 30 Lakhs</li> <li>The vacant land (1.79 acres) opposite to Municipal Office can be developed which accommodates Municipal office, shopping complex, Municipal Commissioner and Municipal Engineer Quarters.</li> <li>4 ward offices can be constructed within Municipal area.</li> </ul>
Burial grounds / Gasifier	Gasifier provision	<ul style="list-style-type: none"> <li>10 burial grounds to be improved at an estimated cost of Rs. 50 lakhs in 2008 – 2009 using General Funds</li> <li>Gasifier Crematorium is proposed at NH - 3 at an estimated cost of Rs.50 lacs funded through Part II scheme (Grant Rs.20 lacs)</li> </ul>

Commercial complexes / Shops	Creating new complexes/Improvement commercial complex	<ul style="list-style-type: none"> <li>• 20 shops proposed under bus stand improvement scheme</li> <li>• Existing shops (12 shops) in Thayumanavar Street to be renovated at a cost of Rs. 45 lakhs in 2008 – 2009 using General funds.</li> </ul>
Other amenities	Daily Market	<ul style="list-style-type: none"> <li>• Required ( land has to be acquired)</li> </ul>
	Public Amenity sites allotted by CMDA	<ul style="list-style-type: none"> <li>• CMDA has to handover sites allotted for public amenities to Municipality</li> </ul>
	Entertainment center	<ul style="list-style-type: none"> <li>• Required</li> </ul>
	Library with Computer center	<ul style="list-style-type: none"> <li>• Required</li> </ul>
	Marriage halls	<ul style="list-style-type: none"> <li>• Renovating 2 Marriage halls required</li> </ul>
	River Front / Pond / Lake Development	<ul style="list-style-type: none"> <li>• Lake improvements (Cleaning, desilting, Bank strengthening with recreational facilities required in 26 water bodies.</li> </ul>
<b>Privatization / Cost Recovery</b>	<b>Sector Components</b>	<b>Key Suggestions</b>
	Areas for privatization	<ul style="list-style-type: none"> <li>• Currently O &amp; M of Water Supply, UGD and SWM (partially) is privatized.</li> </ul>
	User charges	<ul style="list-style-type: none"> <li>• User charges can be collected from main residential areas, Industrial units, Marriage halls and Commercial areas after creating public awareness.</li> </ul>
<b>Slums and Urban Poverty</b>	<b>Sector Components</b>	<b>Key Suggestions</b>
	IHSDP	<ul style="list-style-type: none"> <li>• Proposed at an estimated cost of Rs. 600 lakhs</li> </ul>
<b>Others</b>	<b>Sector Components</b>	<b>Key Suggestions</b>
Truck terminal		<ul style="list-style-type: none"> <li>• Truck terminal for Industrial area required</li> </ul>
Ladies Hostel		<ul style="list-style-type: none"> <li>• Required</li> </ul>



**Final Report**

**10-13**

Figure 10-7 Second Stakeholders Consultation



Figure 10-8 Review Meetings



F  
N  
C  
D  
P  
.III

Final  
Report

10-14

# 11 SWOT

Based on Stakeholder's perception and viewpoints and on the basis of City Opinion Survey in Maraimalai Nagar, an attempt has been made to evaluate Strength, Weakness, Opportunities and threats of the city, which is illustrated below:

## Strength

- ✓ Satellite town of Chennai – 45 kms from Chennai
- ✓ Good road and rail connectivity
- ✓ Airport at 25 kms
- ✓ Many large industries in the area
- ✓ Fairly Good Physical and Social Infrastructure

## Opportunities

- ✓ Scope for developing New Chennai
- ✓ Large track of undeveloped land (nearly 80%) and hence potential for planned development.
- ✓ Scope for Real Estate development, industrial and commercial activity
- ✓ Scope for economic growth and development

## Weakness

- ✓ Absence of water supply sources nearby.
- ✓ Drinking Water supplied by TWAD has iron content.
- ✓ Absence / Inadequate infrastructure in revenue Villages
- ✓ Connectivity is weak across railway line between East and West.

## Threats

- ✓ Water bodies and water table getting polluted due to encroachments and effluent discharge from Maraimalai Nagar industrial area
- ✓ Air Pollution from industrial activity leading to health hazards
- ✓ Problem of encroachment due to fast increase in land prices

**T  
N  
C  
D  
P  
.III**

**Final Report**

11-1

## **11.1 Strengths**

### **11.1.1 Base for many industries**

There are about 250 industries in this area. The area is base for well known industries in the automobile, forging and other sectors. It has 2 industrial estates. Major industries are Ford, KIWI Polish, TAFE, Indian Piston, AUDCO valves etc. There are also food processing and pharmaceutical units.

### **11.1.2 Good Connectivity**

City has good road and rail connectivity. The municipality is also about 25 kms from Chennai airport.

### **11.1.3 Fairly good Physical and Social Infrastructure**

The physical and social infrastructure is available in the region though it requires up gradation and improvement. Under ground drainage network is available in the urban region. Most of the social infrastructures like hospitals, schools, colleges etc. are available.

## **11.2 Opportunities**

### **11.2.1 Scope for developing New Chennai**

Adequate land is available for development and the area has the potential to develop as a planned satellite town to Chennai. The area can be act as an industrial and commercial hub and the real estate development in this region is possible.

## **11.3 Weaknesses**

### **11.3.1 Absence of water supply sources nearby**

Town has no Perennial surface water sources nearby and has to depend on Palar River for Water supply which has high iron content. Lakes and Ponds available within the municipal area are still unexploited.

### **11.3.2 Absence / Inadequate infrastructure in revenue Villages**

Town area has adequate infrastructure facilities whereas the revenue villages are lagging behind as far as infrastructure facilities like Sewerage, adequate water supply, solid waste collection and disposal and proper roads.etc are concerned.

### **11.3.3 Connectivity is weak across railway line between East and West.**

Since the railway line passes through the municipal area, there is a connectivity problem between east and west Maraimalai Nagar. There are 6 such links where ROBs have to be provided for improving the connectivity

## **11.4 Threats**

### **11.4.1 Pollution and Encroachments**

Encroachment of water bodies is commonly seen. Water bodies are getting polluted due to lot of industrial activity. Water table in the last few years has also gone down. Air pollution from industrial area is also a threat for Urban environment.

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III

Final  
Report

11-3

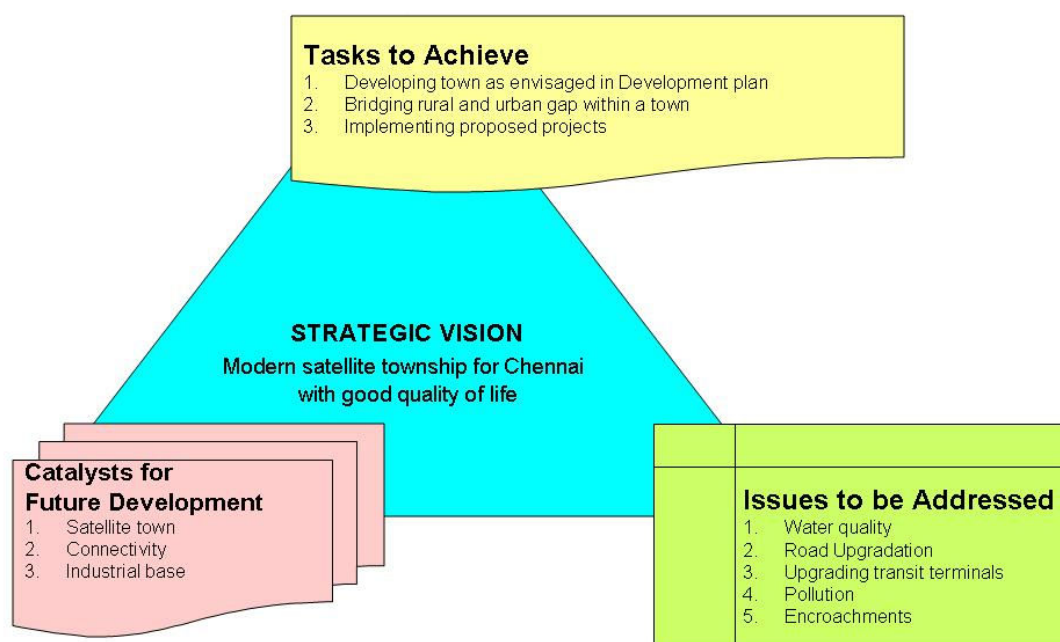


# 12 STRATEGIC VISION AND DEVELOPMENT OBJECTIVES

Stakeholder’s Consultations and Primary surveys held in Maraimalai Nagar as well as the Review Committee meeting held in Commissionerate of Municipal Administration office have resulted in identifying and formulating City Vision for future development which is shown in

*Modern Satellite Township for Chennai with good quality of life*

**Figure 12-1: Development Vision model for Maraimalai Nagar City Development Plan2036**



To achieve the vision, Municipality will have to address the following broad issues immediately and are listed below:

1. Water quality
2. Road Up gradation
3. Upgrading transit terminals
4. Pollution
5. Encroachments

To convert the visionary statement on paper to a ground reality, the tasks that have to be accomplished immediately by the Municipality and other related agencies are listed below:

1. Developing town as envisaged in Development plan
2. Bridging rural and urban gap within a town
3. Implementing proposed projects

Certain catalysts have been identified which could speed up the development process of Maraimalai Nagar and eventually could help in achieving CMA vision cum Strategy which are listed below:

1. Satellite town
2. Connectivity
3. Industrial base

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N  
C  
D  
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**Final  
Report**

**12-2**

# 13 CONSOLIDATED ISSUES

Table 13-A Consolidated Issues

Sector	Issues
Water Supply	<ul style="list-style-type: none"> <li>Water supplied by TWAD is yellow in color due to high iron content.</li> <li>74 percent of the assessments are uncovered by Household Service Connections</li> <li>55 percent of the roads are still uncovered by distribution network</li> <li>Distribution problem in some areas like Thirukatchur, Thailavaram Colony and Thailavaram Village.</li> <li>No treatment other than Chlorination</li> </ul>
Sewerage and Sanitation	<ul style="list-style-type: none"> <li>No UGD in village wards</li> <li>UGD introduced at the time of formation by CMDA about 25 years back</li> <li>Industrial effluents and Sewage disposed into the lake causing water pollution.</li> </ul>
Storm Water Drainage	<ul style="list-style-type: none"> <li>Nearly 56 Km existing bitumen roads have no Storm water drains</li> <li>46 percent of the total roads in Maraimalai are Kutcha and have no drains.</li> </ul>
Solid Waste Management	<ul style="list-style-type: none"> <li>No segregation of waste by both private body and municipality.</li> <li>Inadequate fleet capacity to quantity of waste generated</li> <li>Inadequate staff</li> <li>No scientific method of waste disposal and treatment as on today</li> <li>Village wards are not covered by Solid Waste Management system.</li> </ul>

T  
N  
C  
D  
P  
.III

Final Report

13-1

Sector	Issues
Roads, Traffic and Transportation	<ul style="list-style-type: none"> <li>• 46 percent of the roads need up gradation</li> <li>• Railway line acts as a barrier for East and West Connectivity</li> <li>• Bus Stand and Railway Station infrastructure facilities are inadequate</li> <li>• Roads connecting revenue villages are narrow and needs widening.</li> <li>• No Parking spaces created for Autos, Cars and Two Wheelers</li> <li>• Connectivity by rail transit would be inadequate ( in terms of frequency) considering future demand.</li> </ul>
Street Lighting	<ul style="list-style-type: none"> <li>• Village wards are not covered by Street Lighting.</li> <li>• Spacing between lamps are around 58 meters against the standard norm of 30 meters.</li> </ul>
Socio-Economic Infrastructure	<ul style="list-style-type: none"> <li>• Town has no Slaughter house</li> <li>• Town has no Commercial complexes for revenue generation</li> <li>• 12 shops owned by the Municipality are not in usage</li> <li>• Water bodies are not properly maintained and are getting polluted.</li> <li>• Encroachments in Maraimalai Nagar lake</li> <li>• Town has no Municipal markets</li> <li>• Primary health center needs upgradation</li> <li>• Absence of Big Playground / Stadium.</li> </ul>
Urban Environment	<ul style="list-style-type: none"> <li>• Water gets polluted due to disposal of liquid waste and Industrial waste into lakes.</li> <li>• Water bodies are not properly managed and utilized for ground water recharge.</li> <li>• Air pollution due to industrial belt</li> <li>• Land Pollution due to disposal of solid waste without treatment</li> </ul>

Sector	Issues
Slums and Urban Poverty	<ul style="list-style-type: none"> <li>• Vallancheri has the maximum slum population</li> <li>• Slum areas have inadequate sanitation facilities like public toilets</li> <li>• More than 5000 families are living Below Poverty Line</li> <li>• 12 Km roads are Kutchra in slum areas.</li> </ul>

T  
N  
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D  
P  
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III

Final  
Report

13-3

# 14 SECTORAL STRATEGY AND ACTION PLAN

In order to address the issues identified during Inception, Interim, Draft Final stage and during Stakeholders meeting, the sectoral strategies and action plans have been proposed in this stage. Such action plans and strategies are converted into projects and are phased out based on the priority suggested by the Stakeholders, which are broadly explained in the subsequent chapters.

## 14.1 Sectoral Strategy

Action plans for improving the existing situation of various sectoral components as well as for creating new infrastructure facilities have been formulated in consultation with the Stakeholders and are listed below:

*Table 14-A Action Plan for future development of the town*

Sector	Sectoral Strategy / Action Plan
Water Supply	<ul style="list-style-type: none"> <li>• Developing 26 lakes in phases for tapping alternate water source with overflow weir and proper drainage channel (Estimated cost - 650 lakhs)</li> <li>• Water Supply Improvement Scheme (Rs. 254 lakhs - ongoing)</li> <li>• 14 OHTs of 1 lakh capacity to uncovered areas by 2022-23</li> <li>• DPR for tapping palaveli water source</li> <li>• Construction of Intake and and Pump House for new water supply scheme - Palaveli water supply scheme</li> <li>• Construction of 5.2 mld water treatment plant - Palaveli water supply scheme</li> <li>• Laying of 400 mm dia PSC Pipe of 15 km length - Palaveli water supply scheme</li> <li>• Construction of 6.5 mld water treatment plant in year 2023 - Palaveli water supply scheme</li> <li>• Laying 59.26 Km distribution network by 2012-13, 78.14 Km between 2013-14 and 2017-18.</li> </ul>

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Final Report

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**Final  
Report**

**14-2**

<b>Sector</b>	<b>Sectoral Strategy / Action Plan</b>
Sewerage and Sanitation	<ul style="list-style-type: none"> <li>• UGD improvement scheme (ongoing at a cost of Rs. 375 lakhs under UIDSSMT)</li> <li>• Setting up STP (Total 17 MLD capacity) - 10 MLD demand by 2022-23</li> <li>• Laying 68 Km sewer network by 2017-18, 66 km between 2017-18 and 2022-23</li> <li>• Providing 14 public toilets in 01, 02, 09, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20 and 21</li> <li>• 4 pay and use toilets in 3 Railway stations and in Bus stand</li> </ul>
Storm Water Drainage	<ul style="list-style-type: none"> <li>• 7 Culverts across National Highway 45 - Highway -Imp agency Estimated cost - 28 lakhs</li> <li>• Laying 104 Km storm water drain by 2017-18, 101.5 Km SWDs between 2017-18 and 2022-23.</li> </ul>
Solid Waste Management	<ul style="list-style-type: none"> <li>• Protective gear for Conservancy worker (Workers will get safety gear once in two years)</li> <li>• Procuring Separate bins for Waste Segregation at source for each household (with private sponsorship)</li> <li>• SWM Infrastructure development works (Mini lorries (2 Nos), Dumper placer (1 No), Bio- pulverizer, Screener, Turner and Front –end loader) with the help of general fund</li> <li>• Purchasing Compactor (2 Nos) with bins</li> <li>• Cost for land fill site</li> </ul>

Sector	Sectoral Strategy / Action Plan
Roads, Traffic and Transportation	<ul style="list-style-type: none"> <li>• CC Pavement to Pavender road (Tender called) - Rs. 298 lakhs</li> <li>• CC Pavement to Anna road (Tender called) - Rs. 244 lakhs</li> <li>• BT in Adikalar, Periyar, Kamaraj Nagar, Quide Millath road and BT with SWD in Thiruvalluvar road (Tender called) - Rs. 312 lakhs</li> <li>• Converting 78.14 Km kutchra road into Pucca road</li> <li>• Providing service road on both the sides of the National Highway from Guduvancherry to Singaperumal Koil for a length of 7 Kms - highway implementing agency - Rs. 210 lakhs</li> <li>• Developing 100 feet parallel road (Periyar Salai) to NH – 45 from Guduvanchery – Valancheri – Potheri – Thinnakkattur – Thaiyal Nagar – MM Nagar – Ford – Chinga Perumal Koil for a length of 10 Kms.</li> <li>• 4 Junction Improvement scheme in SRM college junction, Singa perumal Koil Junction, Potheri Junction and Kattankulathur Junction.</li> <li>• Bus stand Improvement Scheme</li> <li>• Separate Mouffsil Bus stand for Regional Transport System</li> <li>• Station area improvement scheme for Potheri, Kattankulathur and Maraimalai Nagar Station - imp agency Railways</li> <li>• Creating 6 RoBs in Thailavaram, Potheri, Kattankulathur, Maraimalai Nagar, Peramanur Samiyar gate, Peramanur Ford gate</li> <li>• City Bus transport in road connecting Singa perumal koil, Industrial estate, W. No 08, 02, 01 connecting Guduvanchery - State transport Corporation - Imp agency</li> <li>• City bus transport connecting Guduvanchery, W. No.1, 2 connecting Kalivandapattu - State transport Corporation - Imp agency</li> <li>• City Bus transport connecting Busstand, 3 Railway stations and all revenue villages - State transport Corporation - Imp agency</li> <li>• Relaying existing BT road once in three years (100.69 Km)</li> <li>• Relaying existing CC road once in 15 years (12.85Km)</li> <li>• Relaying 78.14 Km road once in three years after its conversion from Kutchra to Pucca road.</li> <li>• Relaying new roads after 3 years of its implementation(6.1Km)</li> </ul>

