

CITY CORPORATE CUM BUSINESS PLAN MANAPPARAI

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FINAL REPORT



FEBRUARY 2009

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Disclaimer:

The contents of this report are based primarily on discussions with Manapparai Municipality and information, secondary data /Reports available with the Municipality including our discussions with the Operations Working Group (OWG) representing stake holders 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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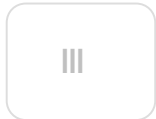
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Annexure.....

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ANNEXURE II NORMS VS CURRENT STATUS

ANNEXURE III URBAN PERFORMANCE INDICATORS

ANNEXURE IV SALARIES

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ANNEXURE VI DRAFT MEMORANDUM OF UNDERSTANDING

ANNEXURE VII COUNCIL RESOLUTION



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Acronyms....

AMP	:	Asset Management Plan
ASI	:	Archeological Survey of India
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
CCBP	:	City Corporate Cum Business Plan
CMA	:	Commissionerate of Municipal Administration
CMWSSB	:	Chennai Metro Water Supply & Sewerage Board
CPHEEO	:	Central Public Health & Environmental Engineering Organisation
DPR	:	Detailed Project Report
ESR	:	Elevated Storage Reservoir
ESA	:	Environmental and Social Assessment
FAS	:	Financial Accounting System
FOB	:	Foot Over Bridge
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
IDSMT	:	Integrated Development of small & Medium Towns
IUDP	:	Integrated Urban Development Project
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
m2	:	Square Meter

m3	:	Cubic Meter
MIS	:	Management Information System
Mid	:	Million litres per day
MOA	:	Memorandum of Association
mm	:	Millimeter
MUDF	:	Municipal Urban Development Funds
MUDP	:	Madras Urban Development Project
NA	:	Not Available/Not Applicable
NGO	:	Non Government Organisation
NH	:	National Highway
NHAI	:	National Highway Authority of India
O&M	:	Operations and Maintenance
OWG	:	Operations Working group
PF	:	Public Fountains
PPP	:	Public Private Participation
PSP	:	Private Sector Participation
PWD	:	Public Works Department
ROB	:	Road Over Bridge
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
TUFIDCO	:	Tamil Nadu Urban Finance & Infrastructure Development Corporation Limited
TWAD	:	Tamil Nadu Water Supply & Drainage Board
UDPFI	:	Urban Development Planning Formulation and Implementation
UIDSSMT	:	Urban Infrastructure Development Scheme for Small & Medium Towns
UGD	:	Under Ground Sewerage
ULB	:	Urban Local Bodies
UT	:	Union Territory
WBM	:	Water Bound Macadam
WFPR	:	Work Force Participation Rate
WS	:	Water Supply

1 PROJECT BACKGROUND

Government of Tamilnadu and The World Bank as a partner has been involved in Urban Reform program in Tamilnadu through Tamilnadu Urban Development Project – TNUDP-I, TNUDP-II, TNUDP-III (in progress). Government of Tamilnadu is now implementing TNUDP-III with focus on furthering the urban reforms initiated under TNUDP-II.

As a financial intermediary, TNUIFSL under TNUDP-III intends to assist Sathyamangalam, Bhavani, Gobichettipalayam, Rasipuram, Komarapalayam, Idappadi, Attur, Dharapuram, Kulithalai, Manapparai, Thuraiyur municipality in strengthening and improving its financial position for effective capital investment management and urban service delivery. These towns are having a good potential for immediate implementation of such financial reforms for which it is essential to formulate a City Corporate Cum Business Plan. Moreover, these municipalities have on their own defined their vision and identified certain projects to be implemented, for which pre-feasibility studies are to be carried out and a sustainable investment plan has to be prepared.

In this regard, the task of preparation of City Corporate cum Business Plan for the aforesaid ULBs was awarded to Darashaw and Company Private Limited. This final report pertains to the City Corporate cum Business Plan for Manapparai Municipality.

1.1 City Corporate Cum Business Plan

City Corporate cum Business Plan (CCBP) is an innovative approach and strategy that represents both a vision for the city and for the ULB organization as well as mission statements on how to materialize the vision. City Corporate cum Business Plan is considered as an important tool for governing the City, through a participatory and consultative process. CCBP tends to bring a systematic approach in the planning process through Citizen's Participation. This helps the ULBs to identify the issues with clear vision and convert them into an action programme for Long, Medium and Short- term periods.

The process of CCBP has been initiated through identifying the basic issues/priorities and possible ways of achieving them through a consultative process. As a forward linking

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process, the stakeholders have made an attempt to assess the deficiency in the existing system and identified an ideal vision for future development. The stakeholders' priorities have been established through a detailed consultation process. Based on this, an appropriate strategy has been drafted, adhering to the preferred standards as suggested by the stakeholders. Detailed corporate plan based on the financial status of the ULB has been prepared for implementation.

One of the major focuses of CCBP is its importance attached in the preparation of 15-year Capital Investment Plan for the ULB. This has been carried out based on the priorities identified by the stakeholders in the context of long-term development and identification of priority investments, which has been phased based on the ULB's infrastructure requirements and investment priority of the OWG members.

The final report has been approved and passed by the Elected Representatives of the Municipal Council (Council Resolution enclosed).

1.2 Approach and Methodology

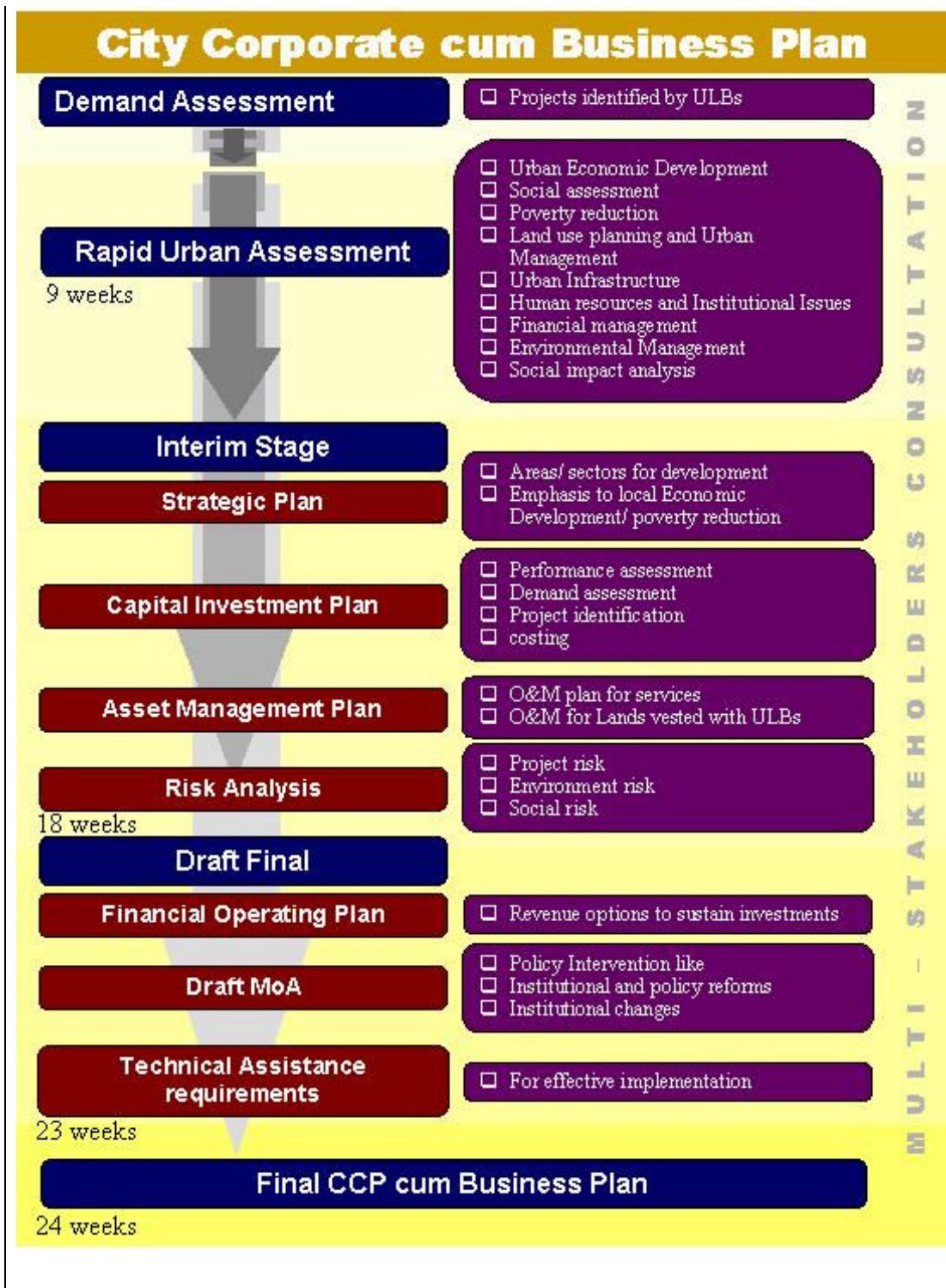
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Evolving and conceptualizing a precise methodological framework is crucial as it guides the task of preparing the City Corporate cum Business Plan (CC & BP) in a phased and planned manner. The study methodology outlines the various stages and tasks carried out in the preparation of City Corporate cum Business Plan for Municipal Towns in Tamil Nadu.

The whole exercise is divided into four stages, which are further subdivided into tasks and several sub-tasks or activities within them. Figure below shows the adopted study methodology and is followed by a brief description on each of the stages.

Figure 1-1: Approach and Methodology for City Corporate cum Business Plan



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1.2.1 Inception Stage

In the inception stage, both the Demand Assessment and the Rapid Urban Assessment for the municipal area was carried out.

1.2.1.1 Demand Assessment

RFP document specifies that the municipalities (allotted to Darashaw and Company Private Limited) have on their own defined their vision and identified certain projects to be implemented, for which pre-feasibility studies are to be carried out and a sustainable investment plan has to be prepared.

Hence, this stage in essence assessed the demand for various projects proposed by the municipality and Investment Plan for such projects was reviewed.

1.2.1.2 Rapid Urban Assessment

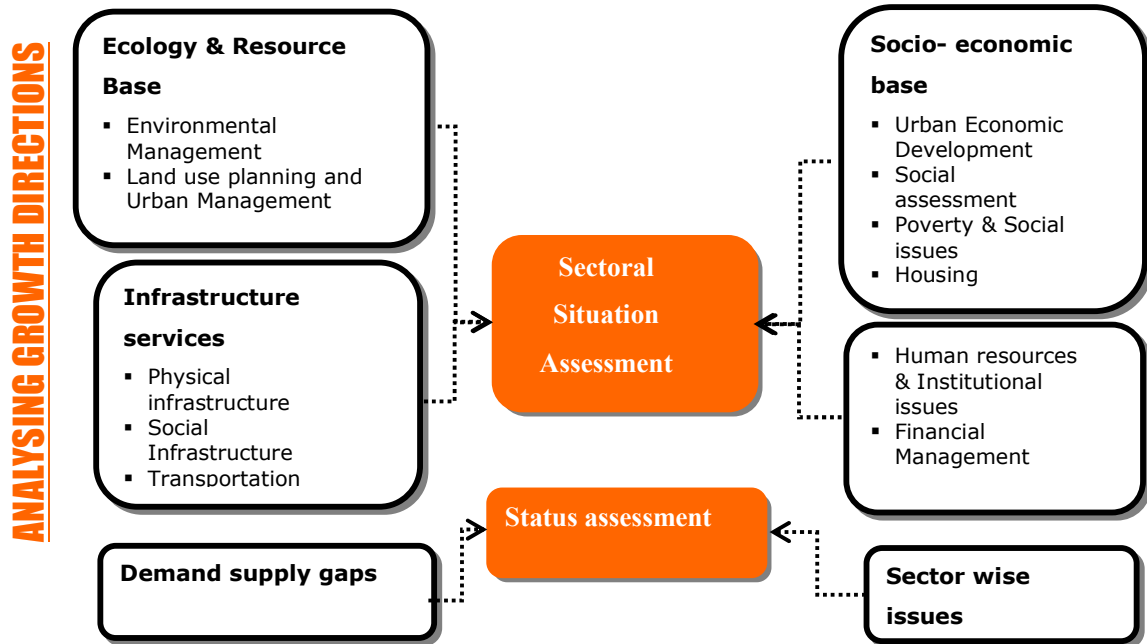
Here, all the information collected by Secondary sources was analyzed to find out current development status at an urban area level. The Analysis included all the sectors mentioned below:

- Urban Economic Development
- Social assessment
- Poverty reduction
- Land use planning and Urban Management
- Urban Infrastructure
- Human resources and Institutional Issues
- Financial management
- Environmental Management
- Social impact analysis

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Figure 1-2 Rapid Urban Assessment



Demand Assessment and Rapid Urban assessment was approved and accepted by the Review Committee on 07th January 2008.

Figure 1-3 Presentation of the Inception report before the Review Committee



The Suggestions given by the Review Committee during the meeting has been given as under.

1.2.1.3 Suggestions of the Review Committee on the Inception Report

Our initial assessment and findings during the Inception stage was presented before the Review Committee meeting held on 07.01.2008. The Review Committee's inputs and comments on the Inception Report are given as under:

1. The consultants were requested to do stakeholder consultations to get demands from public for identifying infrastructure gaps.
2. The consultants were requested to do a SWOT analysis for every Municipality and accordingly fix up their vision statements and potentials for improvements.
3. Apart from the basic infrastructure the consultants were requested to assess the demand for the social infrastructure such as municipal schools, burial ground, slaughter house etc.
4. The consultants had identified projects implemented by municipality. It was also requested that the consultants should identify infrastructure requirements for total up liftment of the towns and accordingly classify under projects implemented by other departments.
5. The collection efficiency for Idappadi and Manapparai Municipalities are very less. The Municipal Commissioners explained that even after repeated action by the local body the collection efficiency remains very less. Hence the consultants were requested to give some innovative practical solutions to achieve the maximum efficiency.
6. All the municipalities were requested to provide five years audited accounts and recent year's un-audited accounts to the consultants. Accordingly the consultant was request to work out the financials.³
7. Integrated approach on plans may be considered by the consultants for all the possible services

The consultants have considered all the important suggestions suggested by the Review Committee and included them in the Interim Report.

1.2.2 Interim Stage

1.2.2.1 Strategic Plan

On the basis of the sectoral issues identified during rapid urban status assessment, the sectoral strategies were proposed and converted into Action plans and projects in liaison with the city vision developed by the municipality. Such projects have been phased on the basis of demand and OWG member's priorities.

During Strategic plan preparation; emphasis were given to Areas/ sectors for local Economic Development and poverty reduction.

1.2.2.2 Capital Investment plan

The Consultant have worked out the cost of projects and financial requirements for meeting the demand for infrastructure and services. Urban agglomeration have been considered while working out the project costing for identified projects.

1.2.2.3 Asset Management plan

Consultant has carried out the O&M costs for the services proposed and at the same time analyzed the impact on finances for existing and proposed Infrastructure projects. A detailed Asset Management Plan have also been prepared for the municipality

1.2.2.4 Risk Analysis

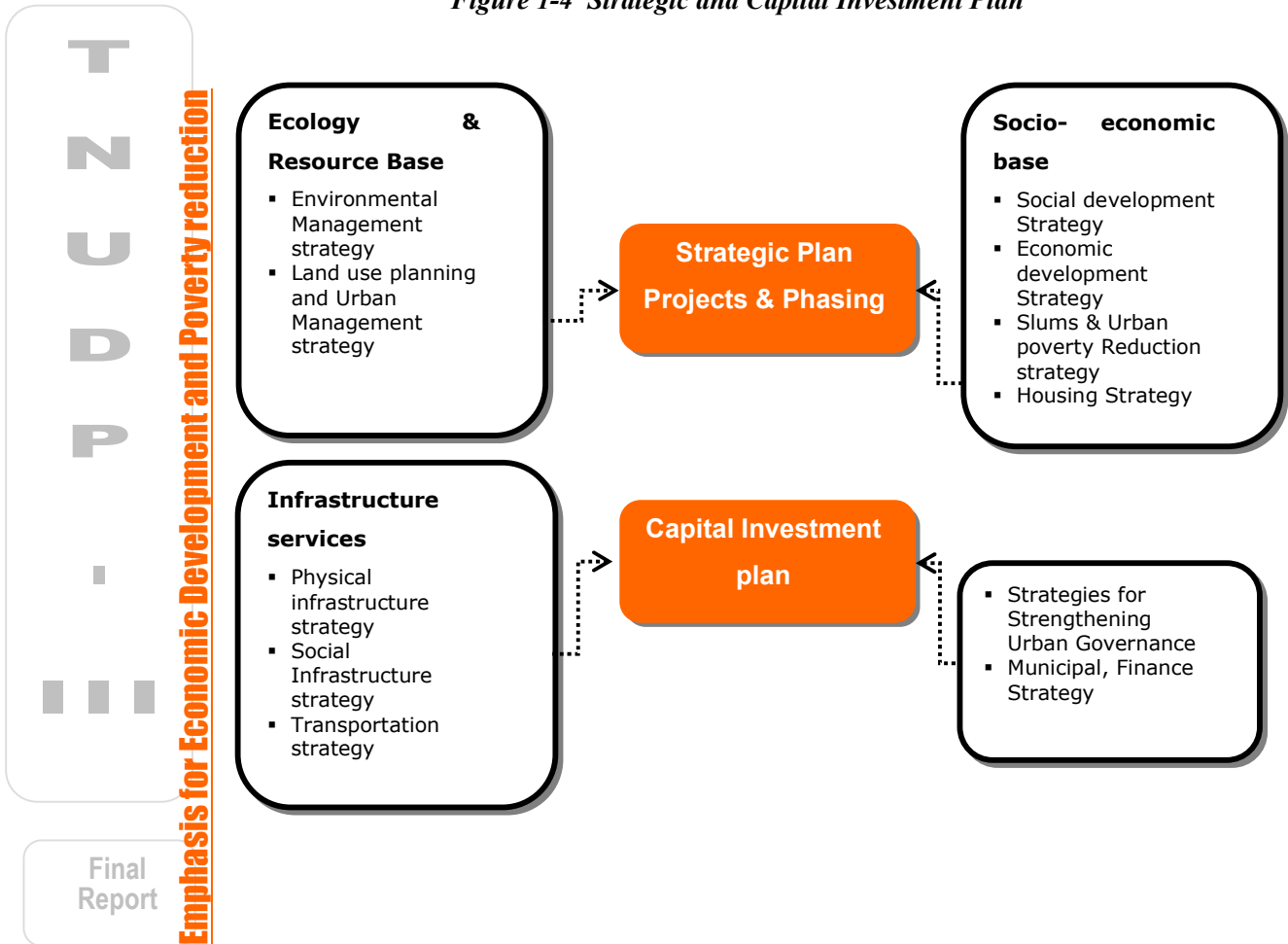
Consultant has carryout the risk analysis for the projects proposed by ULBs as well as for the projects identified in this assignment.



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Figure 1-4 Strategic and Capital Investment Plan



All the aforesaid four tasks were covered in the Interim Stage report which was approved and accepted by the Review Committee in its two day meeting held on 18th and 19th March 2008.

Figure 1-5 Presentation of the Interim report before the Review Committee



1.2.2.5 Suggestions of the Review Committee on the Interim Report

The Review Committee during the aforesaid Interim meeting made some specific suggestions pertaining to Manapparai Municipality to be addressed in the Draft Final Stage and the same is listed out below:

1. The consultants were requested to prioritize the projects based on the demand for the project & demand from the stake holders and also have to consider the state policy and the financial capacity of the local body
2. The consultants had mentioned in the report that the OWG will be formed, which will work towards identifying the issues, developing the strategies and finalize the capital investment plans. But it was found that stakeholder consultation was treated as OWG. Hence the consultants were requested to form the OWG and continuously interact with them towards effective completion of the assignment
3. It was mentioned that the most of the projects identified were proposed under UIDSSMT. The consultants were requested to consider allocation to the state and to the local body for all the schemes and were requested to work out the project financials accordingly
4. In solid waste management sector the consultant has given provisions only for collection system and compost yard. However they were requested to make a provision for scientific sanitary landfill facility for all towns
5. The consultant has proposed some of the remunerative projects in second and third phase. However if there is a demand for such remunerative projects, this may be implemented in the first phase as this may act as an additional source of income for the local bodies
6. *In Sathyamangalam Municipality the projects identified in the water supply sector are only improvements to internal distribution network. However the consultants were requested to analyze the capacity of source for future demand and if necessary a project may be proposed for source augmentation and transmission mains at various phases according to the requirement.*

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7. *The actual cost of the underground sewerage scheme in Sathyamangalam Municipality was increased; hence the consultants were requested to work out the financials based on the actual cost*
8. In Manapparai Municipality the Municipal Engineer informed that they need four high mast lamps in four major junctions. The consultants were requested to make a provision to these lamps in addition to the provisions made already
9. In Manapparai Municipality the provision for bus stand improvement was made in phase II, whereas the municipality informed that the bus stand improvement works has to be done in phase I itself. Hence the consultants may change the phasing accordingly
10. *In Attur Municipality it was observed that all the projects identified were either suggested by the municipality or during the stakeholder consultation. However the consultants have to justify all the demands*
11. Wherever tourism potential is huge, the consultants can identify some of the tourism project which may also be implemented by tourism / other departments
12. *The cost of one of the Water Supply scheme in Rasipuram Municipality was mentioned as Rs. 5.18 Crores whereas the actual cost is Rs. 8.15 Crores and has been sent to CMA for approval. This needs to be addressed.*
13. The consultant has to consider O&M for Underground sewerage system only after completion of the scheme
14. *It was discussed that the Komarapalayam Municipality is not getting potable water because of effluent from dying industries. It was suggested that the consultants may insist the necessity of common effluent treatment plant and the same may also be discussed with the industry associations during the public consultation*
15. *The Commissioner, Idappadi Municipality has agreed to give the detailed break up of all the O&M cost for the municipality, which then be incorporated by the consultant in the financials*
16. *By considering the necessity of the project the Kulithalai Municipality has expressed that the Solid Waste Management project has to be implemented in Phase I and the Community hall may be implemented in Phase II. The Consultant has requested to revise the plan according to the suggestion given by the municipality*

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

1.2.3 Draft Final stage

1.2.3.1 Financial Operating Plan (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.

The projected FOP under four broad scenarios have been worked out to highlight the importance of the reforms suggested to implement all identified projects required for the development of Manapparai Town.

The four broad scenarios under which FOP has been worked out for Manapparai municipality are as under:

1. Base case scenario (“Business as usual scenario”) - In this scenario “No New Projects” are to be implemented over the 15 year period and No reforms to be undertaken.
2. Full Project Scenario without undertaking the Suggested Reforms
3. Full Project Scenario with Full Reforms implementation
4. Sustainable Investment Scenario

1.2.3.2 Draft Memorandum of Association

Consultant has prepared a draft Memorandum of Association between ULB and TNUIFSL. The draft MoA has also outlined the Identified projects with implementation schedule, Reform Agenda which needs to be carried out and suitable action plan for the same.



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1.2.3.3 Suggestions of the Review Committee on the Draft Final Report

The Review Committee during the aforesaid meeting, made some specific suggestions pertaining to Manapparai Municipality to be addressed in the Addendum for the Draft Final Report and the same is listed out below:

1. The consultant informed that none of the municipalities had the capacity to implement all the identified projects even with the reforms proposed. In this regard, consultants were requested to analyze the sustainable investment capacity of the local body and suggest the projects that can be taken within the investment capacity and also to suggest alternative ways to implement the balance identified projects.
2. The consultants were requested to analyze the impact of the reforms suggested on the financials of the local body and also to conduct the sensitivity for the same
3. The consultant has suggested various reforms to be reached after certain period by the local bodies. However the consultants were asked to give the milestones for implementing the reforms, for intermittent period also.
4. The consultants were requested to propose the Under Ground Sewerage Scheme based on the priorities already laid down by the Commissionerate of Municipal Administration, for which TNUIFSL will facilitate in obtaining the same.
5. The consultants were requested to incorporate the provision for scientific sanitary landfill facility for all the local bodies
6. The consultants were requested to work out year on year DSCR, average DSCR, minimum and maximum DSCR.
7. The consultants were requested to include the existing loan while calculating DSCR
8. The cost of the Underground Sewerage Scheme for Rasipuram, Gobichettipalayam, Sathyamangalam and Komarapalayam has increased, hence the consultants were requested to update the same and work-out the financials accordingly

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9. In Bhavani Municipality, the Commissioner pointed out that there is a slight difference in the assets given in the report and hence the consultants were requested to update the list of assets from the local body.
10. In addition to the projects proposed in Bhavani, the Commissioner requested the consultants to incorporate the construction of compound wall in the head works and improvements to certain parks in the municipality.
11. In addition to the projects proposed in Rasipuram, the Municipal Engineer requested the consultants to incorporate the construction of shops at the first floor and a shopping complex at Anna Nagar, which will fetch additional revenue to the local body.
12. While converting Kulithalai from Panchayat to Municipality most of the assets were not transferred. Although these assets are within the municipal limits, these are owned by the Panchayat. As the development of the Kulithalai town vests partly with the Panchayat, the consultants were requested to consult the officials and the elected representatives of the Panchayat before finalizing the plan.

1.2.3.4 Addendum to the Draft Final Report

Based on the comments received on the Draft Final Report, an addendum to the Draft Final Report was prepared and the same was approved by the Review Committee. The Review Committee made some suggestions to be incorporated in the Final Report and the same is listed below:

The following are the salient points discussed.

1. The consultants were requested to incorporate the additional projects in consultation with the local body.
2. The consultants were requested to discuss the reforms suggested with the Council.
3. The consultants were requested to prepare a comparative statement for the full project scenario vis-à-vis sustainable scenario.
4. The consultants were requested to address the requirement of Wind Mills for Dharapuram Municipality.

5. In some of the towns the consultants has decreased the ULB contribution in the scenarios after implementing reforms, which may be addressed.
6. The Consultants were requested to provide justification for projects altered for the sustainable investment scenario.
7. The Consultants were requested to high light the requirement of Common Effluent Treatment Plant for Komarapalayam Municipality in consultation with the Local Body.

The Draft Final Report was approved by the Review Meeting held on 16th and 17th September 2008.

1.2.4 Final Report

The final stage is the preparation of final report covering all the above stages incorporating the suggestions and modifications given by the Review Committee & also by the OWG members.

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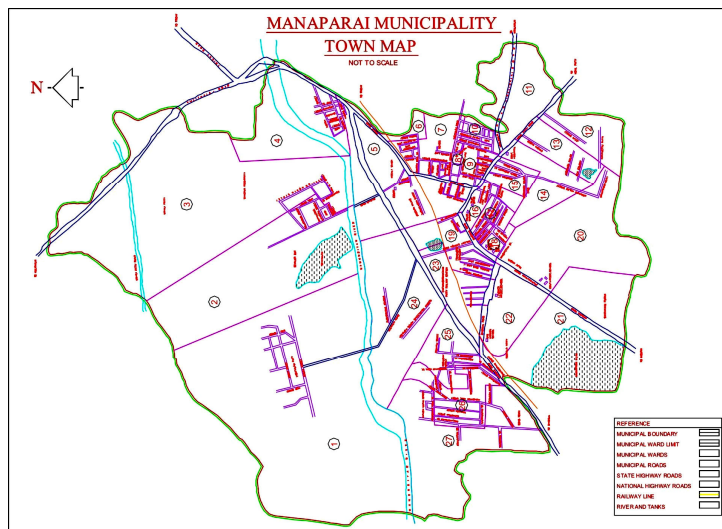
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2 TOWN PROFILE

Manapparai, a Grade one Municipality is located in Tiruchirapalli district of Tamilnadu state. Manapparai which is also a Taluk head quarter, located at 40 Kms from Tiruchirapalli in the South western direction on National Highway No. 45. Manapparai has River Mamundi flows through the middle of the town. Manapparai is famous for Manapparai Murukku also.

Manapparai Municipality was constituted as III Grade Municipality on 1.10.1966. It has been upgraded to I Grade Municipality with effect from 22.5.1998. Manapparai Municipality limit includes the following Revenue villages Sevalur, Vidathilampatti, Manjampatti, Theerampatti, Pothamettupatti, Manapparaipatti, Karamettupatti, Poomalaipatti, Mahalipatti, Nochimedu, Chidambarathanpatti, Veerachi south street and Santhiyagapuram. Extent of the town is 20.85 Sq.Km. Population of the town as per 2001 Census is 35,770 with 17,786 male population and 17,984 female population. Manapparai town map is shown in Figure 2-1. This town is familiar for cattle and vegetable shandy and it ranks third among shandies in Tamilnadu.

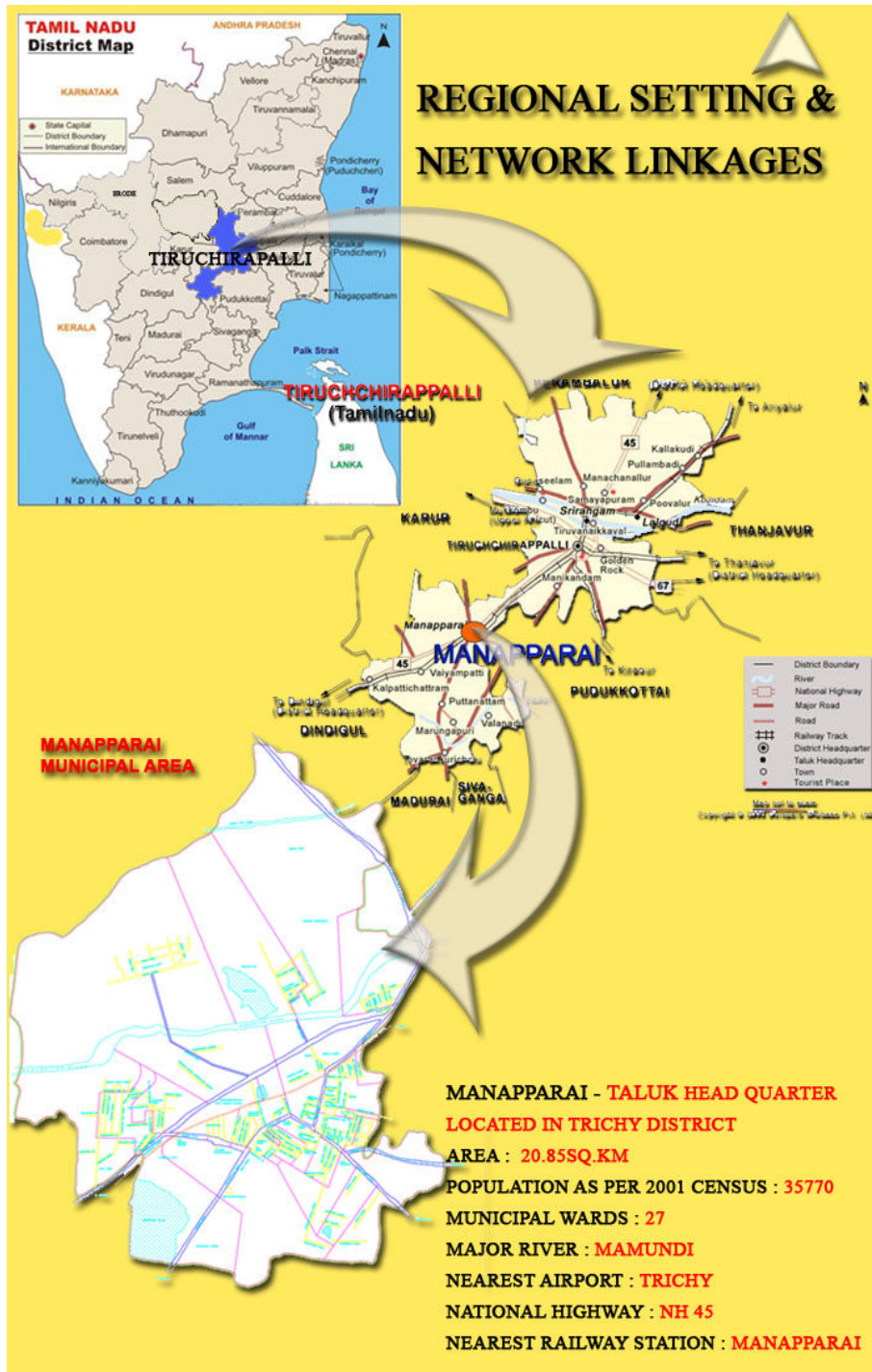
Figure 2-1 Manapparai Town map



Source : Manapparai Municipality

2.1 Regional setting and network linkages

Figure 2-2 Regional Setting and Network Linkages - Manapparai



Manapparai town is located on the National Highway No.45 Madras – Cape Commerin road. Manapparai is located in between Tiruchirappali and Dindigul at a distance of 40 km from Tiruchirappali, 60 km from Dindigul, 102 km from Madurai and 56 km from Pudukkottai. It is situated at 10° 37' Northern latitude and 78°26' East longitude.