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Final Report

14-3

<b>Sector</b>	<b>Sectoral Strategy / Action Plan</b>
Street Lighting	<ul style="list-style-type: none"> <li>• Providing 761 additional energy saver lamps by 2012-13, 2605 lamps between 2013-14 and 2022-23 @ 5500 per unit</li> <li>• Installation of voltage controller&amp; timers for 17 poles @ 7200 per pole(150 poles have already been provided timers)</li> <li>• Installation of electronic chokes in place of conventional copper chokes and 36 w tube lights (for existing 3344 tube lights which excludes existing 270 CFL lamps)</li> <li>• 2 High Mast lights are required in Valancheri and Keelakarunai @5 lakh per High Mast with CFL provision.</li> </ul>
Socio-Economic Infrastructure	<ul style="list-style-type: none"> <li>• Converting Primary Health Centre into General Hospital - Health Department - Imp Agency</li> <li>• Developing 150 approved layouts into parks and playgroundsin phases</li> <li>• Developing Community hall</li> <li>• Slaughter house (proposed under Part II scheme for 25lakhs, 10 lakhs grant out of 25 lakhs)</li> <li>• Creating New municipal office opposite to existing municipal building accomodating Municipal office, shopping complex, Municipal Commissioner and Municipal Engineer Quarters in a land of 1.79 acres</li> <li>• Creating 4 ward offices</li> <li>• Gasifier Crematorium (proposed at NH -3 in an estimated cost of Rs. 50 lakhs), grant is Rs. 20 lakhs</li> <li>• 10 burial grounds Infrastructure improvement scheme</li> <li>• Existing shops (12 shops) in Thayumanavar Street renovation using General fund</li> <li>• Developing Market Infrastructure through Private partnership</li> <li>• Renovating 2 marriage halls</li> <li>• Creating Entertainment center through private participation</li> <li>• Establishing Multi-purpose Stadium through PPP</li> <li>• Creating Truck terminus through PPP</li> <li>• Consultancy services for Bid process management and selection of bidder for PPP projects (3 major projects)</li> </ul>
Slums and Urban Poverty	<ul style="list-style-type: none"> <li>• Implementing IHSDP (Project cost of Rs. 600 lakhs is escalated by 20%)</li> </ul>

Sector	Sectoral Strategy / Action Plan
Urban Environment	<ul style="list-style-type: none"> <li>• Developing Recreational green spaces in 26 lakes</li> <li>• Tree plantation scheme along lake banks, Bus stand and in Railway stations and all along roads (maintenance through private participation for first 5 years) engaging NGOs</li> <li>• Creating Pollution checkup stations and kisoks through private participation</li> </ul>

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**Final Report**

**14-5**



# 15 CAPITAL INVESTMENT PLAN

The Capital Investment Plan (CIP) identifies the investment requirement of the town without taking into consideration the financial feasibility of the projects, which would be covered in Financial Operating Plan (FOP). Maraimalai Nagar investment requirement is Rs **14820.44** lakhs. Consolidated Sector wise Investment requirement for Maraimalai Nagar Municipality is shown in *Table 15-4*.

*Table 15-4 Consolidated Sector wise Capital Investment requirements*

Rs. in Lakhs

Sector	Total Investment	2008-09 to 2012-13	2013-14 to 2017-18	2018-19 to 2022-23
Water Supply	3373.89	833.39	2540.50	0.00
UGD	1578.34	486.34	0.00	1092.00
Sanitation	90.00	90.00	0.00	0.00
Storm Water Drainage	2440.00	2440.00	0.00	0.00
Solid Waste management	542.55	369.82	94.14	78.59
Roads, Traffic and transportation	3772.57	1859.46	1072.07	841.04
Street Lighting	138.09	66.46	35.82	35.82
Socio-economic Infrastructure	725.00	475.00	125.00	125.00
Slums and Urban poverty	2160.00	720.00	720.00	720.00
<b>Total Investment</b>	<b>14820.44</b>	<b>7340.47</b>	<b>4587.52</b>	<b>2892.45</b>
<b>% Share</b>	<b>100.00</b>	<b>49.5</b>	<b>31.00</b>	<b>19.5</b>

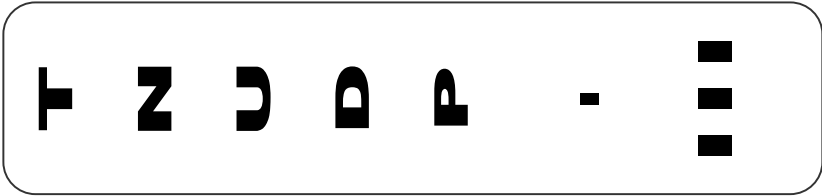
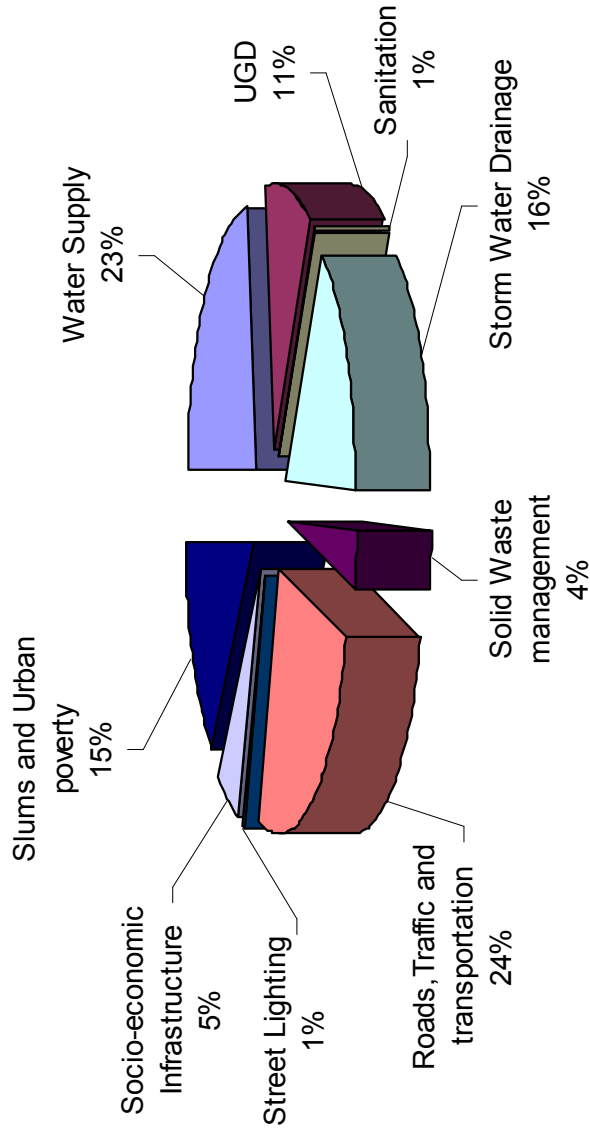
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**Final  
Report**

**15-1**

In this CDP cost estimates, BSUP project considered to be implemented in each phase covers 15% of the total estimated cost. However, estimated cost for all other Infrastructure sectors in this CDP covers the entire town including slums and urban poor. In order to determine the sectoral allocation for slums and urban poor, cost estimates among the sectors for slums and other areas have been worked out as shown in *Table 15-B*.

*Figure 15-1 Sector wise percentage share*



Final Report

15-2



Table 15-B Cost estimates for slums and other areas in Maraimalai Nagar

Project Sector	Total Cost estimates for other areas	Total Cost estimates for slum areas	Total cost estimates for Maraimalai Nagar
Water Supply	2631.63	742.26	3373.89
Sewerage and Sanitation	1301.31	367.03	1668.34
Storm Water Drainage	1903.20	536.80	2440.00
Solid Waste Management	363.51	179.04	542.55
Roads, Traffic and Transportation	2942.61	829.97	3772.57
Street Lighting	107.71	30.38	138.09
Socio-Economic Infrastructure	485.75	239.25	725.00
Basic Services for Urban Poor	0.00	2160.00	2160.00
<b>Total</b>	<b>9735.72</b>	<b>5084.73</b>	<b>14820.44</b>

### 15.1 CIP for Physical Infrastructure sectors

During stake holder's consultation and on the basis of demand supply gap analysis, various works have been identified under different sectors like Water Supply, Sewerage, Solid Waste Management, Storm Water Drains, Roads and Street Lighting which are classified as Physical Infrastructure sectors. The Budget Estimates for the identified projects have been carried out based on TWAD Board Standard Schedule of Rates 2007-08, market rates and with some assumptions on the technical aspects and wherever the estimates are available with the Municipality, the same has been considered for those works.

**T N J D P .**

**Final Report**

**15-3**

### 15.1.1 Water Supply

Various works have been identified under Water Supply Sector on the basis of stake holder's suggestion and on the basis of Demand Supply Gap analysis. The works identified and phase wise investment for the various works are listed below.

**The total estimated cost for the Water Supply Works - Rs. 3373.89 lakhs.**  
**Implementing Agency – Maraimalai Nagar Municipality**  
**Project Manager – Municipal Engineer**

*Table 15-C Project List and Budget Estimates for Water Supply Works*

Rs. in Lakhs

Project list	Estimated cost	2008-09 to 2012-13	2013-14 to 2017-18	2018-19 to 2022-23
Developing 26 lakes in phases for tapping alternate water source with overflow weir and proper drainage channel (Estimated cost - 650 lakhs)				
Water Supply Improvement Scheme (Rs. 254 lakhs - ongoing)				
14 OHT's of 1 lakh capacity to uncovered areas by 2021-22	140.00	140.00	0.00	0.00
DPR for tapping palaveli water source	33.39	33.39	0.00	0.00
Construction of Intake and Pump House for new water supply scheme - Palaveli water supply scheme	585.00	0.00	585.00	0.00

Final Report

15-4



<b>Project list</b>	<b>Estimated cost</b>	<b>2008-09 to 2012-13</b>	<b>2013-14 to 2017-18</b>	<b>2018-19 to 2022-23</b>
Construction of 5.2 MLD water treatment plant - Palaveli water supply scheme	624.00	0.00	624.00	0.00
Laying of 400 mm dia PSC Pipe of 15 km length - Palaveli water supply scheme	460.50	0.00	460.50	0.00
Laying 59.26 Km distribution network by 2012-13, 78.14 Km between 2013-14 and 2017-18.	1531.00	660.00	871.00	0.00
<b>Sub Total</b>	<b>3373.89</b>	<b>833.39</b>	<b>2540.50</b>	<b>0.00</b>

### ***15.1.2 Sewerage and Sanitation***

Detailed list of works, costing and phase wise implementation is given below.

**The total estimated cost for the Sewerage & Sanitation Works - Rs. 1668.34 lakhs.**

**Implementing Agency – TWAD / Maraimalai Nagar Municipality**

**Project Manager – Executive Engineers from TWAD / Municipal Engineer**

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**Final Report**

**15-5**

**Table 15-D Project List and Budget Estimates for Sewerage and Sanitation Works**

Rs. In Lakhs

<b>Project list</b>	<b>Estimated cost</b>	<b>2008-09 to 2012-13</b>	<b>2013-14 to 2017-18</b>	<b>2018-19 to 2022-23</b>
UGD improvement scheme (ongoing at a cost of Rs. 375 lakhs under UIDSSMT)				
Setting up STP (Total 17 MLD capacity) - 10 MLD demand by 2022-23	1092.00	0.00	0.00	1092.00
Laying 68 Km sewer network by 2017-18	486.34	486.34	0.00	0.00
Providing 14 public toilets in 01, 02, 09, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20 and 21	70.00	70.00	0.00	0.00
4 pay and use toilets in 3 Railway stations and in Bus stand	20.00	20.00	0.00	0.00
<b>Sub Total</b>	<b>1668.34</b>	<b>576.34</b>	<b>0.00</b>	<b>1092.00</b>

**15.1.3 Storm Water Drainage**

The works identified and phase wise investment for Maraimalai Nagar municipality is listed below:

**The total estimated costs for the Storm Water Drainage Works – Rs. 2440.00 lakhs**

**Implementing Agency – Maraimalai Nagar Municipality**

**Project Manager – Municipal Engineer**

**Final Report**

**15-6**



**Table 15-E Project List and Budget Estimates for Storm Water Drainage Works**

Rs. in Lakhs

<b>Project list</b>	<b>Estimated cost</b>	<b>2008-09 to 2012-13</b>	<b>2013-14 to 2017-18</b>	<b>2018-19 to 2022-23</b>
7 Culverts across National Highway 45 - Highway -Imp agency Estimated cost - 28 lakhs				
Laying 104 Km storm water drain by 2017-18	2440.00	2440.00	0.00	0.00
<b>Sub Total</b>	<b>2440.00</b>	<b>2440.00</b>	<b>0.00</b>	<b>0.00</b>

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**Final Report**

**15-7**

### **15.1.4 Solid Waste Management**

The project list and budget estimates for Solid Waste management works is shown below:

**The total estimated costs for the Solid Waste Management Works - Rs. 542.55 lakhs**  
**Implementing Agency – Maraimalai Nagar Municipality**  
**Project Manager – Municipal Engineer**

**Table 15-F Project List and Budget Estimates for Solid Waste Management Works**

Rs. In lakhs

<b>Project list</b>	<b>Estimated cost</b>	<b>2008-09 to 2012-13</b>	<b>2013-14 to 2017-18</b>	<b>2018-19 to 2022-23</b>
Protective gear (Workers will get safety gear once in two years)	23.63	7.88	7.88	7.88
Procuring Separate bins for Waste Segregation at source for each household (with private sponsorship)	144.41	39.73	47.62	57.07
SWM Infrastructure development works (Mini lorries (2 Nos), Dumper placer (1 No), Bio- pulverizer, Screener, Turner and Front –end loader) with the help of general fund	206.00	206.00	0.00	0.00
Purchasing Compactor (2 Nos) with bins	90.95	38.65	38.65	13.65
Cost for land fill site	77.56	77.56	0.00	0.00
<b>Sub Total</b>	<b>542.55</b>	<b>369.82</b>	<b>94.14</b>	<b>78.59</b>

**15.1.5 Road works, Traffic and Transportation**

**Final Report**

The project list and budget estimates for Road works, Traffic and Transportation works is shown below:

**The total estimated cost for the Roads, Traffic and Transportation Works - Rs. 3772.57 lakhs**  
**Implementing Agency –Maraimalai Nagar Municipality / Highways**  
**Project Manager – Highway Executive Engineers / Municipal Engineer**

**15-8**



**Table 15-G Project List and Budget Estimates for Road works, Traffic and Transportation Works**

Rs. In Lakhs

Project list	Estimated cost	2008-09 to	2013-14 to	2018-19 to
		2012-13	2017-18	2022-23
CC Pavement to Pavender road (Tender called) - Rs. 298 lakhs				
CC Pavement to Anna road (Tender called) - Rs. 244 lakhs				
BT in Adikalai, Periyar, Kamaraj Nagar, Quide Millath road and BT with SWD in Thiruvalluvar road (Tender called) - Rs. 312 lakhs				
Converting 78.14 Km kutchu road into Pucca road	781.40	260.47	260.47	260.47
Providing service road on both the sides of the National Highway from Goduvancherry to Singaperumal Koil for a length of 7 Kms - highway implementing agency - Rs. 210 lakhs				
Developing 100 feet parallel road (Periyar Salai) to NH – 45 from Guduvanchery – Valancheri – Potheri – Thinnakkattur – Thaiyal Nagar – MM Nagar – Ford – Chinga Perumal Koil for a length of 10 Kms.	900.00	900.00	0.00	0.00
4 Junction Improvement scheme in SRM college junction, Singaperumal Koil Junction, Potheri Junction and Kattankulathur Junction.	20.00	20.00	0.00	0.00
Bus stand Improvement Scheme	200.00	200.00	0.00	0.00
Separate Mouffsil Bus stand for Regional Transport System	330.00	0.00	330.00	0.00
Station area improvement scheme for Potheri, Kattankulathur and Maraimalai Nagar Station - imp agency Railways				
Creating 6 RoBs in Thailavaram, Potheri, Kattankulathur, Maraimalai Nagar, Peramanur Samiyar gate, Peramanur Ford gate (Highway- imp				

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**Final Report**

**15-9**

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<b>Project list</b>	<b>Estimated cost</b>	<b>2008-09 to 2012-13</b>	<b>2013-14 to 2017-18</b>	<b>2018-19 to 2022-23</b>
agency)estimated proj cost - 8400 lakhs				
City Bus transport in road connecting Singa perumal koil, Industrial estate, W. No 08, 02, 01 connecting Guduvanchery - State transport Corporation - Imp agency				
City bus transport connecting Guduvanchery, W. No.1, 2 connecting Kalivandapattu - State transport Corporation - Imp agency				
City Bus transport connecting Busstand, 3 Railway stations and all revenue villages - State transport Corporation - Imp agency				
Relaying existing BT road once in three years (100.69 Km)	1147.87	382.62	382.62	382.62
Relaying existing CC road once in 15 years (12.85Km)	96.38	96.38	0.00	0.00
Relaying 78.14 Km road once in three years after its conversion from Kutcha to Pucca road.	296.93	0.00	98.98	197.95
<b>Sub Total</b>	<b>3772.57</b>	<b>1859.46</b>	<b>1072.07</b>	<b>841.04</b>

### ***15.1.6 Street Lighting***

The project list and budget estimates for Street Lighting is shown below:

**The total estimated cost for Street Lighting – Rs. 138.09 lakhs.  
Implementing Agency –Maraimalai Nagar Municipality / PPP  
Project Manager – Municipal Engineer**

**Final Report**

**15-10**



**Table 15-H Project List and Budget Estimates for Street Lighting**

Project list	Estimated cost	Rs. In Lakhs		
		2008-09 to 2012-13	2013-14 to 2017-18	2018-19 to 2022-23
Providing 761 additional energy saver lamps by 2012-13	113.49	41.86	35.82	35.82
Installation of voltage controller& timers for 17 poles (150 poles have already been provided timers)	1.22	1.22	0.00	0.00
Installation of electronic chokes in place of conventional copper chokes and 36 w tube lights (for existing 3344 tube lights which excludes existing 270 CFL lamps)	13.38	13.38	0.00	0.00
2 High Mast lights are required in Valancheri and Keelakarunai	10.00	10.00	0.00	0.00
<b>Sub Total</b>	<b>138.09</b>	<b>66.46</b>	<b>35.82</b>	<b>35.82</b>

**15.1.7 Socio-Economic Infrastructure**

For enhancing the economic activities in the undeveloped wards on both the sides of the railway line, two SIDCO industrial townships have been suggested to be developed by SIDCO one each on East and Western portion of the railway line. Project list and Budget estimates for Socio-Economic Infrastructure works are listed out in *Table 15-I*.

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**Final  
Report**

**15-11**

The total estimated cost for Socio-economic Infrastructure works – Rs. 725.00 lakhs.  
 Implementing Agency – Maraimalai Nagar Municipality,  
 Project Manager – Municipal Engineer

Table 15-1 Project List and Budget Estimates for Socio-Economic Infrastructure

Rs. in Lakhs

Project list	Estimated cost	2008-09 to 2012-13	2013-14 to 2017-18	2018-19 to 2022-23
Converting Primary Health Centre into General Hospital - Health Department - Imp Agency				
Developing 75 out of 150 approved layouts into parks and playgrounds in phases (considering 25 layouts in each phase)	375.00	125.00	125.00	125.00
Developing Community hall	50.00	50.00	0.00	0.00
Slaughter house (proposed under Part II scheme for 25lakhs, 10 lakhs grant out of 25 lakhs)				
Creating New municipal office opposite to existing municipal building accommodating Municipal office, shopping complex, Municipal Commissioner and Municipal Engineer Quarters in a land of 1.79 acres	30.00	30.00	0.00	0.00
Creating 4 ward offices	40.00	40.00	0.00	0.00
Gasifier Crematorium (proposed at NH -3 in an estimated cost of Rs. 50 lakhs), grant is Rs. 20 lakhs	50.00	50.00	0.00	0.00
10 burial grounds Infrastructure improvement scheme	50.00	50.00	0.00	0.00

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**Final Report**

**15-12**



<b>Project list</b>	<b>Estimated cost</b>	<b>2008-09 to 2012-13</b>	<b>2013-14 to 2017-18</b>	<b>2018-19 to 2022-23</b>
Existing shops (12 shops) in Thayumanavar Street renovation using General fund	45.00	45.00	0.00	0.00
Developing Market Infrastructure through Private partnership				
Renovating 2 marriage halls	25.00	25.00	0.00	0.00
Creating Entertainment center through private participation				
Establishing Multi-purpose Stadium through PPP				
Creating Truck terminus through PPP				
Consultancy services for Bid process management and selection of bidder for PPP projects (3 major projects)	60.00	60.00	0.00	0.00
2 SIDCO Industrial Township (Imp agency – SIDCO)				
<b>Sub Total</b>	<b>725.00</b>	<b>475.00</b>	<b>125.00</b>	<b>125.00</b>

### ***15.1.8 Environment, Slums and Urban Poverty***

Project list and Budget estimates for Environment, Slums & Urban Poverty works are listed out in *Table 15-J*.

**The total estimated cost for Environment, Slums & Urban Poverty works – Rs. 2160.00 lakhs.**

**Implementing Agency – Maraimalai Nagar Municipality / Public Private Participation**

**Project Manager – Municipal Engineer**

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**Final Report**

**15-13**

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**Table 15-J Project List and Budget Estimates for Environment, Slums & Urban Poverty**

Rs. in Lakhs

Project list	Estimated cost	2008-09 to 2012-13		2013-14 to 2017-18		2018-19 to 2022-23	
Developing Recreational green spaces in 26 lakes							
Tree plantation scheme along lake banks, Bus stand and in Railway stations and all along roads (maintenance through private participation for first 5 years) engaging NGOs							
Creating Pollution checkup stations and kiosks through private participation							
IHSDP (Project cost of Rs. 600 lakhs is escalated by 20%)	2160.00	720.00	720.00	720.00	720.00		720.00
<b>Sub Total</b>	<b>2160.00</b>	<b>720.00</b>	<b>720.00</b>	<b>720.00</b>	<b>720.00</b>		<b>720.00</b>

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### **15.2 Consolidated Capital Investment Plan**

**Final Report**

#### **15.2.1 First Phase Investment Plan (2008-09 to 2012 - 13)**

First Phase investment plan for Maraimalai Nagar is given in Table 15-K. The total Estimated Cost for all the Sectors is Rs. **7340.47** lakhs. The total estimated cost after considering escalation for I phase is Rs. **8629.38** lakhs which is shown in Table 15-L.

**15-14**



**T N U D P**

**Final Report**

**15-15**

**Table 15-K First Phase Capital Investment Plan for Maraimalai Nagar Municipality**

Rs. in Lakhs

<b>Project Sector</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>I Phase Investment</b>
Water Supply	33.39	140.00	330.00	330.00	0.00	833.39
UGD	0.00	0.00	0.00	243.17	243.17	486.34
Sanitation	0.00	30.00	30.00	20.00	10.00	90.00
Storm Water						
Drainage	488.00	488.00	488.00	488.00	488.00	2440.00
Solid Waste						
Management	37.22	208.56	41.23	2.61	80.20	369.82
Roads, Traffic and						
Transportation	0.00	210.00	260.47	900.00	489.00	1859.46
Street Lighting	8.37	18.37	8.37	8.37	22.97	66.46
Socio-Economic						
Infrastructure	155.00	145.00	125.00	25.00	25.00	475.00
Basic Services for						
Urban Poor	0.00	0.00	720.00	0.00	0.00	720.00
<b>TOTAL CAPEX</b>	<b>721.98</b>	<b>1239.93</b>	<b>2003.07</b>	<b>2017.15</b>	<b>1358.34</b>	<b>7340.47</b>

**Table 15-L First Phase Capital Investment Plan for Maraimalai Nagar Municipality (after considering escalation cost)**

Rs. in Lakhs

<b>Project Sector</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>I Phase Investment</b>
Water Supply	35.06	154.35	382.02	401.12	0.00	972.54
UGD	0.00	0.00	0.00	295.57	310.35	605.93
Sanitation	0.00	33.08	34.73	24.31	12.76	104.88
Storm Water Drainage	512.40	538.02	564.92	593.17	622.83	2831.33
Solid Waste Management	39.08	229.93	47.73	3.17	102.36	422.28
Roads, Traffic and Transportation	0.00	231.53	301.52	1093.96	624.10	2251.10
Street Lighting	8.79	20.25	9.69	10.18	29.32	78.23
Socio-Economic Infrastructure	162.75	159.86	144.70	30.39	31.91	529.61
Basic Services for Urban Poor	0.00	0.00	833.49	0.00	0.00	833.49
<b>TOTAL CAPEX</b>	<b>758.07</b>	<b>1367.02</b>	<b>2318.80</b>	<b>2451.86</b>	<b>1733.62</b>	<b>8629.38</b>

**T N U D P .**

**Final Report**

**15-16**



### 15.2.2 Second Phase Investment Plan (2013-14 to 2017 - 18)

Second Phase investment plan for Maraimalai Nagar is given in Table 15-M. The total Estimated Cost for all the Sectors is Rs. **4587.52** lakhs. The total estimated cost after considering escalation for I phase is Rs **6699.99** lakhs which is shown below.

Table 15-M Second Phase Capital Investment Plan for Maraimalai Nagar Municipality

Project Sector	Rs. in Lakhs					II phase Investment
	2013-14	2014-15	2015-16	2016-17	2017-18	
Water Supply	585.00	624.00	460.50	435.50	435.50	2540.50
UGD	0.00	0.00	0.00	0.00	0.00	0.00
Sanitation	0.00	0.00	0.00	0.00	0.00	0.00
Storm Water Drainage	0.00	0.00	0.00	0.00	0.00	0.00
Solid Waste Management	38.68	4.08	42.81	4.24	4.33	94.14
Roads, Traffic and Transportation	0.00	359.44	330.00	382.62	0.00	1072.07
Street Lighting	7.16	7.16	7.16	7.16	7.16	35.82
Socio-Economic Infrastructure	25.00	25.00	25.00	25.00	25.00	125.00
Basic Services for Urban Poor	0.00	720.00	0.00	0.00	0.00	720.00
<b>TOTAL CAPEX</b>	<b>655.84</b>	<b>1739.69</b>	<b>865.47</b>	<b>854.53</b>	<b>472.00</b>	<b>4587.52</b>

**T N U D P . III**

**Final Report**

**15-17**

**Table 15-N Second Phase Capital Investment Plan for Maraimalai Nagar Municipality (after considering escalation cost)**

Rs. in Lakhs

<b>Project Sector</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>II phase Investment</b>
Water Supply	783.96	878.03	680.37	675.60	709.38	3727.34
UGD	0.00	0.00	0.00	0.00	0.00	0.00
Sanitation	0.00	0.00	0.00	0.00	0.00	0.00
Storm Water Drainage	0.00	0.00	0.00	0.00	0.00	0.00
Solid Waste Management	51.83	5.74	63.25	6.58	7.06	134.46
Roads, Traffic and Transportation	0.00	505.77	487.56	593.57	0.00	1586.91
Street Lighting	9.60	10.08	10.58	11.11	11.67	53.05
Socio-Economic Infrastructure	33.50	35.18	36.94	38.78	40.72	185.12
Basic Services for Urban Poor	0.00	1013.11	0.00	0.00	0.00	1013.11
<b>TOTAL CAPEX</b>	<b>878.89</b>	<b>2447.91</b>	<b>1278.70</b>	<b>1325.65</b>	<b>768.83</b>	<b>6699.99</b>

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**Final Report**

**15-18**



### 15.2.3 Third Phase Investment Plan (2018-19 to 2022 - 23)

Third Phase investment plan for Maraimalai Nagar is given in **Table 15-O**. The total Estimated Cost for all the Sectors is Rs **2892.45** lakhs. The total estimated cost after considering escalation for III phase is Rs. **5453.54** lakhs which is shown in **Table 15-P**.

**Table 15-O Third Phase Capital Investment Plan for Maraimalai Nagar Municipality**

Rs. in Lakhs

Project Sector	2018-19	2019-20	2020-21	2021-22	2022-23	III phase Investment
Water Supply	0.00	0.00	0.00	0.00	0.00	0.00
UGD	0.00	0.00	0.00	0.00	1092.00	1092.00
Sanitation	0.00	0.00	0.00	0.00	0.00	0.00
Storm Water Drainage	0.00	0.00	0.00	0.00	0.00	0.00
Solid Waste Management	40.44	5.90	19.70	6.20	6.36	78.59
Roads, Traffic and Transportation	458.42	0.00	382.62	0.00	0.00	841.04
Street Lighting	7.16	7.16	7.16	7.16	7.16	35.82
Socio-Economic Infrastructure	25.00	25.00	25.00	25.00	25.00	125.00
Basic Services for Urban Poor	720.00	0.00	0.00	0.00	0.00	720.00
<b>TOTAL CAPEX</b>	<b>1251.02</b>	<b>38.06</b>	<b>434.48</b>	<b>38.36</b>	<b>1130.53</b>	<b>2892.45</b>

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**Final  
Report**

**15-20**

**Table 15-P Third Phase Capital Investment Plan for Maraimalai Nagar Municipality (after considering escalation cost)**

Rs. in Lakhs

<b>Project Sector</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>III phase Investment</b>
Water Supply	0.00	0.00	0.00	0.00	0.00	0.00
UGD	0.00	0.00	0.00	0.00	2270.19	2270.19
Sanitation	0.00	0.00	0.00	0.00	0.00	0.00
Storm Water						
Drainage	0.00	0.00	0.00	0.00	0.00	0.00
Solid Waste Management	69.16	10.59	37.14	12.28	13.23	142.39
Roads, Traffic and Transportation	784.06	0.00	721.49	0.00	0.00	1505.55
Street Lighting	12.25	12.87	13.51	14.18	14.89	67.70
Socio-Economic Infrastructure	42.76	44.90	47.14	49.50	51.97	236.27
Basic Services for Urban Poor	1231.44	0.00	0.00	0.00	0.00	1231.44
<b>TOTAL CAPEX</b>	<b>2139.67</b>	<b>68.35</b>	<b>819.28</b>	<b>75.96</b>	<b>2350.28</b>	<b>5453.54</b>



# 16 ASSET MANAGEMENT PLAN

Asset Management Plan involves maintenance management for preventive and predictive maintenance, equipment recording and tracking, replacement parts inventory, and maintenance labor scheduling. The goal of asset management is to optimize asset use and manage all maintenance efforts involved in making assets as reliable, accurate, and efficient as possible. Asset management Plan is the plan developed for one or more physical assets within the municipality that combines multi disciplinary management techniques including technical and financial over the life cycle of the asset to a specified level of service in a most cost effective manner. The key aspects of asset management plan therefore involve asset inventory, information of assets owned by the municipality and appropriate strategy to manage the assets and increase the productivity of the same. The asset management plan is therefore critical for maintaining, upgrading and operating physical assets in a cost effective manner

Maraimalai Nagar municipality has several assets that require regular maintenance for sustenance of reasonable service delivery levels. Given the high impact of the O&M expenses 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.

## 16.1 List of Assets

The assets of Maraimalai Nagar municipality can be classified as assets relating to basic physical infrastructure such as water supply, roads, Under Ground Drainage, Storm water drains, Street lights, light and heavy vehicles etc and those relating to social infrastructure which include shops, parks, bus stand, Wedding Hall, Burial grounds etc. Among basic physical infrastructure Water Supply, Under ground drainage is revenue generating.

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Final Report

16-1

Vehicle maintenance of the municipality which are generally deployed for general administrative purpose and for water supply and for conservancy activities needs to be properly maintained to increase its efficiency and productivity and minimize its maintenance costs. The municipality could look into entering a contractual agreement with some reputed agencies for regular maintenance of municipal vehicles. The agreement should also include facilities for immediate spot pickup in case there is a breakdown during operations. Proper asset register should be maintained for the same including details on major and minor problems identified, action taken for the same and cost and time taken for rectifying the major and minor repairs.