Manapparai is well connected with all the big cities by rail and road. It has a railway station located on the broad gauge line between Tiruchirappalli and Madurai. Manapparai has the nearest airport at Tiruchirappalli (45kms from the city). Indian Airlines connects Tiruchirappalli with Chennai, Sharjah, Kuwait and Colombo. Air Lanka Service connects Tiruchirappalli with Colombo.

2.2 Demography

The town has a population of 35,770 as per 2001 census. The high growth rate was seen between 1961 and 1971 but it was reduced considerably in each decade and it has reached to 12.35% between 1991 and 2001. Gross population density is around 1715 persons per Sq.Km as per 2001 census and it was 1300 persons per Sq.Km in 1981. The population trend since 1951 is given in Table 2-A. Ward wise population details are given in Table 2-B.

Table 2-A Population growth in Manapparai Municipal area

<i>Year</i>	<i>Population</i>	<i>Variation</i>	<i>% of variation</i>	<i>CAGR</i>	<i>Gross density</i>
1951	8770	--	--	--	--
1961	11644	2874	32.77	2.88	--
1971	19895	8251	70.86	5.50	--
1981	27242	7347	36.93	3.19	1306
1991	31837	4595	16.87	1.57	1527
2001	35770	3933	12.35	1.17	1715

Source : Census Publications

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Table 2-B Ward wise population details in Manapparai

<i>Ward No.</i>	<i>Population</i>	<i>% Share</i>	<i>Ward No.</i>	<i>Population</i>	<i>% share</i>
1	1358	3.80	15	832	2.33
2	1146	3.20	16	1307	3.65
3	1157	3.23	17	1078	3.01
4	1578	4.41	18	1926	5.38
5	1482	4.14	19	741	2.07
6	1848	5.17	20	2878	8.05
7	1034	2.89	21	1088	3.04
8	782	2.19	22	1658	4.64
9	932	2.61	23	1473	4.12
10	1125	3.15	24	1032	2.89
11	1391	3.89	25	1031	2.88
12	1191	3.33	26	1190	3.33
13	1725	4.82	27	1089	3.04
14	1698	4.75	Total	35770	100

Source : Manapparai Municipality

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2.3 Social characteristics

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2.3.1 Social composition

As per census 2001, SC population is around 10 percent of the total population whereas ST population is insignificant which comes around 0.4 percent of the total population as shown in Table 2-C.

Table 2-C Social Composition

<i>Social Composition</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>% share to total</i>
SC Population	1752	1754	3506	9.80
ST Population	66	80	146	0.41
Others	15968	16150	32118	89.79
Total Population	17786	17984	35770	100.00

Source : Census publications 2001

2.3.2 Gender Ratio

Gender ratio in 1951 was 951 females per 1000 males but it has decreased considerably between 1961 and 1971. However, it has again increased in the last three decades and as per 2001 census, 1011 females per 1000 males are there in Manapparai which is shown in Table 2-D. However, gender ratio in the age group 0-6 has reduced considerably, lesser than the state urban figures which are shown in Table 2-E.

Table 2-D Gender ratio in Manapparai

Year	Males	Females	Gender Ratio
1951	4595	4275	951
1961	6038	5606	928
1971	10333	9562	925
1981	13946	13296	953
1991	16233	15604	961
2001	17786	17984	1011

Source: Master Plan report.
Manapparai Municipality

Table 2-E Gender ratio comparison with district and state figures

Gender ratio	Population	Population below 06	SC
Male	17786	2157	1752
Female	17984	2009	1754
Gender ration in Manapparai	1011	931	1001
In Trichy Urban district	999	970	1009
In Tamilnadu Urban	982	955	1001

Source : Census publications 2001

2.3.3 Literacy levels

As per census 2001, 83 percent of total population (excluding 0-6 years of age) are literates of which male accounted for 91 percent and female accounted for 75 percent. Literacy levels in Manapparai have increased from 66 percent to 83 percent between 1991 and 2001. Literacy levels in Manapparai and its comparison with state urban and district urban figures are shown in Table 2-F.

Table 2-F Literacy levels

Literacy levels	Total	Male	Female
Manapparai town	83.15	90.95	75.51
Trichy Urban district	86.76	92.41	81.13
Tamilnadu urban	82.53	88.97	75.99

Source : Census Publications

2.4 Physical characteristics

2.4.1 Geology and soil type

The soils of this region are generally classified as red soil. It is mostly suitable for dry crop namely chillies, cotton and groundnuts which are all the main crop of the region.

2.4.2 Climate and Rainfall

The climate is hot during the summer from March to May and moderate climate during the winter. The town experiences occasional summer rainfall. The town gets rainfall mostly during the North East monsoon during the month of October to December. The average rainfall of the town is around 425 mm.

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3 PHYSICAL PLANNING AND GROWTH MANAGEMENT

Under Town and Country Planning Act 1971, the responsibility of preparing and executing the Master plan for a Local Planning Area vests with the Local Planning Authority. Manapparai Municipal Council is appointed as the “Manapparai Local Planning Authority” under G.O.Ms. No. 650 RD & LD dated 8.4.1975. Manapparai “Local Planning Area Master Plan” was consented in G.O.Ms. No. 866 H & UD dated 16.6.86 and approved by the government in G.O.Ms. No. 124 H & UD dated 9.2.93.

Since the Land Use in the urban areas changed rapidly, Regional Directorate of Town and Country Planning, Tiruchirappalli has carried out the Land Use survey in 2006 to check the discrepancies of the present Land Use from the approved 1993 Master Plan and to prepare a modified Master Plan for approval from the Government.

3.1 Land usage in Manapparai

The Land Use survey was done by Regional Directorate of Town and Country Planning, Tiruchirappalli in 2006 as indicated by Manapparai Municipal officials. The Land usage in Manapparai in year 2006 is shown in Table 3-A. Among the developed areas of the town, about 55 percent of the land is utilized for residential use; only 5 percent of the land is utilized for Industrial use which is very low.

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Table 3-A Existing Land Use in Manapparai Local Planning Area 2006

Existing Land Use in 2006			
Land Use	Area in Ha	% to Developed area	% to the Total area
Residential	263.06	55.66	12.62
Commercial	24.21	5.12	1.16
Industrial	23.15	4.90	1.11
Educational	18.03	3.82	0.86
Public and Semi public	9.4	1.99	0.45
Transportation	134.73	28.51	6.46
Developed Land	472.58	100.00	22.67
Agriculture	1410.45		67.65
Water bodies	201.97		9.69
Undeveloped Land	1612.42		77.33
Total	2085		100.00

Source: Manapparai Master Plan Report. Manapparai Municipality

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3.2 Proposed Land Use for the year 2011

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In the reviewed Master plan for the year 2011, it has been proposed to retain all the land under water as it is. Agricultural lands to an extent of 373.7 hectares have been taken for development for the plan period 2011. The above extent of 373.7 hectares has been spatially distributed among the following five categories namely Residential, Commercial, Industrial, Public and Semi Public, Educational and for Transportation purposes as shown in Table 3-B.

Table 3-B Proposed Land Use and additional land required for development*Area in Hectares*

Land Use	Area required for 2021	% to developed area	% to total area	Existing area (2000)	Additional area required in 2021
Residential	522	61.71	25.05	263	259.22
Commercial	55	6.47	2.63	24	30.55
Industrial	67	7.95	3.23	23	44.15
Educational	40	4.76	1.93	18	22.25
Public and Semi public	11	1.25	0.51	9	1.14
Transportation	151	17.86	7.25	135	16.45
Developed Land	846	100.00	40.59	473	373.75
Agriculture	1037		49.72	1410	-373.74
Water bodies	202		9.69	202	0.00
Undeveloped Land	1239		59.41	1612	-373.74
Total	2085		100.00	2085	0.01

Source : Manapparai Master Plan Report. Manapparai Municipality

3.3 Development Potentials and Constraints

3.3.1 Development Potentials

The spinning mill, located at the periphery of the town, provide employment for more than 1000 workers. There is a possibility for further development in such activities. Due to its location factor and link to nearby towns, Manapparai in future could be developed as a satellite town for Trichy and Dindukkal. Manapparai may develop in its activities and many administrative offices may be located here.

3.3.2 Development Constraints

Absence of local water supply sources, flooding problem due to the absence of proper Storm water drains could be a future development constraints. Town has to adopt diversified economic fields for achieving substantial economic and social development.

4 ECONOMIC DEVELOPMENT

4.1 Economic base of the town

Spinning mill which is located just outside the planning area is the only industry worth mentioning in Manapparai provides employment for more than 1000 persons. In addition, Maris Textile Mill and Radha Textile Mill are located in Ward No .03 on Kulithalai Road. Manapparai is still an

Agro based town. Manapparai is known for market activities and it has Weekly market and Kamaraj Market caters both the Manapparai population and the population in the hinterland.



Figure 4-1 Weekly Market

Manapparai is famous for Cattle market. Area of the Market is 12.52 acres. It attracts people from all parts of Tamilnadu and it is third ranking market in Tamil Nadu. In view of accelerating the Industrial activity within this town, an Industrial belt along one side of the bye pass road is suggested for Industrial use in the recently reviewed Master Plan.

4.1.1 Occupational Pattern

Work force in Tertiary sector has increased from 16 percent to 28 percent of the total population whereas work force in secondary sector has reduced considerably from 6 percent to a meager 0.04 percent between 1991 and 2001. Work force involved in primary sector is still substantial in Manapparai even though it has reduced from 9 to 5 percent of the total population. The occupational pattern in Manapparai Municipal area is shown in Table 4-A.

Table 4-A Occupational Pattern in Manapparai 1991-2001

<i>Workers in</i>	<i>1991</i>	<i>% to total workers</i>	<i>% to total population</i>	<i>2001</i>	<i>% to total workers</i>	<i>% to total population</i>
Primary sector	2958	28.97	9.29	1948	15.40	5.45
Secondary sector	1932	18.92	6.07	16	0.13	0.04
Tertiary sector	5319	52.10	16.71	9922	78.44	27.74
Marginal workers		0.00	0.00	763	6.03	2.13
Total	10209	100.00	32.07	12649	100.00	35.36
Non workers	21628		67.93	23121		64.64
Total population	31837		100.00	35770		100.00

Source : data compiled from Manapparai Master Plan for the year 2011 and census of India 2001

Work Force Participation Rate in Manapparai has increased from 31 percent to 35 percent from the last two decades. Female Work Force Participation has increased from 15 percent to 25 percent of the total population from 1981 to 2001 which is an encouraging aspect. Work Force Participation Rate in Manapparai is shown in Table 4-B.

Table 4-B Work Force Participation Rate in Manapparai for the last two decades

<i>Year</i>	<i>Total Population</i>	<i>No of workers</i>		<i>Male workers</i>		<i>Female workers</i>	
		<i>Total</i>	<i>% to total population</i>	<i>Total</i>	<i>% to total workers</i>	<i>Total</i>	<i>% to total workers</i>
1981	27242	8376	31	7104	84.8	1272	15.19
1991	31837	10209	32	8207	80.4	2002	19.61
2001	35770	12649	35	9531	75.3	3118	24.65

Source : Census Publications

4.2 Tourism in Manapparai

Manapparai has no Tourist destinations within the municipal limit. However, it has some important tourist destinations in the surrounding towns and cities which are listed below:

Table 4-C Tourist Destinations in the vicinity of Manapparai

<i>S.No</i>	<i>Tourist destination</i>	<i>Distance in Kms</i>	<i>Location</i>
1	Veralimalai Muragan Temple	14	Viralimalai
2	Rock Fort	45	Trichy
3	St Johns Church	45	Trichy
4	Sri Kokaneswarar Temple		Thirukokarnam
5	Government Museum	5 Km from Pudukottai station	Thirukokarnam
6	Sri Rangam	45	Trichy
7	Tiruvanaikcoil Jambukeswarar temple	45	Trichy

Source : <http://municipality.tn.gov.in/manapparai/>

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5 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, Drainage, Sewerage, Solid Waste Management, Electricity, Telecommunications and so forth; and
- (b) Socio-economic infrastructure including Education, Health, other Community facilities, Cold storages, Warehouses, Markets, Banks and Financial Institutions.

This chapter deals with Physical Infrastructure which includes Water Supply, Sewerage and Sanitation, Storm water drainage, Solid Waste Management Roads and Street Lighting.

5.1 Water supply

5.1.1 Water Supply Scheme

The existing water supply scheme was planned in April 1995 by TWAD Board and executed with The World Bank assistance. Under this scheme, water is being extracted from Cauvery River with head works at Kulithalai.

The collected water is being pumped by using 110 H.P. Motor and through 3 nos. of online booster stations (located at Kuppachipatti, Kalugur and Chinnareddiapatti) to the 9 reservoirs in the town and distributed to the public through 43.60 Km. length of distribution network. The pumping stations and pumping mains are maintained by the TWAD board.

The head works is situated at a distance of 40 Kms from Manapparai. Manapparai supplies 2.86 MLD treated water from Cauvery Water Supply Scheme to the entire

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section of the society. In addition, Manapparai supplies 0.5 MLD from Under Ground Sources. In total, Manapparai gets 3.36 MLD Water from both Surface and Under Ground water sources.

Table 5-A Details regarding Water Supply in Manapparai

Description	Details
Source of Water Supply	Cauvery river + Ground sources
Water Supply Agency	CWSS (TWAD)
Year of commencement	1995 April
Scheme details	
Location	Kulithalai (Manathatai)
Distance of source from Manapparai	40km
Surface Water supplied	2.86MLD
Ground water supplied	0.5 MLD
Total water supplied	3.36 MLD
Supply frequency	Daily
Description regarding Storage	
No of OHTs	9
Total storage capacity of OHT	28.3 LL
No of GLR	0
Number of Mini tanks	49
Total storage capacity of Mini tanks	49000 litres
Description regarding Connections	
Total Assessments having HSCs	4531
No of Stand posts	174
No of hand pumps	123

Source : Manapparai Municipality

5.1.2 Water Supply System

Manapparai has total 43.60 Km distribution network supplies water to 9 over head tanks of total 2.83 MLD capacities. Treatment in the form of Rapid Sand Filtration of raw water followed by Chlorination at clear water sump is being done by TWAD.

Manapparai has total 10995 no. of assessments out of which 4531 assessments have Household Service Connections. In addition, Municipality has provided 174 stand posts (Public Fountains) and 123 public hand pumps all over the municipal area. Municipality has 49 mini tanks of 1000 litre capacity each placed all over the town for non domestic usage.

5.1.3 Water availability

Municipality supplies 82 LPCD water on an average daily (include both Ground water and Surface water) by taking into consideration the population in 2008 would be 40885 (estimated).

5.1.4 Service adequacy

Table 5-B Performance Indicators

<i>S.No</i>	<i>Indicators</i>	<i>Unit</i>	<i>Current Status</i>	<i>Norm/Standard</i>
1	Daily per capita supply	Litres	82	135
2	Roads covered with distribution network	Percent	63	> 100
3	Storage capacity with respect to supply	Percent	84	33
4	Available Treatment capacity with respect to supply	Percent	100	100
5	Assessments covered by service connections	Percent	41	85
6	Proportion of non domestic service connections	Percent	NA	>5
7	Slum population per stand post	Persons	230	150

Source : Computed based on the data from Manapparai Municipality

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5.2 Sewerage and Sanitation

5.2.1 Sewerage system in Manapparai

There is no underground drainage (UGD) system prevailing in this town as on today. Currently, the Detailed Project Report for implementing Underground Sewerage Scheme for Manapparai municipal area is under preparation by TWAD Board.

5.2.2 Sanitation facilities in Manapparai

In Manapparai, nearly 50 percent of the total households are having individual private sanitation facilities with septic tank as a major mode of sewage disposal. In addition, town has 500 low cost sanitation facilities. Further, there are 13 public toilets available within Manapparai out of which 2 are Pay and Use type. Ward wise Public conveniences in Manapparai is shown in Table 5-C.

Table 5-C Public conveniences (Public Toilets) in Manapparai

<i>Ward No</i>	<i>No of toilets</i>	<i>No of seats for male</i>	<i>No of seats For Female</i>	<i>Total Seats</i>
1	1	5	5	10
2	2	10	10	20
5	2	10	10	20
14	1	5	5	10
16	1	4	4	8
19	1	5	5	10
20	1	5	5	10
23	2	10	10	20
25	1	5	5	10
26	1	5	5	10
Total	13	64	64	128

Source : Manapparai Municipality

5.3 Storm Water Drainage

Pucca Storm Water Drains (Open) constructed within the Municipality is around 23.6 Kms whereas Kutcha drains available are 8.19 Kms. Overall, 46 percent of the roads are covered by Storm water drains against the standard norm of minimum 130 percent. Details regarding storm water drainage system in Manapparai are given in Table 5-D.

Table 5-D Storm Water Drains in Manapparai

<i>Storm water drainage</i>	<i>Single side</i>	<i>Double side</i>	<i>Total</i>	<i>% to total drains</i>
Kutcha drains	8.19	0	8.19	25.8
Pucca drains - open	22.35	1.2	23.6	74.2
Total	30.54	1.2	31.7	100.0

Source : Manapparai Municipality

5.3.1 Service adequacy

Table 5-E Performance Indicators

<i>S.No</i>	<i>Indicators</i>	<i>Unit</i>	<i>Current Status</i>	<i>Normative Standard</i>	<i>Remarks</i>
1	Road length covered with storm water drainage	Percent	46	130	Most of the drains are Pucca open drains and kutcha drains
2	Proportion of Kutcha drains to total drainage length	Percent	26		

Source : Manapparai Municipality

5.4 Solid Waste Management

5.4.1 Generation and collection

Manapparai Town generates around 16 tonnes of Garbage per day at the rate of 370 grams per capita per day. Manapparai Municipality has total 27 Municipal wards in which Door to Door collection and waste segregation is done only in 16 wards

resulting in a D-D and segregation efficiency of 60 percent. Municipality has the proposal to privatize 9 wards namely Ward No.5, 7, 11, 15, 17,19,20,21 and 23.

Waste is segregated into degradable, non-degradable and its details are shown in Table 5-F. Residential area generates nearly 62.5 percent of the total waste followed by slums (19%) and markets (11%) as shown in Table 5-F.

Table 5-F Composition of waste generation

<i>Category</i>	<i>Degradable in ton</i>	<i>Non degradable in Ton</i>	<i>Total in Ton</i>	<i>% share</i>
Kalyana Mandapam & Meeting halls	1	0.3	1.3	8.1
Vegetable Market	1.5	0	1.5	9.4
Fish Market & Slaughter house	0.2	0	0.2	1.3
Residential	8	2	10	62.5
Slums	2.5	0.5	3	18.8
Total	13.2	2.8	16	100.0

Source : Manapparai Municipality

22 temporary waste storage dustbins have been placed all over the town for collection purpose. Nearly 7 bins have been placed in slum areas for primary waste collection. As a part of collection system, 22 pushcarts are engaged in primary waste collection. Manapparai health department has the staff strength of 4 sanitary supervisors, 71 sanitary workers and 3 drivers. Out of 71 sanitary workers, 19 members are involved in road sweeping whereas remaining 52 members are involved in waste collection and disposal.

5.4.2 Disposal and treatment facilities

Three tippers, one Mini lorry and one newly purchased Dumper placer is in operation for secondary waste collection system and disposal. Waste is being collected and disposed at Municipal Burial ground having an area of 3 acres. New site purchased at K.Periyapatti Village, having an area of 10.01 acres is located at a distance of 6 Km

from Manapparai Town. However, opposition and agitation from the public has risen against dumping the garbage in the new site as indicated by Municipal officials. Manapparai currently has no treatment plant since there is an opposition from public in setting up Windrows treatment plant in K. Periyapatti village site. Vehicles deployed for secondary waste collection and disposal and the trips performed are shown in Table 5-G.

Table 5-G Vehicles deployed for Secondary waste collection and disposal

<i>Vehicle type</i>	<i>Number</i>	<i>Trips</i>	<i>Ton</i>	<i>Ton after 0.4 adjustment factor</i>	<i>Volumetric capacity in Ton</i>
Mini Lorry	1	2	2	0.8	1.6
Tipper	3	4	3	1.2	14.4
Dumper placer	1	1	0.8	0.32	0.3
Total	5	7	5.8	2.32	16.32

Source : Manapparai Municipality

5.4.3 Adequacy of services

Table 5-H Performance Indicators

<i>Indicators</i>	<i>Unit</i>	<i>Current Status</i>	<i>Normative Standard</i>
Waste generation per Capita per day	Grams	391	350-450
Collection efficiency	Percent	100	100
Door to Door collection efficiency	Percent	59	59
Conservancy staff per Km	Persons	1.1	2
% capacity of Fleet vehicles to waste generated	Percent	29.5	

Source : Computed based on the data collected from Manapparai Municipality

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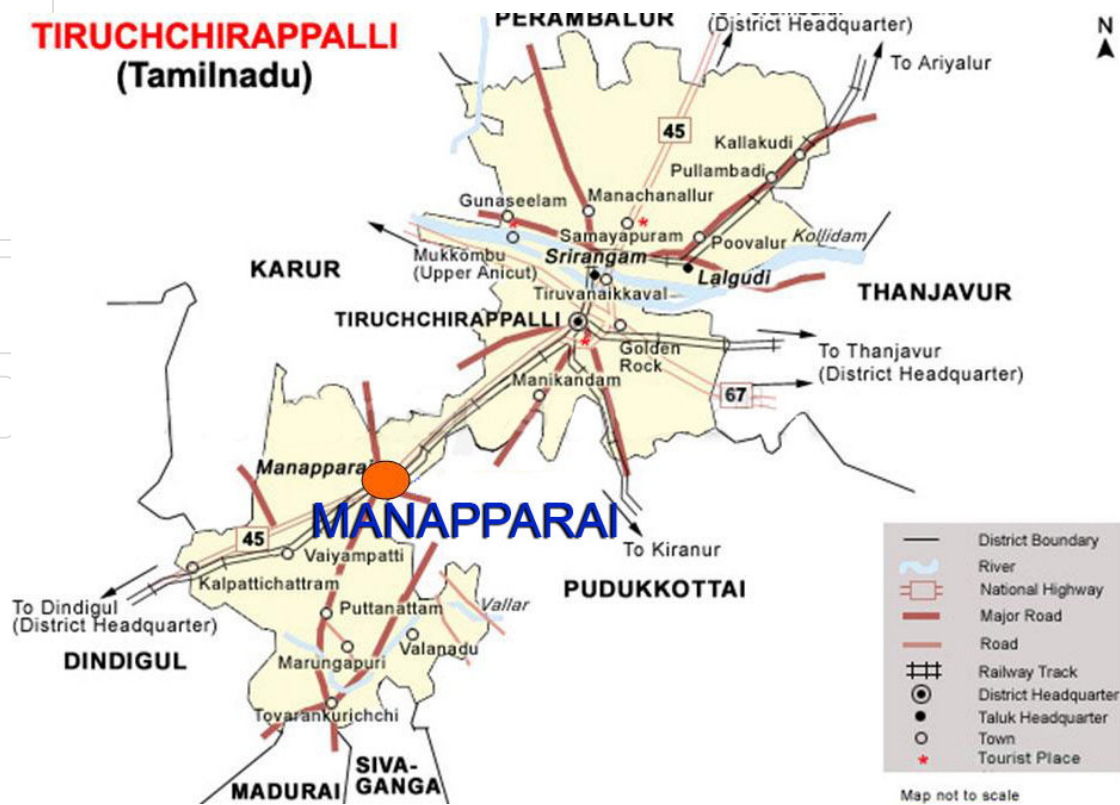
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5.5 Traffic and Transportation

5.5.1 Regional Network

Manapparai town is located on the National Highway No.45 Madras – Cape commerin road. Manapparai is located in between Tiruchirappalli and Dindigul at a distance of 40 km from Tiruchirappalli, 60 km from Dindigul, 102 km from Madurai and 56 km from Pudukkottai. It has a railway station located on the broad gauge line between Trichirappalli and Madurai. Manapparai has the nearest airport at Tiruchirappalli (45kms from the city). Location of Manapparai and its Regional network linkages are shown in Figure 5-1.

Figure 5-1 Location of Manapparai and Regional network linkages



Source : mapsofindia.com

5.5.2 City level Road Network

This town has internal road network of 68.73 Kms with density of 3.29 km/Sq.Km area. . Further 12 Km state highway road is maintained by Public Works Department and 3 Km NH road is maintained by NHAI. The details of the town road network are given in Table 5-I.

Table 5-I Road network and type in Manapparai

Type	Length (Kms)	% to total
Municipal roads		
1. B.T. roads	38.90	56.59
2.W.B.M. roads	1.08	1.57
3. Cement concrete roads	11.85	17.24
4. Earthen roads	16.90	24.60
Sub Total	68.73	100.00
Other Roads		
1. State Highways	12.0	80.00
2. National Highways	3.0	20.00
Sub Total	15.00	100.00
Total	83.73	

Source : Manapparai Municipality

Table 5-J Ward wise road length in Kms in Manapparai Municipal area

Ward No	Road length in Kms	Ward No	Road length in Kms
1	3.06	15	1.07
2	1.73	16	2.18
3	4.78	17	3.23
4	2.85	18	3.6
5	3.83	19	0.52
6	2.34	20	5.92
7	1.88	21	1.45
8	1.1	22	2.32
9	0.97	23	1.7
10	1.38	24	5.22
11	2.04	25	4.79
12	1.63	26	2.35
13	2.34	27	2.04
14	2.41	Total	68.73

Source : Manapparai Municipality

5.5.3 Bus Stand infrastructure

The town has a Grade C bus stand. The present Bus Stand is inadequate for parking of more number of buses. It has 18 bus bays, 9 shops, 1 hotel, 1 passenger waiting hall, 1 pay and use latrine, 1 taxi stand and drinking water facility. There was a proposal to shift the existing bus stand to Weekly Market area but much effort haven't been taken to shift it. New proposal is to expand Bus Stand by demolishing the Municipal office building nearby.

Figure 5-2 Existing Bus stand in Manapparai



5.5.4 Adequacy of services

Table 5-K Performance Indicators

<i>Performance indicators</i>	<i>Unit</i>	<i>Current status</i>
Road density	Km/Sq.Km	3.3
Per capita road length	Meters/Person	1.68
Percentage of Surface roads	Percent	73.84

Source : Computed based on the data collected from Manapparai Municipality

5.6 Street Lighting

Manapparai has 1657 street lights positioned all over the municipal area in which 1435 lights are tube lights, 215 are Sodium Vapor lights and the remaining 7 lights are of Mercury Vapor lamps. Ward wise Street lighting in Manapparai Municipal area is shown in Table 5-L.

Table 5-L Ward wise Street Lighting and its type in Manapparai

Ward No	Tube lights	SV	MV	Total	Ward No	Tube lights	SV	MV	Total
1	72	3		75	15	39	11		50
2	45	9		54	16	52	10		62
3	64	12		76	17	45	4		49
4	73	3		76	18	48	3		51
5	68	28		96	19	35	16		51
6	48	5		53	20	72	10		82
7	38	4		42	21	66	10		76
8	32	13	1	46	22	54	8		62
9	36	6		42	23	49	8		57
10	42	4		46	24	64	3	6	73
11	63	7		70	25	59	12		71
12	60	4		64	26	48	7		55
13	65	5		70	27	43	4		47
14	55	6		61	Total	1435	215	7	1657
Road length in Kms									68.7

Source : Manapparai Municipality

5.6.1 Adequacy of services

Table 5-M Performance Indicators

Indicators	Unit	Current status	Norms/ Standards
Spacing between lamps	Meters	41	30
Proportion of tube lights W.R.T to total	Percent	87	60
Proportion of high power fixtures W.R.T to total	Percent	13	40

Source : Computed based on the data collected from Manapparai Municipality

5.7 Problems and issues

<i>Sector</i>	<i>Issues</i>
Water Supply	<ul style="list-style-type: none"> • Low Service Coverage (41 %) • 37% of the roads have no distribution network • Main line bursting between Manapparai and Kulithalai Head works disrupts regular and consistent water supply • Pressure problem in wards 12, 13, 16, 18, 19 and 20
Sewerage and Sanitation	<ul style="list-style-type: none"> • No Sewerage System (DPR for UGD Scheme is under preparation by TWAD)
Storm water drainage	<ul style="list-style-type: none"> • More than 50% of the roads have no Storm water drains • Flooding due to absence of drains
Traffic and Transportation	<ul style="list-style-type: none"> • Nearly 25 % of the roads are Kutcha roads • Bus stand space is inadequate • Town has two railway crossings causing time delay • Absences of Service road along Bye pass NH-45
Solid Waste management	<ul style="list-style-type: none"> • 16 wards are only covered under D-D and Waste segregation • Inadequate vehicle fleet capacity • No treatment plant
Street Lighting	<ul style="list-style-type: none"> • Spacing between lights is well above the standards (i.e one light in more than 30M spacing) • Absence of Energy saving Mechanism

6 SOCIO-ECONOMIC INFRASTRUCTURE

The Socio-economic infrastructure determines the development status of any human settlement and this chapter covers Health, Education, Recreation and other amenities.

6.1 Health

Manapparai has one Government hospital with 13 doctors and 66 beds serving the population of the town. In addition, 13 private hospitals with total bed strength of 213 and many private clinics without beds are also functioning within the town. Manapparai has all about 279 beds resulting in 7 beds per 1000 members against the norm of two beds per 1000 population. Overall, 52 doctors are serving in Manapparai for the welfare of the society.

Table 6-A Health Institutions in Manapparai

<i>Hospital</i>	<i>Doctors</i>	<i>Beds</i>
GH	13	66
Balaji	3	20
Dhayal	3	20
Chitra	2	10
Mohandas	5	25
Sindhuja	7	40
Rathinadas	5	30
Udhayam	4	15
Pandiyan	1	10
Nasurudeer	2	10
Balu	3	10
Manohar	1	5
Ganesan	1	3
Arivazlagan	2	15
Total	52	279

Source : Manapparai Municipality

6.2 Education

Town is served with 2 Primary Schools, 3 Middle Schools, 4 High Schools and 4 Higher Secondary Schools. Manapparai has one engineering college located nearby at Mullipadi-Karattupatti.

Table 6-B Educational Institutions in Manapparai and in its vicinity

S No	Name Of school	Location	Managed by
Primary schools			
1	Municipal Primary School	Vellakkal, Manapparai	Municipality
2	Municipal Primary School	Kovilpatty Road	Municipality
Middle Schools			
1	Municipal Middle School	Trichy Road	Municipality
2	Vivekananda School	Madurai Road	Private
3	Muslim Arabic Oriental School	Thirumalai Street	Private
High/Higher Secondary Schools			
1	Government Higher Secondary School	Madurai Road	Govt
2	Government High School	Madurai Road	Govt
3	Little Flower Girls Higher Secondary School	Dindugal Road	Private
4	St. Antony's High School	Dindugal Road	Private
5	St. Andrews Higher Secondary School	Dindugal Road	Private
6	Municipal High School	Kovilpatty Road	Municipality
7	Lashmi Matriculation High School	Kovilpatty Road	Private
8	Vinmathi Matric High School	Viralimalai Road	Private
Colleges			
1	Kurinji Engg. College	Mullipadi-Karattupatti	Private
Technical Institutes			
1	Rajarithna Typewriting Institute	Ayyamperumal Street	Private
2	Parvathi Typing Institute	Agraharam	Private
3	Shanmuga Typing Institute	Trichy Road	Private

Source : Manapparai Municipality

6.3 Recreation

Play area attached to the Schools mentioned in Table 6-C provides good play space. Manapparai has two Town halls located in ward No.5 and ward No.19. Town has 5 pucca permanent cinema theatres as shown in Table 6-D serving the population of the town.