**Table 16-A:Details of various social & physical infrastructure assets of Maraimalai Nagar Municipality**

Particulars	Unit	Details
<b>Remunerative Assets – Social Infrastructure</b>		
Commercial Complexes/Shops	12 shops	1.5 grounds- Located in Thayumannavar Street. Now in damaged condition and proposed to be upgraded at an estimated cost of Rs.45 Lacs to be funded through General Funds. Previously collected Rs.300 pm per shop
Marriage/ Wedding Halls	2	Anna Community hall 10000 sq foot, Tirakachur community hall (TNHB) 600 sq foot
Pay & Use Latrines	2	650 Sq feet in ward 5 and ward 16
<b>Social Infrastructure -Non remunerative Infrastructure</b>		
Municipality Office Buildings		1.6 acres (building +vacant land together) - Opposite municipality office there is vacant land of .79 acres belonging to municipality office
Slaughterhouse	Work Ongoing	Kamarajar Road behind Ford Factory ( Area 7) at an cost of Rs.25 Lacs funded through part-II Scheme ( Rs.10 Lacs Grant and Rs.15 Lacs General Fund ) Scheduled to be completed in July 2008

**C O N T E N T S**

**Final Report**

**16-2**

Noon Meal Centre	12	Buildings is owned by the municipality Located in wards (2,3,9,10,11,13,14,15,18,19,20,21 )
Libraries/ Reading Rooms	4	a) Ward no 18 (500 sq foot - this is proposed to be shifted to Ward 17)) b) Ward 17 -2 grounds. Constructed at a cost of Rs3.5 lacs mainly funded through MP fund. Work is on going C) Ward No 6 (Thiruvalluvar salai) – area 2 grounds d) Ward no 20 - area 1.5 grounds
TV Rooms	18 Rooms	Each room - around 200 sq foot. But one is used as Ration shop in ward 3
Radio Room	4	Radio rooms are located in TV rooms located in wards 19,9,11,12
Parks & Play Grounds	10 - Parks. Play ground – Nil	Owned by municipality but some are maintained by companies within the area
Burial Ground	40	36 for Hindus and 4 for Muslims. Area varies between 50 cents to 1.5 acres
<b>Physical Infrastructure Assets</b>		
<b>Water supply</b>		
Overhead Tank	Nos	26
Pumping Stations (indicate type - water/sewer/storm)		<b>NUMBER-</b> 4 (1 main and 3 sub main). 1 is proposed at thirukachur TNHB in land located in area of 50 cents to be funded under UIDSSMT scheme for Rs.404 lacs. <b>AREA-</b> 7 acres, 2.5 acres, 2 acres & 1 acre <b>LOCATION-</b> Adiligalar Salai -NHI ( 7 acres main pump station), Kambar Salai NH2 -1 (2.5 acres sub pump station), Kamarajar Salai CIDCO Industrial Area(2 acres sub pump station) and Karmarajar Industrial Area (1 acre near Kizhakaranae villages)
<b>Storm water drains</b>	kms	67
<b>Roads</b>	kms	Bitumen-118.45, WBM -44.37 Cement Concrete -12.85, Earthen Road -33.77 - Total roads-229.44
<b>Street Lights</b>	Nos	Tube lights -2124, Sodium Vapor 250 W –872 Sodium Vapor 150 W-150, Sodium Vapor 70 W-150 CFL-315, High Mast -3

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Final Report

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<b>Solid Waste Management -</b>		
Compost yard	acres	5.56
Vehicles	Nos	Lorry -2, Tractor -1 Private Tractor-2
<b>Approved Layouts</b>	Nos	150

Source: Maraimalai Nagar Municipality

**Table 16-B Land requirements for executing e major infrastructure project identified in CIP**

<b>Projects</b>	<b>Land Required in acres</b>
Separate Mouffsil Bus stand for Regional Transport System	10
Developing Community hall	1
Developing Market Infrastructure through Private partnership	1
Creating Entertainment center through private participation	5
Establishing Multi-purpose Stadium through PPP	5
Creating Truck terminus through PPP	10
Land Fill site	20
<b>Total</b>	<b>52</b>

**Final Report**

**16-4**

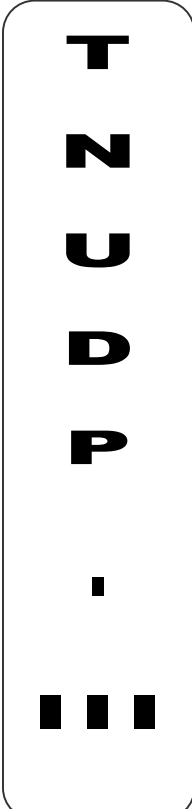
### **16.2 Operations and Maintenance**

The revenue generation and the operations and maintenance activities currently being followed and suggestions for comprehensive Asset Management including ways and means to meet the expenses involved & make it a self sustaining for various assets are listed below:-

**16.2.1 O&M of social infrastructure assets**

**Table 16-C : O&M and Revenue generation**

<b>Asset</b>	<b>Average Annual income</b>	<b>Current O&amp;M practice</b>	<b>Recommendations</b>
Parks & Playgrounds	Non remunerative	Ad hoc Proposal to improve 5 parks at an estimated cost of Rs.10 Lacs per Park from General Funds( During 2008-09)	-Periodic annual maintenance is required -Minor maintenance work can be undertaken with the help of Residential Welfare Associations and Self Help Groups with major maintenance resting with the ULB. - Private sponsorship can be explored
Commercial Complex	Rs.300 per month per shop	Adhoc Basis -	-Periodic annual maintenance is required.



**Final Report**

**16-5**

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Final  
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16-6

Asset	Average Annual income	Current O&M practice	Recommendations
Office Building	Non remunerative	Adhoc Proposed for an improvement of Office Building at an estimated cost of Rs.30 Lacs from general Funds (Schedule to be completed by 2008-09) - There is a plan to use the vacant land opposite to the existing office building for construction of new office building, municipal commissioner quarters, municipal engineer quarters and commercial complex	
Bus Stand	Proposed	Proposed Bus Stand at MM Nagar, an extent of 1.50 acres located to opposite to PHC at NH-II at an estimated cost of Rs. 2 Crores. The land has been given by CMDA.	-Periodic annual maintenance is required once the bus stop is set up -Additional Income generating activities which are proposed are restaurants, 20 shops, pay & use toilets, advertisements/hoarding and paid parking, etc.

Asset	Average Annual income	Current O&M practice	Recommendations
Pay & Use	Non remunerative	Ad hoc	<p>-Can explore the possibility of converting public toilets to pay and use in some commercial areas/bus stand and some of maintenance can be handed over to SHGs (slum areas) with only major maintenance/new work to be taken up by the ULB</p> <p>-The proposed Bus stand Improvement Scheme will include a Pay &amp; Use toilet also</p>

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Final Report

16-7

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**Final Report**

**16-8**

Asset	Average Annual income	Current O&M practice	Recommendations
Burial Ground	Non-remunerative	Adhoc Proposal to improve 10 Burial Ground at an estimated cost of Rs.5 Lacs per Burial Ground funded by General funds. - Gassifier (D Type) for Rs.50 Lacs located in NH 3 to be funded by Rs.20 Lacs under Part II Scheme and Rs.30 Lacs from General Fund ( Scheduled to complete in 2008-09)	- Periodic annual maintenance can sustain the quality of the asset - If Gassifier is introduced (funded through government schemes) , then there could be some reduction in burden of maintaining existing burial grounds - The gassifier is proposed in NH3 – D Type

Source: Analysis based on Information provided by Maraimalai Nagar Municipality

**16.2.2 O&M Physical Infrastructure**

The CAGR of past expenses relating to Operation and Maintenance of the assets relating to Physical infrastructure is given in Table 16-D. Reforms suggested for O & M of assets have been covered in Chapter 17 under sub heading “Reforms in Physical Infrastructure

**Table 16-D Past Growth trends in O & M expenses relating to key physical infrastructure**

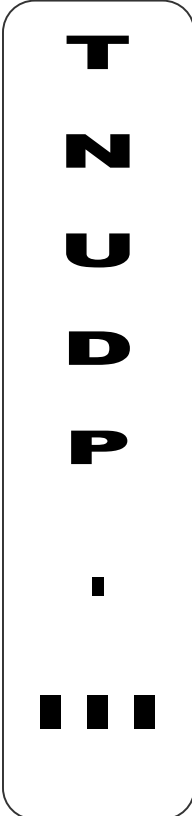
<b>Description</b>	<b>CAGR in the last 4 years</b>
<b>Water Supply</b>	
Operating Expenses	NA
Power Charges for Head Water Works	Inconsistent trend
Maintenance expense for Water Supply Works	Inconsistent trend
<b>Solid Waste Management</b>	
Heavy vehicle expenditure	Inconsistent trend
<b>Municipal roads</b>	
<b>Street lighting</b>	
Maintenance Expense for Street Lights	Inconsistent trend
Power charges for street lighting	Inconsistent trend

Source: Analysis based on the financial statements provided by the municipality

**16.2.2.1 O & M for proposed capital works**

Based on the aforesaid standards / assumptions, the operation and maintenance expenses for proposed capital works assets for the first phase have been worked out and are listed below:

**Table 16-E O & M for proposed capital works**



**Final Report**

**16-9**

Table 16 E O & M for proposed capital works

Rs.in Lakhs

Maraimalai Nagar																
Investment Requirements																
Project Sector	Total Investment	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Water Supply	4699.88	35.06	154.35	382.02	401.12	0.00	783.96	878.03	680.37	675.60	709.38	0.00	0.00	0.00	0.00	0.00
UGD	2876.12	0.00	0.00	0.00	295.57	310.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2270.19
Sanitation	104.88	0.00	33.08	34.73	24.31	12.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Storm Water Drainage	2831.33	512.40	538.02	564.92	593.17	622.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solid Waste Management without bins and gear	453.69	0.00	227.12	44.74	0.00	98.99	0.00	0.00	57.10	0.00	0.00	0.00	0.00	25.74	0.00	0.00
Solid Waste Management	245.43	39.08	2.82	2.99	3.17	3.37	51.83	5.74	6.14	6.58	7.06	69.16	10.59	11.40	12.28	13.23
Roads, Traffic and Transportation	5343.55	0.00	231.53	301.52	1093.96	624.10	0.00	505.77	487.56	593.57	0.00	784.06	0.00	721.49	0.00	0.00
Street Lighting	198.98	8.79	20.25	9.69	10.18	29.32	9.60	10.08	10.58	11.11	11.67	12.25	12.87	13.51	14.18	14.89
Socio-Economic Infrastructure	888.00	99.75	159.86	144.70	30.39	31.91	33.50	35.18	36.94	38.78	40.72	42.76	44.90	47.14	49.50	51.97
Slums and Urban Poverty	3078.05	0.00	0.00	833.49	0.00	0.00	0.00	1013.11	0.00	0.00	0.00	1231.44	0.00	0.00	0.00	0.00
<b>TOTAL CAPEX</b>	<b>20719.91</b>	<b>695.07</b>	<b>1367.02</b>	<b>2318.80</b>	<b>2451.86</b>	<b>1733.62</b>	<b>878.89</b>	<b>2447.91</b>	<b>1278.70</b>	<b>1325.65</b>	<b>768.83</b>	<b>2139.67</b>	<b>68.35</b>	<b>819.28</b>	<b>75.96</b>	<b>2350.28</b>
O & M Cost for New Infrastructure Works																
Sector - Physical Infrastructure	Total O&M	O & M Expenses														
		2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Water Supply	3169.41	0.00	15.24	25.42	49.86	76.92	81.54	133.46	194.15	246.63	301.96	362.64	384.40	407.46	431.91	457.82
UGD	582.87	0.00	15.00	15.60	16.22	28.70	42.26	43.95	45.71	47.53	49.44	51.41	53.47	55.61	57.83	60.15
Sanitation	62.11	0.00	0.00	1.32	2.77	3.85	4.51	4.69	4.88	5.08	5.28	5.49	5.71	5.94	6.18	6.42
Storm Water Drainage	753.96	0.00	10.25	21.21	32.94	45.46	58.82	60.00	61.20	62.42	63.67	64.95	66.25	67.57	68.92	70.30
Solid Waste Management without bins and gear	869.97	0.00	0.00	22.71	29.46	32.40	45.54	50.10	55.11	66.33	72.96	80.26	88.28	97.11	109.39	120.33
Roads, Traffic and Transportation	1376.36	0.00	0.00	6.95	16.20	49.50	69.71	71.80	89.13	106.43	127.43	131.26	158.71	163.48	190.02	195.73
Street Lighting	88.11	0.00	0.44	1.47	2.03	2.64	4.24	4.93	5.68	6.50	7.38	8.33	9.36	10.47	11.67	12.96
Socio-Economic Infrastructure	79.91	0.00	1.00	2.61	4.08	4.42	4.79	5.17	5.57	6.00	6.45	6.92	7.41	7.94	8.49	9.07
Slums and Urban Poverty	239.65	0.00	0.00	0.00	8.33	8.42	8.50	8.59	18.80	18.99	19.18	19.37	31.88	32.20	32.52	32.85
<b>TOTAL CAPEX</b>	<b>7222.36</b>	<b>0.00</b>	<b>41.92</b>	<b>97.29</b>	<b>161.89</b>	<b>252.31</b>	<b>319.91</b>	<b>382.70</b>	<b>480.24</b>	<b>565.91</b>	<b>653.74</b>	<b>730.62</b>	<b>805.47</b>	<b>847.77</b>	<b>916.94</b>	<b>965.63</b>

## **16.3 Asset Management Plan- Recommendations**

*The following are some of the suggestions with regard to formulation and implementation of a comprehensive asset management plan:-*

### **16.3.1 Asset Register**

A comprehensive Asset register needs to be maintained containing details of the list of assets, year and cost of acquisition, particulars such as the location, size of the area/building, ownership records and all supporting documents required for the same. These details are required for assessing the condition of the asset and for also ensuring that the assets do not move out of municipality's control and ownership. Proper fencing and protection to municipal properties are required to prevent encroachment and land grabbing. The reforms programme under TNUDP has initiated the process of computerizing and digitalizing the asset inventory for all municipalities in Tamil Nadu. Hence for Maraimalai Nagar Municipality there is an urgent need to initiate and complete this asset register backed by comprehensive supporting documents, records and other relevant details. Computerization of asset register is required with focus on proper designing, testing, installing a database management system for municipal assets. Data thus compiled would need to be classified on the basis of sector specific infrastructure facilities, land and properties etc

**Final  
Report**

**16-10**

### **16.3.2 Asset Value and Life Cycle Management**

The Municipality needs to determine the value of various assets in regular intervals. As all assets have a limited life expectancy, concerted efforts need to be undertaken by the municipality on regular basis before investing further in a new asset or upgradation of the existing assets. In case of an asset (service) that is handed over to a private contractor for O&M, periodic review and inspection needs to be made to prevent misuse and damage to the assets.

### **16.3.3 Sustainability**

Sustainable management of assets is an important element of asset management plan. Sustainable development has been defined as “meeting the needs of present generation without compromising the ability of future generations to meet their own needs”. A long term financial plan to provide necessary resources to operate, rehabilitate and ultimately replace the asset at the optimal time to achieve lowest life cycle cost is required. Preventive and operational maintenance at regular intervals can prevent higher cost associated with the full replacement of the asset. Such a plan would ensure that the current users pay a fair share for the service they receive so the future users do not have the burden to pay a higher cost for the same level of the service. Sustainable management calls for a contribution from the users to meet partially or fully the O&M cost associated with the utilization of assets. Hence user charges and fees is critical for a sustainable and a successful asset management programme

### **16.3.4 Integration of Technical and Financial Plans**

An integrated plan combining technical aspects (to minimize life cycle cost & reduce the risk level) and financial aspects (Financial plan) are required to quantify the level of service and the cost associated with the same. The technical and financial plans need to be flexible enough to suit the changing requirements of the public.

### **16.3.5 Condition Assessment Survey(CAS)**

The municipality could look to undertake CAS for various assets owned by the ULB, which could bring to light the deficiencies in a system or a component, the extent of defects, estimated cost of repairs and the prioritizing the work to be undertaken. This systematic review could enhance the life of the asset and minimize huge capital outlay on account of delay in taking remedial actions.

### **16.3.6 Monitoring and Evaluation**

To optimize an asset management plan, performance of the assets and rehabilitation strategies should be monitored regularly, and adjustments made at the appropriate stage in the asset life cycle to achieve an acceptable balance between cost and the performance (Level of service). It is also imperative to monitor and take damage control measures when the municipality takes

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Final  
Report

16-11

up any development works to prevent damage to the other assets of the municipality. Prioritizing the works to be undertaken can prevent unnecessary maintenance and capital cost.

### ***16.3.7 Budgeting***

A regular budgeting exercise regarding the possible O&M cost for various assets needs to be undertaken by the municipality. There should be a clear link to the financials plans and the budgeting exercise undertaken by the municipality. An Asset Management Plan should incorporate expenses relating to maintenance, renewal and augmentation of the asset of the municipality.

### ***16.3.8 Training in Database management***

All the above requires proper training to the concerned staff. Training would involve various issues such as methods of simplified updation of data, methods of monitoring and follow up and training in issues relating to infrastructure facilities management, land use, litigation, encroachment etc.

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**Final  
Report**

**16-12**

# 17 REFORMS AND RESOURCE MOBILIZATION

## 17.1 Overview

Urban reforms are the main focus of good governance and service delivery to the inhabitants of the urban area. Several initiatives and reforms have been taken up at the national level and state level. These reforms need to be replicated and implemented by the ULBs completely in a time bound manner. The State Government and the Urban Local Bodies have executed a Memorandum of Agreement with the Government of India, committing to implement the reform programme.

Under the Urban Local Bodies level, reforms committed viz., E-Governance, shift to Accrual based double entry accounting, property tax (85% coverage), property tax collection efficiency (90%). 100% cost recovery for water supply and solid waste services have been committed to be achieved in the year 2012. Internal earmarking of funds for services to Urban Poor has been done and provision of Basic services to urban poor has been committed to be achieved in the year 2012. Encouragement of Public Private Partnership to be carried on through outsourcing in solid waste management, street light maintenance, pumping station maintenance, STP maintenance and hiring of vehicles. Many of the suggested reforms have been implemented to a large extent though at the ULB level further refinement and qualitative implementation needs to be carried out. Besides these mandatory reforms the ULBs have initiated Institutional Strengthening, Capacity building for administrative and elected representatives under various reform programs of TNUDP and State Government.

## **17.2 Reform measures of Maraimalai Nagar Municipality**

The reform measures to be undertaken by the municipality can be broadly classified into 3 broad heads:

- *Financial and Accounting Reforms*
- *Institutional Reforms*
- *Reforms in physical infrastructure*

### **17.2.1 Financial & Accounting reforms**

#### **17.2.1.1 Financial Reforms**

As a part of financial reforms, reforms in tax and non tax collection needs to be taken up for improving the financial position of the municipality. The reform process of tax collection should be comprehensive and should focus on structural and systematic changes so that the increase in efficiency is sustained. This is vital for achieving self-sufficiency and improving its financial health to make it possible for the ULB to undertake various projects for the welfare of the people.

The revenue department of Maraimalai Nagar Municipality is responsible for collection of various taxes and charges from its citizens including raising the demand for key revenue items like property tax, profession tax, water charges etc., follow up on outstanding payment and prepare the Demand Collection Balance (DCB) statement. In this municipality there is only one bill collector against the sanctioned post of three in this department.