Table 6-C Playgrounds in Manapparai

Sl No	Name of Play ground	Location
1	Little Flower Girls Higher Secondary School	Dindigul Road
2	Government Girls Higher Secondary School	Madurai Road
3	Government (co – education) Higher Secondary School	Madurai Road
4	Municipal Play Ground	Nalangadi Complex, Trichy Road
5	Mont Fort Matriculation Higher Secondary School	Manjampatti, Dindigul Road

Source : Manapparai Municipality

Table 6-D Theatres in Manapparai

Sl No	Name of Theatre	Location
1	Karppagam Theater	Rajiv Nagar
2	Balaji Theater	Gandhi Nagar
3	Balakrishna Theater	Viralimalai Road
4	Udayam Theater	Manapparai patty Road
5	Indira (A) Abirami Theater	Trichy Road.

Source : Manapparai Municipality

Table 6-E Water Bodies in Manapparai

Water Bodies	Ward No	Area in Ha
Karikkon Kulam	14	3.84
Muniyappan Kulam	13	1.43
More Kulam	19	1.31
Naicker Kulam	20	2.05
Vaigai Kulam	11	3.39
Manapparai Kulam	23	6.14
Seva Kulam	2	50.99
Vanan Kulam	11	0.67 and 0.2

Source : Manapparai Municipality

6.4 Other amenities

There are 8 water bodies located all over the town which are listed in Table 6-E. Manapparai has one weekly market and one daily market located in ward No 04 and

23 respectively. There are 6 banks serving the population of the town as shown in Table 6-F.

Table 6-F Banking Infrastructure in Manapparai

<i>Sl.No</i>	<i>Name of the Bank</i>	<i>Ward No</i>	<i>Address</i>
1	State Bank of India	23	Dindugal Road
2	Indian Bank	19	Dindugal Road
3	Indian Overseas Bank	5	Trichy Road
4	City Union Bank	19	Trichy Road
5	TDCC Bank	5	Kovilpatty Road
6	Town Bank	15	Trichy Road

Source : Manapparai Municipality

6.5 Problems and Issues

<i>Sector</i>	<i>Issues</i>
Social infrastructure	<ul style="list-style-type: none"> • No parks and playgrounds • Water bodies (8) are poorly maintained • Market areas have inadequate infrastructure facilities

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7 SLUMS AND URBAN POVERTY

As per Census of India, the slum areas are broadly defined as:-

- (i) All specified areas in a town or city notified as ‘Slum’ by State/Local Government and UT Administration under any Act including a ‘Slum Act’.
- (ii) All areas recognized as ‘Slum’ by State/Local Government and UT Administration, Housing and Slum Boards, which may have not been formally notified as slum under any act;
- (iii) A compact area of at least 300 persons or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.

7.1 Slums in Manapparai

In Manapparai, there are 19 slums in existence. Out of 19 slum pockets, 9 are notified and 10 are un-notified having 9065 and 4506 slum population respectively. Substantial share of Manapparai population lives in slums. The share

of slum population to the total population has increased from 29 percent to 38 percent from the last two decades as shown in Table 7-A. Ward wise location of slums and its type is shown in Table 7-B.

Table 7-A Slum population growth in Manapparai

<i>Year</i>	<i>Slum Population</i>	<i>Total population</i>	<i>% Share</i>
1981	7915	27242	29.1
1991	10842	31837	34.1
2001	13571	35770	37.9

Source : Manapparai Municipality

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Table 7-B Slums in Manapparai

Sl No	Name of Slum/Location	Slum Type	Ward No	Population
1	Sethurathinapuram	Notified	16	1331
2	Poomalapatty	Notified	22	805
3	Kallathupatty	Notified	22	610
4	Theerampatty	Notified	25,26	1018
5	Sealur	Notified	2,3	2340
6	Vidathilampatty	Notified	1	1200
7	Vellakkal	Notified	24	1100
8	Viramalai Road M.G.R. Nagar	Notified	11	355
9	Karamettupatty	Notified	12	306
10	Atthikulam	Un-notified	5	505
11	Poosarikalam	Un-notified	5	405
12	Chithamparathan patty	Un-notified	23	605
13	Eda Street	Un-notified	12	876
14	Mahalipatty	Un-notified	3	305
15	Potthamettupatty	Un-notified	4	600
16	Manjampatty	Un-notified	26,27	605
17	Nocheemedu	Un-notified	25	305
18	Manapparai patty	Un-notified	20	150
19	Sangama Rettiya patty	Un-notified	3	150
	Total			13571

Source : Manapparai Municipality

7.1.1 Service provision in slum areas

Individual Household Service Connections and Stand Posts have been provided in slum areas for water supply. 1427 HSCs and 53 stand posts have been provided in slum areas. After deducting HSCs, on an average nearly 230 persons are utilizing one Stand post in Manapparai against the norm of 150 persons per Stand post. As far as public conveniences are concerned, 13 slum pockets have no public conveniences and population served by one toilet unit is coming around 2250 including notified and un-notified slum population which is very high.

IHSDP project has got sanctioned and the work has been initiated. Total 16 works are proposed in all 19 slums at the cost of Rs. 200.83 lakhs. Municipal officials indicate

that in I – Phase, Rs. 70.54 lakhs got sanctioned for housing component. In the II phase, Infrastructure improvement components would be taken up for the approved DPR cost of Rs. 104.83 lakhs.

Table 7-C Service provisions in Slum areas

Sl No	Name of Slum/Location	Population	No Of HSC	No of PF	No of public toilets	Pop / PF
1	Sethurathinapuram	1331	124	3	1	402
2	Poomalapatty	805	98	2	0	354
3	Kallathupatty	610	6	1	0	604
4	Theerampatty	1018	86	4	1	233
5	Sevalur	2340	121	7	1	317
6	Vidathilampatty	1200	74	6	1	188
7	Vellakkal	1100	121	2	0	490
8	Viramalai Road M.G.R. Nagar	355	184	4	0	43
9	Karamettupatty	306	3	2	0	152
10	Atthikulam	505	74	3	1	144
11	Poosarikalam	405	38	1	0	367
12	Chithamparathan patty	605	41	2	1	282
13	Eda Street	876	64	6	0	135
14	Mahalipatty	305	12	0	0	NA
15	Potthamettupatty	600	194	3	0	135
16	Manjampatty	605	99	3	0	169
17	Nocheemedu	305	26	1	0	279
18	Manapparaipatty	150	58	2	0	46
19	Sangama Rettiya patty	150	4	1	0	146
	Total	13571	1427	53	6	229

Source : Computed based on the data collected from Manapparai Municipality

7.2 Urban poor in Manapparai

Manapparai has 19 percent of the total population living below poverty line. Ward No 26 has the maximum percentage share of BPL population which is around 27 of the total ward population. Ward No.13 and 20 has the minimum share of BPL population

which is around 12 percent of the total ward population. Ward wise BPL population and its share to total ward population is shown in Table 7-D.

Table 7-D Ward wise BPL population and its share to total ward population in Manapparai

Ward No.	Pop	BPL Pop	% share to total ward population	Ward No.	Pop	BPL Pop	% share to total ward population
1	1358	329	24.2	15	832	170	20.4
2	1146	169	14.7	16	1307	192	14.7
3	1157	183	15.8	17	1078	182	16.9
4	1578	358	22.7	18	1926	374	19.4
5	1482	333	22.5	19	741	123	16.6
6	1848	395	21.4	20	2878	352	12.2
7	1034	244	23.6	21	1088	226	20.8
8	782	161	20.6	22	1658	263	15.9
9	932	212	22.7	23	1473	284	19.3
10	1125	255	22.7	24	1032	200	19.4
11	1391	337	24.2	25	1031	234	22.7
12	1191	230	19.3	26	1190	320	26.9
13	1725	213	12.3	27	1089	246	22.6
14	1698	261	15.4	Total	35770	6846	19.1

Source : Manapparai Municipality

7.3 Problems and Issues

Sector	Issues
Slums and Urban Poverty	<ul style="list-style-type: none"> • Large number of slum pockets (19) • 38 percent of the total population is living in slums • 19 percent of the total population are living below poverty line • Inadequate infrastructure facilities in slum areas

8 FINANCIAL STATUS

8.1 Overview

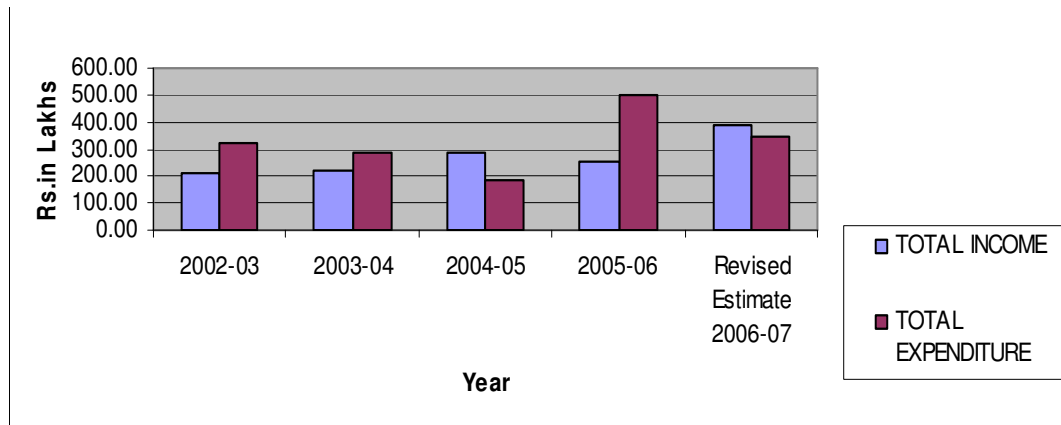
The Urban Local Bodies (ULB's) in Tamil Nadu have adopted Accrual Based Accounting System in the last few years. Currently the ULB's of Tamil Nadu maintain three separate fund namely a) Revenue and Capital Fund b) Water Supply and Drainage Fund and c) Elementary Education Fund. For each of these funds a Trial Balance, Income & Expenditure Account and Balance Sheet are maintained.

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.

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 would be required for undertaking up capital works.

8.2 Financials (Revenue Fund)

Figure 8-1 Income & Expenditure Account (Revenue Fund)



Source : Annual Accounts/Budget Estimates of Manapparai Municipality

Table 8-A Income & Expenditure Account (Revenue and Capital Fund)

Rs.in lakhs

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07 (Revised Estimates)
INCOME					
Property Tax	24.36	25.43	26.75	27.42	34.58
Other Tax	6.79	7.57	10.18	9.68	8.89
Assigned Revenue	59.62	40.95	18.03	33.42	25.88
Devolution fund	59.67	70.22	60.52	89.02	91.69
Service Charges and Fees	11.83	13.17	15.37	10.31	13.15
<i>Fees for Bus stand</i>	5.81	5.52	5.57	5.01	5.93
<i>Building License Fees</i>	2.49	2.24	1.73	2.14	2.30
<i>Other Fees</i>	3.53	5.41	8.07	3.16	4.92
Grants and Contribution		16.32	1.39	10.40	151.03
Sale & Hire Charges	0.13	0.01	0.01	0.01	0.01
Other Income	50.91	49.78	157.43	73.72	59.73
<i>Daily Market Fees</i>	0.87	0.86	0.88	0.88	0.90
<i>Fees for Slaughter house</i>	0.12	0.13	0.02	0.07	0.05
<i>Rent on Shopping Complex</i>	4.03	4.35	4.39	4.36	4.49
<i>Project Overhead Appropriation Expenses</i>	7.74	4.01	4.79	10.18	4.00
<i>Others</i>	38.14	40.44	147.34	58.24	50.29

EXPENDITURE					
Personnel Cost I (Salaries)	72.71	71.13	74.58	78.23	90.92
Personnel Cost II (Others)	1.88	1.38	0.73	0.80	0.84
Terminal and retirement benefits	23.57	31.91	21.42	42.07	43.90
Operating Expenses	14.39	17.28	18.95	17.60	27.00
<i>Maintenance Expense for Street Lights</i>	1.83	1.68	1.53	2.43	6.00
<i>Power Charges for Street Lights</i>	12.45	14.94	16.52	14.10	20.00
<i>Others</i>	0.12	0.65	0.90	1.06	1.00
Repairs & Maintenance	24.58	6.98	12.64	8.19	10.19
<i>Heavy Vehicles</i>	3.36	3.79	3.83	4.24	4.46
<i>Others</i>	21.23	3.19	8.81	3.94	5.73
Programme Expenses	0.00	0.00	0.00	0.01	0.12
Administrative Expenses	12.92	8.49	7.08	16.18	14.12
Finance Expenses	98.21	85.53	2.65	229.42	96.32
<i>Interest on loans/Ways and means advance</i>	79.97	82.80	0.00	227.76	96.32
<i>Others</i>	18.24	2.73	2.65	1.66	0.00
Capital Works MPL Contribution	0.00	0.00	0.00	30.82	0.00
Depreciation	74.27	62.04	49.88	73.95	60.48
TOTAL EXPENDITURE	322.54	284.73	187.93	497.26	343.89
NET	-109.24	-61.28	101.74	-243.28	41.07

Source: Annual Accounts/Budget Estimates of Manapparai Municipality

Table 8-B Balance Sheet (Revenue and Capital Fund)

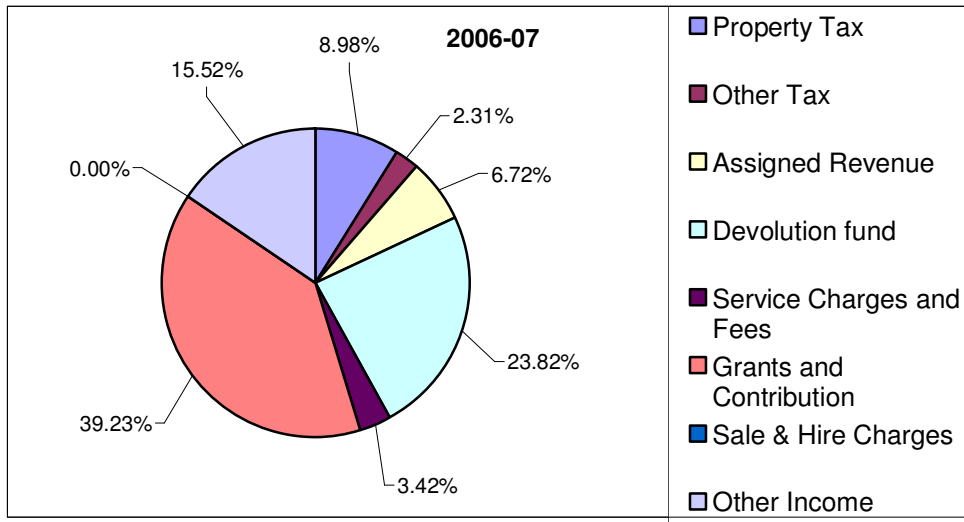
Rs.in lakhs'

<i>Particulars</i>	<i>2002-03</i>	<i>2003-04</i>	<i>2004-05</i>	<i>2005-06</i>
LIABILITIES				
Loan	656.07	656.07	677.63	675.80
<i>Loan from the Government</i>	592.39	592.39	587.38	585.55
<i>Loan from TNUDF</i>	63.68	63.68	63.68	63.68
<i>Others(IUDP Loan)</i>	0.00	0.00	26.57	26.57
Grants & Contribution	122.29	143.56	214.83	355.32
<i>Grant & Contribution From Government</i>	113.96	135.23	206.50	321.98
<i>Contribution from others</i>	6.50	0.00	0.00	0.00
<i>Municipal Contribution to Capital Works</i>	0.00	6.50	6.50	31.27
<i>Diversion from other TP fund & SJSRY</i>	1.83	1.83	1.83	2.07
Accumulated Depreciation Account	236.01	298.05	347.94	419.82
Current Liabilities	600.26	690.70	599.33	806.87
Accumulated Surplus Account	232.49	171.74	247.52	4.24
TOTAL LIABILITIES	1847.12	1960.12	2087.24	2262.05
ASSETS				
Fixed Assets	1577.09	1621.68	1661.01	1750.44
Current Assets	270.03	338.44	426.23	511.61
TOTAL ASSETS	1847.12	1960.12	2087.24	2262.05

Source : Annual Accounts/Budget Estimates of Manapparai Municipality

8.3 Analysis of Income

Figure 8-2: Income break up of Manapparai Municipality for FY 2006-07



Source : Revised Budget Estimates of Manapparai Municipality for the FY 2006-07

Income of the Municipality has shown a steady growth of 6% annually between FY 2002-03 to FY 2005-06. The income has ranged between Rs.213.20 Lakhs in FY 2002-03 to Rs.384.96 Lakhs in FY 2006-07(including the Grants & Contribution of Rs.151.03 Lakhs). The CAGR of Income for the last 5 years including FY 2006-07 is at 16% due to the significant inflows from Grants and Contribution of Rs.151.03 in FY 2006-07 (Revised estimates).

8.3.1 Own Sources

8.3.1.1 Municipal Taxes

Municipal taxes consisting of Property and Other Taxes (Mainly Professional Tax) contribute about 11%-15% of the total income of Manapparai Municipality. The Municipal taxes have been growing at a CAGR of around 9% over the last 5 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. Property tax contributed about 80% of the total Municipal taxes for the FY 2006-07.

Table 8-C Property Tax Particulars

Categories	Rate per Sq ft(Rs.)
A	1.00
B	0.60
C	0.30
Slab	(in %)
General funds	6.50
Water Drainage	6.00
Solid Waste	0.00
Education cess	2.50
Library Cess	1.25
No. of Assessment as on November 2007	10995
No. of Assessment 2002-03	9646
% Increase in Number Assessments for the Past 6 years	3%
CAGR in collection over the Last 5 years	9.16%
Collection Efficiency(2006-07) Except Government Building and Litigation	
<i>a. Current</i>	74.00%
<i>b.Arrears</i>	49.00%
Total Property Tax collection(Rs.in Lakhs in 2006-07)	34.58
Number of Staff in Revenue Department	7
Revenue per staff (Rs.in Lakhs)	4.94
Average Tax Demand per property(Rs.)	651
Average annual Property Tax Collection per Property (Rs)	425
% of arrears pending more than 6 years	21.00%

Source : Manapparai Municipality

The collection efficiency of the current demand of property taxes appears moderate close to 74% while the efficiency of arrears remains only at 50%. The Municipality needs to pay

critical attention to identify and bring in more assesses for enhancing property tax collection which has grown less than 3% over the last 5 years. In the accounts proper provisioning should be made for writing off the arrears pending for more than 6 years. Currently the arrears pending over 6 years amounts to Rs.3.44 Lakhs with number of assesses being 1233.

Other Taxes:

Other Tax revenues are in the form of taxes levied on carriage & carts, animals, advertisement, professional tax and others. Professional tax is the other important contributor of the own sources of revenue. The other taxes contributed about 20% of the total Municipal taxes for the FY 2006-07 (Revised estimates)

Table 8-D Professional Tax Particulars

Particulars	
Total Professional Tax Collection(Rs.in Lakhs 2006-07)	8.89
No.of Assessment(2007-08) as November 2007	421.00
No.of Assessment 2004-05	378.00
% increase in No. of Assessments for the past 4 years	4%
Slab for Professional Tax	
Up to Rs.21000	Nil
Rs.21000 to Rs.30000	Rs.78/=
Rs.30001 to Rs.45000	Rs.195/=
Rs.45001 to Rs.60000	Rs.390/=
Rs.60001 to Rs.75000	Rs.585/=
Above Rs.75001	Rs.780/=

Source: Manapparai Municipality

The Professional Tax collection over the last 5 years has grown at a CAGR of 7% lesser than that of the Property Tax collection which has grown by 9%. Out of the 421 current assesses, 332 people are from trade, 82 Organization Group and 7 organization individuals.

8.3.1.2 Non Tax Revenues

The second important component of the municipal revenue is the Non-Tax Revenues like the Service Charges and Fees, Sale & Hire Charges and Other Income which accounted for around 19% of the Municipality's revenue during FY 2006-07.

Service Charges and Fees

Service Charges and Fees accounts for about 3-6 % of the total income of the municipality. The major sources of income under this head are Fees for Bus Stand, Fees for Slaughter House, Building License Fees. About 40%-50% of the service charges come from Bus Stand Fees. Manapparai Municipality earned Rs.13.15 Lakhs as Service Charges and Fees for the FY 2006-07.

Other Income

The Municipality earns significant revenue through earnings from other sources namely Development Charges, Survey Fees, Daily Market Fees, rental Income from Community Hall, Shopping Complex, lease of land etc. The compounded annual growth rate of Other Income for the last 5 years has however been modest at 4%

8.3.2 External Sources

8.3.2.1 Assigned Revenue

Assigned Revenue includes revenues transfers to the ULB by the GOTN under specific acts. This source of revenue income comprises duty on transfer of properties, entertainment tax and other assigned revenue. The Share of Assigned Revenue has fallen from Rs.59.62 Lakhs in FY 2002-03 to Rs.25.88 Lakhs in FY 2006-07 (Revised estimates).

8.3.2.2 Devolution Fund

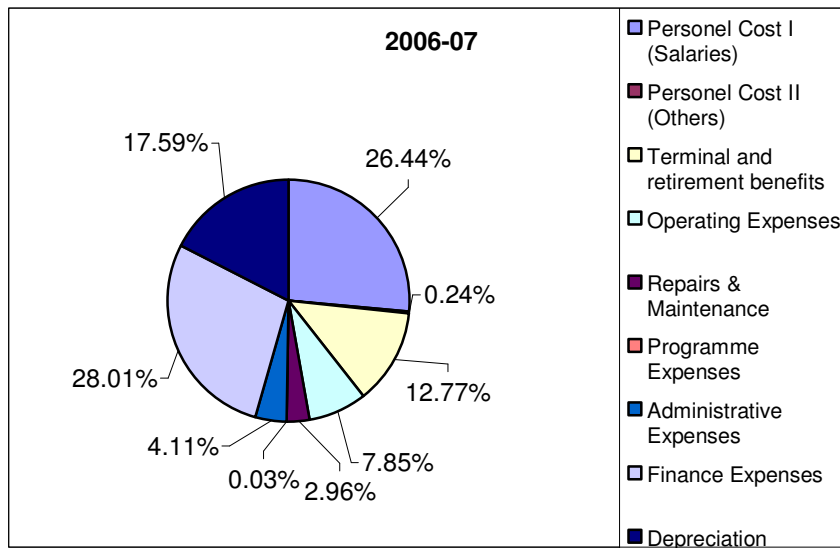
Based on the Second State Finance Commission recommendations, GOTN transfers 8 % of its state revenue to the local government. The contribution through devolution funds has been growing at a CAGR of 11% over the last 5 years.

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

Figure 8-3 Break up of Expenditure of Manapparai Municipality for FY 2006-07



Source : Revised Budget Estimates of Manapparai Municipality for the FY 2006-07

8.4.1 Personal Costs

This expense mainly includes the staff salaries, Terminal and retirement benefits and allowances paid to the employees of the ULB. The Personal Cost accounted for about 40% of the total Expenditure of the ULB during FY 2006-07 (Revised estimates). This expense has grown at around 8% for the last 5 years. For every Rupee 1 of the income of the municipality 35 paise went to meet the personnel cost of the employees leaving the rest for meeting the other expenses of the municipality during FY 2006-07.

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. In this regard Manapparai Municipality utilizes on an average 10-11% of its income towards operations and maintenance expenses for its infrastructure facilities excluding water supply.

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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 etc. The operating expenses account for 7-8% of municipality income, and this is mainly spent for power and maintenance expenses of street lights. Power cost for street lights account for more than 80% of the total Operating Expenses. However no attempt has been initiated by the municipality for installation of energy saving devices such as automatic timers which could help in conservation of power costs to some extent.

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8.4.2.2 Repairs & Maintenance

Repairs & Maintenance expense mainly consists of such expenses such as Heavy Vehicle Maintenance, Light Vehicle Maintenance, Sanitary/ Conservancy Expenses etc. The municipality spends around 3-4% of its income for maintenance and repair works of its key infrastructure facilities.

8.4.3 Administrative Expenses

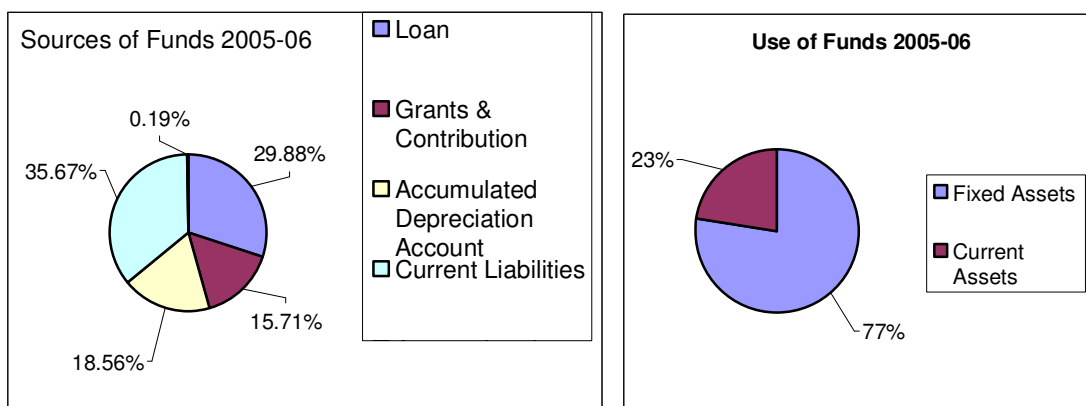
Administrative Expense of the municipality accounts for about 3-4% of the Total Expenditure. This has grown at CAGR of 2 % over the last 5 years.

8.4.4 Finance Expenses

Manapparai Municipality has a loan outstanding of Rs. 675.80 Lakhs as on FY 2005-06 mainly consisting of government loan of Rs.585.55 Lakhs. Most of the loans have been borrowed for improvement and development of roads. For the FY 2005-06 an amount of Rs.227.76 Lakhs has been provided as Interest on Loans which seem to be an abnormal figure and not in line with the out standing loan balance.

8.5 Source & Use of Funds

Figure 8-4 : Source and Use of Funds of Manapparai Municipality as on FY 2005-06



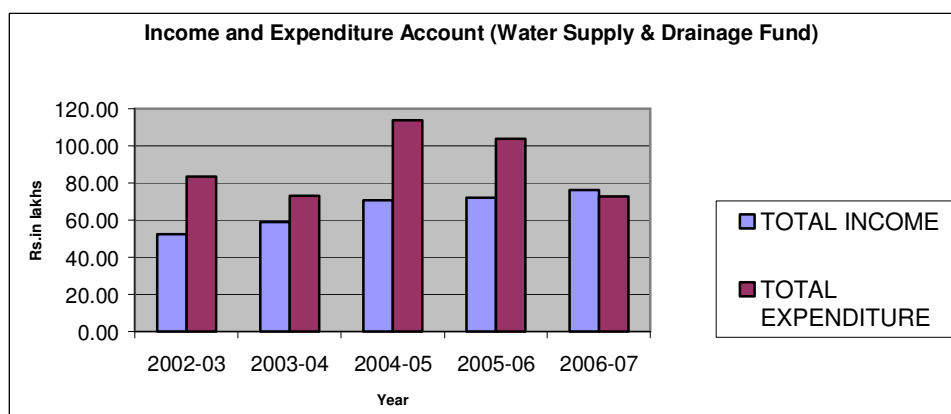
Source : Manapparai Municipality

- About 30% of the municipality’s fund requirements are met through loans mainly government loans (FY2005-06). During June 2007 it had borrowed Rs.50 Lakhs from TUFIDCO for improvement of Road at 8% interest rate. It has also borrowed in June 2003 Rs.63.68 Lakhs for Special road works from TNUIFSL which has now been taken over by TUFIDCO.
- About 80% of the resources available to the municipality had been deployed in creation of Fixed Assets. However the growth in fixed assets over the last 5 years has been only at @ 4%. Further 61% of the fixed assets is accounted by land

- During FY 2005-06 the Accumulated Surplus has been shown at Rs.4.24 Lakhs which would need to be clarified.

8.6 Financials (Water Supply & Drainage Fund)

Figure 8-5 : Income & Expenditure Account (Water Supply & Drainage Fund)



Source : Annual Accounts/Budget Estimates of Manapparai Municipality

Table 8-E : Income & Expenditure Account (Water Supply & Drainage Fund)

Rs.in lakhs

Particulars	2002-03	2003-04	2004-05	2005-06	Revised Estimate 2006-07
INCOME					
Water Tax	22.48	23.47	24.70	25.31	26.06
Other Tax	0.00	0.00	0.00	0.00	0.00
Assigned Revenue	0.00	0.00	0.00	0.00	0.00
Devolution fund	0.00	0.00	0.00	0.00	0.00
Service Charges and Fees	29.83	35.35	45.11	46.48	49.44
Initial Deposit for New Water supply connections	4.83	3.20	4.01	3.92	4.50
Water Supply Connection Charges	1.25	1.06	2.72	2.44	3.00
Metered/Tap rate water charges	23.72	31.07	38.38	40.11	41.93
Charges for water supply through lorries	0.01	0.01	0.00	0.00	0.00
Others	0.02	0.02	0.00	0.01	0.01
Other Income	0.15	0.20	0.80	0.51	0.77
TOTAL INCOME	52.46	59.02	70.61	72.30	76.27

EXPENDITURE					
Personnel Cost I (Salaries)	8.77	6.17	6.33	6.75	9.50
Personnel Cost II (Others)	0.00	0.00	0.00	0.00	0.05
Terminal and retirement benefits	0.73	2.19	4.41	0.55	0.33
Operating Expenses	2.80	2.46	2.92	2.95	0.13
Repairs & Maintenance	45.77	37.64	76.36	70.56	62.77
<i>Power Charges for Head Water Works</i>	1.18	1.59	2.01	2.36	3.40
<i>Maintenance expense for Water Supply Works</i>	0.94	0.49	1.49	1.78	1.35
<i>Maintenance Charges to TWAD</i>	39.83	33.86	70.82	63.13	55.00
<i>Others</i>	3.83	1.70	2.03	3.28	3.02
Administrative Expenses	0.24	0.89	0.00	0.05	0.00
Finance Expenses	4.73	2.25	2.45	1.50	0.00
Depreciation	20.45	21.71	21.48	21.36	0.00
TOTAL EXPENDITURE	83.50	73.33	113.94	103.72	72.78
NET DEFICIT/SURPLUS	-31.04	-14.31	-43.34	-31.41	3.49

Source : Manapparai Municipality

Table 8-F : Balance Sheet (Water Supply & Drainage Fund)

Rs.in lakhs

Particulars	2002-03	2003-04	2004-05	2005-06
LIABILITIES				
Grants & Contribution	0.52	34.70	64.70	77.97
Diversion from other TP fund	0.52	34.70	64.70	77.97
Accumulated Depreciation Account	62.68	84.40	105.88	127.23
Current Liabilities	133.00	112.77	114.98	110.61
Accumulated Surplus Account	584.62	570.74	527.70	496.28
TOTAL LIABILITIES	780.82	802.60	813.26	812.10
ASSETS				
Fixed Assets	725.55	732.57	739.93	723.29
Current Assets	54.67	67.72	70.26	85.68
Other Items	0.60	2.31	3.07	3.12
TOTAL ASSETS	780.82	802.60	813.26	812.10

Source : Manapparai Municipality

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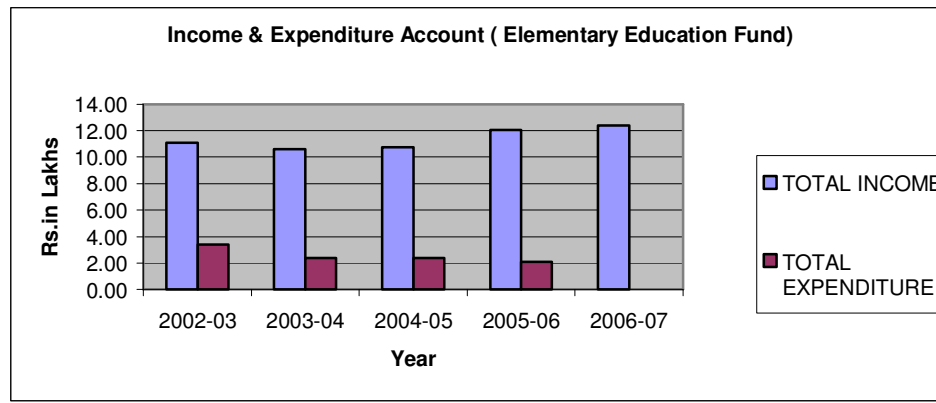
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Our Observations

- The total income of the municipality under this fund has grown by 10 % over the last 5 years
- The main income components under this fund are water taxes and service charges and fees accounting for 34 % & 65% respectively of the total income for FY 2006-07(Revised estimates)
- Water taxes has grown at a moderate 4 % over the last 5 years
- Service charges and fees consisting mainly of Initial deposit for new water supply, metered/tap rate water charges has grown by 13% over the last 5 years. In this the metered/Tap water charges which account for about 85% of the total service charges and fees has grown by 15%.
- The total expenditure of the municipality under this fund has shown a fluctuating trend and has ranged between Rs.72.78 Lakhs to Rs.113.94 Lakhs for the past 5 years.
- Repairs and maintenance account for more than 60% of the total expenditure of the municipality, while the operating expenses account for 3 % of the total expenditure under this fund.
- The Municipality spends a very significant amount for paying the maintenance charges to the TWAD Board accounting for close to 90% of the total repairs & maintenance expense in the FY 2005-06
- In the last few years this fund has shown a continuous deficit except for FY 2006-07 (Revised Estimates) which has a small surplus of Rs.3.49 lacs.
- Around 90 % of the funds have been deployed in creation of productive capital assets with investment in infrastructure related water supply accounting for about 87% as on FY 2005-06.