One of the most important yard stick for measuring the robustness of tax collection is collection efficiency. The Collection Efficiency of important revenue sources of Maraimalai Nagar Municipality for the last 4 years is given as under:

Table 17-A Collection efficiency

Particulars	2003-04	2004-05	2005-06	2006-07
<b>Property Tax</b>				
Arrears	20.23%	22.67%	12.74%	38.19%
Collection	53.41%	58.87%	66.27%	75.39%
<b>Total</b>	<b>36.65%</b>	<b>38.85%</b>	<b>36.80%</b>	<b>53.66%</b>
<b>Profession Tax</b>				
Arrears	100.00%	100.00%	0.00%	94.72%
Collection	70.09%	80.70%	67.22%	92.42%
<b>Total</b>	<b>76.65%</b>	<b>86.28%</b>	<b>52.04%</b>	<b>92.53%</b>
<b>Water Charges</b>				
Arrears	92.36%	15.24%	14.62%	23.23%
Collection	77.59%	41.26%	51.48%	61.15%
<b>Total</b>	<b>88.54%</b>	<b>21.32%</b>	<b>23.07%</b>	<b>35.56%</b>

Source: DCB of Maraimalai Nagar Municipality

Table 17-B Efficiency parameters of key taxes and water charges

Particulars	Collection efficiency (2006-07) %	Arrears Collection Efficiency (%) (2006-07)	CAGR in no of Assessments (%) (2002-03 to 2007-08)	CAGR in the terms of value (%) (2002-03 to 2005-06)
Property taxes	75.39	38.19	3.16	7.78
Profession Taxes	92.42	94.72	NA	29.03
Water Charges	61.15	23.23	3.56%	1.66

### 17.2.1.1.1 Property taxes:

Property taxes are one of the important sources of revenue for Maraimalai Nagar Municipality accounting for more than 90% of the total municipal taxes. The current and arrear collection efficiency of property taxes stands at 75.39% & 38.19 %

respectively. This would need to be improved to 90%. Among the important reasons being cited by the officials and elected staff for the lower collection efficiency are limited manpower , no alternate collection centre except the ULB office and lack of computerized updated records which hinders property tax revenue. Further more in the absence of Town Planning Department; the details regarding vacant land are not available. It is found that on the demand side, if the demand for property tax is not raised on time, there is a lag in the entire collection cycle, thus adversely affecting the working capital cycle. 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

This average performance is also reflected in average CAGR of the number of assessments which has grown by less than 4% over the last 6 years. The low coverage and low collection efficiency needs to be addressed by the municipality on a priority basis to generate sufficient revenue to fund its development programs. The municipality has initiated proceedings against the following companies for claims of property taxes. Companies include Chandra Industries, Iris Development, Car Plast (I) Ltd, Sasi & Shekar, Ford India Limited, Sivasakthi Wood works, Textile International, Cutfast Abrasive Tools, P & P Polymers. The total outstanding due to the municipality amounts to Rs.2.80 crs

Maramalai Nagar has good potential for enhancing the Property tax revenue considering the large size of the city, closeness to Chennai and presence of large number of Industries in the area. Robust growth in Taxes is required to meet the fund the projects. Proper implementation of reforms is a pre-requisite for healthy revenue generation. In the light of the revision in property taxes announced by the State government and based on our discussions with the municipality, a 25% growth in property taxes has been envisaged every 5 year period starting from 2008-09. Healthy growth in number of assessments, updated tax demand, periodic revisions and high collection efficiency is important for strong growth in property tax collection

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17-4

**Suggested Property taxes Reforms**

- Mandatory Implementation of Revision of Property Tax once in every five years is required.
- Digitization of the property maps through GIS to identify un -assessed and under assessed properties is required. GIS based mapping system is advisable for each property identified on GIS (Whether it is residential, commercial or industrial).The above database can be crossed checked with the data from various governmental authorities/sources such as Income Tax, Profession Tax, and Electricity Bills etc. Such database also would help the ULB to verify the utility of the property against the purpose for which permission was taken. A cost benefit study should be conducted to evaluate the possibility of the introduction of remote sensing/GIS.
- Computerization of records of encroached properties, action taken, list of encroachers through MIS would enable linking the same with GIS.
- Making the payment of property tax more convenient for the assessee through the use of various alternative modes can be explored:
  - Through banks
  - Through online payment
  - Through ECS/ EFT
- Using special schemes and incentives to encourage people to make the payment of property tax before the lapse of the due date can be considered. Rebates can be offered for advance payment of property taxes
- Currently the payment of property taxes is possible only in the municipality office. Considering the large size of the municipality the possibility of introducing additional collection centers to enable the citizens to pay the taxes can be looked into. There is a proposal to have a collection centre for payment of taxes in the bus stand
- Improve enforcement against defaulters by modifying byelaws with adequate recourse to ULB within the current framework for enforcing disconnections on defaulters.
- PSP involvement in computerization, billing, collections and survey of properties can be explored.
- Rewarding collection efforts of the employees to encourage more aggressive collection.
- List of consistent major defaulters can be published in the notice board of the municipality office. This can be resorted in the case of extreme default.
- Suitable legislation at state level to ensure that in the case of disputed property tax the assessee should first pay the tax under protest and then can take the necessary legal recourse as done in customs/excise duties can be considered.
- Late payment of property tax after the grace period can be penalized with nominal charges as being done in the case of insurance payments etc

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**Final Report**

**17-5**



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**Final Report**

**17-6**

**17.2.1.2 Accounting reforms**

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 in line with the State government’s reforms initiative.

The following reform measures are suggested:

<b>Suggested Accounting Reforms</b>
<ul style="list-style-type: none"> <li>➤ As on date Maraimalai Nagar municipality has audited accounts only upto FY 2005-06. Therefore there is an urgent need for the ULB to update it accounts to the latest year to provide a complete, updated details on the financial health of the ULB. Hence accounts needs to be finalized within the year itself instead of couple of years later as seen currently. This would enable the ULB to identify the revenue gaps, financial commitments and costs of various services and take remedial measures to regain its financial health.</li> <li>➤ Zero based budgeting would need to be carried out for continual monitoring of budgets and cash flow management.</li> <li>➤ As a part of a larger accounting reform process at the State level, it is suggested that the ULB can include disclosures in its Annual Accounts and other published documents details on cost recovery of essential services through direct “user charges”, indirect “taxes” and Environmental status report. This information can be made available to the public through various channels (Such as hosted the details on the website, distribution of pamphlets, Involving SHGs/NGOs/Woman Groups for spreading awareness, Public announcements etc) in simple effective language to facilitate substantial/full recovery of O&amp;M costs of the various essential services such as Water Supply, Solid Waste Management, etc. The awareness creation at various levels will increase the “willingness to pay” actions of the citizens of the area.</li> <li>➤ The audited annual accounts can contain ULB Discussion and Analysis Report (UDAR) providing a holistic view on the financial health, quality of service level rendered, initiatives taken/proposed by the ULB to improve the city, areas of concern, targets and action plan to achieve the same etc. This report along with the Urban Performance indicators can provide a qualitative edge to the accounting and financial reporting system that can go a long way towards achieving high levels transparency, accountability and easy and smoother facilitation of the reform process required. Thus the support from the stake holders of the city would become easier if the awareness is created with these qualitative reports being prepared and shared with the key stake holders of the city.</li> </ul>

### **17.2.1.3 Institutional Reforms**

The Institutional reforms suggested for Maraimalai Nagar municipality can be broadly divided into the following heads:

- Training and Capacity Building for administrative staff and elected officials
- Private Sector Participation
- User charges
- MIS and E Governance

#### **17.2.1.3.1 Training and Capacity Building for administrative staff and elected officials**

Both the elected and administrative member has undergone periodic training under the TNUDP and other programs of the state government. For the administrative staff training has been given at various levels in the areas of Technical issues, Accounts, Human Resources, Computer etc.

The various training undergone by the staff of Maraimalai Nagar Municipality has been elaborated as under:

- ✓ Bhavanisagar Training: was given to Head Clerk for a period 2 months
- ✓ Computer Training was imparted to the Junior Assistant, Junior Engineer & Sanitary Inspector for a period of one week during the month of June and July 2007 under TNUDP III
- ✓ Technical training ( A one day seminar) was imparted to Municipal Engineer, Junior Engineer and Overseer on the topic Gasifier Crematorium in Pondicherry
- ✓ The Executive Officer and president had visited the SWM services catered by the Pammal Municipality as a part of their site visits.

It is recommended that the periodicity of the training can be enhanced coupled with more qualitative in-depth focus on the type of training offered. This would result in increased awareness among the administrative staff on various issues there by

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**Final Report**

17-7

enhancing their productivity and creating awareness about their responsibility towards the public. For both elected and administrative members educational and awareness tours can be organised to understand the best practices in various services of other ULBs.

**17.2.1.3.2 Private Sector Participation**

Government of Tamil Nadu (GoTN) has laid down a policy clearance order for the ULBs in the State, indicating the areas of privatisation in the sectors of Solid Waste Management, Water Supply, Sewerage, Drain Cleaning, Public Toilets, Road Maintenance, Street Lighting, Parking lots, parks and play grounds, and vehicle maintenance. The GoTN states that this list is indicative and local bodies are free to investigate other areas of privatisation. The local body would be saving the indirect cost towards pension, gratuity, etc if privatization efforts are initiated and effective monitoring and evaluation on the delivery of services of private contractor is adopted.

**17.2.1.3.3 Areas of Privatisation/outsourcing**

*Table 17-C: Privatisation /outsourcing activities of Maraimalai Nagar Municipality*

<b>Areas of privatization/Outsourcing</b>	<b>I Solid waste management</b>
Coverage	5 out of 21 wards (wards 4,5,6,7,8)
Contractor	Srinivasa Waste Management
Average payment per month	Rs.3 lakhs
Further privatisation initiatives in solid waste management	<p>It may not be possible for going for complete privatization of SWM for all wards considering the large number of conservancy workers in the ULB's pay roll</p> <p>The ULB can also seek private sponsorship for purchase of household bins for waste segregation.</p>
	<b>II Maintenance of Water Supply services</b>
Coverage	All wards

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**Final Report**

**17-8**

Payment terms	Rs.450 per hand pump
	<b>III Maintenance of Under Ground Drainage Services</b>
Coverage	5 out of 21 wards
Contractor	Vijai Electricals
Payment terms	Rs.700 per pump room per day and Rs.1200 per day for drainage line/attending blockage for maintenance
Other privatization areas	The ULB can look to other areas of privatization such as O & M of street lights

#### 17.2.1.3.4 User Charges

There is a need to introduce in phases the concept of “User Charges” for various infrastructure amenities provided by the municipality. Cross subsidization of tariff, Innovative product structuring and community participation are some of the measures which could be explored to provide services for the urban poor.

Currently only for water supply and UGD the ULB is able to generate direct revenue in the form of water and sewerage charges, initial deposit and connection charges and indirectly through water tax. For other services the ULB depends on its taxes and non tax revenue. The ULB needs to explore the option of introducing user charges in other areas too. Some of the suggested areas are user charges from commercial entities and institutions for solid waste management to be extended to residential areas in phases after proper awareness is created at all levels.

To enhance its revenue the municipality would need to increase the deposit charges for new connections and increase the monthly water charges once in 5 years. This backed by higher collection efficiency and enhanced service coverage of water connections can minimize revenue leakages from water sources. It is recommended that the current collection efficiency of water charges can be enhanced from 61.15%

to over 90% and the service coverage to be improved from the current 26 % to 85% by 2017-18. This could also minimize unauthorized/illegal connection. However in the absence of records in these aspects, the revenue loss from water supply cannot be quantified accurately.

**17.2.1.3.5 E-Governance & Computerisation:**

*Table17-D :E Governance Status*

<b>Module Category</b>	<b>Stats of Modules Online</b>
Birth & Death	Yes
Property Tax	No
Non-Tax	No
Water Charges	No
Building Plan	No
F.A.S	No
Vehicle Maintenance	No
Pay Roll	No
Professional Tax	No
Hospital mgt	No
Family Enumeration	No
Stores & Inventory	No
D&O	No
Movable /immovable	No
SWM	No
Grievance Records	No

**Source: Maraimalai Nagar Municipality**

Currently Currently E-Governance and computerization has been initiated in the areas of Birth & Death out of the 16 modules. There is a urgent need to implement the same in other key areas such as Tax & Non-tax, Pay roll, Building Plan, Water Charges, grievance records etc.

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**Final Report**

**17-10**

## 17.2.2 Reforms in Physical Infrastructure

### 17.2.2.1 Suggested reforms related to Water Supply

- Service coverage of water connections to be increased from current 26% to 85% by 2017-18
- Water supply charges and connection charges need to be revised on periodic basis ie once in 5 years to fund its future investments in water supply.
- Monthly water charges for the consumers can be increased minimum of 25% every 5 years.
- For funding its investments in water supply, the municipality can consider alternative payment structures for 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. This could result in 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.
- To improve the collection levels, the municipality could look at providing an incentive and penalty structure for payment of water taxes and charges.
- For reducing operating and maintenance costs, water leakage audit, installation of leak detection equipment and replacement of pipes needs to be done on regular basis.
- Currently there is no record maintained for Unaccounted for Water (UFW). UFW is the difference between the volume of water delivered into the distribution system and the water sold/billed or accounted for by legitimate consumption. There is need for maintaining such a record for reducing the possibilities of revenue leak through unauthorized/illegal connections.
- Pumps, motors and distribution network which undergo severe wear and tear impact power costs of the municipality besides reducing operational efficiency. Hence periodic maintenance of the system with regular investments in up gradation and replacement of pipelines, motors and pumps needs to be followed to avoid huge one time expenditure to the maximum extent possible.

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Final  
Report

17-11

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Final Report

17-12

- Periodic technical training to its engineering cell is required.

### **17.2.2.2 Suggested reforms related to Sewerage System**

The following measures are suggested for proper O & M and ensure sustainability of this key infrastructure provision

- Privatization of maintenance of sewerage system can be considered to reduce the establishment charges of municipality and O&M Charges.
- Sewer Connection charges to the users can be increased once in five years for better revenue generation.
- Monthly service charges for the consumers can be increased minimum of 25% every 5 years.
- To improve the collection levels of monthly charges, the municipality could look at providing an incentive and penalty structure for payment of charges and privatize the collection system.
- Pumps, motors in sewage pumping stations undergo severe wear and tear and impacts power costs of the municipality besides reducing operational efficiency. Hence periodic maintenance of the system with regular investments in up gradation and replacement of pipelines, motors and pumps needs to be followed to avoid huge one time expenditure to the maximum extent possible.
- Annual Maintenance Contract for Sewage Pumping Stations and Sewage Treatment Plants can be adopted.
- Periodic technical training to its engineering cell is required in O&M of Sewage Treatment Plant, Pumping Stations and Sewer Networking System

### **17.2.2.3 Suggested reforms related to Solid Waste Management**

- Door to door collection of garbage at household level and segregation of waste at source need to be implemented after creating suitable awareness level

- *Gradual and phased introduction of user charges initially for commercial areas later to be extended to residential zones can be considered in later years after proper awareness is created among various stake holders.*
- *Private sponsorship of bins for waste segregation at house hold level can be looked into*
- *Vehicles used in SWM and conservancy activities such as tipper lorries, tractors; dumper blazer etc can be maintained through outsourcing arrangement with reputed contractors. The Annual Maintenance Contract should be all comprehensive covering various critical clauses in order to protect the municipality from possible claims from the Ways to improve the revenue from charges that are being collected from different commercial establishments like hotels including kiosks, eating houses, restaurants, hotels and retail markets should be studied.*
- *The municipality can identify the ways to generate revenue from Solid Waste by selling compost at market.*
- *The municipality can auction to the private parties for disposal of recyclables.*
- *Potential for getting carbon credit benefit through the Clean Development Mechanism (CDM) need to be studied in making a comprehensive solid waste management scheme.*
- *Phased privatization of services for the following activities should be undertaken to reduce the establishment charges and O&M charges of Municipality and reduce the establishment costs:*
  - *Door to door collection of domestic waste*
  - *Door to door collection of commercial waste, construction waste and Market waste.*
  - *Setting up and operation and maintenance of waste treatment plants.*
  - *Supplying vehicles on rent*
  - *Transportation of waste on contract basis*
  - *However immediate complete privatization of SWM activities may not possible considering the large number of conservancy workers in the municipality's pay roll.*

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**Final  
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**17-13**

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- *Delegation of powers and fixing accountability should be done for better management of the system. .*
- *Human Resources Development*
  - *Special training to unqualified staff*
  - *Refresher courses for all levels of staff about advances in the field of SWM*
  - *Exposure to elected members*
  - *Design of SWM course to Public Health staff*

**17.2.2.4 Suggested reforms related to Street Lighting**

- *Meeting the norms of one pole per 30 meters by 2012-13*
- *Energy Audit needs to be conducted periodically.*
- *Private parties can be involved for financing, operation and maintenance of energy efficient street light projects to reduce the cost incurred for the same.*

**17.2.2.5 Suggested reforms related to Roads**

- *Relaying Bitumen roads once in three years with patch works to be undertaken based on the need in between years*
- *Future roads to be laid with dedicated service lanes.*
- *Relaying roads with recyclable materials like fly ash, can be explored.*

**Final Report**

**17-14**

**17.3 Possibilities of Additional Resource Mobilisation**

As discussed in detail in earlier chapter that the revenue of the municipality needs to be enhanced to the maximum extent to meet its service obligations and meet the expectations of the city. Hence both the traditional and non-traditional alternatives for resource mobilization need to be evaluated to achieve the vision of “**Modern Satellite Township for Chennai with good Quality of life**”

Resource Mobilization efforts need to be directed towards generating additional revenue from existing avenues such as property taxes, profession tax, water charges, service charges and fees and remunerative assets of the municipality. Besides this the municipality would need to take measures to control expenditure in water supply, solid waste management, street lighting etc. The previous paragraphs have already been discussed the possibility of user charges, privatization/outsourcing etc. Additional resource mobilization options such as enhancing revenues of remunerative social assets, non-tax revenue options such as advertisement and parking fees for the municipality are discussed in detail in subsequent paragraphs.

The remunerative social assets of the municipality consist of income from markets, community hall and income from the same is less than Rs.2 lakhs per year. There is a proposal for bus stand at an estimated cost of Rs.200 lakhs. The proposed facilities include Bus bays, waiting hall, Tax Collection centre, a Restaurant, 20 shops, Pay and Use Toilets, Cement concrete pavement. As per our discussions with the municipal officials once this project is completed, annual income of Rs.5 lakhs can be expected from this asset. There is also a proposal for renovation of existing shops (12 shops) in Thayumanavar at a cost of Rs. 45 lakhs which is expected to be completed using ULBs own funds in 2008-09 as they are not in good condition. Earlier these shops fetched Rs.300 pm.

Non remunerative social assets of the municipality are parks, burial ground and public toilets etc. The municipality has plans to renovate 10 parks at an estimated cost of Rs.1 cr, improvement of 10 burial grounds at an estimated cost of Rs.50 lacs and set up a gassifier at an estimated cost of Rs.50 lacs. The funds of the same are through grants and municipality's own funds. Hence after considering the social remunerative assets of the municipality the chances of significant revenue mobilization from these assets are limited. Revenue from Vacant land development cannot be estimated in the absence of records on vacant lands.

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**Final  
Report**

**17-15**

Currently about Rs.1.3 lakhs is being collected as parking fee by the municipality. As per our discussions with stake holders parking spaces can be created at 3 Railway stations, Bus stand & near Commercial complexes. However in the absence of traffic study the revenue from paid parking lots cannot be quantified. The size of the municipal area, the presence of large number of industrial units, fast development of residential and commercial activities in this area offers wide scope for generating revenue from parking fees especially in town area and industrial area.

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**Final  
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**17-16**

# 18 FINANCIAL OPERATING PLAN

## 18.1 Background - need for an FOP

The Financial Operating Plan (FOP) assesses the financial strength of the municipality to implement the identified investments. 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.

In the FOP three scenarios are envisaged

Scenarios	Details
Base Case Scenario	No New Projects and <b>No</b> Reforms (“Business as Usual” Scenario)
Full Project-Scenario I	Implementation of all Projects required for the next 15 years <b>without</b> Reform implementation
Full Project -Scenario II	Implementation of all Projects required for the next 15 years <b>with</b> Reform implementation

The key reforms are highlighted in Table below. The total reforms suggested have been elaborated in Reforms Implementation Schedule (Figure 18-1)

**Key reforms**

Particulars	Current practice	Reform suggested
Revision in Property tax rates	Revision once in 10 years	25% increase in every 5 years
Service level Coverage (Water Supply- Number of assessments)	26%	5% to 10% increase every year achieving 85% coverage by 2017-18
Revision in Initial Deposit for New Water Connections	Adhoc revision	Rs.2000 increase every 5 years for each new connection
Revision in Water Charges	Adhoc revision	25% increase every 5 years
Revision in Initial Deposit for New UGD Connections	No UGD currently	Rs.2000 increase every 5 years for each new connection
Revision in Monthly user charges for UGD	No UGD currently	25% increase every 5 years once implemented

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**Final Report**

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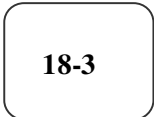
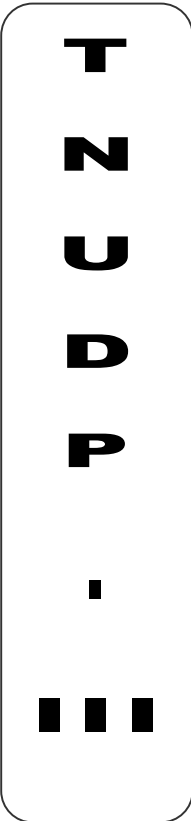
User Charges for Solid Waste Management	Not Charged	Rs.50 per month from Non-Domestic assesses from the year 2011-12 and Rs.15 per month from Domestic assesses from the year 2013-14. A 25% increase every 5 years in the user charges has been proposed.
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## 18.2 Financial Sustainability

The financial sustainability Analysis is carried out with the basic assumption that the municipality will carry out reforms and projects envisaged under various scenarios. The Financial Operating plan prepared for Maraimalai Nagar Municipality evaluates the municipality’s financial position based on the three scenarios described below:

### 18.2.1 Base Case Scenario

In the base case scenario, the finances of ULB are forecast for next 15 years without taking into consideration any new projects envisaged in Capital Investment Plan. . Current practices with regard to tariff revision of key services are only considered. Additional resources mobilized through various initiatives such as resource mobilization through enhanced revision of property tax rates and the number of assessments (based on projected population increase), increased revenue realization through faster growth in service charges and fees including revision of user charges and connection charges for water supply, other income (mainly Lease rental income) etc are loaded to the FOP in the base case scenario. Routine revenue expenses including Operations and Maintenance of existing assets have also been considered and loaded to the FOP. Revenue surplus thus



generated indicates ULBs capacity to service the usual capital expenditure in the normal course of running its operations.

### **18.2.2 Full project Scenario**

Full Project scenario for Maraimalai Nagar has been worked out based on estimated demand supply analysis of various physical and social infrastructure requirements of the city and feedback of stakeholders' consultation on the city's needs for the next 15 years. The financial mix for funding these projects has been based on prudent financial norms and existing practices of funding currently being followed today. The projects identified are vital for meeting the basic requirements of the town as per the infrastructure standards. Furthermore all the projects identified fall under the obligatory functions under the 12<sup>th</sup> Schedule. 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 overcome these issues the framework for FOP is developed taking into account existing strengths of the town and also reducing the inefficiencies in the system.

Phasing of the identified projects is done based on the possible year of construction, demand supply gap analysis and investment priority of the stakeholders. Implications of the investments worked out in terms of external borrowing required & the resulting debt servicing commitments, external support in form of grants and additional operation and maintenance expenditure anticipated due to the new projects identified have been worked out for the next 15 years. Debt servicing capabilities, gaps in required investments from ULB for the said projects vs the actual availability with the municipality for the ULB's contribution for the said projects has been worked out to estimate the extent of ULB's capability to meet its contribution for financing the new projects identified under Capital Investment Plan.

The implications on the investment and borrowing capability of the ULB for all the identified projects is worked out under two scenarios

- A) Without suggested reforms
- B) With suggested reforms

## **18.3 Assumptions for FOP**

This FOP is based on a whole range of assumptions related to income and expenditure. These are critical to understand the financial projections worked out, sustenance of the projected increase in revenue and expenditure under various scenarios and surplus thus generated. Assumptions regarding interest rates, repayment terms and conditions, financing pattern have also been explained in subsequent paragraphs. Assumptions regarding additional Operation and Maintenance Expenses for the new projects identified have also been provided. The assumptions would help in understanding the extent of investment sustenance for future projects envisaged.

### **18.3.1 Revenue Income**

In case of taxes and non tax revenue such as property taxes, water charges and sewerage charges where the base and basis of revenue is fairly well known and predictable the likely revenue is forecast based on certain assumptions regarding growth in number of assessment, revision in average revenue per property (for property taxes), revision in charges/Tariffs (water charges and sewerage). Table 18-A, Table 18-B, Table 18-C lists out the assumptions with regard to forecasting income from property tax, water charges and sewerage charges respectively. Assumptions regarding other sources of revenue income have been given in Table 18-D. Tables indicate the assumptions in revenue income in base case scenario and investment scenario.

### 18.3.1.1 Property Taxes

Table 18-A : Key assumptions for forecasting income from Property Taxes

Description	Current Level	Base Case Scenario	Investment Scenario
Annual Growth in Number of Assessment	3.16% (From 2002-03 till 2007-08)	Projected based on the estimated increase in population of the city	Projected based on the estimated increase in population of the city
Periodic Increase in Average Revenue per property (%)		25% increase in every 10 years	25% increase in every 5 years

Source: Analysis

### 18.3.1.2 Water Charges

Table 18-B: Key assumptions for forecasting income from Water Charges

Description	Current Level	Base Case Scenario	Investment Scenario
<b>% OF WATER CONNECTIONS TO PROPERTY TAX ASSESSMENT</b>			
2007-08	26%		
2013-14		57%	57%
2017-18		85%	85%
<b>INITIAL DEPOSIT FOR NEW WATER SUPPLY CONNECTIONS ( Rs. per connection)</b>			
<b>Domestic (Rs.)</b>			
From 2008-09 till 2012-13	Rs.1500	Rs.1500	Rs.1500
From 2013-14 till 2017-18		Rs.1500	Rs.3500
From 2018-19 till 2022-23		Rs.3500	Rs.5500
<b>Non-Domestic (Rs.)</b>			
From 2008-09 till 2012-13	Rs.2500	Rs.2500	Rs.2500
From 2013-14 till 2017-18		Rs.2500	Rs.4500

Final Report

18-6

From 2018-19 till 2022-23		Rs.4500	Rs.6500
<b>Industrial (Rs.)</b>			
From 2008-09 till 2012-13	Rs.4000	Rs.4000	Rs.4000
From 2013-14 till 2017-18		Rs.4000	Rs.6000
From 2018-19 till 2022-23		Rs.6000	Rs.8000
<b>WATER CHARGES (per month)</b>			
<b>Domestic (Rs.)</b>			
2008-09	Rs.20		
From 2009-10 till 2012-13		Rs. 20	Rs. 20
From 2013-14 till 2017-18		Rs. 20	Rs. 25(25% increase)
From 2018-19 till 2022-23		Rs. 25 (25% increase)	Rs. 31.25 (25% increase)
<b>Non-Domestic (Rs.)</b>			
2008-09	Rs.60		
From 2009-10 till 2012-13		Rs.60	Rs.60(25% increase)
From 2013-14 till 2017-18		Rs.60	Rs.75(25% increase)
From 2018-19 till 2022-23		Rs.75 (25% increase)	Rs.93.75% increase)
<b>Industrial (Rs.)</b>			
2008-09	Rs.100		
From 2009-10 till 2012-13		Rs.100	Rs.100 (25% increase)
From 2013-14 till 2017-18		Rs.100	Rs.125(25% increase)
From 2018-19 till 2022-23		Rs.125 (25% increase)	Rs.156.25 (25% increase)

Source: Analysis

### 18.3.1.3 Sewerage Charges

Table 18-C : Key assumptions for forecasting income from Sewerage Charges

Description	Current Level	Base Case Scenario	Investment Scenario
<b>Number of UGD Connections</b>	30%		70% of Total Number of Property tax assessment
<b>Ratio of Domestic and Non-Domestic/Industrial to the total UGD Connections</b> <i>(This is based on the current % of Domestic and Non-Domestic of the total Property tax assessments)</i>	97:03		97:03
<b>MONTHLY USER CHARGES</b>			
<i>(Note: Monthly User charges would be collected after the UGD Project is completed)</i>			
<b>At present</b>	Nil	Nil	
<b>Domestic (Rs./Month.)</b>			
<i>From 2012-13</i>			Rs.50
<i>From 2013-14 till 2017-18</i>			Rs.62.50 (25% increase)
<i>From 2018-19 till 2022-23</i>			Rs.78.125(25% increase)
<b>Non-Domestic (Rs./Month.)</b>			

Final Report

18-8

<i>From 2012-13</i>			Rs.100
<i>From 2013-14 till 2017-18</i>			Rs.125 (25% increase)
<i>From 2018-19 till 2022-23</i>			Rs.156.25 (25% increase)
<b>Industrial (Rs./Month.)</b>			
<i>From 2012-13</i>			Rs.500
<i>From 2013-14 till 2017-18</i>			Rs.625 (25% increase)
<i>From 2018-19 till 2022-23</i>			Rs.781.25 (25% increase)
<b>DEPOSIT FEE /CONNECTION</b>			
<b>Domestic (Rs.)</b>			
<b>At Present</b>	Rs.1500	Rs.1500	
<i>From 2012-13</i>			Rs.3000
<i>From 2013-14 till 2017-18</i>			Rs.5000
<i>From 2018-19 till 2022-23</i>			Rs.7000
<b>Non-Domestic (Rs.)</b>			
<b>At Present</b>	Rs.2500	Rs.2500	
<i>From 2012-13</i>			Rs.5000
<i>From 2013-14 till 2017-18</i>			Rs.7000
<i>From 2018-19 till 2022-23</i>			Rs.9000
<b>Industrial (Rs.)</b>			
<b>At Present</b>	Rs.4000	Rs.4000	

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Final Report

18-9

From 2012-13			Rs.10000
From 2013-14 till 2017-18			Rs.12000
From 2018-19 till 2022-23			Rs.14000

Source: Analysis

**18.3.1.4 Other sources of Revenue income**

**Table 18-D : Assumption for Income**

Particulars	CAGR-(%)	Projected growth Rates (%)	Notes
<b>Profession Tax</b>	19.95% (2002-03 till 2007-08)	10%	Average CAGR is taken for projected growth in Profession Tax -
<b>External Sources</b> (Assigned Revenue+ Devolution Funds+ Grants & Contribution)	17.94% (2002-03 till 2007-08)	7%	Since external sources of income has shown an up & down trend in the last few years, a projected growth of 7% is taken for calculating income from external sources.
<b>Service Charges &amp; fees</b> (Excluding Water Charges)	49% for Building license fee and 14.31% for other fees	5%	Minimum of 5% growth rate assumed on safer side on account Service charges & other fees excluding water charges.

<b>Other Income</b>	Inconsistent trend	5%	2007-08 (Budget) is taken as the base year for projections. This includes development charges and project overhead appropriation expenses.
User Charges for Solid Waste Management	Not charged		Rs.50 per month from Non-Domestic assesses from 2011-12 and Rs.15 per month from Domestic assesses from 2013-14. A 25% increase every 5 years in the user charges has been envisaged.

Source: Analysis based on past financials provided by Maraimalai Nagar Municipality\

### 18.3.2 Revenue Expenditure

#### 18.3.2.1 Current Revenue Expenditure

Table 18-E: Assumption for Revenue Expenditure

Particulars	CAGR-(%)	Projected Growth Rates (%)
Personnel Cost & Retirement Benefits ( Salaries)	Salaries- 12.06% (2002-03 till 2007-08) Retirement Benefits- Inconsistent trend	6%
Operating Expenses	9.52%	7%
Repairs & Maintenance	2.27%	6%

<b>Administrative Expenses</b>	Doubled during 06-07 & 07-08 years showing a CAGR of 46.85% over five years ending 2007-08.	10%
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Source: Analysis based on past financials provided by Maraimalai Nagar Municipality

### 18.3.2.2 Additional O&M Expenditure due to sub-projects

This has already been covered in Chapter 16: Asset Management Plan: Table 16 E: O&M for Proposed Works

### 18.3.2.3 Future Debt obligations

Table 18-F: Key assumptions for forecasting future debt obligations

Sector	Tenure	Moratorium	Rate of Interest (%)
Water Supply, UGD	20	5	10.00
Roads, Storm Water Drains	10	2	9.00
Others	5	NIL	9.00

Source: Analysis

### 18.3.3 Funding Mechanism

Table 18-G : Financing Pattern for Proposed projects as per prudent Funding norms

Particulars	Loan	Grant	ULB Share/ Public Contribution	Notes
<b>Water Supply</b>	50	30	20	
<b>UGD</b>	50	30	20	*Fully public contribution -20%
<b>Sanitation</b>		50	50	
<b>Storm Water Drainage</b>	30	60	10	
<b>Solid Waste Management</b>		50	50	
<b>Roads, Traffic and Transportation</b>	30	60	10	

<b>Street Lighting</b>			100	
<b>Socio-Economic Infrastructure</b>				
<i>School Building</i>		50	50	
<i>Parks and Playgrounds</i>		50	50	
<i>Daily and Weekly Market</i>	90		10	PPP
<i>Slum Improvement- IHSDP</i>		80	20**	** Equal Contribution from the ULB and the beneficiaries
<i>Burial Ground Improvement</i>		50	50	
<i>Gassifier</i>		50	50	
<i>Slaughter House</i>		50	50	
<i>Land Development</i>	90		10	
<i>Community Hall</i>		50	50	
<b>Municipal Building</b>		50	50	

Source: Analysis

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**Final Report**

**18-13**



## **18.4 Outcome of Financial Operating Plan**

### **18.4.1 Base Case Scenario (“Business as Usual Scenario”)**

In the Base Case Scenario, the finances of ULB are forecast for the next 15 years without taking into consideration any new projects envisaged in Capital Investment Plan (CIP). The past trends in growth rates in revenue income and expenditure are assumed to continue over the next 15 years. No new revenue sources such as user charges for UGD, SWM are envisaged under this scenario. Revenue surplus thus generated indicates ULB’s capacity to service the usual capital expenditure in the normal course of running its operations. Table 18-H indicates the revenue surplus position of the ULB over the 15 year period.