8.7 Financials (Elementary Education Fund)

Figure 8-6 : Income & Expenditure Account (Elementary Education Fund)



Source : Annual Accounts/Budget Estimates of Manapparai Municipality

Table 8-G : Income & Expenditure Account (Elementary Education Fund)

Rs. in lakhs

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07 (Revised Estimate)
INCOME					
Education Tax	9.37	9.78	10.29	10.54	10.86
Other Income	1.73	0.80	0.46	1.50	1.55
TOTAL INCOME	11.10	10.58	10.75	12.05	12.41
EXPENDITURE					
Finance Expenses	1.31	0.00	0.00	0.00	0.00
Provision of Doubtful collection	0.66	0.86	1.02	0.63	0.00
Depreciation	1.45	1.44	1.37	1.30	0.00
Other Expenses	0.00	0.08	0.00	0.16	0.00
TOTAL EXPENDITURE	3.42	2.39	2.39	2.09	0.00
NET DEFICIT/SURPLUS	7.68	8.19	8.36	9.96	12.41

Source : Manapparai Municipality

Table 8-H : Balance Sheet (Elementary Education Fund)*Rs.in lakhs*

<i>Particulars</i>	<i>2002-03</i>	<i>2003-04</i>	<i>2004-05</i>	<i>2005-06</i>
LIABILITIES				
Accumulated Depreciation	4.05	5.49	6.86	8.17
Accumulated Surplus	85.15	93.52	102.00	111.96
Current Liabilities	2.64	3.35	4.25	2.49
TOTAL LIABILITIES	91.84	102.36	113.11	122.61
ASSETS				
Fixed Assets	60.02	61.37	61.37	61.37
Current Assets	31.83	40.99	51.74	61.24
Other Items				
TOTAL ASSETS	91.84	102.36	113.11	122.61

Source : Manapparai Municipality

Our Observations

- Education tax a component of property Tax has grown @ 4% over the last 5 years
- The Income growth has been stagnant at around ranging between Rs.11.10 Lakhs- Rs.12.41 lakhs, while the expenses has remained under Rs.3 Lakhs
- The surplus has grown from Rs.7.68 in FY 2002-03 to Rs.12.41 Lakhs in FY 2006-07(Revised estimates)
- Municipality owns 3 schools and not much had been invested in upgradation of school properties as seen from fixed asset figures which has stagnated.

8.8 Financials Consolidated

Table 8-I : Consolidated Financials of the three funds

Rs.in lakhs

<i>Particulars</i>	<i>2002-03</i>	<i>2003-04</i>	<i>2004-05</i>	<i>2005-06</i>	<i>2006-07</i>	<i>Budget 2007-08</i>
INCOME						
Property Taxes	24.36	25.43	26.75	27.42	28.20	36.31
Water Taxes	22.48	23.47	24.70	25.31	26.03	27.36
Education Tax	9.37	9.78	10.29	10.54	10.85	11.40
Other Tax	6.79	7.57	10.18	9.68	8.69	9.73
Assigned Revenue	59.62	40.95	18.03	33.42	20.40	27.18
Devolution fund	59.67	70.22	60.52	89.02	80.23	96.28
Service Charges and Fees	41.77	48.64	60.49	56.86	65.16	66.11
<i>Fees for Bus stand</i>	5.81	5.52	5.57	5.01	5.93	5.53
<i>Fees for Slaughter house</i>	0.12	0.13	0.02	0.07	0.05	0.12
<i>Building License Fees</i>	2.49	2.24	1.73	2.14	2.34	2.42
<i>Initial Deposit for New Water supply connections</i>	4.83	3.20	4.01	3.92	3.99	4.73
<i>Water Supply Connection Charges</i>	1.25	1.06	2.72	2.44	2.60	3.15
<i>Metered/Tap rate water charges</i>	23.72	31.07	38.38	40.11	37.82	44.03
<i>Charges for water supply through lorries</i>	0.01	0.01	0.00	0.00	0.00	0.00
<i>Other Fees</i>	3.55	5.43	8.07	3.17	12.43	6.13
Grants and Contribution	0.00	16.32	1.39	10.40	4.81	158.58
Sale & Hire Charges	0.13	0.01	0.01	0.01	0.01	0.01
Other Income	52.67	50.66	158.67	75.67	66.99	65.79
<i>Daily Market Fees</i>	0.87	0.86	0.88	0.88	0.87	0.95
<i>Rent on Shopping Complex</i>	4.03	4.35	4.39	4.36	5.12	4.72
<i>Project Overhead Appropriation Expenses</i>	7.74	4.01	4.79	10.18	13.02	4.20
<i>Others</i>	40.02	41.45	148.61	60.25	47.98	55.92

EXPENDITURE						
Personnel Cost I (Salaries)	81.48	77.30	80.91	84.98	39.04	112.84
Personnel Cost II (Others)	1.88	1.38	0.73	0.80	1.60	9.00
Terminal and retirement benefits	24.30	34.11	25.83	42.62	28.45	42.37
Operating Expenses	17.19	19.74	21.87	20.55	30.56	57.38
<i>Maintenance Expense for Street Lights</i>	1.83	1.68	1.53	2.43	5.36	7.00
<i>Power Charges for Street Lights</i>	12.45	14.94	16.52	14.10	19.61	22.00
<i>Operating Expenses - Water Fund</i>	2.80	2.46	2.92	2.95	3.48	1.38
<i>Others</i>	0.12	0.65	0.90	1.06	2.11	27.00
Repairs & Maintenance	70.36	44.62	88.99	78.74	60.66	113.72
<i>Heavy Vehicles</i>	3.36	3.79	3.83	4.24	5.19	5.00
<i>Power Charges for Head Water Works</i>	1.18	1.59	2.01	2.36	3.35	3.74
<i>Maintenance expense for Water Works</i>	0.94	0.49	1.49	1.78	2.03	7.00
<i>Maintenance Charges to TWAD Board</i>	39.83	33.86	70.82	63.13	45.65	60.00
<i>Others- Water fund</i>	3.83	1.70	2.03	3.28	0.13	1.98
<i>Others- Education Fund</i>	0.00	0.00	0.00	0.00	0.00	29.00
<i>Others -Revenue Fund</i>	21.23	3.19	8.81	3.94	4.31	7.00
Programme Expenses	0.00	0.00	0.00	0.01	0.52	0.00
Administrative Expenses	13.16	9.46	7.08	16.39	7.03	36.95
Finance Expenses	104.92	88.64	6.12	231.55	96.37	150.00
<i>Interest on loans/Ways and means advance</i>	86.01	85.05	2.45	229.26	96.37	150.00
<i>Others</i>	18.24	2.73	2.65	1.66	0.00	0.00
<i>Provision for doubtful collection E fund</i>	0.66	0.86	1.02	0.63	0.00	0.00
Capital Works MPL Contribution Rev fund	0.00	0.00	0.00	30.82	0.00	0.00
Depreciation	96.17	85.20	72.74	96.61	75.37	61.69
TOTAL EXPENDITURE	409.46	360.45	304.27	603.07	339.59	583.95
NET	-132.60	-67.40	66.76	-264.74	-28.23	-85.20

Source: Manapparai Municipality

The consolidated financials of Manapparai Municipality shows that the municipality has been showing continuous net deficit in the last few years except for the year 2004-05.

8.9 Demand, Collection and Balance

Table 8-J: DCB for the Past 6 years

Rs.in Lakhs

Sl.No	Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
		Actuals					
1 PROPERTY TAX- DEMAND, COLLECTION AND BALANCE							
	Total Assessment	9646	9971	10394	10664	10904	10995
A.	Demand						
	Arrears	96.01	92.07	107.58	110.43	99.82	99.89
	Current	61.90	63.57	66.89	68.54	70.51	71.83
	Total	157.91	155.64	174.47	178.97	170.33	171.72
B.	Collection						
	Arrears	21.91	15.55	22.11	22.80	23.65	12.70
	Current	34.42	32.51	41.93	40.33	46.95	31.22
	Total	56.33	48.05	64.04	63.14	70.60	43.92
C.	Balance						
	Arrears	65.61	76.52	85.47	71.62	71.62	87.19
	Current	26.46	31.06	24.95	28.21	28.21	40.61
	Total	92.07	107.58	110.43	99.82	99.82	127.80
II PROFESSION TAX- DEMAND, COLLECTION AND BALANCE							
A.	Demand						
	Arrears	18.23	7.35	8.16	10.94	10.19	10.93
	Current	6.79	7.57	10.18	9.68	8.66	5.66
	Total	25.01	14.92	18.34	20.62	18.85	16.59
B.	Collection						
	Arrears	0.43	0.77	0.65	1.79	0.84	0.36
	Current	4.58	5.99	6.74	8.63	8.66	4.52
	Total	5.00	6.76	7.40	10.43	9.50	4.88
C.	Balance						
	Arrears	5.14	6.58	7.51	9.15	9.15	10.57
	Current	2.21	1.58	3.43	1.04	1.04	1.14

III WATER CHARGES- DEMAND, COLLECTION AND BALANCE							
	Total Assessment	3670	3880	4039	4255	4421	4531
A.	Demand						
	Arrears	142.68	129.35	155.76	163.84	19.14	18.01
	Current	188.01	182.25	192.46	215.97	37.82	43.41
	Total	330.69	311.59	348.22	379.81	56.96	61.42
B.	Collection						
	Arrears	25.94	19.52	33.50	34.67	10.77	6.13
	Current	153.23	136.31	150.88	173.02	32.01	23.01
	Total	179.17	155.84	184.39	207.69	42.78	29.14
C.	Balance						
	Arrears	95.58	109.82	122.25	113.16	113.16	11.88
	Current	33.77	45.94	41.58	42.95	42.95	20.40
	Total	129.35	155.76	163.84	156.10	156.10	32.28
IV NON TAX ITEMS- DEMAND, COLLECTION AND BALANCE							
A.	Demand						
	Arrears	22.30	22.65	25.29	25.98	26.86	3.44
	Current	95.61	80.04	77.02	97.64	24.21	14.02
	Total	117.91	102.69	102.31	123.62	51.07	17.46
B.	Collection						
	Arrears	0.09		1.65	1.55	1.01	2.38
	Current	95.15	77.40	74.68	95.12	24.22	9.19
	Total	95.24	77.40	0.00	96.67	25.23	11.57
C.	Balance						
	Arrears	22.21	22.65	23.63	24.43	24.43	1.06
	Current	0.45	2.63	2.35	2.51	2.51	4.83

8.10 Outstanding Loan and Non-Debt Liability

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

Table 8-K : Outstanding Loan and Non-Debt Liability

Rs.in Lakhs

<i>Sl.No</i>	<i>Particulars</i>	<i>2006-07</i>
1.OUTSTANDING PRINCIPAL ON LOANS		
1	Loan from the Government	580.86
2	Loan from TUFIDCO – Special Road Project	55.23
3	Loan from TUFIDCO - Others	50.00
4	Loan from Others	83.96
<i>Source: Manapparai Municipality, TUFIDCO & TNUFISL</i>		
2 NON-DEBT LIABILITY (2005-06)		
1	Library cess	5.26
2	Provident Fund	15.53
3	Terminal Benefits	0.71
4	Group Insurance Schemes	0.93
5	Dues- TWAD Board	50.35
6	Dues- Electricity Board	NA
7	Survey Charges	Nil

Source: Manapparai Municipality

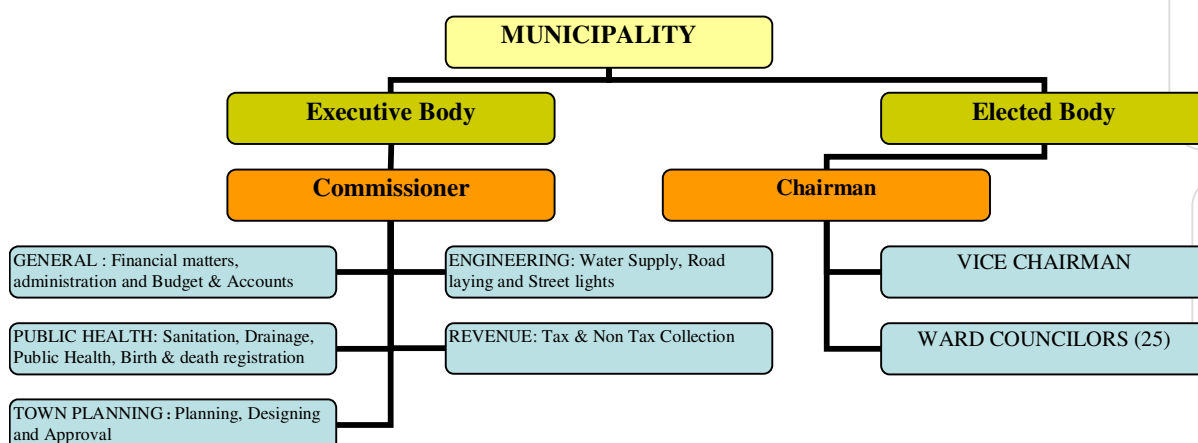
Note: Terminal Benefits includes Special PF cum Gratuity Scheme Recoveries + FBF/Group Insurance Scheme Recoveries

9 INSTITUTIONAL STATUS

9.1 Institutional Structure

The organizational chart of Manapparai Municipality and details of the staff strength for the various activities against the sanctioned list are given in Figure 9-1 and Table 9-A respectively.

Figure 9-1 Organization chart of Manapparai Municipality



Source: Manapparai Municipality

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Table 9-A : The Staff strength of the Manapparai Municipality

<i>Executive Staff</i>	<i>Sanctioned</i>	<i>Appointed</i>	<i>Post Vacant</i>
Administrative/General			
Manager	1	1	-
Accountant	1	1	-
Asst.Programmer	1	1	-
Noon Meal Assistant	1	1	-
Junior.Assistant	8	8	-
Typist	1	1	-
Record Clerk	1	0	1
Office Asst.	3	3	-
Office Night Watchman	1	1	-
Shandy watchman	2	0	2
Engineering			
Municipal Engineer	1	1	-
Overseer	1	1	-
Work Inspector	1	0	1
Fitter	1	0	1
Switch Board Operator	1	1	-
Turn cork	2	2	-
Wiremen	1	0	1
Wiremen to Helper	1	0	1
Driver	1	1	-
Road Mazdoor	7	1	6
Electrician grade II	1	1	-
N.M.Lorry Driver	1	1	-
Town Planning			
Town Planning Inspector	1	1	-
Revenue			
Revenue Inspector	1	1	-
Revenue Assistant	5	5	-

Public Health			
Sanitary Inspector	2	2	-
Public Health Driver	3	3	-
Public Health Cleaner	1	1	-
Sanitary Supervisor	4	4	-
Sanitary Workers	98	74	24

Source : Manapparai Municipality

- As seen from the above table the vacancies are few against the sanctioned limit.
- However in the Public Health section, vacancies of 24 conservancy staff are yet to be filled up. This is critical for maintaining a hygienic and a clean city.
- Staff Salary pay slip for one representative month for all the sections have been enclosed in the Annexure

Source : Manapparai Municipality

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10 DEMAND ASSESSMENT

Physical Infrastructure gaps have been identified based on Demand Supply Gap analysis for the current and for future population for the intervals 2008-09, 2012 – 13, 2017-18 and for 2022-23 whereas Social Infrastructure demand assessment is done based on the opinion and suggestions given by OWG members as well as on the basis of Rapid Urban Assessment. Demand Assessment is done separately for both Physical and Socio-economic Infrastructure and the same is presented in **Table 10-A** and **Table 10-B** respectively.

Table 10-A Demand Supply Gap Analysis for Physical Infrastructure

Population	2008-09	2012-13	2017-18	2022-23
Manapparai population	40885	44096	47976	51858
Water Supply MLD	2008-09	2012-13	2017-18	2022-23
Manapparai water demand @ 135 lpcd	5.5	6.0	6.5	7.0
Existing Supply	3.4	3.4	3.4	3.4
Gap	2.2	2.6	3.1	3.6
Water Treatment Plant capacity in MLD	2008-09	2012-13	2017-18	2022-23
Demand for treatment plant capacity	5.5	6.0	6.5	7.0
Existing treated water supply	3.4	3.4	3.4	3.4
Gap	2.2	2.6	3.1	3.6
Water Distribution Network in Kms	2008-09	2012-13	2017-18	2022-23
Existing distribution length in Kms	43.6	43.6	43.6	43.6
Road length in Kms @ 1.7 m per person	68.7	75.0	81.6	88.2
Gap	25.1	31.4	38.0	44.6
Water Service connections	2008-09	2012-13	2017-18	2022-23
No of Assessments	11357	12249	13327	14405
No of service connections	4531	7962	11328	12244
% service connections existing & proposed	39.9	65	85	85
Gap	60.1	35	15	15

Population	2008-09	2012-13	2017-18	2022-23
Storage capacity	2008-09	2012-13	2017-18	2022-23
Existing Storage Capacity in MLD	2.8	2.8	2.8	2.8
Storage capacity demand in MLD	1.8	2.0	2.1	2.3
Gap in MLD	-0.9	-0.8	-0.6	-0.5
Sewage generation	2008-09	2012-13	2017-18	2022-23
Manapparai sewage generation	4.4	4.8	5.2	5.6
Proposed collection	0.00	0.00	5.20	5.60
Gap	4.4	4.8	0.0	0.0
Sewer connections	2008-09	2012-13	2017-18	2022-23
Proposed connections	0.0		9328.8	10083.6
Demand for sewer connections	7950	8574	9329	10084
Gap	7950	8574	0	0
Road network	2008-09	2012-13	2017-18	2022-23
Existing road network in Kms	68.7	68.7	68.7	68.7
Per Capita road length assumed	1.7	1.7	1.7	1.7
Road length demand		75.0	81.6	88.2
Gap		6.2	12.8	19.4
Storm water drainage	2008-09	2012-13	2017-18	2022-23
Manapparai existing SWD	31.7	31.7	31.7	31.7
Storm water drain demand	89	97	106	115
Gap	57.65	65.75	74.33	82.91
Solid waste generation	2008-09	2012-13	2017-18	2022-23
Per capita waste in grams per day	391	407.23	428.01	449.84
Manapparai waste generation	16.0	18.0	20.5	23.3
Growth rate assumed	1.00%			
Street Lighting	2008-09	2012-13	2017-18	2022-23
Manapparai existing lights	1657	1389	1389	1389
Road length in Kms	68.7	75.0	81.6	88.2
Street light demand @ one light per 30 m	2291	2499	2719	2939
Gap	634	1110	1330	1550

Table 10-B : Demand Assessment for Socio-Economic Infrastructure

Particulars	Project requirements	Projects proposed by the Municipality
New School creation	Not required	• Nil
Existing school infrastructure up gradation	Not required	• Renovation has already been done with the help of Education fund
Creating new health infrastructure	Not required	• Nil
Maternity center	Required	• Nil
Parks and Playfields development	Required	• 2 parks proposed under Vision Plan
Vegetable Market Improvement	Required	• Proposed in Vision Plan
Community Hall up gradation / Creation	Not required	• Nil
Slaughter house up gradation	Required	• Slaughter house is being renovated under Part – II scheme
Municipal building renovation	Required	• Proposal has already been sent to CMA for approval
Burial ground / Gasifier	Required	• Burial ground Improvements proposed in Vision Plan • Gasifier – not proposed
Upgrading Commercial complexes	Not required	• Nil
Creating new complexes	Required	• Only in thought process (converting Manamagzil mandram into commercial complex after obtaining land from revenue department

11 CONSULTATION WITH OWG

11.1 Operational Working Group

The success of the City Corporate cum Business Plan depends on the extent of participation by the various agencies involved in urban governance and service delivery. As it is very rightly said “Business Plan is an exercise ‘For’ the people, ‘Of’ the people and ‘By’ the people.” perception and views of the representatives from the municipality and various Para-Statal agencies are of paramount importance.

To bring all the agencies involved in urban governance and service delivery under one platform for the consultation process, Operational Working Group (OWG) was formed. The first formal Operational Working Group (OWG) meeting was held in Manapparai Municipality Office on 08.02.2008. The OWG members had a wide representation 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

During the first formal OWG meeting, the Consultants made a presentation on the Rapid Urban Assessment as well as the demand assessment including the current status of the Manapparai Town in terms of Infrastructure, Financial and Institutional aspects.

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Projects already identified by the Municipality and additional projects proposed by the Consultants based on the Demand Supply Gap analysis taking into consideration current and future needs and requirements were also presented and discussed during the meeting. During the presentation and subsequent interaction with OWG members, many ideas and suggestions were made and the same has been encapsulated below and the same has been considered and incorporated in this Final Report.

Table 11-A Suggestions / projects identified during OWG meeting

<i>Physical Infrastructure</i>	<i>Sector Components</i>	<i>Key Suggestions / Projects identified</i>
Water Supply	Water Sources	<ul style="list-style-type: none"> • Check dam on the Mamundi river
	Head works and Pumping main	<ul style="list-style-type: none"> • Replacing AC mainline with PSC pipe of 400 mm dia for 40 Km length
	ESR / GSR	<ul style="list-style-type: none"> • DPR required addressing low pressure areas like Wards 12, 13, 16, 18, 19 and 20. • OHTs required for Manapparapatti, Annavi Nagar, Vellakkal and Manjampatti
	Distribution Network	<ul style="list-style-type: none"> • Replacing existing 2 Km 4 inch PVC pipe • Laying distribution network for uncovered areas on demand
	HSCs / Stand posts	<ul style="list-style-type: none"> • Increasing HSCs coverage by 85% before 2017.
Sewerage and Sanitation	Underground Drainage	<ul style="list-style-type: none"> • Required immediately
	Public Toilets	<ul style="list-style-type: none"> • No renovation is required for existing public toilets. If required that could be managed with the help of General fund.
	Pay and Use Toilets	<ul style="list-style-type: none"> • Pay and Use Toilet near Uzhavar

		Shandy is required. No renovation is required for existing Pay and Use Toilets. If required that could be managed with the help of General fund.
	Deposit and connection charges	<ul style="list-style-type: none"> Public has apprehension over paying deposit and connection charges.
Storm Water Drainage	Renovating existing drains	<ul style="list-style-type: none"> Existing open drains need to be converted into closed drain (31.7 Km) while relaying roads which will get damaged due to UGD implementation in the coming years (proposed Now).
	New Drain Provision	<ul style="list-style-type: none"> Creating closed rains for 83 Km by 2022
Roads	Kutcha road upgradation	<ul style="list-style-type: none"> Converting Kutcha roads into BT / CC road after implementing UGD
	Pucca road improvement	<ul style="list-style-type: none"> Relaying roads which will get damaged due to UGD implementation
	Building New Roads / Links	<ul style="list-style-type: none"> Creating new roads of 15.4 Km by 2022 based on demand. New link between kovilpatti road and Madurai road of 4 Km length to relieve congestion on the main arterial road.
	Bye pass / Highway projects	<ul style="list-style-type: none"> RoBs at railway crossings
	Connectivity Improvement	<ul style="list-style-type: none"> Bridge is under construction under UIDSSMT scheme.
Traffic and Transportation	Traffic Management / Junction Improvement	<ul style="list-style-type: none"> Junction improvement near Bus Stand Converting Arterial road into two lane road with median and street lighting in the middle after removing encroachments.
	Bus stand / railway	<ul style="list-style-type: none"> Bus stand extension project by

	station Imp	demolishing the existing Municipal office building
	Transport system (Both Bus and Rail)	<ul style="list-style-type: none"> Trains like Tirupathi and Vaigai need to have a stage in Manapparai station.
Solid Waste Management	Door to Door collection and Segregation	<ul style="list-style-type: none"> Adopting D-D in all wards Open to the idea that Waste segregation at source can be done by providing separate bins to all households with private sponsorship.
	Man power Requirements / Privatization	<ul style="list-style-type: none"> If more man power is required, Municipality can go for more privatization.
	Vehicle requirements	<ul style="list-style-type: none"> Tricycles required for D-D collection in all the wards
	Dumping site / Compost yard	<ul style="list-style-type: none"> Compost yard (Windrows treatment Plant) would be in operation after two months.
	User Charges	<ul style="list-style-type: none"> OWG members are open to the idea for charging user charges only for waste from non domestic areas (other than residential areas).
	Public Awareness	<ul style="list-style-type: none"> Required for adopting waste segregation at source.
Street Lighting	Energy Saving Initiatives	<ul style="list-style-type: none"> Energy saving can be done with the help of private participation
	Privatization	<ul style="list-style-type: none"> Open to the idea for privatization. Already maintenance work of street lighting is privatized.

<i>Social Infrastructure</i>	<i>Sector Components</i>	<i>Key Suggestions</i>
Schools	Renovation of existing Schools	<ul style="list-style-type: none"> Renovation has already been done as envisaged in the vision plan with the help of education fund (30 lakhs spent)
	Infrastructure requirements in the existing schools	<ul style="list-style-type: none"> Infrastructure improvement has already been done with the help of education fund (30 lakhs spent)
Parks and Playgrounds	Proposed parks and Playgrounds	<ul style="list-style-type: none"> 2 parks are already proposed in Vision plan
	Approved layout for parks and playgrounds	<ul style="list-style-type: none"> Additional 5 approved layouts can be developed as parks
Daily Market	Infrastructure Improvement	<ul style="list-style-type: none"> Improvement as envisaged in Vision Plan
Slaughter House	Slaughter house improvement scheme	<ul style="list-style-type: none"> Slaughter house renovation is undergoing under Part – II scheme (20 lakhs)
Maternity Center	New center Requirements	<ul style="list-style-type: none"> Maternity center required near Bypass road close to cattle Shandy.
Municipal building	Creating new blocks / Improving existing blocks	<ul style="list-style-type: none"> Setting up Municipal building at a cost of 50 lakhs (proposal sent to CMA)
Burial grounds / Gassifier	Burial ground Improvement	<ul style="list-style-type: none"> Burial ground improvement at a cost of 3.5 lakhs as envisaged in Vision Plan
	Gassifier provision	<ul style="list-style-type: none"> Gassifier is required
Commercial complexes / Shops	Creating new complexes	<ul style="list-style-type: none"> Converting Manamagzil Mandram into a commercial complex after obtaining land ownership from revenue department

<i>Sector</i>	<i>Sector Components</i>	<i>Key Suggestions</i>
Slums and Urban Poverty / Environmental Issues	HSCs / Stand posts in Slum areas	<ul style="list-style-type: none"> OHTs required to provide supply in Manapparapatti, Manjampatti and Vellakkal areas
	Other Infrastructure provisions	<ul style="list-style-type: none"> IHSDP proposal got sanctioned.
	Pollution related issues	<ul style="list-style-type: none"> Pollution is not a major problem here since there are no major industries functioning.
	Developing & maintaining Water bodies	<ul style="list-style-type: none"> 8 water bodies has to be de-silted
	Water Channel Improvement	<ul style="list-style-type: none"> Comprehensive Storm Water Drainage is required
	Flood related issues	<ul style="list-style-type: none"> -Do-

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<i>Sector</i>	<i>Sector Components</i>	<i>Key Suggestions</i>
Urban Finance / Institutional Framework	Areas for privatization	<ul style="list-style-type: none"> Municipality is open to the idea of waste segregation at source through partial sponsorship for purchasing bins.
	User charges	<ul style="list-style-type: none"> Small proportion of user charges can also be looked into for collection of waste from households

11.2 Sector Priority based on OWG opinion survey

Projects identified both by the Municipality and by the consultants 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 OWG meeting, Stakeholders have been asked to prioritize the sectors pertaining to Physical infrastructure, Social Infrastructure and Environment and is presented in a scale of 0-100¹ scores.

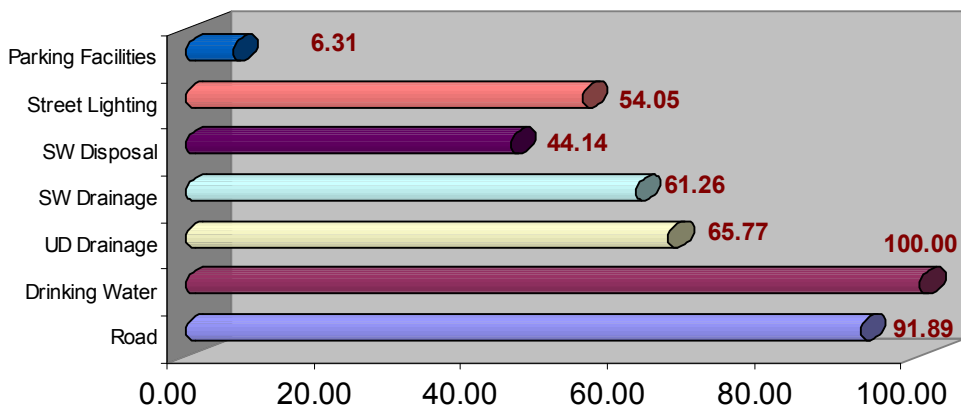
11.2.1 Physical infrastructure priority

Based on the opinion survey conducted during OWG meeting, 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. Street lighting
6. Solid Waste Disposal
7. Parking facilities

However, road works can be ideally taken up after implementing UGD system proposed. Hence Drinking Water supply, UGD and Road has to be given first, second and third priority respectively.

Figure 11-1 Sector prioritization by the Stakeholders (Physical Infrastructure)



Source : Survey findings

¹ Sector is highly prioritized by the Stakeholders if it gets 100 score and least prioritized if it gets 0 score.