#### **The following are the outcome under this scenario:-**

- The projected cumulative revenue surplus (Closing Balance) of the ULB shows a healthy surplus position over the 15 year period with a revenue surplus touching Rs.25582.13 Lakhs in the year 2022-23 after meeting its current debt obligations.

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Final  
Report

18-14

Maraimalai Nagar

Table 18-H: Financial Operating Plan - No Projects, No REFORMS- Base Case Scenario

Rs.in Lakhs

Particulars	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Opening Balance (X)	1006.38	1931.62	2927.72	4110.61	5352.71	6648.52	8046.72	9517.63	11095.97	12763.95	14505.85	16394.88	18349.22	20642.66	23051.98
<b>Revenue Income</b>															
Property Tax	486.00	519.93	668.05	686.17	704.30	732.27	760.23	788.20	816.16	844.12	877.64	911.16	1180.84	1222.74	1264.63
Other Taxes(Profession Tax)	91.56	100.72	110.79	121.87	134.05	147.46	162.21	178.43	196.27	215.90	237.48	261.23	287.36	316.09	347.70
External Sources	354.24	379.04	405.57	433.96	464.34	496.84	531.62	568.83	608.65	651.26	696.85	745.63	797.82	853.67	913.42
Service Charges & Fees	172.25	183.11	193.91	205.19	208.92	249.28	257.57	273.76	290.68	291.92	357.61	338.07	352.45	367.43	383.05
Other Income	287.73	302.12	317.23	333.09	349.74	367.23	385.59	404.87	425.11	446.37	468.69	492.12	516.73	542.56	569.69
<b>Revenue Income (A)</b>	<b>1391.79</b>	<b>1484.92</b>	<b>1695.54</b>	<b>1780.28</b>	<b>1861.35</b>	<b>1993.08</b>	<b>2097.22</b>	<b>2214.09</b>	<b>2336.88</b>	<b>2449.57</b>	<b>2638.27</b>	<b>2748.21</b>	<b>3135.19</b>	<b>3302.49</b>	<b>3478.50</b>
<b>Revenue Expenditure</b>															
Personnel Cost	76.81	81.42	86.30	91.48	96.97	102.79	108.95	115.49	122.42	129.77	137.55	145.80	154.55	163.83	173.66
Operating Expenses	121.38	129.88	138.97	148.70	159.11	170.24	182.16	194.91	208.56	223.16	238.78	255.49	273.38	292.51	312.99
Repairs and Maintenance	84.60	89.68	95.06	100.76	106.81	113.21	120.01	127.21	134.84	142.93	151.51	160.60	170.23	180.45	191.27
Administrative Expenses	40.72	44.80	49.28	54.20	59.62	65.59	72.15	79.36	87.30	96.03	105.63	116.19	127.81	140.59	154.65
Existing Debt Repayment	143.04	143.04	143.04	143.04	143.04	143.04	143.04	118.78	115.79	115.79	115.79	115.79	115.79	115.79	115.79
<b>Revenue Expenditure (B)</b>	<b>466.56</b>	<b>488.81</b>	<b>512.65</b>	<b>538.18</b>	<b>565.55</b>	<b>594.87</b>	<b>626.31</b>	<b>635.75</b>	<b>668.90</b>	<b>707.66</b>	<b>749.25</b>	<b>793.87</b>	<b>841.76</b>	<b>893.16</b>	<b>948.35</b>
<b>SURPLUS OR DEFICIT (A-B)=C</b>	<b>925.23</b>	<b>996.11</b>	<b>1182.89</b>	<b>1242.10</b>	<b>1295.81</b>	<b>1398.20</b>	<b>1470.91</b>	<b>1578.34</b>	<b>1667.98</b>	<b>1741.91</b>	<b>1889.03</b>	<b>1954.34</b>	<b>2293.44</b>	<b>2409.33</b>	<b>2530.15</b>
<b>Closing Balance (C+X)=D</b>	<b>1931.62</b>	<b>2927.72</b>	<b>4110.61</b>	<b>5352.71</b>	<b>6648.52</b>	<b>8046.72</b>	<b>9517.63</b>	<b>11095.97</b>	<b>12763.95</b>	<b>14505.85</b>	<b>16394.88</b>	<b>18349.22</b>	<b>20642.66</b>	<b>23051.98</b>	<b>25582.13</b>

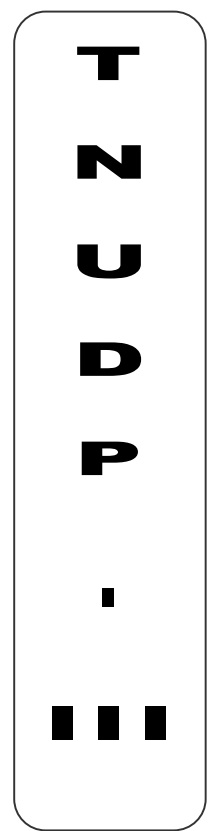
### 18.4.2 Full Project Scenario **WITHOUT** Reforms

The Full project investment scenario is based on projects identified for Maraimalai Nagar Municipality and the investment required for upgrading the town’s infrastructure. The projects have been identified based on estimated demand supply analysis of various physical and social infrastructure requirements of the city and feedback obtained from stakeholders on the city’s needs for the next 15 years. The financial mix for funding these projects has been based on financial norms and existing practices currently being followed. The projects identified are vital for meeting the basic requirements of the city as per the infrastructure standards and norms.

The cash flows from the new projects is given in Table 18-I. The projected Overall Closing balance shows a positive financial impact for the ULB in implementing the projects even without undertaking the reforms suggested. The same has been shown in Table 18 J

**The following are the outcome under this scenario:- (Full project without reforms under suggested norms of funding)**

Financing Criteria	Results obtained
Whether new project O&M is being met by the revenue of the ULB?	The ULB is able to meet the O&M of the new projects
Whether ULB is able to meet its debt repayment obligations?	ULB is able to meet its loan repayment obligations. The same has been shown in Table 18 K with DSCR is more than 1.25 times (Minimum acceptable DSCR norms )



Final Report

18-15

<p>Whether ULB is able to contribute the required amount as per prudent funding norms?</p>	<p>The ULB would be able to meet its financial contribution to new projects as required under prudent financial norms of funding. The required ULB contribution is Rs. 36.56 crs as shown under Table 18 L.</p>
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As seen from the results of the above scenario, the ULB is comfortable in taking up all the projects identified in the CIP. The ULB is able to easily service the O&M of new projects, repay the debt obligation, contribute comfortably towards its share of funding to the projects identified under the CIP.

**Table 18 L: FULL PROJECT SCENARIO WITHOUT REFORMS- Suggested Funding Pattern.**

Particulars	Full project Scenario- Funding based on Suggested financial norms (Rs.lakhs)
Loan Amount	6306.62
External Support	10512.42
ULB's Contribution	3656.07
Public Contribution	307.80
PPP	0.00
<b>Project Cost</b>	<b>20782.91</b>
% of loan on Project cost	30.00%

The full reform implementation would help the ULB to make a healthy contribution to its share of funds for the projects implementation and also improves its borrowing capacity there by reducing the dependence on the external support for the project implementation and make them self sufficient. The same has been elaborated under Heading 18.4.3

Maraimalai Nagar

Table No 18 I: Full Project Cash Flow, Full Projects WITHOUT REFORMS - As per Prudent Financial norms

Rs. In Lakhs

Particulars	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Opening Balance (A)</b>		-32.59	-135.61	-350.42	-731.15	-1265.60	-1842.85	-2573.42	-3451.36	-4486.12	-5658.96	-6886.15	-8155.25	-9466.15	-10760.35
<b>Sources of Funds</b>															
Debt Drawn Down	237.40	308.04	450.94	854.48	529.25	391.98	590.75	486.45	515.87	354.69	235.22	0.00	216.45	0.00	1135.09
ULB Own Contribution	263.17	263.31	285.41	253.95	224.47	242.04	218.27	206.50	186.69	167.77	195.12	202.03	289.68	328.77	328.90
Grants	413.62	719.47	1414.84	1250.22	914.78	277.86	1397.82	546.74	581.51	236.70	1511.55	27.74	475.03	30.89	713.66
Public Contribution	0.00	0.00	83.35	0.00	0.00	0.00	101.31	0.00	0.00	0.00	123.14	0.00	0.00	0.00	0.00
Monthly User Charges fro UGD	0.00	0.00	0.00	0.00	0.00	88.29	91.66	95.03	98.40	101.77	132.27	137.32	142.37	147.42	152.47
Initial Deposit from Additional UGD Connections	0.00	0.00	0.00	0.00	9.47	14.61	14.61	14.61	14.61	14.61	28.52	28.52	28.52	28.52	28.52
<b>Total Inflow (B)</b>	<b>914.19</b>	<b>1290.81</b>	<b>2234.55</b>	<b>2358.65</b>	<b>1677.97</b>	<b>1014.76</b>	<b>2414.42</b>	<b>1349.32</b>	<b>1397.08</b>	<b>875.55</b>	<b>2225.82</b>	<b>395.61</b>	<b>1152.05</b>	<b>535.59</b>	<b>2358.65</b>
<b>Disposition of Funds</b>															
Project Capex	914.19	1290.81	2234.55	2358.65	1668.50	911.87	2308.15	1239.69	1284.07	759.17	2065.03	229.77	981.16	359.65	2177.66
O&M For New Project	0.00	41.92	97.29	161.89	252.31	319.91	382.70	480.24	565.91	653.74	730.62	805.47	847.77	916.94	965.63
Debt Servicing (Principal + Interest)	32.59	61.09	117.52	218.84	291.60	360.23	454.14	507.33	581.86	635.48	657.36	629.46	634.02	553.20	629.92
<b>Total Outflow ( C )</b>	<b>946.79</b>	<b>1393.83</b>	<b>2449.36</b>	<b>2739.38</b>	<b>2212.41</b>	<b>1592.02</b>	<b>3144.99</b>	<b>2227.26</b>	<b>2431.84</b>	<b>2048.39</b>	<b>3453.01</b>	<b>1664.71</b>	<b>2462.95</b>	<b>1829.80</b>	<b>3773.20</b>
<b>Net Cash Flow (B-C)= D</b>	<b>-32.59</b>	<b>-103.01</b>	<b>-214.81</b>	<b>-380.73</b>	<b>-534.44</b>	<b>-577.25</b>	<b>-730.57</b>	<b>-877.94</b>	<b>-1034.76</b>	<b>-1172.84</b>	<b>-1227.19</b>	<b>-1269.10</b>	<b>-1310.90</b>	<b>-1294.20</b>	<b>-1414.55</b>
<b>Closing Balance (A+D)=E</b>	<b>-32.59</b>	<b>-135.61</b>	<b>-350.42</b>	<b>-731.15</b>	<b>-1265.60</b>	<b>-1842.85</b>	<b>-2573.42</b>	<b>-3451.36</b>	<b>-4486.12</b>	<b>-5658.96</b>	<b>-6886.15</b>	<b>-8155.25</b>	<b>-9466.15</b>	<b>-10760.35</b>	<b>-12174.91</b>

Maraimalai Nagar

Table 18 J : Financial Operating Plan - Full Project (Without Reforms) As per Prudent Financial Norms

Particulars	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Opening Balance (X)	1006.38	1931.62	2927.72	4110.61	5352.71	6657.99	8159.08	9736.26	11424.24	13205.22	15063.51	17113.32	19233.50	21697.83	24283.09
<b>Revenue Income</b>															
Property Tax	486.00	519.93	668.05	686.17	704.30	732.27	760.23	788.20	816.16	844.12	877.64	911.16	1180.84	1222.74	1264.63
Other Taxes(Profession Tax)	91.56	100.72	110.79	121.87	134.05	147.46	162.21	178.43	196.27	215.90	237.48	261.23	287.36	316.09	347.70
External Sources	354.24	379.04	405.57	433.96	464.34	496.84	531.62	568.83	608.65	651.26	696.85	745.63	797.82	853.67	913.42
Service Charges & Fees	172.25	183.11	193.91	205.19	208.92	249.28	257.57	273.76	290.68	291.92	357.61	338.07	352.45	367.43	383.05
Other Income	287.73	302.12	317.23	333.09	349.74	367.23	385.59	404.87	425.11	446.37	468.69	492.12	516.73	542.56	569.69
User Charges for Sewerage (UGD)				0.00	0.00	88.29	91.66	95.03	98.40	101.77	132.27	137.32	142.37	147.42	152.47
Initial Deposit for New UGD Connections				0.00	9.47	14.61	14.61	14.61	14.61	14.61	28.52	28.52	28.52	28.52	28.52
User charges from SWM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Revenue Income (A)</b>	<b>1391.79</b>	<b>1484.92</b>	<b>1695.54</b>	<b>1780.28</b>	<b>1870.82</b>	<b>2095.97</b>	<b>2203.48</b>	<b>2323.73</b>	<b>2449.88</b>	<b>2565.95</b>	<b>2799.06</b>	<b>2914.05</b>	<b>3306.08</b>	<b>3478.43</b>	<b>3659.49</b>
<b>Revenue Expenditure</b>															
Personnel Cost	76.81	81.42	86.30	91.48	96.97	102.79	108.95	115.49	122.42	129.77	137.55	145.80	154.55	163.83	173.66
Operating Expenses	121.38	129.88	138.97	148.70	159.11	170.24	182.16	194.91	208.56	223.16	238.78	255.49	273.38	292.51	312.99
Repairs and Maintenance	84.60	89.68	95.06	100.76	106.81	113.21	120.01	127.21	134.84	142.93	151.51	160.60	170.23	180.45	191.27
Programme Expenses															
Administrative Expenses	40.72	44.80	49.28	54.20	59.62	65.59	72.15	79.36	87.30	96.03	105.63	116.19	127.81	140.59	154.65
Existing Debt Repayment	143.04	143.04	143.04	143.04	143.04	143.04	143.04	118.78	115.79	115.79	115.79	115.79	115.79	115.79	115.79
<b>Revenue Expenditure (B)</b>	<b>466.56</b>	<b>488.81</b>	<b>512.65</b>	<b>538.18</b>	<b>565.55</b>	<b>594.87</b>	<b>626.31</b>	<b>635.75</b>	<b>668.90</b>	<b>707.66</b>	<b>749.25</b>	<b>793.87</b>	<b>841.76</b>	<b>893.16</b>	<b>948.35</b>
<b>SURPLUS OR DEFICIT (A-B)=C</b>	<b>925.23</b>	<b>996.11</b>	<b>1182.89</b>	<b>1242.10</b>	<b>1305.27</b>	<b>1501.10</b>	<b>1577.18</b>	<b>1687.98</b>	<b>1780.99</b>	<b>1858.29</b>	<b>2049.81</b>	<b>2120.18</b>	<b>2464.33</b>	<b>2585.27</b>	<b>2711.14</b>
Closing Balance (C+X)=D	1931.62	2927.72	4110.61	5352.71	6657.99	8159.08	9736.26	11424.24	13205.22	15063.51	17113.32	19233.50	21697.83	24283.09	26994.23
Total Net Project Cash Flow (E)	-295.77	-398.91	-635.83	-985.11	-1499.53	-2187.78	-2897.96	-3767.49	-4785.81	-5943.11	-7242.06	-8523.12	-9926.72	-11265.06	-12684.80
Overall Closing Balance (D+E)=F	1635.85	2528.81	3474.78	4367.61	5158.45	5971.30	6838.30	7656.75	8419.41	9120.40	9871.26	10710.38	11771.11	13018.03	14309.43



### 18.4.3 Full Project Scenario WITH Reforms

The cash flows from the new projects under this scenario is shown in Table 18 M. The financial impact for the ULB in implementing full projects through additional resources generated on account of reforms suggested and as per the suggested funding pattern is given in Table 18 N

**The following are the outcome under this scenario:-**

Financing Criteria	Results obtained
Whether new project O&M is being met by the revenue of the ULB?	The ULB is able to meet the O&M of the new projects after implementing all reforms suggested as additional revenues are realized.
Whether ULB is able to meet its debt repayment obligations?	ULB is able to meet its loan repayment obligations. The same has been shown in Table 18 O with DSCR is more than 1.25 times (Minimum acceptable DSCR norms )
Whether ULB is able to contribute the required amount as per prudent funding norms?	The ULB would able to meet comfortably for its financial contribution to new projects

The table below shows the funding pattern for the projects with reforms and borrowing capacity of the ULB under “Full Project Scenario WITH Reforms”

**Table 18 P: FULL PROJECT SCENARIO WITH REFORMS - Suggested Funding pattern**

<b>Particulars</b>	<b>Full Project Scenario (Rs.lakhs)</b>
Loan Amount	7310.31
External Support	2985.13
ULB’s Contribution	10179.67
Public Contribution	307.80
PPP	<b>0.00</b>
<b>Project Cost</b>	<b>20782.91</b>
% of loan on Project cost	35%

- As seen from the above table, the ULB is able to contribute Rs.101.80 Crs for implementing the projects identified under CIP.
- The ULB’s capability to borrow is Rs.73.10 Crs. as against the loan requirement of Rs.63.07 Crores.
- The dependence on external support reduces after the reform implementation.

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**Final  
Report**

**18-18**

Maraimalai Nagar

Table No 18 M: Full Project Cash Flow, Full Projects WITH REFORMS - With Suggested Funding Pattern.