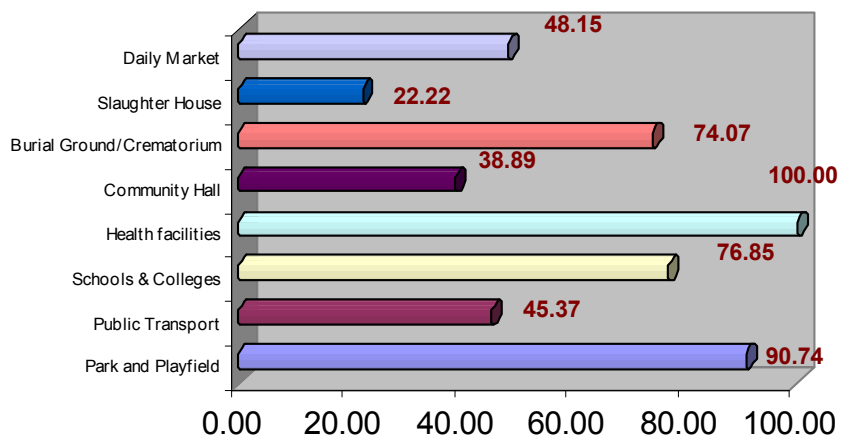
11.2.2 Social infrastructure priority

Based on opinion survey conducted during OWG meeting, Stakeholders have given priority to the sectors related to Social infrastructure on the following order:

1. Health facilities (Maternity Center)
2. Parks, Playfields
3. Schools and Colleges
4. Burial ground / Gasifier crematorium
5. Daily Market
6. Public Transport
7. Community Hall
8. Slaughter House

Since the town lacks basic infrastructure facilities like adequate treated water, sewerage and sanitation and Maternity center etc. citizens of Manapparai are susceptible to various health hazards. Hence, they have insisted Health facilities as one of their high priority sector.

Figure 11-2 Sector prioritization by the Stakeholders (Social Infrastructure)



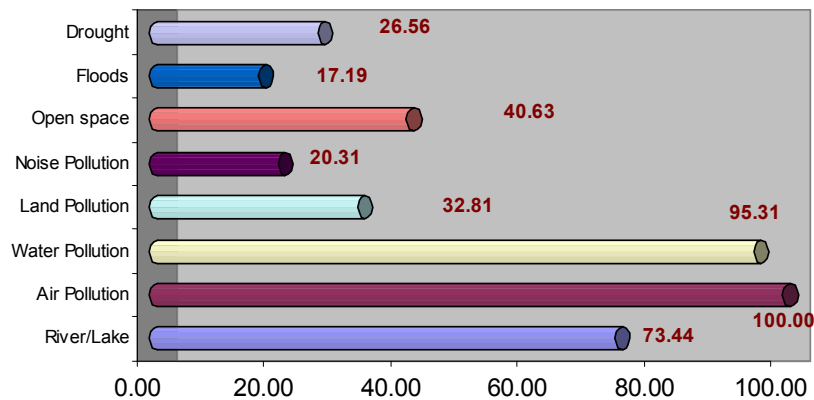
Source : Survey findings

11.2.3 Environmental Issues

Based on opinion survey conducted during OWG meeting, Stakeholders have given priority to the Environmental Issues on the following order:

1. Air pollution
2. Water Pollution
3. River/Lake
4. Open space inadequacy in the form of parks / Playgrounds
5. Land Pollution
6. Drought
7. Noise Pollution
8. Flood

Figure 11-3 Sector prioritization by the Stakeholders (Environmental Issues)



Source : Survey findings

Figure 11-4 Consultation with OWG members in Manapparai



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12 SWOT

Based on Stakeholder's perception and view points expressed in the OWG meetings and on the basis of assessment done by the consultants, an attempt has been made to evaluate Strength, Weakness, Opportunities and threats of the city which is shown below:

Strength

- ✓ Town lies in-between Cauvery and Bhavani confluence.
- ✓ City known for Handloom and Carpet Manufacturing
- ✓ Declared as a tourist centre by Government of India (Sangameswarar Temple)
- ✓ Railway (ERODE) as well as Highway (NH -47) link in its proximity.
- ✓ E-governance and privatization initiatives (Streetlights , Solid Waste)

Opportunities

- ✓ Proposed Infrastructure Projects such as UGD, Bus stand Extension, Compost Yard projects can enhance the Infrastructure of the town
- ✓ Extending the Municipal limits by adding Kuruppunaickan palayam, Oratchi Kottai, Jeeva Nagar, Servarayan palayam, Pudiya and Palaya kadayaam patti and Thottipalayam.

Weakness

- ✓ Dependent on distant Cauvery source (40 Kms) and TWAD
- ✓ Only 46 % roads are covered by SWDs out of which 26% are kutchra drains.
- ✓ Slum population is around 38% .
- ✓ Nearly 25% of the roads are Kutchra.
- ✓ Low collection efficiency of taxes (35% in property taxes in 2005-2006)
- ✓ High dependance on external funds (around 50%)
- ✓ Net deficit in Water fund over the last few years

Threats

- ✓ Flood prone area due to absence of proper drains
- ✓ Inadequate income deters Municipality from taking Capital Intensive projects

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13 CONSOLIDATED ISSUES

The issues identified during Rapid Urban Assessment as well as the issues indicated by the OWG members were consolidated sector wise and are presented below:

Table 13-A: Consolidated Issues

Sector	Issues
Water Supply	<ul style="list-style-type: none"> • Low Service Coverage (41 %) • 37% of the roads have no distribution network • Main line bursting between Manapparai and Kulithalai Head works disrupts regular and consistent water supply • Pressure problem in wards 12, 13, 16, 18, 19 and 20
Sewerage and Sanitation	<ul style="list-style-type: none"> • No Sewerage System (DPR for UGD Scheme is under preparation by TWAD)
Storm water drainage	<ul style="list-style-type: none"> • More than 50% of the roads have no Storm water drains • Flooding due to absence of drains
Traffic and Transportation	<ul style="list-style-type: none"> • Nearly 25 % of the roads are Kutcha roads • Bus stand space is inadequate • Town has two railway crossings causing time delay • Absences of Service road along Bye pass NH-45
Solid Waste management	<ul style="list-style-type: none"> • 16 wards are only covered under D-D and Waste segregation • Inadequate vehicle fleet capacity • No treatment plant
Street Lighting	<ul style="list-style-type: none"> • Spacing between lights is well above the standards (i.e one light in more than 30M spacing) • Absence of Energy saving Mechanism
Slums and Urban Poverty	<ul style="list-style-type: none"> • Large number of slum pockets (19) • 38 percent of the total population is living in slums • 19 percent of the total population are living below poverty line • Inadequate infrastructure facilities in slum areas

<i>Sector</i>	<i>Issues</i>
Social infrastructure	<ul style="list-style-type: none"> • No parks and playgrounds • Water bodies (8) are poorly maintained • Market areas have inadequate infrastructure facilities
Urban Finance	<ul style="list-style-type: none"> • High dependence on External funds • Deficit in the water fund in the last few years
Capacity Assessment	<ul style="list-style-type: none"> • Overall Collection efficiency of property taxes , profession taxes and water charges poor at 35%, 51% and 55% (2005-06)

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14 SECTORAL STRATEGY AND ACTION PLAN

In order to address the issues identified during rapid urban assessment stage and during OWG meetings, 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 OWG members which is 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 Operational Working Group members and are listed below:

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

<i>Sub sector</i>	<i>Strategic Plan / Action plan</i>
Water Supply	<ul style="list-style-type: none"> Obtaining additional water quantity of 3.6 MLD from TWAD (Cauvery Combined Water Supply Scheme)
	<ul style="list-style-type: none"> Replacing existing AC 300 mm main line by 400 mm PSC for 40 Km length from Headworks to Manapparai
	<ul style="list-style-type: none"> Laying Distribution network for 45 Km road length by 2022-23.
	<ul style="list-style-type: none"> Replacing worn out distribution network (2 Km 4 inch PVC pipe replacement by the pipe of same size and same type)
	<ul style="list-style-type: none"> Preparing Asset management plan for water supply related assets
Sewerage and Sanitation	<ul style="list-style-type: none"> Implementing Underground Sewerage System before 2017-18.
	<ul style="list-style-type: none"> Creating Public Toilet near Uzhavar Shandy.
Storm water drainage	<ul style="list-style-type: none"> Creating closed drains for 83 Km length by 2022-23.
	<ul style="list-style-type: none"> Converting open drain into closed drain for existing 31.7 Km length.

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<i>Sub sector</i>	<i>Strategic Plan / Action plan</i>
Solid Waste Management	<ul style="list-style-type: none"> • Providing Separate bins for Waste Segregation at source to all households with Private participation
	<ul style="list-style-type: none"> • Adopting D – D collection and waste segregation in all wards
	<ul style="list-style-type: none"> • Providing protective gear for Conservancy workers
Traffic and Transportation	<ul style="list-style-type: none"> • Creating new roads of 15.4 Km by 2022-23 (2.2 Km by 2012-13(four Km new link mentioned below is deducted from 2011 demand), 6.6 Km by 2017-18 and 6.6 Km by 2022-23 • Creating new link between Kovilpatti road and Madurai road of 4 Km length (2 Lane)
	<ul style="list-style-type: none"> • Adopting Traffic Management Schemes
	<ul style="list-style-type: none"> • Conversion of Kutcha road network into Pucca road network (16.9 Km)
	<ul style="list-style-type: none"> • Relaying existing and newly created Bitumen roads once in every three years.
	<ul style="list-style-type: none"> • Providing ROBs at two railway crossings.
Street Lighting	<ul style="list-style-type: none"> • Adopting energy saving street lighting systems like CFL and FTL lamps, Voltage Controller & Timer and Electronic Chokes.
	<ul style="list-style-type: none"> • Involving private agencies for operation & maintenance of street lighting and to reduce energy consumption.
	<ul style="list-style-type: none"> • Provision of lighting system as per standards and norms
	<ul style="list-style-type: none"> • Providing 4 High Mast Lights in Office premises, Mariamman Koil and in Bye-Pass.
Slums and Urban Poverty	<ul style="list-style-type: none"> • Implementing IHSDP on time (already under implementation)
	<ul style="list-style-type: none"> • Provision of all infrastructure facilities in all slums
	<ul style="list-style-type: none"> • Project formulation and implementation of slums with local stakeholder's participation
	<ul style="list-style-type: none"> • Preventing further development of slums
	<ul style="list-style-type: none"> • Self help group formulation targeting BPL population
Socio-Economic Infrastructure	<ul style="list-style-type: none"> • Developing proposed 2 parks as envisaged in Vision Plan • Develop remaining 5 approved layouts as parks and Playgrounds

<i>Sub sector</i>	<i>Strategic Plan / Action plan</i>
	<ul style="list-style-type: none"> • Upgrading Infrastructure facilities in Daily market as envisaged in Vision plan • Setting up New Maternity Center. • New Office Building Construction in 710 / 7 survey number in an extent of 1.5 acres • Setting up Gassifier Crematorium • Converting Manamaghzil Mandram into a commercial complex after obtaining land from Revenue Department in an extent of 1.27 acres. • Improving Bus Stand Infrastructure as per Vision Plan.
<p>Improving Environmental status</p>	<ul style="list-style-type: none"> • Karikankulam desiltation with recreational development • Desilting Moor Kulam and Muniappan Kulam • Removing encroachments in Vannan kulam located nearby Viralimalai Road and Atthi Kulam with desiltation • Desilting Muniappan Kulam with recreational development • Desilting Sevakulam and Perumal Naidu Kulam • Desilting Manapparai Kulam
<p>Urban Finance</p>	<ul style="list-style-type: none"> • Revision in Property Taxes every five years. • Periodic revision in monthly charges and deposit charges for water supply and sewerage • Gradual and phased introduction of User charges for Solid Waste Management backed by revision in charges every five years. • Achieving close to cent percent collection efficiency in Tax and Non Tax revenue. • Achieving 85% service coverage in water supply by 2017-18. • Achieving 70% service coverage in Sewerage.
<p>Institutional Framework</p>	<ul style="list-style-type: none"> • Privatization and outsourcing of critical services like O & M of Solid Waste Management, Water and Sewerage systems to be introduced gradually. • Qualitative computerization and E-Governance of all the modules.

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). The investment requirement is Rs. **6977.21** lacs.

Table 15-A : Consolidated Sector wise Capital Investment requirements

Rs. in Lakhs

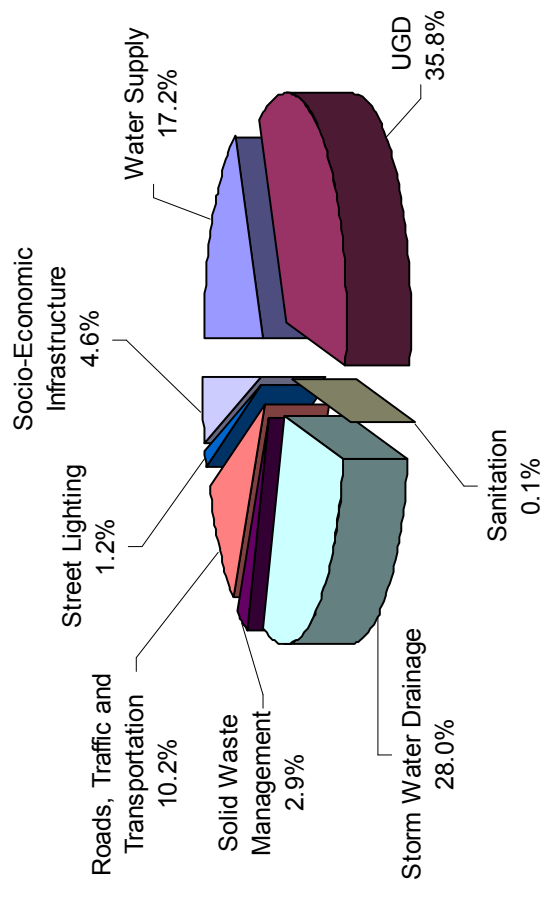
Project Sector	Total Investment	2008-09 to 2012-13	2013-14 to 2017-18	2018-19 to 2022-23
Water Supply	1202.92	978.92	96.00	128.00
UGD	2500.00	2500.00	0.00	0.00
Sanitation	5.00	5.00	0.00	0.00
Storm Water Drainage	1950.30	0.00	975.15	975.15
Solid Waste Management	201.04	105.81	46.27	48.96
Roads, Traffic and Transportation	712.13	93.00	207.06	412.07
Street Lighting	83.12	58.92	12.10	12.10
Socio-Economic Infrastructure	322.70	252.70	70.00	0.00
Parks and Playgrounds	29.20	4.20	25.00	0.00
Bus stand Improvement	179.00	179.00	0.00	0.00
Daily Market	9.50	9.50	0.00	0.00
Slaughter House	0.00	0.00	0.00	0.00
Maternity Center	10.00	10.00	0.00	0.00
Municipal building	50.00	50.00	0.00	0.00
Burial grounds / Gassifier	45.00	0.00	45.00	0.00
TOTAL CAPEX	6977.21	3994.35	1406.58	1576.28

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Figure 15-1 Sector wise percentage share



15.1 CIP for Physical Infrastructure sectors

During OWG meetings 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

15.1.1 Water Supply

The following assumptions were made while calculating Budget Estimates for water supply projects:

- For Water Supply Distribution Network of 45 km length PVC pipes are considered with diameters ranging from 110 mm to 280 mm dia.
- For Calculating the cost of laying 400 mm dia PSC pipe for 40 km length it is assumed that about 70% of the pipeline is under ground and 30% is above the ground.
- A provisional sum of Rs. 10 lakhs taken for shifting of utilities.

The works identified and phase wise investment for the various works are listed in Table 15-B.

The total estimated cost for Water Supply Works - Rs. 1202.92 lakhs.

Implementing Agency – TWAD / Manapparai Municipality

Project Manager – Executive Engineers from TWAD / Municipal Engineer

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

Rs. in Lakhs

Project List	Remarks	Phasing				Implementing Agency
Replacing AC main pipe line with PSC main line of 400 Dia for 40 Kms (from head works to Manapparai)	Proposal identified during OWG (AC Pipe bursting is a regular phenomenon as indicated by the OWG)	910.00	910.00	0.00	0.00	TWAD / Municipality
Laying Distribution network for additional 45 Km road length by 2022 (10 Km by 2012, 15 Km by 2017, 20 Km by 2022)	Demand Supply Gap length modified in each phase as discussed with OWG members	288.00	64.00	96.00	128.00	Municipality
Replacing existing 2 Km 4 inch PVC pipe with new pipe line of same type and size	Identified during OWG meeting	4.92	4.92	0.00	0.00	Municipality
Sub Total for Water Supply Works:		1202.92	978.92	96.00	128.00	

15.1.2 Sewerage and Sanitation

Detailed Project Report is under preparation for Under Ground Drainage Scheme for Manapparai Municipality. The Estimated Cost for the scheme is taken as Rs. 2500 lakhs. Apart from the UGD a Public Toilet at Uzharvar Shandy is considered under this sector. The works identified and phase wise investment for the various works are listed in Table 15-C.

The total estimated cost for the Sewerage & Sanitation Works - Rs. 2505.00 lakhs.
 Implementing Agency – TWAD / Manapparai Municipality
 Project Manager – Executive Engineers from TWAD / Municipal Engineer

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

Rs. in Lakhs

Project List	Remarks	Phasing			Implementing Agency
		Estimated cost	2008-09 to 2012-13	2013-14 to 2017-18	
UGD Scheme for Manapparai Municipality (tentative cost applied since the DPR is under preparation)	DPR under preparation by TWAD	2500.00	2500.00	0.00	TWAD/ Municipality
Public Toilet near Uzhavar Shandy	Based on Rapid Urban Assessment	5.00	5.00	0.00	Municipality
Sub Total for Sewerage and Sanitation Works:		2505.00	2505.00	0.00	

15.1.3 Storm Water Drainage

Various works have been identified under Storm Water Drainage Sector and the following assumptions were made while calculating

Budget Estimates:

- For Drains it is assumed that the width is ranging from 0.45m to 1.5m and depth ranging from 0.5 to 1.0 m.
- For smaller dimension drains brick walls are considered and for big drains RR Masonry walls are considered.
- All the drains are considered to be closed drains with RCC slab.

The works identified and phase wise investment for the various works are listed in *Table 15-D*.

The total estimated cost for the Storm Water Drainage Works – Rs. 1950.30 lakhs
 Implementing Agency – Manapparai Municipality
 Project Manager – Municipal Engineer

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

Rs. in Lakhs

Project List	Remarks	Phasing			Implementing Agency
		Estimated cost	2008-09 to 2012-13	2013-14 to 2017-18	
Creating closed drains for 83 Km length by 2022	Based on Rapid Urban Assessment	1626.80	0.00	813.40	Municipality
Converting open drain into closed drain for existing 31.7 Km length	Based on Rapid Urban Assessment	323.50	0.00	161.75	Municipality
Sub Total for Storm Water Drainage Works:		1950.30	0.00	975.15	975.15

15.1.4 Solid Waste Management

Under Solid waste Management, Protective gear for conservancy workers is proposed in such a way that workers would get protective gear once in two years (50% workers is planned to be covered each year). In addition, Household segregation bins (2 Nos) are proposed for each assessment in Manapparai Municipality with due consideration given to projected assessments also. Household segregation bins are proposed to be replaced once in 5 years. Details of costing and phasing of investment is given in *Table 15-E*.

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The total estimated costs for the Solid Waste Management Works - Rs. 201.00 lakhs
 Implementing Agency – Manapparai Municipality / PPP
 Project Manager – Municipal Engineer

Rs. in Lakhs

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

Project List	Remarks	Phasing			Implementing Agency
		Estimated cost	2008-09 to 2012-13	2013-14 to 2017-18	
Protective gear for Conservancy worker (Workers will get safety gear once in two years)	Proposal identified during OWG	38.9	13.0	13.0	Municipality with private participation
Procuring Separate bins for Waste Segregation at source for each household (with private sponsorship)	Proposal identified during OWG	99.95	30.62	33.32	Municipality with private participation
Contribution to Regional Municipal Solid Waste Landfill	Identified during review committee meeting	62.23	62.23	0.00	Municipality / RDMA / PPP
Sub Total for Solid Waste Management Works:		201.0	105.8	46.3	49.0

15.1.5 Roads, Traffic and Transportation

Under this sector it is proposed to construct new roads, converting kutcha road to BT roads and resurfacing the damaged roads after UGD is implemented. For budget cost estimates unit rates per km length are considered. The works identified and phase wise investment for the various works are listed in Table 15-F.

The total estimated cost for the Roads, Traffic and Transportation Works - Rs. 712.13 lakhs (Municipal project cost)
Implementing Agency –Manapparai Municipality
Project Manager –Municipal Engineer

Table 15-F Project List and Budget Estimates for Roads, Traffic and Transportation Works

Project List	Remarks	Estimated cost	Phasing			Implementing Agency
			2008-09 to 2012-13	2013-14 to 2017-18	2018-19 to 2022-23	
Creating new roads of 15.4 Km by 2022 (2.2 Km by 2012(four Km new Road link mentioned below is deducted from 2012 demand), 6.6 Km by 2017 and 6.6 Km by 2022	Based on Demand Supply Gap Analysis	231.00	33.00	99.00	99.00	Municipality
Converting 16.9 Km Kutcha road into BT road	Based on Rapid Urban Assessment	169.00	0.00	84.50	84.50	Municipality

Rs. in Lakhs

Resurfacing damaged roads after implementing UGD (38.9 Km BT road) Relaying cost included in UGD cost and hence not included in II phase	Based on Demand Supply Gap Analysis	147.82	0.00	0.00	0.00	147.82	Municipality
Resurfacing new roads after each third year of its implementation 6.20 Kms	Based on Demand Supply Gap Analysis	47.12	0.00	0.00	23.56	23.56	Municipality
Resurfacing new roads after each third year of its implementation 6.60 Kms	Based on Demand Supply Gap Analysis	25.08	0.00	0.00	0.00	25.08	Municipality
Resurfacing new roads after each third year of its implementation 16.90 Kms	Based on Demand Supply Gap Analysis	32.11	0.00	0.00	0.00	32.11	Municipality
New link between kovilpatti road and Madurai road of 4 Km length (2 Lane)	Based on OWG recommendation	60.00	60.00	0.00	0.00	0.00	Municipality
RoBs at railway Junctions	Based on Rapid Urban Assessment						Railways
Sub Total for Road Works:		712.13	93.00	207.06	412.07		

15.1.6 Street Lighting

Under this sector it is proposed to manage the street lighting and energy saving mechanism through private partnership. The phase wise implementation details and costing is given in *Table 15-G*.

The total estimated cost for Street Lighting – Rs. 83.12 lakhs
Implementing Agency – Manapparai Municipality / PPP
Project Manager – Municipal Engineer

Table 15-G Project List and Budget Estimates for Street Lighting Works

Rs. in Lakhs

Project List	Remarks	Phasing				Implementing Agency
		Estimated cost	2008-09 to 2012-13	2013-14 to 2017-18	2018-19 to 2022-23	
Installing 476 energy saving CFL lights by 2012, 220 by 2017 and 220 by year 2022	Based on Demand Supply Gap Analysis	50.38	26.18	12.10	12.10	Municipality / PPP
Installing 4 High Mast lights with CFL lamp layer in Office, Mariammal Koil, Bye Pass entrance	Based on OWG recommendation	22.00	22.00	0.00	0.00	Municipality
Installation of voltage controller & timers	Based on Rapid Urban Assessment	5.00	5.00	0.00	0.00	Municipality / PPP
Installation of electronic chokes in place of conventional copper chokes and 36 w tube lights	Based on Rapid Urban Assessment	5.74	5.74	0.00	0.00	Municipality / PPP
Sub Total for Street Lighting Works:		83.12	58.92	12.10	12.10	

15.2 Socio-economic Infrastructure

Socio-Economic Infrastructure works are identified based on Demand Supply Gap analysis, during OWG meetings and from master plan proposals. These works include improving the existing municipal school building, Parks and Playgrounds, construction of community hall, slum improvement works, Gasifier, renovation of slaughter house, burial ground, Tourism projects and upgrading the daily and weekly markets. Project list and Budget estimates for Socio-Economic Infrastructure works are listed out in Table 15-H.

The total estimated cost for Socio-Economic Works – Rs. 322.70 lakhs
 Implementing Agency – Manapparai Municipality / PPP
 Project Manager – Municipal Engineer

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

(Rs. in lakhs)

Project List	Remarks	Phasing				Implementing Agency
		Estimated cost	2008-09 to 2012-13	2013-14 to 2017-18	2018-19 to 2022-23	
Developing parks (2)	Vision Plan	4.20	4.20	0.00	0.00	Municipality
Developing remaining 5 approved layout parks	Based on Rapid Urban Assessment	25.00	0.00	25.00	0.00	Municipality
Improving Bus stand Infrastructure	Vision Plan	179.00	179.00	0.00	0.00	Municipality
Upgrading infrastructure facilities in Daily market	Vision Plan	9.50	9.50	0.00	0.00	Municipality
Under renovation with the help of Part II scheme fund (20 Lakhs - 10 : 10)	Based on Rapid Urban Assessment	0.00	0.00	0.00	0.00	Municipality
Setting up new Maternity center	Based on Demand Supply Gap Analysis	10.00	10.00	0.00	0.00	Municipality
New Office Building Construction in 710 / 7 survey number in 1.5 acres	Part II Scheme	50.00	50.00	0.00	0.00	Municipality

Project List	Remarks	Phasing				Implementing Agency
		Estimated cost	2008-09 to 2012-13	2013-14 to 2017-18	2018-19 to 2022-23	
Gasifier crematorium	Based on Demand Supply Gap Analysis	45.00	0.00	45.00	0.00	Municipality
Converting Manamaghzil Mandram into a commercial complex after obtaining land from Revenue Department in an extent of 1.27 acres.	Based on OWG recommendation	0.00	0.00	0.00	0.00	Municipality /PPP
IHSDP (already got sanctioned and currently under implementation)	Based on Rapid Urban Assessment	0.00	0.00	0.00	0.00	Municipality
Karikankulam desiltation with recreational development	Based on OWG recommendation					Revenue / PWD
Desilting Moor Kulam and Muniappan Kulam	Based on OWG recommendation					Revenue / PWD
Removing encroachments in Vannan kulam located nearby Viralimalai road and Atthi kulam with desiltation	Based on OWG recommendation					Revenue / PWD
Desilting Muniappan Kulam with recreational development	Based on OWG recommendation					Revenue / PWD
Desilting Sevakulam and Perumal Naidu kulam	Based on OWG recommendation					Revenue / PWD
Desilting Manapparai Kulam	Based on OWG recommendation					Revenue / PWD
Sub Total for Socio Economic Infrastructure Works:		322.70	252.70	70.00	0.00	

15.3 Consolidated Capital Investment Plan

15.3.1 First Phase Investment Plan (2008-09 to 2012 - 13)

First Phase investment plan for Manapparai is given in Table 15-I. The total Estimated Cost for all the Sectors is Rs **3994.35** lakhs. The total estimated cost after considering escalation for I phase is Rs. **5252.89** lakhs which is shown in Table 15-J.

Table 15-I First Phase Capital Investment Plan for Manapparai Municipality

Rs. in Lakhs

Project Sector	2008-09	2009-10	2010-11	2011-12	2012-13	Investment(I Phase)
Water Supply	4.92	0.00	910.00	32.00	32.00	978.92
UGD	0.00	833.33	833.33	833.33	0.00	2500.00
Sanitation	5.00	0.00	0.00	0.00	0.00	5.00
Storm Water Drainage	0.00	0.00	0.00	0.00	0.00	0.00
Solid Waste Management	30.98	65.37	3.14	3.15	3.16	105.81
Roads, Traffic and Transportation	0.00	0.00	0.00	46.50	46.50	93.00
Street Lighting	15.98	10.74	10.74	10.74	10.74	58.92
Socio-Economic Infrastructure	0.00	64.20	188.50	0.00	0.00	252.70
Parks and Playgrounds	0.00	4.20	0.00	0.00	0.00	4.20
Bus stand Improvement	0.00	0.00	179.00	0.00	0.00	179.00
Daily Market	0.00	0.00	9.50	0.00	0.00	9.50
Slaughter House	0.00	0.00	0.00	0.00	0.00	0.00

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<i>Project Sector</i>	<i>2008-09</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>Investment(I Phase)</i>
<i>Maternity Center</i>	0.00	10.00	0.00	0.00	0.00	10.00
<i>Municipal building</i>	0.00	50.00	0.00	0.00	0.00	50.00
<i>Burial grounds / Gassifier</i>	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CAPEX	56.88	973.63	1945.71	925.72	92.40	3994.35

Table 15-J First Phase Capital Investment Plan for Manapparai Municipality (after considering escalation cost)

Rs. in Lakhs

<i>Project Sector</i>	<i>2008-09</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>Investment (I Phase)</i>
<i>Water Supply</i>	5.17	0.00	1053.44	38.90	40.84	1138.34
<i>UGD</i>	0.00	1116.75	1172.58	1231.21	0.00	3520.54
<i>Sanitation</i>	5.25	0.00	0.00	0.00	0.00	5.25
<i>Storm Water Drainage</i>	0.00	0.00	0.00	0.00	0.00	0.00
<i>Solid Waste Management</i>	32.53	72.06	3.64	3.83	4.04	116.10
<i>Roads, Traffic and Transportation</i>	0.00	0.00	0.00	56.52	59.35	115.87
<i>Street Lighting</i>	16.77	11.84	12.43	13.05	13.70	67.79
<i>Socio-Economic Infrastructure</i>	0.00	70.78	218.21	0.00	0.00	288.99
<i>Parks and Playgrounds</i>	0.00	4.63	0.00	0.00	0.00	4.63
<i>Bus stand Improvement</i>	0.00	0.00	207.21	0.00	0.00	207.21
<i>Daily Market</i>	0.00	0.00	11.00	0.00	0.00	11.00
<i>Slaughter House</i>	0.00	0.00	0.00	0.00	0.00	0.00
<i>Maternity Center</i>	0.00	11.03	0.00	0.00	0.00	11.03
<i>Municipal building</i>	0.00	55.13	0.00	0.00	0.00	55.13
<i>Burial grounds / Gassifier</i>	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CAPEX	59.72	1271.43	2460.30	1343.51	117.93	5252.89

15.3.2 Second Phase Investment Plan (2013-14 to 2017 – 18)

Second Phase investment plan for Manapparai is given in Table 15-K. The total Estimated Cost for all the Sectors is Rs. **1406.58** lakhs. The total estimated cost after considering escalation for I phase is Rs. **2104.15** lakhs which is shown in Table 15-L.

Table 15-K Second Phase Capital Investment Plan for Manapparai Municipality

Rs. in Lakhs

Project Sector	2013-14	2014-15	2015-16	2016-17	2017-18	Investment (II Phase)
Water Supply	0.00	0.00	0.00	48.00	48.00	96.00
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	195.03	195.03	195.03	195.03	195.03	975.15
Solid Waste Management	31.50	3.66	3.68	3.70	3.72	46.27
Roads, Traffic and Transportation	0.00	0.00	11.78	103.53	91.75	207.06
Street Lighting	2.42	2.42	2.42	2.42	2.42	12.10
Socio-Economic Infrastructure	50.00	5.00	5.00	5.00	5.00	70.00
Parks and Playgrounds	5.00	5.00	5.00	5.00	5.00	25.00
Bus stand Improvement	0.00	0.00	0.00	0.00	0.00	0.00
Daily Market	0.00	0.00	0.00	0.00	0.00	0.00
Slaughter House	0.00	0.00	0.00	0.00	0.00	0.00
Maternity Center	0.00	0.00	0.00	0.00	0.00	0.00
Municipal building	0.00	0.00	0.00	0.00	0.00	0.00
Burial grounds / Gassifier	45.00	0.00	0.00	0.00	0.00	45.00
TOTAL CAPEX	278.95	206.11	217.91	357.68	345.92	1406.58

Table 15-L Second Phase Capital Investment Plan for Manapparai Municipality (after considering escalation cost)

Rs. in Lakhs

Project Sector	2013-14	2014-15	2015-16	2016-17	2017-18	Investment (II Phase)
Water Supply	0.00	0.00	0.00	74.46	78.19	152.65
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	261.36	274.43	288.15	302.56	317.68	1444.17
Solid Waste Management	42.22	5.15	5.44	5.74	6.06	64.61
Roads, Traffic and Transportation	0.00	0.00	17.40	160.61	149.45	327.46
Street Lighting	3.24	3.41	3.58	3.75	3.94	17.92
Socio-Economic Infrastructure	67.00	7.04	7.39	7.76	8.14	97.33
Parks and Playgrounds	6.70	7.04	7.39	7.76	8.14	37.02
Bus stand Improvement	0.00	0.00	0.00	0.00	0.00	0.00
Daily Market	0.00	0.00	0.00	0.00	0.00	0.00
Slaughter House	0.00	0.00	0.00	0.00	0.00	0.00
Maternity Center	0.00	0.00	0.00	0.00	0.00	0.00
Municipal building	0.00	0.00	0.00	0.00	0.00	0.00
Burial grounds / Gassifier	60.30	0.00	0.00	0.00	0.00	60.30
TOTAL CAPEX	373.82	290.02	321.96	554.88	563.47	2104.15

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

Third Phase investment plan for Manapparai is given in Table 15-M. The total Estimated Cost for all the Sectors is Rs. **1576.28** lakhs. The total estimated cost after considering escalation for III phase is Rs. **3011.78** lakhs which is shown in Table 15-N.

Table 15-M Third Phase Capital Investment Plan for Manapparai Municipality

Rs. in Lakhs

Project Sector	2018-19	2019-20	2020-21	2021-22	2022-23	Investment (III Phase)
Water Supply	0.00	0.00	0.00	64.00	64.00	128.00
UGD	0.00	0.00	0.00	0.00	0.00	0.00
Sanitation	195.03	195.03	195.03	195.03	195.03	975.15
Storm Water Drainage	32.03	4.19	4.22	4.25	4.28	48.96
Solid Waste Management	32.03	4.19	4.22	4.25	4.28	48.96
Roads, Traffic and Transportation	0.00	85.69	114.29	120.35	91.75	412.07
Street Lighting	2.42	2.42	2.42	2.42	2.42	12.10
Socio-Economic Infrastructure	0.00	0.00	0.00	0.00	0.00	0.00
Parks and Playgrounds	0.00	0.00	0.00	0.00	0.00	0.00
Bus stand Improvement	0.00	0.00	0.00	0.00	0.00	0.00
Daily Market	0.00	0.00	0.00	0.00	0.00	0.00
Slaughter House	0.00	0.00	0.00	0.00	0.00	0.00
Maternity Center	0.00	0.00	0.00	0.00	0.00	0.00
Municipal building	0.00	0.00	0.00	0.00	0.00	0.00
Burial grounds / Gassifier	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CAPEX	229.48	287.33	315.96	386.04	357.48	1576.28

Table 15-N Third Phase Capital Investment Plan for Manapparai Municipality (after considering escalation cost)

Rs. in Lakhs

Project Sector	2018-19	2019-20	2020-21	2021-22	2022-23	Investment (III Phase)
Water Supply	0.00	0.00	0.00	126.72	133.05	259.77
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	333.57	350.25	367.76	386.15	405.45	1843.17
Solid Waste Management	54.77	7.53	7.96	8.41	8.89	87.56
Roads, Traffic and Transportation	0.00	153.89	215.50	238.27	190.74	798.40
Street Lighting	4.14	4.35	4.56	4.79	5.03	22.87
Socio-Economic Infrastructure	0.00	0.00	0.00	0.00	0.00	0.00
Parks and Playgrounds	0.00	0.00	0.00	0.00	0.00	0.00
Bus stand Improvement	0.00	0.00	0.00	0.00	0.00	0.00
Daily Market	0.00	0.00	0.00	0.00	0.00	0.00
Slaughter House	0.00	0.00	0.00	0.00	0.00	0.00
Maternity Center	0.00	0.00	0.00	0.00	0.00	0.00
Municipal building	0.00	0.00	0.00	0.00	0.00	0.00
Burial grounds / Gassifier	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CAPEX	392.48	516.01	595.78	764.34	743.16	3011.78

16 RISK ANALYSIS

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CHAPTER 16 : RISK ANALYSIS OF IDENTIFIED NEW PROJECTS FOR MANAPPARAI

**CHAPTER 16 : RISK ANALYSIS OF IDENTIFIED NEW PROJECTS
MANAPPARAI MUNICIPALITY**

Project list	Land Acquisition / Availability	Manpower availability (Skilled)	Environmental clearance	Financial availability with the local body	R & R risk	ULBs ability to fund any cost overrun	Political stability	Natural barriers	Time delay	ULBs ability to meet O & M cost	Multiplicity of organisation	Public Litigation
Water Supply												
Replacing AC main pipe line with PSC main line of 400 Dia for 40 Kms (from head works to Manapparai)	NA	NA	Not Required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
Laying Distribution network for additional 45 Km road length by 2022 (10 Km by 2012, 15 Km by 2017, 20 Km by 2022)	NA	NA	Not Required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
Replacing existing 2 Km 4 inch PVC pipe with new pipe line of same type and size	NA	Available	Not Required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
Sewerage and Sanitation												
UGD Scheme for Manapparai Municipality (tentative cost applied since the DPR is under preparation)	LA required	Dependent on TWAD	Required	Severe Constraint	NA	very much minimal	Currently stable	NA	Depends on fund availability, approval and sanction	Constraint	Yes	Possible
Public Toilet near Uzhavar Shandy	LA required	Available	Not required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No

CHAPTER 16 : RISK ANALYSIS OF IDENTIFIED NEW PROJECTS FOR MANAPPARAI

Project list	Land Acquisition / Availability	Manpower availability (Skilled)	Environmental clearance	Financial availability with the local body	R & R risk	ULBs ability to fund any cost overrun	Political stability	Natural barriers	Time delay	ULBs ability to meet O & M cost	Multiplicity of organisation	Public Litigation
Storm Water Drainage												
Creating closed drains for 83 Km length by 2022	LA may be required	Available	Not required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability and completion of UGD	Yes	No	No
Converting open drain into closed drain for existing 31.7 Km length (to be done along with road after implementing UGD)	NA	Available	Not required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability and completion of UGD	Yes	No	No
Roads												
Creating new roads of 15.4 Km by 2022 (2.2 Km by 2012(four Km new link mentioned below is deducted from 2012 demand), 6.6 Km by 2017 and 6.6 Km by 2022	LA may be required	Available	Not required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
Converting 16.9 Km Kutcha road into BT road	NA	Available	Not Required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
Resurfacing damaged roads after implementing UGD (38.9 Km BT road) Relaying cost included in UGD cost and hence not included in II phase	NA	Available	Not Required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability and completion of UGD	Yes	No	No
Resurfacing new roads after each third year of its implementation 6.20 Kms	NA	Available	Not required	Constraint	NA	Minimal	Currently stable	NA	Depends on fund availability and approval	Yes	No	No
Resurfacing new roads after each third year of its implementation 6.60 Kms	NA	Available	Not required	Constraint	NA	Minimal	Currently stable	NA	Depends on fund availability and approval	Yes	No	No
Resurfacing BT roads after each third year of its implementation 16.90 Kms	NA	Available	Not required	Constraint	NA	Minimal	Currently stable	NA	Depends on fund availability and approval	Yes	No	No

CHAPTER 16 : RISK ANALYSIS OF IDENTIFIED NEW PROJECTS FOR MANAPPARAI

Project list	Land Acquisition / Availability	Manpower availability (Skilled)	Environmental clearance	Financial availability with the local body	R & R risk	ULBs ability to fund any cost overrun	Political stability	Natural barriers	Time delay	ULBs ability to meet O & M cost	Multiplicity of organisation	Public Litigation
Traffic and Transportation												
New link between kovilpatti road and Madurai road of 4 Km length (2 Lane)	LA may be required	Available	Not Required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
RoBs at railway Junctions	NA	NA	Not Required	NA	NA	NA	Currently Stable	NA	NA	NA	No	No
Solid Waste Management												
Protective gear for Conservancy worker (Workers will get safety gear once in two years)	NA	NA	Not required	Not a Constraint	NA	Minimal	Currently stable	NA	Depends on fund availability and approval	NA	No	No
Procuring Separate bins for Waste Segregation at source for each household (with private sponsorship)	NA	NA	Not required	Not a Constraint	NA	Minimal	Currently stable	NA	Depends on fund availability and approval	NA	No	No
Contribution to Regional Land fill	LA may be required	Available	Not Required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	Possible
Street Lighting and Energy saving Mechanism												
Installing 476 energy saving CFL lights by 2012, 220 by 2017 and 220 by year 2022	NA	Available	Not required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
Installing 4 High Mast lights with CFL lamp layer in Office, Mariammal Koil, Bye Pass entrance and one more place	NA	Available	Not required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
Sector - Socio-Economic Infrastructure												
Developing parks (2)	Available	Available	Not required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
Developing remaining 5 approved layout parks	Available	Available	Not required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
Improving Bus stand Infrastructure	Available	Available	Not required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
Upgrading infrastructure facilities in Daily market	NA	Available	Not required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No

CHAPTER 16 : RISK ANALYSIS OF IDENTIFIED NEW PROJECTS FOR MANAPPARAI

Project list	Land Acquisition / Availability	Manpower availability (Skilled)	Environmental clearance	Financial availability with the local body	R & P risk	ULBs ability to fund any cost overrun	Political stability	Natural barriers	Time delay	ULBs ability to meet O & M cost	Multiplicity of organisation	Public Litigation
Setting up new Maternity center	LA may be required	Available	Not required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
New Office Building Construction in 710 / 7 survey number in an extent of 1.5 acres	Available	Available	Not Required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
Gassifer crematorium	Available	Available	Required	Constraint	NA	Minimal	Currently Stable	NA	Depends on fund availability	Yes	No	No
Converting Manamaghzil Mandram into a commercial complex after obtaining land from Revenue Department in an extent of 1.27 acres.	Available	Available	Not Required	NA	NA	NA	Currently Stable	NA	NA	NA	No	No
Karikankulam desiltation with recreational development	NA	NA	Not Required	NA	NA	NA	Currently Stable	NA	NA	NA	No	No
Desilting Moor Kulam and Muniappan Kulam	NA	NA	Not Required	NA	NA	NA	Currently Stable	NA	NA	NA	No	No
Removing encroachments in Vannan kulam located nearby Viraimalai road and Atthi kulam with desiltation	NA	NA	Not Required	NA	Possible	NA	Currently Stable	NA	NA	NA	No	Possible
Desilting Muniappan Kulam with recreational development	NA	NA	Not Required	NA	NA	NA	Currently Stable	NA	NA	NA	No	No
Desilting Sevakulam and Perumal Naidu kulam	NA	NA	Not Required	NA	NA	NA	Currently Stable	NA	NA	NA	No	No
Desilting Manapparai Kulam	NA	NA	Not Required	NA	NA	NA	Currently Stable	NA	NA	NA	No	No

NA - Not applicable

17 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.

Manapparai 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

17.1 List of Assets:

The assets of Manapparai municipality can be classified as assets relating to basic physical infrastructure such as water supply, roads, storm water drains, street lights, light and heavy vehicles etc and those relating to social infrastructure which include shops, markets, parks, bus stand commercial complexes, slaughter house, maternity centres, burial grounds etc. Among basic physical infrastructure only water supply services can be considered revenue generating as the municipality is able to collect taxes, connection charges, initial deposit charges and metering/tap rate charges and

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hence expenses are met mainly through dedicated water supply fund set up for the purpose. With regard to social infrastructure, only markets, commercial complexes and shops, bus stand, toilets (pay and use) etc are revenue generating and hence can be considered remunerative and others such as burial grounds, community hall, slaughter house, parks, public toilets, maternity centre etc; are not revenue generating or revenue generation is extremely nominal and may not be self sustaining. Some of the social infrastructure is required to be provided by the municipality as the functions remain obligatory functions of the municipality and also help to fund the non enumerative activities of the municipality. These are also required to maintain the cleanliness and sanitation of the city.

The various physical and social infrastructure of the municipality are listed below:

Table 17-A: Details of various social & physical infrastructure assets

<i>Particulars</i>	<i>Unit</i>	<i>Details</i>
REMUNERATIVE ASSETS – SOCIAL INFRASTRUCTURE		
Bus Stand	1	Area- 842 Sq meter Dindigul Road
Office Buildings	1	Dindigul Road
Commercial Complexes	2	Area- 143 Sq meter 1.Nallangadi 2.Mariamman Koil Street(6 shops)
Markets-Within Local Body Limits-Daily	1	Area- 575 Sq meter Back side of Mariamman Street
Markets-Within Local Body Limits-Weekly	1	Area- 580 Sq meter Trichy Road
Pay and Use Latrines	2	Area-89 Sq meter 1. Bus stand 2. Nallangadi
Slaughterhouse	1	Area-89 Sq meter Proposed to be upgraded
SOCIAL INFRASTRUCTURE -NON RENUMERATIVE INFRASTRUCTURE		
School Buildings	3	Area- 1046 Sq meter 1. Mariamman 1 way 2. Koilpetti Road 3.Velakkan Road
Office Buildings	4	Area- 443 Sq meter
Noon Meal Centres	10	
Burial Ground	1	Sevalur Road

PHYSICAL INFRASTRUCTURE ASSETS		
Water Supply		
Overhead Tank	10	1. Anna Nagar (9 lacs) 2. Madurai Road (4 lacs) 3. Reservoir periyadu (4 lacs) 4. Reservoir Small (0.60) 5. Potthamettupadtti (5 lacs) 6. Veedathilam patti (1 lacs) 7. Sevalur (1 lacs) 8. Deeram patti (3 lacs) 9. Magali patti (10000 +10000 litres) 10. Anna nagar Upper (1 lacs)
Length of Distribution line	43.60 Km	
Others		
Storm water drains	30.54 Km	Kutcha drains - 8.19 Kms Pucca drains - open - 23.6 Kms
Roads		B.T. roads - 38.90 Km W.B.M. roads - 1.08 Km Cement concrete roads - 11.85 Km Earthen roads - 16.90 Km
Street Lights	1657	
Solid Waste Management		
Compost Yard	2 3 acres 10.01 acres	Municipal Burial ground - old K.Periyapatti Village site - New
Vehicles	5	Mini Lorry - 1 Tipper - 3 Dumper placer - 1
Others		

Source: Manapparai Municipality

17.2 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:-

17.2.1 O&M of social infrastructure assets

Table 17-B: O&M and Revenue generation

Asset	Average Annual income	Current O&M practice	Recommendations
Daily Market	Rs 0.90 Lakhs	Ad hoc basis.	<p>-Periodic inspection and maintenance is required.</p> <p>- About 2-3 % of the income earned from this asset can be invested annually on maintaining and upgrading the facilities.</p> <p>-Private party to whom the Area/facilities are leased can meet the expenses related to the maintenance of the asset partially.</p> <p>-Municipality to clear unauthorized encroachments to use additional space for revenue generation</p> <p>-Additional Income generating activities such as pay & use toilets and parking lots can be explored if found viable</p>
Weekly Shandy	Rs. 24.25 Lakhs	Ad hoc basis	same as above
Shops/Commercial Complex	NA	Ad hoc basis	same as above
Slaughter House	Rs. 0.05 Lakhs	Renovation scheme for Rs.20 lakhs, funded through Part II scheme is undertaken.	

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Parks & Playgrounds	Nil		Can be maintained jointly with private sector (companies/clubs etc) or maintained exclusively by the private sector on sponsorship basis
Bus Stand	Rs. 5.5 lakhs	Ad Hoc basis	-Periodic annual maintenance is required -Additional Income generating activities such as pay & use toilets, advertisements/hoarding and paid parking lots if found viable can be undertaken
Pay & Use Toilets/public toilet	Rs.4.3 lakhs	Ad hoc basis	Can explore the possibility of converting some public toilets to pay and use in some commercial areas and some of maintenance can be handed over to SHGs with only major maintenance/new work to be taken up by the ULB
Burial Ground	NIL	Ad hoc basis	Periodic annual maintenance can sustain the quality of the asset Gasifier funded through government schemes can reduce the burden of maintaining existing burial grounds
School Building	NIL	Add hoc basis	O & M can be met through funds from elementary education fund

Source: Analysis based on Information provided by Manapparai Municipality

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17.2.2 O&M Physical Infrastructure

Operation and Maintenance of the assets related to Physical and socio-economic infrastructure is divided under two heads;

- To maintain the existing assets for the next five years and
- To maintain the assets proposed to be created under various capital works proposed.

Since the O & M of the existing assets related to Socio- Economic Infrastructure has already been assessed in the above sections of this chapter, the O & M of the existing physical Infrastructure assets and the proposed O & M for the capital works identified is broadly discussed in this section. Key growth rates assumed for forecasting O & M of the existing assets and of the capital works proposed are tabulated below:

Table 17-C Key assumptions for forecasting O & M for the existing and proposed assets

<i>Description</i>	<i>Current level</i>	<i>Assumption</i>
FOR EXISTING ASSETS		
Water Supply		
<i>Operating Expenses</i>	6%	<i>Assuming 3% increased rate</i>
<i>Repairs & Maintenance expense for Water Supply Works</i>	3%	<i>Assuming 6% increased rate</i>
Solid Waste Management		
<i>Repairs and Maintenance for heavy vehicles</i>	12%	<i>Assuming 5 % increased rate in heavy vehicle exp</i>
Street lighting		
<i>Maintenance Expense for Street Lights</i>	31%	<i>Assuming 10% growth rate</i>
<i>Power Charges for Street Lights</i>	12%	<i>Assuming 5% growth rate</i>
For capital works		
Water Supply	NA	6% of the project cost
Sewerage & Sanitation	NA	4% of the project cost
Roads and Traffic Management	NA	3% of the project cost
Storm Water Drainage	NA	2% of the project cost
Solid Waste Management	NA	10% of the project cost
Street Lighting	NA	5% of the project cost
Slum up gradation	NA	1% of the project cost
Others	NA	2% of the project cost

17.2.2.1 O & M for Existing Physical Infrastructure Assets

Based on the aforesaid assumptions, the operation and maintenance expenses for existing physical infrastructure assets have been worked out based on the past trends and based on the availability of the data / information available with the Municipality.

Table 17-D O & M for existing physical Infrastructure assets

Rs in Lakhs

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17.2.2.2 O & M for proposed capital works

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

Table 17-E O & M for proposed capital works

Rs. in lakhs

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Table 17 D O & M for existing physical Infrastructure assets																
Manapparai																
Sectors - Physical Infrastructure	CAGR (past expenses 2003-03 to 2006-2007)	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Rs.in Lakhs																
Water Supply																
<i>Operating Expenses</i>	6%	1.42	1.46	1.51	1.55	1.60	1.65	1.70	1.75	1.80	1.85	1.91	1.97	2.03	2.09	2.15
<i>Repairs & Maintenance expense for Water Supply Works</i>	3%	77.08	81.71	86.61	91.81	97.32	103.15	109.34	115.90	122.86	130.23	138.04	146.33	155.11	164.41	174.28
Solid Waste Management																
<i>Repairs and Maintenance for heavy vehicles</i>	12%	5.25	5.51	5.79	6.08	6.38	6.70	7.04	7.39	7.76	8.14	8.55	8.98	9.43	9.90	10.39
<i>Safety and Health related expenditure</i>		2.59	2.72	2.86	3.00	3.15	3.31	3.47	3.64	3.83	4.02	4.22	4.43	4.65	4.88	5.13
Street lighting																
<i>Maintenance Expense for Street Lights</i>	31%	7.70	8.47	9.32	10.25	11.27	12.40	13.64	15.01	16.51	18.16	19.97	21.97	24.17	26.58	29.24
<i>Power Charges for Street Lights</i>	12%	23.10	24.26	25.47	26.74	28.08	29.48	30.96	32.50	34.13	35.84	37.63	39.51	41.48	43.56	45.74

Table 17 E O & M for proposed capital works

Manapparai		Investment Requirements														Rs.in Lakhs													
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	1550.76	5.17	0.00	1053.44	38.90	40.84	0.00	0.00	0.00	74.46	78.19	0.00	0.00	0.00	126.72	133.05													
UGD	3520.54	0.00	1116.75	1172.58	1231.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00													
Sanitation	5.25	5.25	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													
Storm Water Drainage	3287.34	0.00	0.00	0.00	0.00	0.00	261.36	274.43	288.15	302.56	317.68	333.57	350.25	367.76	386.15	405.45													
Solid Waste Management without bins and gear	68.61	0.00	68.61	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													
Roads, Traffic and Transportation	1241.74	0.00	0.00	0.00	56.52	59.35	0.00	0.00	17.40	160.61	149.45	0.00	153.89	215.50	238.27	190.74													
Street Lighting	108.58	16.77	11.84	12.43	13.05	13.70	3.24	3.41	3.58	3.75	3.94	4.14	4.35	4.56	4.79	5.03													
Socio-Economic Infrastructure	386.32	0.00	70.78	218.21	0.00	0.00	67.00	7.04	7.39	7.76	8.14	0.00	0.00	0.00	0.00	0.00													
TOTAL CAPEX	10169.15	27.19	1267.97	2456.66	1339.68	113.89	331.61	284.87	316.52	549.14	557.41	337.71	508.48	587.82	755.93	734.28													
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	1205.3	0.00	0.31	0.33	63.55	69.70	76.33	80.91	85.77	90.92	100.84	111.58	118.27	125.37	132.89	148.47													
UGD	1899.2	0.00	0.00	0.00	0.00	140.82	146.45	152.31	158.41	164.74	171.33	178.18	185.31	192.72	200.43	208.45													
Sanitation	3.8	0.00	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35													
Storm Water Drainage	283.7	0.00	0.00	0.00	0.00	0.00	0.00	5.23	10.82	16.80	23.19	30.00	37.28	45.03	53.28	62.07													
Solid Waste Management without bins and gear	168.3	0.00	0.00	6.86	7.55	8.30	9.13	10.05	11.05	12.15	13.37	14.71	16.18	17.80	19.58	21.53													
Roads, Traffic and Transportation	135.6	0.00	0.00	0.00	0.00	1.70	3.53	3.63	3.74	4.38	9.33	14.09	14.51	19.56	26.62	34.56													
Street Lighting	64.2	0.00	0.84	1.47	2.17	2.93	3.76	4.11	4.49	4.89	5.32	5.78	6.28	6.81	7.38	7.99													
Socio-Economic Infrastructure	45.7	0.00	0.00	0.71	2.90	2.93	2.96	3.65	3.76	3.87	3.99	4.11	4.15	4.19	4.24	4.28													
Total O & M expenditure	3805.8	0.00	1.36	9.59	76.39	226.61	242.41	260.15	278.30	298.03	327.65	358.76	382.29	411.81	444.75	487.70													

17.3 Asset Management Plan- Recommendations

The following are some of the suggestions with regard to formulation and implementation of a comprehensive Asset Management Plan:-

17.3.1 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. The reform programme under TNUDP has initiated the process of computerizing and digitalizing the asset inventory for all municipalities in Tamil Nadu. 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

17.3.2 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.

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17.3.3 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

17.3.4 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.

17.3.5 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.

17.3.6 Risk Assessment

Asset management needs to take into account various risk factors such as financials, environmental, regulatory, legal, public health and safety. The risk assessment has been elaborated in the Chapter 16 of this report.

17.3.7 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 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.

17.3.8 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.

17.3.9 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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18 REFORMS AND RESOURCE MOBILIZATION

18.1 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 program..

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 some 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.

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18.2 Reform measures of Manapparai 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

18.2.1 Financial & Accounting reforms

18.2.1.1 Financial Reforms

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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 Manapparai 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. There is 1 revenue inspector and 5 revenue assistants for revenue collection and all the posts are filled up.

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 Manapparai Municipality for the last 5 years is given as under:

Table 18-A: Collection Efficiency of key revenue sources

Particulars	2003-04	2004-05	2005-06	2006-07	2007-08
I. PROPERTY TAX					
Arrears	17%	21%	21%	24%	13%
Current	51%	63%	59%	67%	43%
Total	31%	37%	35%	41%	26%
II. PROFESSIONAL TAX					
Arrears	10%	8%	16%	8%	3%
Current	79%	66%	89%	100%	80%
Total	45%	40%	51%	50%	29%
III. WATER CHARGES					
Arrears	15%	22%	21%	56%	34%
Current	75%	78%	80%	85%	53%
Total	50%	53%	55%	75%	47%

Source: DCB of Manapparai Municipality

Table 18-B: Efficiency parameters of key taxes and water charges

Particulars	Current Collection efficiency (2006-07)	Arrears Collection efficiency (2006-07)	CAGR in no of assessments (%)	CAGR in the terms of value (%) Last 5 years
Property taxes	67%	24%	2.65% (From 2002-03 till 2007-08)	3.73%
Profession Taxes	100%	8%	3.66% (From 2004-05 till 2007-08)	6.27%
Water Charges	85%	56%	3.00% (From 2002-03 till 2007-08)	12.37%

Source: Analysis of the Manapparai Municipality

18.2.1.1.1 Property taxes:

Property taxes are one of the important sources of revenue for Manapparai Municipality accounting for more than 77% of the tax income of the municipality. The current and arrear collection efficiency of property taxes stands at 67% and 24% respectively as on 31.03.2007. The CAGR of no of assessments (3%) and in value terms (4%) reveals moderate progress in identifying under assessed and un assessed properties. This needs to be addressed on priority basis. Hence there is an urgent to need to identify more assessments and also further revise property taxes to generate sufficient revenue to fund its development programs.

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

Some of the possible means of enhancing the property tax collection are given below:

Table 18-C: Reforms in property Taxes

Suggested Property taxes Reforms	
<p>➤</p>	<p>Mandatory Implementation of Revision of Property Tax once in every five years is required.</p>
<p>➤</p>	<p>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.</p>

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- 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
- Collection of arrears through innovative means such as community participation and fast track litigation methods need to be attempted. Law enforcement powers should be given to the municipality to compel payment of taxes and other charges levied by them.
- 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

18.2.1.2 Accounting reforms

The administrative 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.

Table 18-D: Accounting Reforms***Suggested Accounting Reforms***

- ✓ As on date Manapparai municipality has audited accounts only upto FY 2005-06. Therefore there is an urgent need for the ULB to update its accounts to the latest year to provide a complete, updated details on the financial health of the ULB. Hence accounts need 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.
- ✓ Zero based budgeting would need to be carried out for continual monitoring of budgets and cash flow management.
- ✓ 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&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.
- ✓ 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 stakeholders of the city would become easier if the awareness is created with these qualitative reports being prepared and shared with the key stakeholders of the city.

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18.2.2 Institutional Reforms

The Institutional reforms suggested for Manapparai 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

18.2.2.1 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 Manapparai Municipality has been elaborated as under:

Training

Training to the staff are provided in the areas of Human Resource development & Training, Sectoral Training, Accounts and Computerization and E-governance depending upon the need under TNUDP III Programs and other programs organized by CMA

Some of the details of latest training undergone by the staff are as below:

HRD training imparted to Manager & Accountant under TNUDP III Programs in Kodaikanal & General Training conducted by Tamil Nadu Institute of Urban Studies, Coimbatore

Computer training was imparted to all categories of staff under TNDUPIII.

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Technical Training to Municipal Engineer for 5 days was imparted by CMWSSB on Skill Development of staff in engineering department covering technical, human and financial areas

Accounts Training was imparted to all staffs in the municipality under TNUDP III Programs

- **Public Grievance Redressal Mechanism**

- ✓ Chairman and Commissioner are actively involved in addressing the grievances from the public
- ✓ Many of the public grievances are hosted in the collector's website where action taken replies are also made. They do not have a public grievance cell but two separate registers are maintained, one for complaints received from the CM cell and another for the collectors cell. A designated clerk is being given the responsibility for collating and sending the complaints to the respective sections for taking necessary actions. Most of the complaints are being received in areas of water supply, drains and roads.
- ✓ The redressal response time has been fixed for various grievances

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 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.

18.2.2.2 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 privatization 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 privatization. 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.

Table 18-E: Areas of Privatization/outsourcing

<i>Areas of privatization/Outsourcing</i>	<i>Details</i>
SECTOR CURRENTLY PRIVATISED	STREET LIGHTS (O & M)
Contract period	3 years starting from 01.02.2006
Contractor	Bhaghawathi Agency, Manargudi
Coverage	All wards
Amount paid to the contractor	Rs.42256/- per month
Other areas of privatization	<ul style="list-style-type: none"> ✓ The ULB can also seek private sponsorship for purchase of household bins for waste segregation once awareness is created among the public on the waste segregation ✓ Privatization of SWM can be considered in stages initially in few wards and later for the entire municipality

18.2.2.3 User Charges

There is a need to introduce in phases “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 the ULB is able to generate direct revenue in the form of water charges, initial deposit and connection charges and indirectly through water tax which is a component of property tax. For other services the ULB depends on its taxes and external funds to fund its activities. As these are inadequate the municipality is facing continuous deficits even in meeting its obligatory commitments and are unable to initiate any major improvement scheme for development of the city. In the light of the above limitations, the ULB needs to explore the option of introducing user charges in other areas too. For the proposed UGD collection of user charges for meeting O & M expenses becomes imperative.



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. However as per our discussions with the OWG, small amount of user charges can be attempted.

To enhance its revenue the municipality would need to increase the deposit charges for new connections and can explore the option of increasing the water charges. 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 collection efficiency can be enhanced from 75% to over 90% and the service coverage to be improved from the current 40% to 85% over a stipulated time period. 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.

18.2.2.4 E-Governance & Computerization

There is a data entry operator for attending to information and MIS requirements. This activity has come under the limelight after a significant computerization activity was undertaken under TNUDP programs. The municipality also has an E-mail address and any complains or suggestions can be received on this.

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Table 18-F: E-Governance status

<i>Name of the Module</i>	<i>Online Status</i>
Birth and Death Registration	Yes
Property Tax	Yes
Water Charges	Yes
Non tax	Yes
Professional Tax	Yes
Building Plan approval	Yes
SWM	Yes
D&O and PFA	Yes
Movable assets	Yes
Immovable assets	Yes
FAS , & MISC.	Yes
Inventory	No
Vehicle	Yes
Payroll	Yes
Mother and Child Welfare	NA
Census	No
Elect-roll	No
Hospitals	NA

Source : Manapparai Municipality

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18.2.3 Reforms in Physical Infrastructure

Table 18-G: Reforms in Physical Infrastructure

Sectors	Suggested Reforms
<p>Water Supply</p>	<ul style="list-style-type: none"> ➤ Service coverage of water connections to be increased from current 40% 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 service 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

	<p>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.</p> <ul style="list-style-type: none"> ➤Privatization in routine maintenance relating to water supply such as hand pumps can be considered ➤Periodic technical training to its engineering cell is required.
<p>Sewerage services</p>	<ul style="list-style-type: none"> ➤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.
<p>Solid Waste Management</p>	<ul style="list-style-type: none"> ➤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

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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, star 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.
- Privatization of services for the following activities can be undertaken to reduce the establishment charges and O&M charges of Municipality:
 - 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.
- 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

	<ul style="list-style-type: none"> ▪ Exposure to elected members ▪ Design of SWM course to Public Health staff
Street lights	<ul style="list-style-type: none"> ➤ 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.
Roads	<ul style="list-style-type: none"> ➤ 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

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18.3 Additional Resource Mobilization

As discussed in detail in earlier chapter that the revenue of the municipality is inadequate to meet its service obligations and hence faces resource constraint in initiating major development works which require sustainable investments. Hence both the traditional and non-traditional alternatives for resource mobilization need to be evaluated in light of the huge investments required for many projects identified.

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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. Additional resource mobilization options such as enhancing revenues of remunerative assets, non-tax revenue options such as advertisement and parking fees for the municipality are discussed in detail in subsequent paragraphs.