	Rs. In Lakhs														
Particulars	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Opening Balance (A)</b>		-42.87	-179.37	-451.53	-942.53	-1634.30	-2364.72	-3275.90	-4335.96	-5564.44	-6930.47	-8355.14	-9762.97	-11211.60	-12558.03
<b>Sources of Funds</b>															
Debt Drawn Down	352.41	569.20	601.84	1163.55	830.16	261.10	569.74	528.27	562.12	216.34	505.01	5.30	451.46	6.14	687.67
ULB Own Contribution	679.20	661.69	701.03	593.04	472.93	500.50	411.57	532.70	497.14	440.30	632.23	690.49	974.93	1153.79	1238.12
Grants	76.13	96.47	756.51	27.35	22.33	16.75	828.08	18.47	19.39	20.36	1006.53	22.45	23.57	24.75	25.99
Public Contribution	0.00	0.00	83.35	0.00	0.00	0.00	101.31	0.00	0.00	0.00	123.14	0.00	0.00	0.00	0.00
Monthly User Charges fro UGD	0.00	0.00	0.00	0.00	0.00	110.36	114.57	118.79	123.00	127.22	165.34	171.65	177.97	184.28	190.59
Initial Deposit from Additional UGD Connections	0.00	0.00	0.00	0.00	9.47	23.79	23.79	23.79	23.79	23.79	39.53	39.53	39.53	39.53	39.53
<b>Total Inflow (B)</b>	<b>1107.73</b>	<b>1327.36</b>	<b>2142.73</b>	<b>1783.94</b>	<b>1334.89</b>	<b>912.51</b>	<b>2049.07</b>	<b>1222.02</b>	<b>1225.45</b>	<b>828.02</b>	<b>2471.79</b>	<b>929.41</b>	<b>1667.46</b>	<b>1408.49</b>	<b>2181.90</b>
<b>Disposition of Funds</b>															
Project Capex	1107.73	1327.36	2142.73	1783.94	1325.43	778.36	1910.70	1079.44	1078.65	677.01	2266.92	718.23	1449.96	1184.68	1951.78
O&M For New Project	0.00	41.92	97.29	161.89	252.31	319.91	382.70	480.24	565.91	653.74	730.62	805.47	847.77	916.94	965.63
Debt Servicing (Principal + Interest)	42.87	94.57	174.88	329.10	448.93	544.66	666.86	722.40	809.37	863.29	898.92	813.53	818.35	653.30	636.47
<b>Total Outflow ( C )</b>	<b>1150.60</b>	<b>1463.85</b>	<b>2414.90</b>	<b>2274.93</b>	<b>2026.67</b>	<b>1642.93</b>	<b>2960.26</b>	<b>2282.08</b>	<b>2453.93</b>	<b>2194.05</b>	<b>3896.46</b>	<b>2337.24</b>	<b>3116.08</b>	<b>2754.92</b>	<b>3553.88</b>
<b>Net Cash Flow (B-C)= D</b>	<b>-42.87</b>	<b>-136.49</b>	<b>-272.17</b>	<b>-490.99</b>	<b>-691.77</b>	<b>-730.42</b>	<b>-911.18</b>	<b>-1060.06</b>	<b>-1228.48</b>	<b>-1366.03</b>	<b>-1424.68</b>	<b>-1407.83</b>	<b>-1448.63</b>	<b>-1346.43</b>	<b>-1371.98</b>
<b>Closing Balance (A+D)=E</b>	<b>-42.87</b>	<b>-179.37</b>	<b>-451.53</b>	<b>-942.53</b>	<b>-1634.30</b>	<b>-2364.72</b>	<b>-3275.90</b>	<b>-4335.96</b>	<b>-5564.44</b>	<b>-6930.47</b>	<b>-8355.14</b>	<b>-9762.97</b>	<b>-11211.60</b>	<b>-12558.03</b>	<b>-13930.01</b>

Maraimalai Nagar

Table 18 N : Financial Operating Plan - Full Project (With Reforms) As per Suggested Funding Pattern.

Particulars	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Opening Balance (X)	1006.38	1931.62	2927.72	4110.61	5372.03	6687.67	8202.46	9786.69	11681.37	13702.50	15791.54	18242.43	20758.46	23691.14	26760.29
<b>Revenue Income</b>															
Property Tax	486.00	519.93	668.05	686.17	704.30	732.27	760.23	985.24	1020.20	1055.16	1097.05	1138.95	1476.05	1528.42	1580.79
Other Taxes(Profession Tax)	91.56	100.72	110.79	121.87	134.05	147.46	162.21	178.43	196.27	215.90	237.48	261.23	287.36	316.09	347.70
External Sources	354.24	379.04	405.57	433.96	464.34	496.84	531.62	568.83	608.65	651.26	696.85	745.63	797.82	853.67	913.42
Service Charges & Fees	172.25	183.11	193.91	205.19	208.92	309.15	312.02	332.02	352.79	338.87	410.24	372.60	387.54	403.08	419.26
Other Income	287.73	302.12	317.23	333.09	349.74	367.23	385.59	404.87	425.11	446.37	468.69	492.12	516.73	542.56	569.69
User Charges for Sewerage (UGD)					0.00	110.36	114.57	118.79	123.00	127.22	165.34	171.65	177.97	184.28	190.59
Initial Deposit for New UGD Connections					9.47	23.79	23.79	23.79	23.79	23.79	39.53	39.53	39.53	39.53	39.53
User charges from SWM				19.32	19.83	56.71	58.87	61.04	63.20	65.37	84.96	88.20	91.44	94.69	97.93
<b>Revenue Income (A)</b>	<b>1391.79</b>	<b>1484.92</b>	<b>1695.54</b>	<b>1799.60</b>	<b>1881.19</b>	<b>2109.66</b>	<b>2210.54</b>	<b>2530.43</b>	<b>2690.03</b>	<b>2796.71</b>	<b>3200.13</b>	<b>3309.91</b>	<b>3774.43</b>	<b>3962.32</b>	<b>4158.92</b>
<b>Revenue Expenditure</b>															
Personnel Cost	76.81	81.42	86.30	91.48	96.97	102.79	108.95	115.49	122.42	129.77	137.55	145.80	154.55	163.83	173.66
Operating Expenses	121.38	129.88	138.97	148.70	159.11	170.24	182.16	194.91	208.56	223.16	238.78	255.49	273.38	292.51	312.99
Repairs and Maintenance	84.60	89.68	95.06	100.76	106.81	113.21	120.01	127.21	134.84	142.93	151.51	160.60	170.23	180.45	191.27
Programme Expenses															
Administrative Expenses	40.72	44.80	49.28	54.20	59.62	65.59	72.15	79.36	87.30	96.03	105.63	116.19	127.81	140.59	154.65
Existing Debt Repayment	143.04	143.04	143.04	143.04	143.04	143.04	143.04	118.78	115.79	115.79	115.79	115.79	115.79	115.79	115.79
<b>Revenue Expenditure (B)</b>	<b>466.56</b>	<b>488.81</b>	<b>512.65</b>	<b>538.18</b>	<b>565.55</b>	<b>594.87</b>	<b>626.31</b>	<b>635.75</b>	<b>668.90</b>	<b>707.66</b>	<b>749.25</b>	<b>793.87</b>	<b>841.76</b>	<b>893.16</b>	<b>948.35</b>
<b>SURPLUS OR DEFICIT (A-B)=C</b>	<b>925.23</b>	<b>996.11</b>	<b>1182.89</b>	<b>1261.42</b>	<b>1315.64</b>	<b>1514.79</b>	<b>1584.23</b>	<b>1894.68</b>	<b>2021.13</b>	<b>2089.04</b>	<b>2450.88</b>	<b>2516.04</b>	<b>2932.67</b>	<b>3069.16</b>	<b>3210.57</b>
<b>Closing Balance (C+X)=D</b>	<b>1931.62</b>	<b>2927.72</b>	<b>4110.61</b>	<b>5372.03</b>	<b>6687.67</b>	<b>8202.46</b>	<b>9786.69</b>	<b>11681.37</b>	<b>13702.50</b>	<b>15791.54</b>	<b>18242.43</b>	<b>20758.46</b>	<b>23691.14</b>	<b>26760.29</b>	<b>29970.86</b>
<b>Total Net Project Cash Flow (E)</b>	<b>-722.07</b>	<b>-841.06</b>	<b>-1152.56</b>	<b>-1535.56</b>	<b>-2116.70</b>	<b>-2999.37</b>	<b>-3825.84</b>	<b>-5011.24</b>	<b>-6208.38</b>	<b>-7521.78</b>	<b>-9192.24</b>	<b>-10664.64</b>	<b>-12404.02</b>	<b>-13935.63</b>	<b>-15398.25</b>
<b>Overall Closing Balance (D+E)=F</b>	<b>1209.54</b>	<b>2086.67</b>	<b>2958.05</b>	<b>3836.47</b>	<b>4570.97</b>	<b>5203.08</b>	<b>5960.85</b>	<b>6670.13</b>	<b>7494.12</b>	<b>8269.76</b>	<b>9050.19</b>	<b>10093.83</b>	<b>11287.12</b>	<b>12824.66</b>	<b>14572.61</b>



## 18.5 Conclusion and Recommendation

- The projected financial position of Maraimalai Nagar municipality is healthy to undertake all the projects envisaged under the CIP
- The full reform implementation also helps the ULB to *comfortably contribute* its share of funds for the projects implementation and also improves its borrowing capacity
- It is suggested that all reforms outlined in the Reform Implementation Schedule needs to be implemented fully in order to fund the projects envisaged under Full Project Investment Scenario. The time frame envisaged under Reforms Implementation Schedule in Figure 18.1 needs to be firmly adhered to. The reform implementation would enable the municipality to have adequate financial strength to take up more projects as the city develops and more urbanization happens.
- The reform efforts of the ULB need to be supported and rewarded with financial assistance from funding agencies of Rs.73.10 Crores and external support of Rs.29.85 Crores in order to implement all projects suggested under CIP.
- The ULB can bring in Rs. 101.80 Crores over the 15 year period to meet its share of contribution towards the full project implementation. This is possible only if ULB implements all the reforms suggested and highlighted in this report within the scheduled time frame.

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Final  
Report

18-19

Figure 18 - 1: Reforms Implementation Schedule for Maraimalai Nagar

Figure 18 - 1: Reforms Implementation Schedule

Maraimalai Nagar		2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Reforms	Current status															
<b>Property Tax</b>																
90% Collection Efficiency	75% (current collection)		●	—————												
Mandatory Implementation of Revision of Property Tax once in every five years is required	Once in 10 years			●					●					●		
Digitization of the property maps through GIS	Not done						●	—————								
Computerization of Property tax records	Initiated				●	—————										
Introducing alternate methods of tax payment (ECS/EFT/Online Payment)	Currently in Municipal office only				●	—————										
Other Reforms in property taxes as mentioned in Chapter 17 of this report	Limited extent						●	—————								
<b>Water Supply</b>																
Service coverage of water connections to be increased from current 26% to 85%	26%	31%	36%	40%	45%	50%	57%	64%	71%	78%	85%	—————				
Revision of Water supply charges and initial deposit for new water connection	Ad hoc basis						●					●	—————			
One time payment options for monthly water charges	Not done				●	—————										
Incentive and penalty structure for payment of water taxes and charges.	Not done		●	—————												
Water Leakage Audit for Un-accounted for Water (UFW)	Not done				●	—————										
Energy Audit	Study has been initiated				●					●					●	
Periodic maintenance of Water supply systems	Ad hoc maintenance	●	—————													

Figure 18 - 1: Reforms Implementation Schedule for Maraimalai Nagar

Reforms	Current status	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
		Periodic Training to Water Supply Staff	Regularly		●		●		●		●		●		●	
Privatization in routine maintenance relating to water supply	Not done				●	—————										
<b>Sewerage and Sanitation</b>																
Privatization of maintenance of sewerage system can be considered to reduce the establishment charges of municipality and O&M Charges	NA						●	—————								
Revision in Sewer Monthly user charges in every five years after implementation	NA											●				
Revision in initial deposit for new sewer connections in every five years after implementation	NA					●						●				
Periodic maintenance of Sewer supply systems	NA						●	—————								
Annual Maintenance Contract for Sewage Pumping Stations and Sewage Treatment Plants can be adopted.	NA						●	—————								
Incentive and penalty structure for payment of Sewer taxes and charges.	NA						●	—————								
Periodic technical training to its engineering cell is required in O&M of Sewage Treatment Plant, Pumping Stations and Sewer Networking System.	NA						●	●		●		●			●	



Figure 18 - 1: Reforms Implementation Schedule for Maraimalai Nagar

Reforms	Current status	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
		<b>Municipal Assets</b>														
Creation and updating the Comprehensive asset register with regard to land and building	Not Comprehensive		●	—————												
Valuation of assets and liabilities of the Municipality	Not done		●					●					●			
Periodic maintenance of Social Infrastructure	Ad hoc	●	—————													
<b>Accounting Reforms</b>																
Comprehensive Budgeting incorporating O&M costs of various assets	Not Done		●	—————												
Periodic Training to Accounting Staff	Regularly		●		●		●		●		●		●		●	
Finalisation of accounts and completion of audit of accounts with in that specific year	Not done		●	—————												
Zero based budgeting would need to be carried out for continual monitoring of budgets and cash flow management	Not done		●	—————												





Figure18 - 2 : Project Implementation Schedule for Maraimalai Nagar

Particulars	Current Status	Assistance	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
<b>Roads, Traffic &amp; Transportation</b>		Financial Insitution, Govt. and ULB															
Converting 78.14 Km kutchra road into Pucca road	Identified during Stakeholder's consultation and to be implemented once in all the three phases	ULB Financial Insitution, Govt. and ULB															
Developing 100 feet parallel road (Periyar Salai) to NH - 45 from Guduvanchery - Valancheri - Potheri - Thinnakkattur - Thaiyal Nagar - MM Nagar - Ford - Chinga Perumal Koil for a length of 10 Kms.	Identified based on Demand assessment to be implemented in first phase	ULB Financial Insitution, Govt. and ULB															
4 Junction Improvement scheme in SRM college junction, Singa perumal Koil Junction, Potheri Junction and Kattankulathur Junction.	Identified based on Demand assessment to be implemented in first phase	ULB Financial Insitution, Govt. and ULB															
Bus stand Improvement Scheme	Identified based on Demand assessment to be implemented in first phase	ULB Financial Insitution, Govt. and ULB															
Separate Mouffsil Bus stand for Regional Transport System	Identified based on Demand assessment to be implemented in second phase	ULB Financial Insitution, Govt. and ULB															
Relaying existing BT road once in three years (100.69 Km)	Identified based on Rapid Urban Assessment to be implemented once in all the three phases	ULB Financial Insitution, Govt. and ULB															
Relaying existing CC road once in 3 years (12.85Km)	Identified based on Rapid Urban Assessment to be implemented once in all the three phases	ULB Financial Insitution, Govt. and ULB															
Relaying 78.14 Km road once in three years after its conversion from Kutchra to Pucca road.	Identified based on Rapid Urban Assessment to be implemented in second and third phase	ULB Financial Insitution, Govt. and ULB															

Figure18 - 2 : Project Implementation Schedule for Maraimalai Nagar

Particulars	Current Status	Assistance		2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	
<b>Street Lighting &amp; Energy Saving Mechanism</b>																			
Providing 761 additional energy saver lamps by 2012-13	Identified based on Demand supply Gap Analysis and to be implemented in Phases	PSP	ULB																
Installation of voltage controller& timers for 17 poles (150 poles have already been provided timers)	Based on TERI Report No. 20051B33	PSP	ULB																
Installation of electronic chokes in place of conventional copper chokes and 36 w tube lights (for existing 3344 tube lights which excludes	Based on TERI Report No. 20051B33	PSP	ULB																
2 High Mast lights are required in Valancheri and Keelakarunai	Based on Stakeholders opinion and to be implemented in first phase	PSP	ULB																
<b>Socio-Economic Infrastructure</b>																			
Developing 150 approved layouts into parks and playgroundsin phases	Identified based on Rapid Urban Assessment to be implemented in all the phases	ULB	External Assistant and ULB																
Developing Community hall	Identified based on Rapid Urban Assessment to be implemented in the first phase.	ULB	External Assistant and ULB																
Creating New municipal office opposite to existing municipal building accomodating Municipal office, shopping complex, Municipal Commissioner and Municipal Engineer Quarters in a land of 1.79 acres	Identified based on Rapid Urban Assessment to be implemented in the first phase.	ULB	External Assistant and ULB																
Creating 4 ward offices	Identified based on Rapid Urban Assessment to be implemented in the first phase.	PSP	External Assistant and ULB																
Gasifier Crematorium (proposed at NH -3 in an estimated cost of Rs. 50 lakhs), grant is Rs. 20 lakhs	Identified based on Rapid Urban Assessment to be implemented in the first phase.	ULB	External Assistant and ULB																
10 burial grounds Infrastructure improvement scheme	Identified based on Rapid Urban Assessment to be implemented in the first phase.	ULB	External Assistant and ULB																
Existing shops (12 shops) in Thayumanavar Street renovation using General fund	Identified based on Rapid Urban Assessment to be implemented in the first phase.	ULB	External Assistant and ULB																
Renovating 2 marriage halls	Identified based on Rapid Urban Assessment to be implemented in the first phase.	ULB	External Assistant and ULB																
Consultancy services for Bid process management and selection of bidder for PPP projects (3 major projects)	Identified based on Rapid Urban Assessment to be implemented in the first phase.	PSP	External Assistant and ULB																
<b>Slums and Urban poverty</b>																			
IHSDP (Project cost of Rs. 600 lakhs is escalated by 20%)	Identified during stakeholders consultation to be implemented in all the three phases	ULB	External Assistant, ULB and Public																