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18.3.1 Additional revenue from Social Remunerative assets

Table 18-H: Income from Remunerative social assets

Rs. in Lakhs

Particulars	2003-04	2004-05	2005-06	2006-07	2007-08
Fees for Bus stand	5.52	5.57	5.01	5.93	5.53
Fees for slaughter house	0.13	0.02	0.07	0.05	0.12
Daily Market Fees	0.86	0.88	0.88	0.87	0.95
Rent on Shopping Complex	4.35	4.39	4.36	5.12	4.72
Others	46.88	156.68	63.42	60.41	62.05
Total	57.73	167.54	73.74	72.38	73.37

As evident from the above table the municipality earns more than Rs.70 Lakhs from its remunerative social assets enjoying a CAGR of over 6% in the last 5 years. The significant sources of the revenue for the municipality are Income from Cattle market (Weekly Market) which is above Rs.20 lakhs, Rent from Shopping Complex and other shops (117 Shops) for about Rs.15 Lakhs, Fees from Bus Stand etc. As per our discussions with OWG the Manamaghzil Mandram located opposite to the Municipal Office can be converted into a commercial complex after obtaining the land (1.27 acres) from Revenue Department. Furthermore as proposed under the Vision Plan the proposed Bus Stand Improvement estimated at around Rs.179 Lakhs could generate additional revenue for the municipality. But the debt repayment commitments of the municipality could serve as a deterrent.

18.3.2 Advertisement & Parking Fees

Currently no substantial Advertisement Fees or parking fees is being collected by the municipality. Possibilities of revenue from this source are limited in the absence of major industrial activity in this town.

19 FINANCIAL OPERATING PLAN

19.1 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 four scenarios are envisaged

Scenarios	Details
Base Case Scenario	No New Projects without Reforms
Full Project Scenario	Implementation of all Projects required for the next 15 years without Reform implementation
Full Project Scenario	Implementation of all Projects required for the next 15 years with Reform implementation
Sustainable Project Scenario	Implementation of key Projects required for the next 15 years with Reform implementation

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The key reforms are highlighted in Table below. The total reforms suggested have been elaborated in Reforms Implementation Schedule Figure 19-1

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)	53%	3% to 4% 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
User Charges for Solid Waste Management	Not Charged	Rs.40 per month from Non-Domestic assesses from the year 2011-12 and Rs.20 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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19.2 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 Manapparai Municipality evaluates the municipality's financial position based on the three scenarios described below:

19.2.1 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. Additional resources mobilized through various initiatives such as resource mobilization through enhanced revision of property tax rates and no 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.

19.2.2 Full project Scenario

Full Project scenario for Manapparai has been worked out based on estimated demand supply analysis of various physical and social infrastructure requirements of the city and feedback of OWG members 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 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 12th Schedule. In the event of the town not undertaking the project, the key problems

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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 OWG members. 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

19.2.3 Sustainable Project Scenario

The sustainable investment scenario is worked out when the full project investment scenario indicates inability of the municipality to sustain the full identified investment. In this case, the identified investment is sized down to immediate felt need for the municipality to sustain on its own with external support and borrowings.

19.3 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.

19.3.1 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 19-A, Table 19-B, Table 19-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 19-D. Tables indicate the assumptions in revenue income in base case scenario and investment scenario.

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19.3.1.1 Property Taxes

Table 19-A : Key assumptions for forecasting income from Property Taxes

Description	Current Level	Base Case Scenario	Investment Scenario
Annual Growth in Number of Assessment	CAGR of 2.65% (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 5 years	25% increase in every 5 years

Source: Analysis

19.3.1.2 Water Charges

Table 19-B: Key assumptions for forecasting income from Water Charges

Description	Current Level	Base Case Scenario	Investment Scenario
% OF WATER CONNECTIONS TO PROPERTY TAX ASSESSMENT			
2007-08	39.90%		
2012-13		65%	65%
2017-18		85%	85%
INITIAL DEPOSIT FOR NEW WATER SUPPLY CONNECTIONS (Rs. per connection)			
Domestic (Rs.)			
From 2008-09 till 2012-13	Rs.2000		
From 2013-14 till 2017-18		Rs.4000	Rs.4000
From 2018-19 till 2022-23		Rs.6000	Rs.6000
Non-Domestic (Rs.)			
From 2008-09 till 2012-13	Rs.7500		
From 2013-14 till 2017-18		Rs.9500	Rs.9500
From 2018-19 till 2022-23		Rs.11500	Rs.11500
WATER CHARGES (per month)			
Domestic (Rs.)			

From 2008-09 till 2012-13	Rs.75		
From 2013-14 till 2017-18		Rs.94 (25% Increase)	Rs.94 (25% Increase)
From 2018-19 till 2022-23		Rs.117 (25% Increase)	Rs.117 (25% Increase)
Non-Domestic (Rs.)			
From 2008-09 till 2012-13	Rs.300		
From 2013-14 till 2017-18		Rs.375 (25% Increase)	Rs.375 (25% Increase)
From 2018-19 till 2022-23		Rs.469 (25% Increase)	Rs.469 (25% Increase)

Source: Analysis

19.3.1.3 Sewerage Charges

Table 19-C : Key assumptions for forecasting income from Sewerage Charges for the proposed UGD project

Description	Current Level	Base Case Scenario	Investment Scenario
Number of UGD Connections			70% of Total Number of Property tax assessment
Ratio of Domestic and Non-Domestic to the total UGD Connections (This is based on the current % of Domestic and Non-Domestic of the total Property tax assessments)			90:10
MONTHLY USER CHARGES			
(Note: Monthly User charges would be collected after the UGD Project is completed)			
Domestic (Rs./Month.)			
From 2011-12 till 2015-16	Rs.80		
From 2016-17 till 2020-21			Rs.100 (25% increase)
From 2021-22 till 2022-23			Rs.125 (25% increase)
Non-Domestic (Rs./Month.)			
From 2011-12 till 2015-16	Rs.350		
From 2016-17 till 2020-21			Rs.437.50 (25% increase)
From 2021-22 till 2022-23			Rs.547 (25% increase)

DEPOSIT FEE /CONNECTION			
Domestic (Rs.)			
<i>From 2008-09 till 2012-13</i>	Rs.7500		
<i>From 2013-14 till 2017-18</i>			Rs.9500
<i>From 2018-19 till 2022-23</i>			Rs.11500
Non-Domestic (Rs.)			
<i>From 2008-09 till 2012-13</i>	Rs.13500		
<i>From 2013-14 till 2017-18</i>			Rs.15500
<i>From 2018-19 till 2022-23</i>			Rs.17500

Source: Analysis

19.3.1.4 Other sources of Revenue income

Table 19-D : Assumption for Income

<i>Particulars</i>	<i>Current Growth Rates (CAGR-%)</i>	<i>Projected growth Rates (%)</i>	<i>Notes</i>
Profession Tax	6.35% (2002-03 till 2006-07)	7%	-
External Sources (Assigned Revenue+ Devolution Funds+ Grants & Contribution)	Negative CAGR of 23.52% for Assigned Revenue & 7.68% for Devolution Funds (2002-03 till 2006-07)	5%	Moderate growth of 5% is assumed on account of declining trend in Assigned Revenue. Projections are being based on the year 2006-07. 2007-08 estimates show a sum of Rs.1.58 crores as grant.

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Service Charges & fees (Excluding Water Charges and Bus Stand Fees)	7.06% (From 2002-03 till 2007-08)	5%	Includes Fees for Bus stand (12% growth rate assumed on account of Bus Stand Improvement), Slaughter house and Building License Fees
Other Income	6.20% (2002-03 till 2006-07)	5%	Other Income consisting of Daily Market Fees, Rent on Shopping Complex & shops etc; have grown at a moderate rate in the past few years and similar long term trend is projected to continue.
User Charges for Solid Waste Management			Rs.40 per month from Non-Domestic assesses from 2011-12 and Rs.20 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 Manapparai Municipality

19.3.2 Revenue Expenditure

19.3.2.1 Current Revenue Expenditure

Table 19-E: Assumption for Revenue Expenditure

Particulars	CAGR-(%)	Projected Growth Rates (%)
Personnel Cost & Retirement Benefits (Salaries)	Salaries & Retirement Benefits- Inconsistent trend	5%
Operating Expenses	15.47%	8%
Repairs & Maintenance	Inconsistent Trend	5%. This Includes the Maintenance expense for water supply works which has been projected based on the supply from TWAD to the ULB @ 90 LPCD per person
Administrative Expenses	Inconsistent Trend	5%

Source: Analysis based on past financials provided by Manapparai Municipality

19.3.2.2 Future Debt obligations

Table 19-F: Key assumptions for forecasting future debt obligations

Sector	Tenure	Moratorium	Rate of Interest (%)
Water Supply, UGD	20	5	9.00
Roads, Storm Water Drains	10	2	8.50
Others	5	NIL	9.00

Source: Analysis

19.3.2.3 Additional O&M Expenditure due to sub-projects

This has already been covered in Chapter 17: Asset Management Plan: Table 17-E O & M for proposed capital works

19.3.3 Funding Mechanism

Table 19-G : Financing Pattern for Proposed projects

<i>Particulars</i>	<i>Loan</i>	<i>Grant</i>	<i>ULB Share/Public Contribution</i>	<i>Notes</i>
Water Supply	50	30	20	
UGD	50	30	20*	* Public Contribution to UGD
Sanitation		50	50	
Storm Water Drainage	60	30	10	
Solid Waste Management		50	50	
Roads, Traffic and Transportation	60	30	10	
Street Lighting			100	
Socio-Economic Infrastructure				
<i>Parks and Playgrounds</i>		50	50	
<i>Bus stand Improvement</i>	90		10	
<i>Daily Market</i>	90		10	
<i>Slaughter House</i>		50	50	
<i>Maternity Center</i>			100	ULB Contribution
<i>Municipal building</i>		50	50	
<i>Burial grounds / Gassifier</i>		50	50	

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19.4 Outcome of Financial Operating Plan

19.4.1 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 19-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.1472.90 Lakhs in the year 2022-23.

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Table 19 H :Financial Operating Plan - No Projects, No REFORMS- Base Case Scenario

Particulars	Projections														
	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)	133.49	163.63	181.74	203.09	228.15	257.45	305.59	368.94	437.82	523.00	615.58	763.31	921.34	1091.17	1274.41
Revenue Income															
Property Tax	93.81	95.60	97.43	99.29	101.18	102.89	104.65	106.43	108.24	110.08	139.83	142.02	144.25	146.51	148.80
ProfessionTax	10.41	11.14	11.92	12.75	13.65	14.60	15.62	16.72	17.89	19.14	20.48	21.91	23.45	25.09	26.85
External Sources	125.04	131.29	137.86	144.75	151.99	159.59	167.57	175.94	184.74	193.98	203.68	213.86	224.55	235.78	247.57
Service Charges and Fees	71.79	69.73	72.17	74.75	77.49	94.61	97.87	101.35	105.05	109.03	132.03	136.79	141.93	147.43	153.35
Sale & Hire Charges	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Other Income	72.37	79.61	87.57	96.32	105.96	116.55	128.21	141.03	155.13	170.64	187.71	206.48	227.12	249.84	274.82
Revenue Income (A)	373.47	387.42	406.99	427.91	450.31	488.29	513.96	541.57	571.15	602.97	683.82	721.16	761.41	804.75	851.49
Revenue Expenditure															
Personel Cost I (Salaries)	118.48	124.41	130.63	137.16	144.02	151.22	158.78	166.72	175.05	183.80	192.99	202.64	212.78	223.42	234.59
Personel Cost II (Others)	9.18	9.36	9.55	9.74	9.94	10.14	10.34	10.54	10.76	10.97	11.19	11.41	11.64	11.88	12.11
Terminal and retirement benefits	44.49	46.71	49.05	51.50	54.08	56.78	59.62	62.60	65.73	69.02	72.47	76.09	79.89	83.89	88.08
Operating Expenses	60.82	64.47	68.34	72.44	76.79	81.39	86.28	91.46	96.94	102.76	108.92	115.46	122.39	129.73	137.51
Repairs & Maintenance	78.08	81.98	86.08	90.39	94.90	99.65	104.63	109.86	115.36	121.12	127.18	133.54	140.22	147.23	154.59
Programme Expenses	0.55	0.57	0.60	0.63	0.66	0.70	0.73	0.77	0.81	0.85	0.89	0.93	0.98	1.03	1.08
Administrative Expenses	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92	14.62
Debt repayment for existing loans	24.35	34.05	33.25	32.45	31.65	30.85	20.35	20.35	10.42	10.42	10.42	10.42	10.42	10.42	10.42
Revenue Expenditure(B)	343.33	369.31	385.64	402.86	421.01	440.15	450.62	472.69	485.97	510.39	536.09	563.13	591.57	621.51	653.00
Revenue Surplus/Deficit (A-B)= C	30.14	18.11	21.35	25.06	29.30	48.14	63.34	68.88	85.18	92.58	147.73	158.03	169.83	183.24	198.49
Closing Balance (C+X)=D	163.63	181.74	203.09	228.15	257.45	305.59	368.94	437.82	523.00	615.58	763.31	921.34	1091.17	1274.41	1472.90

19.4.2 Full Project Scenario WITHOUT Reforms

Under this **NO REFORM** Scenario, the FOP for full project has been worked out as under:

- Funding pattern as per Prudent Financial norms
The same has been elaborated under heading 19.4.2.1

19.4.2.1 Full Project Scenario WITHOUT Reforms and Funding pattern for the new projects based on prudent financial norms

The Full project investment scenario is based on projects identified for Manapparai 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 OWG members 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 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 19 I and the adverse financial impact in implementing these projects without undertaking the reforms suggested is shown in Table 19 J.

The following is the outcome under this scenario:-

- ✓ Without reforms, the ULB would not be able to meet O&M expenses of new Projects year on year and cumulatively the Net surplus is very minimal for the next 15 years.
- ✓ Hence with ULB's financial position, no borrowings would be possible for funding the projects identified.
- ✓ The ULB would not be able to contribute its share in the total project funding.

As seen from Table 19 K the ULB faces serious constraints in meeting the O&M of new projects without undertaking the reforms. Hence the only solution for the ULB for implementing all the identified projects is to undertake all the reforms suggested. The same has been elaborated under Heading 19.4.3

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19.4.3 Full Project Scenario WITH Reforms

Under **FULL REFORM** Scenario, the FOP for full project has been worked out as under:

- Funding pattern as per Prudent Financial norms
- Funding pattern based on the borrowing capacity of the ULB

The same has been elaborated under heading 19.4.3.1 and 19.4.3.2 respectively

19.4.3.1 Full Project Scenario WITH Reforms and Funding pattern based on prudent financial norms

The cash flows from the new projects under this scenario is shown in Table 19 L. The financial impact for the ULB in implementing full projects through additional resources generated on account of reforms suggested and as per the prudent financial norms is given in Table 19 M.

The following are the outcome under this scenario:-

- ✓ The ULB is able to comfortably meet the O&M of new Projects for the next 15 years. The same has been shown in Table 19 N
- ✓ The ULB faces constraints in meeting the debt repayment commitments as indicated by the Debt Service Coverage ratio (DSCR) which falls below the prudent financial norms of 1.25 times. The same has been shown in Table 19 O

To address the issue of constraints in its borrowing capacity to fund all projects, the ULB would require additional external support as the capacity of the ULB to borrow under this scenario would be only around Rs.3.51 Crores as against the loan requirement of Rs.54.47 Crores. The same has been discussed under heading 19.4.3.2

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Table No 19 I: Full Projects Cash Flow, WITHOUT REFORMS - As per Prudent Financial norms

Rs. in Lakns

	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
Particulars															
Opening Balance (A)		0.00	-51.61	-215.88	-506.76	-842.41	-1209.62	-1628.67	-2137.88	-2728.38	-3391.25	-4126.84	-4932.53	-5814.41	-6786.51
A Sources of Funds															
1 Debt Drawn Down	0.00	558.37	1309.40	668.97	56.03	156.82	164.66	183.33	315.13	319.37	200.14	302.48	349.96	438.01	424.24
2 ULB Own Contribution	40.83	88.77	246.76	28.40	29.82	83.99	36.94	40.54	71.71	73.39	64.88	58.52	66.87	96.78	95.70
3 External Support	18.89	400.93	669.63	399.90	32.07	133.02	88.42	98.08	168.04	170.70	127.46	155.00	178.96	229.55	223.22
4 Public Contribution	0.00	223.35	234.52	246.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 Monthly User Charges from UGD	0.00	0.00	0.00	0.00	110.09	111.96	113.87	115.81	117.78	119.78	121.66	123.57	125.51	127.48	161.84
6 Initial Deposit from Additional UGD Connections	0.00	0.00	12.53	12.76	12.98	11.79	12.02	12.25	12.42	12.64	11.85	14.99	15.27	15.48	15.70
Total Inflow (B)	59.72	1271.43	2472.83	1356.27	241.00	497.58	415.91	450.01	685.08	695.89	525.99	654.56	736.56	907.30	920.70
B Disposition of Funds															
Project Capex	59.72	1271.43	2460.30	1343.51	117.93	373.82	290.02	321.96	554.88	563.47	392.48	516.01	595.78	764.34	743.16
O&M For New Project	0.00	1.36	9.59	76.39	226.61	242.41	260.15	278.30	298.03	327.65	358.76	382.29	411.81	444.75	487.70
Debt Servicing (Principal + Interest)	0.00	50.25	167.21	227.25	232.11	248.57	284.78	358.97	422.67	467.65	510.34	561.96	610.85	670.31	735.32
Others															
Total Outflow (C)	59.72	1323.04	2637.10	1647.15	576.65	864.80	834.95	959.22	1275.58	1358.76	1261.58	1460.26	1618.44	1879.39	1966.18
Net Cash Flow (B-C)= D	0.00	-51.61	-164.27	-290.88	-335.64	-367.22	-419.04	-509.21	-590.50	-662.87	-735.59	-805.69	-881.88	-972.10	-1045.48
Closing Balance (A+D)=E	0.00	-51.61	-215.88	-506.76	-842.41	-1209.62	-1628.67	-2137.88	-2728.38	-3391.25	-4126.84	-4932.53	-5814.41	-6786.51	-7831.99

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Table No 19 J. : Financial Operating Plan- With FULL PROJECT WITHOUT REFORMS- As per Prudent Financial Norms

Particulars	Projections														
	Rs in Lakhs														
	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)	133.49	163.06	203.99	268.39	344.65	543.63	746.33	971.27	1208.88	1469.94	1745.71	2078.98	2430.09	2794.20	3172.63
Revenue Income															
Property Tax	93.81	95.60	97.43	99.29	101.18	102.89	104.65	106.43	108.24	110.08	139.83	142.02	144.25	146.51	148.80
ProfessionTax	10.41	11.14	11.92	12.75	13.65	14.60	15.62	16.72	17.89	19.14	20.48	21.91	23.45	25.09	26.85
External Sources	125.04	131.29	137.86	144.75	151.99	159.59	167.57	175.94	184.74	193.98	203.68	213.86	224.55	235.78	247.57
Service Charges and Fees	71.79	93.77	104.64	115.97	127.78	130.13	139.43	149.16	159.29	169.91	195.90	205.08	211.32	217.89	224.90
Sale & Hire Charges	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Other Income	72.37	79.61	87.57	96.32	105.96	116.55	128.21	141.03	155.13	170.64	187.71	206.48	227.12	249.84	274.82
User Charges from UGD	0.00	0.00	0.00	0.00	110.09	111.96	113.87	115.81	117.78	119.78	121.66	123.57	125.51	127.48	161.84
Initial deposit from new UGD Connections	0.00	0.00	12.53	12.76	12.98	11.79	12.02	12.25	12.42	12.64	11.85	14.99	15.27	15.48	15.70
Revenue Income (A)	373.47	411.46	451.99	481.89	623.68	647.57	681.42	717.43	755.58	796.28	881.20	928.01	971.57	1018.17	1100.58
Revenue Expenditure															
Personel Cost I (Salaries)	118.48	124.41	130.63	137.16	144.02	151.22	158.78	166.72	175.05	183.80	192.99	202.64	212.78	223.42	234.59
Personel Cost II (Others)	9.18	9.36	9.55	9.74	9.94	10.14	10.34	10.54	10.76	10.97	11.19	11.41	11.64	11.88	12.11
Terminal and retirement benefits	44.49	46.71	49.05	51.50	54.08	56.78	59.62	62.60	65.73	69.02	72.47	76.09	79.89	83.89	88.08
Operating Expenses	61.40	65.69	70.29	75.21	80.48	86.11	92.14	98.59	105.49	112.88	120.78	129.23	138.28	147.96	158.31
Repairs & Maintenance	78.08	81.98	86.08	90.39	94.90	99.65	104.63	109.86	115.36	121.12	127.18	133.54	140.22	147.23	154.59
Programme Expenses	0.55	0.57	0.60	0.63	0.66	0.70	0.73	0.77	0.81	0.85	0.89	0.93	0.98	1.03	1.08
Administrative Expenses	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92	14.62
Debt repayment for existing loans	24.35	34.05	33.25	32.45	31.65	30.85	20.35	20.35	10.42	10.42	10.42	10.42	10.42	10.42	10.42
Revenue Expenditure(B)	343.90	370.53	387.59	405.63	424.70	444.86	456.48	479.82	494.52	520.51	547.94	576.90	607.46	639.73	673.80
Revenue Surplus/Deficit (A-B)= C	29.57	40.93	64.40	76.26	198.98	202.71	224.93	237.61	261.07	275.77	333.26	351.11	364.11	378.44	426.78
Closing Balance (C+X)=D	163.06	203.99	268.39	344.65	543.63	746.33	971.27	1208.88	1469.94	1745.71	2078.98	2430.09	2794.20	3172.63	3599.41
Total Net Project Cash Flow (E)	-40.83	-140.38	-475.17	-547.92	-995.31	-1417.37	-1791.50	-2306.48	-2930.29	-3597.07	-4325.23	-5129.61	-6022.06	-7026.25	-8105.23
Overall Closing Balance (D+E)=F	122.23	63.60	-206.78	-203.27	-451.68	-671.04	-820.24	-1097.61	-1460.35	-1851.36	-2246.26	-2699.52	-3227.86	-3853.61	-4505.81

Table No 19 K : Calculation of Net Surplus after meeting the O&M on account of New Projects- Full project WITHOUT Reforms

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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
Revenue Surplus before meeting the debt obligations	53.92	74.98	97.65	108.71	230.63	233.56	245.28	257.96	271.48	286.19	343.68	361.53	374.52	388.85	437.20
O&M on New projects	0.00	1.36	9.59	76.39	226.61	242.41	260.15	278.30	298.03	327.65	358.76	382.29	411.81	444.75	487.70
Revenue Surplus after meeting New O&M	53.92	73.62	88.06	32.32	4.02	-8.85	-14.87	-20.34	-26.54	-41.46	-15.08	-20.77	-37.29	-55.90	-50.51

Cumulative

Cumulative revenue Surplus before meeting the debt obligations	187.41	262.39	360.04	468.75	699.38	932.94	1178.22	1436.18	1707.66	1993.85	2337.53	2699.06	3073.58	3462.44	3899.63
Cumulative O&M on New Projects	0.00	1.36	10.95	87.34	313.95	556.36	816.51	1094.81	1392.84	1720.49	2079.25	2461.54	2873.35	3318.10	3805.80
Cumulative revenue Surplus after meeting the New O&M	187.41	261.03	349.09	381.41	385.43	376.57	361.71	341.37	314.83	273.36	258.28	237.52	200.23	144.33	93.83

19.4.3.2 Full Project Scenario WITH Reforms and with additional external support

The cash flows from new projects is shown in Table 19 P and the financial impact in implementing the Full projects WITH reforms but with additional external support is given in Table 19 Q.

The following are the outcome under this scenario:-

- ✓ The ULB is able to meet the O&M of new Projects for the next 15 years.
- ✓ The ULB would be able to borrow Rs.3.51 crs against the requirement of Rs.54.47crs
- ✓ With the borrowings of Rs.3.51 crs, the ULB would be able to meet its debt repayment commitments as indicated by the Debt Service Coverage ratio (DSCR). The same has been shown in Table 19 R. This is possible only due to strong external support
- ✓ Total external support required would be Rs.85.88 crs
- ✓ The ULB would not be able to meet its contribution in funding of the projects

Table 19 S: Funding requirements as per Prudent Funding Norms vs. Funding Possibilities based on borrowing capacity – Full Project Scenario WITH Reforms

Particulars	Full project Scenario- Funding based on prudent financial norms (Rs. Lakhs)	Full Project Scenario – Funding based on borrowing capacity and with reform implementation (Rs. Lakhs)
Loan Amount	5446.91	351.54
External Support	3093.87	8588.32
ULB Contribution	1123.93	724.84

Public Contribution	704.11	704.11
Project cost	10368.81	10368.81
% of loan on Project cost	52.53%	3.39%
Borrowing Capacity of the ULB is 6.45% of the loan required for implementation of all the projects identified under CIP		

As seen from the above table, the ULB can contribute only Rs.724.84 Lakhs against the requirement of Rs.1123.93 Lakhs on account of reform implementation. The ULB's capability to borrow is only Rs.351.54 Lakhs against the loan requirement of Rs.5446.91 Lakhs. Total external support required would be Rs. 8588.32 Lakhs in order to implement all the identified projects envisaged under CIP.

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Table No 19 L: Full Project Cash Flow,With FULL PROJECT WITH REFORMS - Prudent Financial Norms

		Hs. 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 (A)			0.00	-51.61	-215.88	-506.76	-842.41	-1206.71	-1622.79	-2128.97	-2716.41	-3346.21	-4045.53	-4817.37	-5664.84	-6602.00
A	Sources of Funds															
1	Debt Drawn Down	0.00	558.37	1309.40	668.97	56.03	156.82	164.66	183.33	315.13	319.37	200.14	302.48	349.96	438.01	424.24
2	ULB Own Contribution	40.83	88.77	246.76	28.40	29.82	83.99	36.94	40.54	71.71	73.39	64.88	58.52	66.87	96.78	95.70
3	External Support	18.89	400.93	669.63	399.90	32.07	133.02	88.42	98.08	168.04	170.70	127.46	155.00	178.96	229.55	223.22
4	Public Contribution	0.00	223.35	234.52	246.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Monthly User Charges from UGD	0.00	0.00	0.00	0.00	110.09	111.96	113.87	115.81	117.78	149.73	152.08	154.46	156.89	159.35	202.30
6	Initial Deposit from Additional UGD Connections	0.00	0.00	12.53	12.76	12.98	14.71	14.99	15.27	15.48	15.77	17.70	17.96	18.30	18.55	18.80
Total Inflow (B)		59.72	1271.43	2472.83	1356.27	241.00	500.49	418.88	453.04	688.14	728.96	562.26	688.42	770.97	942.23	964.27
B	Disposition of Funds															
	Project Capex	59.72	1271.43	2460.30	1343.51	117.93	373.82	290.02	321.96	554.88	563.47	392.48	516.01	595.78	764.34	743.16
	O&M For New Project	0.00	1.36	9.59	76.39	226.61	242.41	260.15	278.30	298.03	327.65	358.76	382.29	411.81	444.75	487.70
	Debt Servicing (Principal + Interest)	0.00	50.25	167.21	227.25	232.11	248.57	284.78	358.97	422.67	467.65	510.34	561.96	610.85	670.31	735.32
	Others															
Total Outflow (C)		59.72	1323.04	2637.10	1647.15	576.65	864.80	834.95	959.22	1275.58	1358.76	1261.58	1460.26	1618.44	1879.39	1966.18
Net Cash Flow (B-C)= D		0.00	-51.61	-164.27	-290.88	-335.64	-364.31	-416.08	-506.19	-587.44	-629.80	-699.32	-771.84	-847.48	-937.16	-1001.91
Closing Balance (A+D)=E		0.00	-51.61	-215.88	-506.76	-842.41	-1206.71	-1622.79	-2128.97	-2716.41	-3346.21	-4045.53	-4817.37	-5664.84	-6602.00	-7603.92

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Table No 19 M : Financial Operating Plan - With FULL PROJECT WITH REFORMS - As per Prudent Financial Norms

Particulars	Projections														
	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)	133.49	163.06	203.99	268.39	350.42	555.27	854.48	1179.04	1519.49	1888.24	2305.03	2794.92	3298.71	3817.90	4355.97
Revenue Income															
Property Tax	93.81	95.60	97.43	99.29	101.18	128.68	130.87	133.10	135.36	137.67	174.75	177.49	180.28	183.10	185.97
ProfessionTax	10.41	11.14	11.92	12.75	13.65	14.60	15.62	16.72	17.89	19.14	20.48	21.91	23.45	25.09	26.85
External Sources	125.04	131.29	137.86	144.75	151.99	159.59	167.57	175.94	184.74	193.98	203.68	213.86	224.55	235.78	247.57
Service Charges and Fees	71.79	93.77	104.64	115.97	127.78	165.04	176.43	188.29	200.61	213.50	236.67	243.06	249.89	257.07	264.70
Sale & Hire Charges	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Other Income	72.37	79.61	87.57	96.32	105.96	116.55	128.21	141.03	155.13	170.64	187.71	206.48	227.12	249.84	274.82
User Charges from SWM	0.00	0.00	0.00	5.77	5.88	32.89	33.45	34.02	36.17	36.78	44.67	45.37	46.08	48.93	49.70
User Charges from UGD	0.00	0.00	0.00	0.00	110.09	111.96	113.87	115.81	117.78	149.73	152.08	154.46	156.89	159.35	202.30
Initial deposit from new UGD Connections	0.00	0.00	12.53	12.76	12.98	14.71	14.99	15.27	15.48	15.77	17.70	17.96	18.30	18.55	18.80
Revenue Income (A)	373.47	411.46	451.99	487.66	629.56	744.06	781.05	820.28	863.26	937.30	1037.83	1080.68	1126.65	1177.81	1270.80
Revenue Expenditure															
Personel Cost I (Salaries)	118.48	124.41	130.63	137.16	144.02	151.22	158.78	166.72	175.05	183.80	192.99	202.64	212.78	223.42	234.59
Personel Cost II (Others)	9.18	9.36	9.55	9.74	9.94	10.14	10.34	10.54	10.76	10.97	11.19	11.41	11.64	11.88	12.11
Terminal and retirement benefits	44.49	46.71	49.05	51.50	54.08	56.78	59.62	62.60	65.73	69.02	72.47	76.09	79.89	83.89	88.08
Operating Expenses	61.40	65.69	70.29	75.21	80.48	86.11	92.14	98.59	105.49	112.88	120.78	129.23	138.28	147.96	158.31
Repairs & Maintenance	78.08	81.98	86.08	90.39	94.90	99.65	104.63	109.86	115.36	121.12	127.18	133.54	140.22	147.23	154.59
Programme Expenses	0.55	0.57	0.60	0.63	0.66	0.70	0.73	0.77	0.81	0.85	0.89	0.93	0.98	1.03	1.08
Administrative Expenses	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92	14.62
Debt repayment for existing loans	24.35	34.05	33.25	32.45	31.65	30.85	20.35	20.35	10.42	10.42	10.42	10.42	10.42	10.42	10.42
Revenue Expenditure(B)	343.90	370.53	387.59	405.63	424.70	444.86	456.48	479.82	494.52	520.51	547.94	576.90	607.46	639.73	673.80
Revenue Surplus/Deficit (A-B)= C	29.57	40.93	64.40	82.03	204.86	299.20	324.56	340.46	368.75	416.79	489.89	503.79	519.19	538.08	597.00
Closing Balance (C+X)=D	163.06	203.99	268.39	350.42	555.27	854.48	1179.04	1519.49	1888.24	2305.03	2794.92	3298.71	3817.90	4355.97	4952.98
Total Net Project Cash Flow (E)	-40.83	-140.38	-475.17	-547.92	-995.31	-1417.37	-1788.59	-2300.60	-2921.39	-3585.10	-4280.20	-5048.31	-5906.89	-6876.68	-7920.73
Overall Closing Balance (D+E)=F	122.23	63.60	-206.78	-197.50	-440.03	-562.90	-609.55	-781.11	-1033.14	-1280.07	-1485.27	-1749.60	-2089.00	-2520.71	-2967.75

Table No 19 N : Calculation of Net Surplus after meeting the O&M on account of New Projects- Full project WITH Reforms

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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
Revenue Surplus before meeting the debt obligations	53.92	74.98	97.65	114.48	236.51	330.05	344.91	360.81	379.16	427.21	500.30	514.20	529.61	548.49	607.42
O&M on New projects	0.00	1.36	9.59	76.39	226.61	242.41	260.15	278.30	298.03	327.65	358.76	382.29	411.81	444.75	487.70
Revenue Surplus after meeting New O&M	53.92	73.62	88.06	38.09	9.90	87.64	84.76	82.51	81.14	99.56	141.55	131.91	117.80	103.74	119.72

Cumulative

Cumulative revenue Surplus before meeting the debt obligations	187.41	262.39	360.04	474.52	711.03	1041.08	1385.99	1746.80	2125.96	2553.17	3053.48	3567.68	4097.28	4645.78	5253.19
Cumulative O&M on New Projects	0.00	1.36	10.95	87.34	313.95	556.36	816.51	1094.81	1392.84	1720.49	2079.25	2461.54	2873.35	3318.10	3805.80
Cumulative revenue Surplus after meeting the New O&M	187.41	261.03	349.09	387.18	397.08	484.72	569.48	651.99	733.12	832.68	974.23	1106.14	1223.93	1327.67	1447.39

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Table No 19 P: Full Project Scenario With FULL PROJECT WITH REFORMS with additional external support

		Hs. 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 (A)		0.00	-6.38	-17.47	-101.16	-225.25	-362.07	-516.92	-691.26	-886.61	-1080.77	-1303.24	-1549.30	-1823.94	-2131.24
A Sources of Funds															
1 Debt Drawn Down	0.00	55.84	109.97	67.21	5.93	0.00	0.00	1.74	16.06	14.95	0.00	15.39	21.55	23.83	19.07
2 ULB Own Contribution	40.83	50.42	34.25	24.35	19.64	55.51	30.85	32.39	34.01	35.71	37.50	70.15	84.44	91.06	83.72
3 External Support	18.89	941.82	2081.56	1005.70	92.35	318.31	259.17	287.83	504.81	512.81	354.98	430.47	489.80	649.45	640.37
4 Public Contribution	0.00	223.35	234.52	246.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 Monthly User Charges from UGD	0.00	0.00	0.00	0.00	110.09	111.96	113.87	115.81	117.78	149.73	152.08	154.46	156.89	159.35	202.30
6 Initial Deposit from Additional UGD Connections	0.00	0.00	12.53	12.76	12.98	14.71	14.99	15.27	15.48	15.77	17.70	17.96	18.30	18.55	18.80
Total Inflow (B)	59.72	1271.43	2472.83	1356.27	241.00	500.49	418.88	453.04	688.14	728.96	562.26	688.42	770.97	942.23	964.27
B Disposition of Funds															
Project Capex	59.72	1271.43	2460.30	1343.51	117.93	373.82	290.02	321.96	554.88	563.47	392.48	516.01	595.78	764.34	743.16
O&M For New Project	0.00	1.36	9.59	76.39	226.61	242.41	260.15	278.30	298.03	327.65	358.76	382.29	411.81	444.75	487.70
Debt Servicing (Principal + Interest)	0.00	5.03	14.03	20.05	20.56	21.08	23.55	27.13	30.58	32.01	33.49	36.18	38.01	40.45	43.00
Others															
Total Outflow (C)	59.72	1277.81	2483.92	1439.96	365.10	637.31	573.72	627.38	883.49	923.13	784.73	934.48	1045.60	1249.54	1273.87
Net Cash Flow (B-C)= D	0.00	-6.38	-11.09	-83.69	-124.09	-136.82	-154.84	-174.34	-195.35	-194.17	-222.47	-246.06	-274.64	-307.30	-309.60
Closing Balance (A+D)=E	0.00	-6.38	-17.47	-101.16	-225.25	-362.07	-516.92	-691.26	-886.61	-1080.77	-1303.24	-1549.30	-1823.94	-2131.24	-2440.84

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Table No 19 Q : Financial Operating Plan With FULL PROJECT WITH REFORMS with additional external support

Particulars	Projections														Rs in Lakhs	
	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)	133.49	163.63	205.78	272.14	356.94	565.49	869.40	1199.83	1547.42	1924.71	2351.62	2853.36	3370.92	3906.00	4462.30	
Revenue Income																
Property Tax	93.81	95.60	97.43	99.29	101.18	128.68	130.87	133.10	135.36	137.67	174.75	177.49	180.28	183.10	185.97	
ProfessionTax	10.41	11.14	11.92	12.75	13.65	14.60	15.62	16.72	17.89	19.14	20.48	21.91	23.45	25.09	26.85	
External Sources	125.04	131.29	137.86	144.75	151.99	159.59	167.57	175.94	184.74	193.98	203.68	213.86	224.55	235.78	247.57	
Service Charges and Fees	71.79	93.77	104.64	115.97	127.78	165.04	176.43	188.29	200.61	213.50	236.67	243.06	249.89	257.07	264.70	
Sale & Hire Charges	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	
Other Income	72.37	79.61	87.57	96.32	105.96	116.55	128.21	141.03	155.13	170.64	187.71	206.48	227.12	249.84	274.82	
User Charges from SWM	0.00	0.00	0.00	5.77	5.88	32.89	33.45	34.02	36.17	36.78	44.67	45.37	46.08	48.93	49.70	
User Charges from UGD	0.00	0.00	0.00	0.00	110.09	111.96	113.87	115.81	117.78	149.73	152.08	154.46	156.89	159.35	202.30	
Initial deposit from new UGD Connections	0.00	0.00	12.53	12.76	12.98	14.71	14.99	15.27	15.48	15.77	17.70	17.96	18.30	18.55	18.80	
Revenue Income (A)	373.47	411.46	451.99	487.66	629.56	744.06	781.05	820.28	863.26	937.30	1037.83	1080.68	1126.65	1177.81	1270.80	
Revenue Expenditure																
Personel Cost I (Salaries)	118.48	124.41	130.63	137.16	144.02	151.22	158.78	166.72	175.05	183.80	192.99	202.64	212.78	223.42	234.59	
Personel Cost II (Others)	9.18	9.36	9.55	9.74	9.94	10.14	10.34	10.54	10.76	10.97	11.19	11.41	11.64	11.88	12.11	
Terminal and retirement benefits	44.49	46.71	49.05	51.50	54.08	56.78	59.62	62.60	65.73	69.02	72.47	76.09	79.89	83.89	88.08	
Operating Expenses	60.82	64.47	68.34	72.44	76.79	81.39	86.28	91.46	96.94	102.76	108.92	115.46	122.39	129.73	137.51	
Repairs & Maintenance	78.08	81.98	86.08	90.39	94.90	99.65	104.63	109.86	115.36	121.12	127.18	133.54	140.22	147.23	154.59	
Programme Expenses	0.55	0.57	0.60	0.63	0.66	0.70	0.73	0.77	0.81	0.85	0.89	0.93	0.98	1.03	1.08	
Administrative Expenses	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92	14.62	
Debt repayment for existing loans	24.35	34.05	33.25	32.45	31.65	30.85	20.35	20.35	10.42	10.42	10.42	10.42	10.42	10.42	10.42	
Revenue Expenditure(B)	343.33	369.31	385.64	402.86	421.01	440.15	450.62	472.69	485.97	510.39	536.09	563.13	591.57	621.51	653.00	
Revenue Surplus/Deficit (A-B)= C	30.14	42.15	66.35	84.80	208.55	303.92	330.42	347.59	377.30	426.91	501.74	517.56	535.08	556.30	617.80	
Closing Balance (C+X)=D	163.63	205.78	272.14	356.94	565.49	869.40	1199.83	1547.42	1924.71	2351.62	2853.36	3370.92	3906.00	4462.30	5080.10	
Total Net Project Cash Flow (E)	-40.83	-56.81	-64.25	-138.27	-367.97	-544.26	-676.62	-854.73	-1053.88	-1281.98	-1510.52	-1791.86	-2083.56	-2400.19	-2745.67	
Overall Closing Balance (D+E)=F	122.80	148.97	207.88	218.67	197.52	325.15	523.21	692.69	870.84	1069.65	1342.85	1579.06	1822.45	2062.11	2334.44	

19.4.4 Sustainable Investment Scenario WITH Reforms

The sustainable investment scenario is worked out when the full project investment scenario indicates inability of the municipality to sustain the full identified investment. In this case, the identified investment is sized down to immediate felt need for the municipality to sustain on its own with external borrowings and support.

Implications of this investment in terms of external support required, borrowing capacity of the ULB and the resultant debt service commitment, and impact on O&M of new projects are worked out. The outcome of this scenario will give an indication of the actual level of investment sustainable by the municipality with external support.

The Capital Investment for various projects in sustainable scenario is shown in Table 19 T

Table 19 T Capital Investment Plan- Sustainable Scenario

Project Sector	Total Investment (Rs.in Lakhs)
Water Supply	1550.76
UGD	3520.24
Sanitation	5.25
Storm Water Drainage	0.00
Solid Waste Management	268.27
Roads, Traffic and Transportation	1241.74
Street Lighting	108.58
Socio-Economic Infrastructure	386.32
TOTAL CAPEX	7081.47

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The List of projects not considered (Roads and SWD) under sustainable scenario are given in Table 19 U

Table 19 U: List of projects not considered for Sustainable Scenario

Project Name	**Project Cost before escalation (Rs.in Lakhs)
Creating closed drains for 83 Km length by 2022	1626.80
Converting open drain into closed drain for existing 31.7 Km length	323.50
Total Project Cost	1950.30

** Project Cost when implemented with escalation would come to **Rs. 32.87 Crores**

19.4.4.1 Sustainable Investment Scenario WITH Reforms and Funding pattern based on prudent financial norms

The cash flows from the new projects is shown in Table 19 V and the financial impact in implementing sustainable projects through additional resources generated on account of reforms suggested and as per the prudent financial norms is given in Table 19 W

The following are the outcome under this scenario:-

- ✓ The ULB is able to meet the O&M of new Projects for the next 15 years.
- ✓ The ULB faces constraints in meeting the debt repayment commitments as indicated by the Debt Service Coverage ratio (DSCR) which falls below the prudent financial norms. The same has been shown in Table 19 X
- ✓ The ULB would not be able to meet its share of funding the projects identified under sustainable scenario.

To address this issue, the ULB would require additional external support as the capacity of the ULB to borrow under this scenario would be only around Rs.4.75 Crores as against the loan requirement of Rs. 34.74 Crores. The same has been discussed in heading 19.4.4.2

19.4.4.2 Sustainable investment Scenario WITH Reforms and with additional external support

The cash flows from new projects is shown in Table 19 Y and the financial impact in implementing the Full projects WITH reforms but with additional external support is given in Table 19 Z.

The following are the outcome under this scenario:-

- ✓ The ULB is able to meet the O&M of new Projects for the next 15 years.
- ✓ The ULB would be able to borrow Rs. 4.75 crs against the requirement of Rs.34.75 crs
- ✓ With the borrowings of Rs.4.75 crs, the ULB would be able to meet its debt repayment commitments as indicated by the Debt Service Coverage ratio (DSCR). The same has been shown in Table 19 AA. This is possible only due to strong external support
- ✓ Total external support required would be Rs. 49.77 crs in order to implement projects envisaged under sustainable scenario.

The table below shows the funding and borrowing capacity of the ULB under “Sustainable Scenario WITH Reforms”

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Table 19 AB : Funding based on prudent financial norms Vs Funding possibility based on borrowing capacity – Sustainable Investment Scenario WITH Reforms

Particulars	Sustainable Scenario- Funding based on prudent financial norms (Rs.in Lakhs)	Sustainable scenario – Funding based on borrowing capacity (Rs.in Lakhs)
Loan Amount	3474.50	475.72
External Support	2107.67	4977.12
ULB Contribution	795.19	924.52
Public Contribution	704.11	704.11
Project cost	7081.47	7081.47
% of loan on Project cost	49.06%	6.72%
Borrowing Capacity of the ULB is 13.69 % of the loan required for investments under sustainable scenario		

As seen from the above table, the ULB able to contribute Rs.924.52 Lakhs which is more than the requirement of Rs.795.19 Lakhs on account of reform implementation. The ULB's capability to borrow is only Rs.475.72 Lakhs against the loan requirement of Rs.3474.50 Lakhs. Total external support required would be Rs. 4977.12 Lakhs in order to implement all the identified projects envisaged under this Sustainable scenario.

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Table 19 V -Full Project Cash Flow of Identified New projects in Sustainable Scenario- 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
	Opening Balance (A)		0.00	-51.61	-215.88	-506.76	-842.41	-1193.38	-1576.91	-2015.77	-2499.22	-2986.48	-3502.65	-4048.59	-4624.51	-5242.78
A	Sources of Funds															
1	Debt Drawn Down	0.00	558.37	1309.40	668.97	56.03	0.00	0.00	10.44	133.60	128.76	0.00	92.33	129.30	206.32	180.97
2	ULB Own Contribution	40.83	88.77	246.76	28.40	29.82	57.85	9.50	11.73	41.46	41.63	31.53	23.50	30.09	58.17	55.16
3	External Support	18.89	400.93	669.63	399.90	32.07	54.61	6.09	11.64	77.27	75.39	27.39	49.93	68.63	113.70	101.58
4	Public Contribution	0.00	223.35	234.52	246.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Monthly User Charges from UGD	0.00	0.00	0.00	0.00	110.09	111.96	113.87	115.81	117.78	149.73	152.08	154.46	156.89	159.35	202.30
6	Initial Deposit from Additional UGD Connections	0.00	0.00	12.53	12.76	12.98	14.71	14.99	15.27	15.48	15.77	17.70	17.96	18.30	18.55	18.80
	Total Inflow (B)	59.72	1271.43	2472.83	1356.27	241.00	239.13	144.45	164.89	385.59	411.28	228.69	338.18	403.21	556.09	558.82
B	Disposition of Funds															
	Project Capex	59.72	1271.43	2460.30	1343.51	117.93	112.46	15.59	33.81	252.32	245.78	58.91	165.76	228.03	378.19	337.71
	O&M For New Project	0.00	1.36	9.59	76.39	226.61	242.41	254.93	267.48	281.23	304.46	328.75	345.02	366.78	391.47	425.63
	Debt Servicing (Principal + Interest)	0.00	50.25	167.21	227.25	232.11	235.24	257.46	302.46	335.49	348.29	357.20	373.33	384.32	404.69	428.64
	Others															
	Total Outflow (C)	59.72	1323.04	2637.10	1647.15	576.65	590.11	527.98	603.75	869.04	898.53	744.87	884.11	979.13	1174.36	1191.98
	Net Cash Flow (B-C)= D	0.00	-51.61	-164.27	-290.88	-335.64	-350.98	-383.52	-438.86	-483.45	-487.26	-516.17	-545.94	-575.92	-618.27	-633.17
	Closing Balance (A+D)=E	0.00	-51.61	-215.88	-506.76	-842.41	-1193.38	-1576.91	-2015.77	-2499.22	-2986.48	-3502.65	-4048.59	-4624.51	-5242.78	-5875.95

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Table No.19 W : Financial Operating Plan - Sustainable Scenario - Prudent Financial Norms

Particulars	Projections														
	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)	133.49	163.06	203.99	268.39	350.42	555.27	854.48	1179.04	1519.49	1888.24	2305.03	2794.92	3298.71	3817.90	4355.97
Revenue Income															
Property Tax	93.81	95.60	97.43	99.29	101.18	128.68	130.87	133.10	135.36	137.67	174.75	177.49	180.28	183.10	185.97
ProfessionTax	10.41	11.14	11.92	12.75	13.65	14.60	15.62	16.72	17.89	19.14	20.48	21.91	23.45	25.09	26.85
External Sources	125.04	131.29	137.86	144.75	151.99	159.59	167.57	175.94	184.74	193.98	203.68	213.86	224.55	235.78	247.57
Service Charges and Fees	71.79	93.77	104.64	115.97	127.78	165.04	176.43	188.29	200.61	213.50	236.67	243.06	249.89	257.07	264.70
Sale & Hire Charges	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Other Income	72.37	79.61	87.57	96.32	105.96	116.55	128.21	141.03	155.13	170.64	187.71	206.48	227.12	249.84	274.82
User Charges from SWM	0.00	0.00	0.00	5.77	5.88	32.89	33.45	34.02	36.17	36.78	44.67	45.37	46.08	48.93	49.70
User Charges from UGD	0.00	0.00	0.00	0.00	110.09	111.96	113.87	115.81	117.78	149.73	152.08	154.46	156.89	159.35	202.30
Initial deposit from new UGD Connections	0.00	0.00	12.53	12.76	12.98	14.71	14.99	15.27	15.48	15.77	17.70	17.96	18.30	18.55	18.80
Revenue Income (A)	373.47	411.46	451.99	487.66	629.56	744.06	781.05	820.28	863.26	937.30	1037.83	1080.68	1126.65	1177.81	1270.80
Revenue Expenditure															
Personel Cost I (Salaries)	118.48	124.41	130.63	137.16	144.02	151.22	158.78	166.72	175.05	183.80	192.99	202.64	212.78	223.42	234.59
Personel Cost II (Others)	9.18	9.36	9.55	9.74	9.94	10.14	10.34	10.54	10.76	10.97	11.19	11.41	11.64	11.88	12.11
Terminal and retirement benefits	44.49	46.71	49.05	51.50	54.08	56.78	59.62	62.60	65.73	69.02	72.47	76.09	79.89	83.89	88.08
Operating Expenses	61.40	65.69	70.29	75.21	80.48	86.11	92.14	98.59	105.49	112.88	120.78	129.23	138.28	147.96	158.31
Repairs & Maintenance	78.08	81.98	86.08	90.39	94.90	99.65	104.63	109.86	115.36	121.12	127.18	133.54	140.22	147.23	154.59
Programme Expenses	0.55	0.57	0.60	0.63	0.66	0.70	0.73	0.77	0.81	0.85	0.89	0.93	0.98	1.03	1.08
Administrative Expenses	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92	14.62
Debt repayment for existing loans	24.35	34.05	33.25	32.45	31.65	30.85	20.35	20.35	10.42	10.42	10.42	10.42	10.42	10.42	10.42
Revenue Expenditure(B)	343.90	370.53	387.59	405.63	424.70	444.86	456.48	479.82	494.52	520.51	547.94	576.90	607.46	639.73	673.80
Revenue Surplus/Deficit (A-B)= C	29.57	40.93	64.40	82.03	204.86	299.20	324.56	340.46	368.75	416.79	489.89	503.79	519.19	538.08	597.00
Closing Balance (C+X)=D	163.06	203.99	268.39	350.42	555.27	854.48	1179.04	1519.49	1888.24	2305.03	2794.92	3298.71	3817.90	4355.97	4952.98
Total Net Project Cash Flow (E)	-40.83	-140.38	-475.17	-547.92	-995.31	-1377.91	-1715.26	-2158.58	-2673.94	-3193.60	-3703.96	-4244.50	-4829.79	-5478.84	-6152.21
Overall Closing Balance (D+E)=F	122.23	63.60	-206.78	-197.50	-440.03	-523.43	-536.23	-639.08	-785.70	-888.56	-909.03	-945.79	-1011.89	-1122.87	-1199.23

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Table 19 Y - Full Project Cash Flow of Identified New projects in Sustainable Scenario- Additional External Support

		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 (A)		0.00	-6.38	-17.47	-101.64	-226.72	-365.04	-516.71	-682.45	-864.60	-1040.62	-1239.61	-1457.60	-1698.25	-1965.76
A	Sources of Funds															
1	Debt Drawn Down	0.00	55.84	109.97	72.86	11.87	0.00	0.00	3.48	32.12	29.89	0.00	30.78	43.10	47.65	38.15
2	ULB Own Contribution	57.10	50.42	37.89	24.35	19.64	3.24	3.41	16.95	77.62	73.85	58.91	104.21	120.28	146.53	130.13
3	External Support	2.63	941.82	2077.93	1000.05	86.42	109.22	12.19	13.38	142.59	142.04	0.00	30.78	64.65	184.01	169.43
4	Public Contribution	0.00	223.35	234.52	246.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Monthly User Charges from UGD	0.00	0.00	0.00	0.00	110.09	111.96	113.87	115.81	117.78	149.73	152.08	154.46	156.89	159.35	202.30
6	Initial Deposit from Additional UGD Connections	0.00	0.00	12.53	12.76	12.98	14.71	14.99	15.27	15.48	15.77	17.70	17.96	18.30	18.55	18.80
	Total Inflow (B)	59.72	1271.43	2472.83	1356.27	241.00	239.13	144.45	164.89	385.59	411.28	228.69	338.18	403.21	556.09	558.82
B	Disposition of Funds															
	Project Capex	59.72	1271.43	2460.30	1343.51	117.93	112.46	15.59	33.81	252.32	245.78	58.91	165.76	228.03	378.19	337.71
	O&M For New Project	0.00	1.36	9.59	76.39	226.61	242.41	254.93	267.48	281.23	304.46	328.75	345.02	366.78	391.47	425.63
	Debt Servicing (Principal + Interest)	0.00	5.03	14.03	20.53	21.54	22.58	25.60	29.34	34.19	37.05	40.01	45.39	49.05	53.94	59.05
	Others															
	Total Outflow (C)	59.72	1277.81	2483.92	1440.44	366.08	377.46	296.12	330.63	567.74	587.30	427.68	556.17	643.86	823.60	822.39
	Net Cash Flow (B-C)= D	0.00	-6.38	-11.09	-84.17	-125.08	-138.32	-151.67	-165.74	-182.15	-176.02	-198.99	-217.99	-240.65	-267.51	-263.58
	Closing Balance (A+D)=E	0.00	-6.38	-17.47	-101.64	-226.72	-365.04	-516.71	-682.45	-864.60	-1040.62	-1239.61	-1457.60	-1698.25	-1965.76	-2229.34

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Table No.19 Z : Financial Operating Plan - Sustainable Scenario- Additional External Support

Particulars	Projections														Rs in Lakhs	
	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)	133.49	163.63	205.78	272.14	356.94	565.49	869.40	1199.83	1547.42	1924.71	2351.62	2853.36	3370.92	3906.00	4462.30	
Revenue Income																
Property Tax	93.81	95.60	97.43	99.29	101.18	128.68	130.87	133.10	135.36	137.67	174.75	177.49	180.28	183.10	185.97	
ProfessionTax	10.41	11.14	11.92	12.75	13.65	14.60	15.62	16.72	17.89	19.14	20.48	21.91	23.45	25.09	26.85	
External Sources	125.04	131.29	137.86	144.75	151.99	159.59	167.57	175.94	184.74	193.98	203.68	213.86	224.55	235.78	247.57	
Service Charges and Fees	71.79	93.77	104.64	115.97	127.78	165.04	176.43	188.29	200.61	213.50	236.67	243.06	249.89	257.07	264.70	
Sale & Hire Charges	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	
Other Income	72.37	79.61	87.57	96.32	105.96	116.55	128.21	141.03	155.13	170.64	187.71	206.48	227.12	249.84	274.82	
User Charges from SWM	0.00	0.00	0.00	5.77	5.88	32.89	33.45	34.02	36.17	36.78	44.67	45.37	46.08	48.93	49.70	
User Charges from UGD	0.00	0.00	0.00	0.00	110.09	111.96	113.87	115.81	117.78	149.73	152.08	154.46	156.89	159.35	202.30	
Initial deposit from new UGD Connections	0.00	0.00	12.53	12.76	12.98	14.71	14.99	15.27	15.48	15.77	17.70	17.96	18.30	18.55	18.80	
Revenue Income (A)	373.47	411.46	451.99	487.66	629.56	744.06	781.05	820.28	863.26	937.30	1037.83	1080.68	1126.65	1177.81	1270.80	
Revenue Expenditure																
Personel Cost I (Salaries)	118.48	124.41	130.63	137.16	144.02	151.22	158.78	166.72	175.05	183.80	192.99	202.64	212.78	223.42	234.59	
Personel Cost II (Others)	9.18	9.36	9.55	9.74	9.94	10.14	10.34	10.54	10.76	10.97	11.19	11.41	11.64	11.88	12.11	
Terminal and retirement benefits	44.49	46.71	49.05	51.50	54.08	56.78	59.62	62.60	65.73	69.02	72.47	76.09	79.89	83.89	88.08	
Operating Expenses	60.82	64.47	68.34	72.44	76.79	81.39	86.28	91.46	96.94	102.76	108.92	115.46	122.39	129.73	137.51	
Repairs & Maintenance	78.08	81.98	86.08	90.39	94.90	99.65	104.63	109.86	115.36	121.12	127.18	133.54	140.22	147.23	154.59	
Programme Expenses	0.55	0.57	0.60	0.63	0.66	0.70	0.73	0.77	0.81	0.85	0.89	0.93	0.98	1.03	1.08	
Administrative Expenses	7.38	7.75	8.14	8.55	8.97	9.42	9.89	10.39	10.91	11.45	12.03	12.63	13.26	13.92	14.62	
Debt repayment for existing loans	24.35	34.05	33.25	32.45	31.65	30.85	20.35	20.35	10.42	10.42	10.42	10.42	10.42	10.42	10.42	
Revenue Expenditure(B)	343.33	369.31	385.64	402.86	421.01	440.15	450.62	472.69	485.97	510.39	536.09	563.13	591.57	621.51	653.00	
Revenue Surplus/Deficit (A-B)= C	30.14	42.15	66.35	84.80	208.55	303.92	330.42	347.59	377.30	426.91	501.74	517.56	535.08	556.30	617.80	
Closing Balance (C+X)=D	163.63	205.78	272.14	356.94	565.49	869.40	1199.83	1547.42	1924.71	2351.62	2853.36	3370.92	3906.00	4462.30	5080.10	
Total Net Project Cash Flow (E)	-57.10	-56.81	-67.89	-138.75	-369.43	-494.95	-648.97	-830.48	-1075.48	-1279.97	-1468.30	-1734.22	-1993.71	-2290.18	-2580.57	
Overall Closing Balance (D+E)=F	106.53	148.97	204.24	218.18	196.05	374.45	550.86	716.94	849.24	1071.66	1385.07	1636.70	1912.29	2172.12	2499.53	

19.5 Conclusion

Prudent Financial Norms of funding of projects under Full Project Investment scenario and Sustainable Investment Scenario and funding possibilities of Identified Projects under Full Investments Scenario are summarized in Table 19 AC below:

Table 19AC: - Comparative statement for the full project scenario vis-à-vis sustainable scenario:-

Project Sector	Full Project Scenario - **Project Cost before escalation (Rs.in Lakhs)	Sustainable Scenario - **Project Cost before escalation (Rs.in Lakhs)
Water Supply	1202.92	1202.92
UGD	2500.00	2500.00
Sanitation	5.00	5.00
Storm Water Drainage	1950.30	0.00
Solid Waste Management	201.04	201.04
Roads, Traffic and Transportation	712.13	712.13
Street Lighting	83.12	83.12
Socio-Economic Infrastructure	322.70	322.70
TOTAL CAPEX	6977.21	5026.91

** Project Cost when implemented with escalation would come to

- a. Full Project Scenario –Rs.10368.81 Lakhs
- b. Sustainable Scenario- Rs.7081.47 Lakhs.

Table 19 AD: Funding pattern based on prudent financial norms for full project scenario and sustainable scenario:

Particulars	Full Project Scenario (Rs.in Lakhs) - NORMS	Sustainable Scenario (Rs.in Lakhs) - NORMS
Total Project Cost	10368.81	7081.47
ULB Contribution	1123.93	795.19
Public Contribution	704.11	704.11
Loan	5446.91	3474.50
External Support	3093.87	2107.67

Table AE: Funding possibilities for Identified Projects under Full Project Investment Scenario WITH Reforms and Sustainable Investment Scenario WITH Reforms

Particulars	Full Project Scenario WITH reforms- Funding based on borrowing capacity (Rs.in Lakhs)	Sustainable Scenario WITH Reforms- Funding based on borrowing capacity (Rs.in Lakhs)
Total Project Cost	10368.81	7081.47
Means of Finance		
ULB Contribution	724.84	924.52
Public Contribution	704.11	704.11
Loan	351.54	475.72
External Support	8588.32	4977.12
O&M	Able to meet O&M costs of projects identified under CIP- Full Projects	Able to meet O&M costs of project identified under Sustainable scenario

Average	1.69	1.66
Minimum	1.03	1.00
Maximum	6.04	5.38

1. The ULB faces constraint in meeting the O & M expenses for identified projects under CIP if the reforms **suggested are not implemented** which is shown in Table 2 E. To address this issue it is imperative for the ULB to undertake all the reforms suggested which would help to meet the O&M of New projects and also to contribute some own share of contribution to the projects identified.
2. The ULB would face constraints in debt repayment on account of projects to be implemented both under Full Project scenario and Sustainable scenario without large external support and full reform implementation. The ability of ULB to borrow is limited against the loan requirement for full project implementation and even for projects identified under sustainable scenario. The only way to address the issue is full reform implementation coupled with strong external support
3. In case of Full Project scenario, even after undertaking the reforms, the ULB could contribute only Rs.724.84 Lakhs against the requirement of Rs.1123.93 Lakhs. The balance needs to be supported by strong external support.
4. For implementing all the projects identified under CIP, ULB's ability to borrow is only 6.45% (if all suggested reforms are undertaken). Under sustainable scenario, the ULB's ability to borrow with full reform implementation is about 13.69% of the loan requirements of Rs. 34.74 crs. Thus implementation of all reforms suggested leads to increase in borrowing capacity of the ULB which improves the ULB's possibilities of undertaking all the projects required for improvement of Manapparai town

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19.6 Recommendations

1. It is suggested that all reforms outlined in the Reform Implementation Schedule needs to be implemented fully in order to fund the projects envisaged both under Full Project Investment Scenario and Sustainable Investment scenario. The time frame envisaged under Reforms Implementation Schedule in Figure 19-1 needs to be firmly adhered to.
2. External support is required for full project implementation and sustainable project implementation. The amount of external support required varies between Rs.49.77 crs for sustainable scenario with reforms, Rs.85.88 crs for full project scenario with reforms
3. Full reform implementation by the ULB backed by strong external support is a must for bringing in projects required for improving the town over the next 15 years
4. The reform efforts of the ULB need to be supported and rewarded by financial assistance from funding agencies and strong external support as indicated in the Table above in order to implement all projects suggested under CIP.
5. The ULB would need to bring in Rs.924.52 Lakhs over the 15 year period to meet its share of contribution towards projects to be implemented under sustainable scenario. This is possible only if ULB implements all the reforms suggested and highlighted in this report within the scheduled time frame.

Figure 19-1: Reforms Implementation Schedule for Manapparai

Figure 19-1: Reforms Implementation Schedule

MANAPPARAI

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
Property Tax																
90% Collection Efficiency	43% (current collection efficiency -2007-08)															
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 initiated															
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 18 of this report	Limited extent															
Water Supply																
Service coverage of water connections to be increased from current 38.70% to 85%	38.70%	40%	46%	52%	59%	65%	69%	73%	77%	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															

Figure 19-1: Reforms Implementation Schedule for Manapparai

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
Water Leakage Audit for Un-accounted for Water (UFW)	Not done															
Energy Audit	Not done															
Periodic maintenance of Water supply systems	Ad hoc maintenance															
Periodic Training to Water Supply Staff	Regularly															
Privatization in routine maintenance relating to water supply	Not done															
Sewerage and Sanitation																
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	NA															
Revision in initial deposit for new sewer connections	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															
engineering cell is required in O&M of Sewage Treatment Plant, Pumping Stations and Sewer	NA															

Figure 19-1: Reforms Implementation Schedule for Manapparai

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		
Solid Waste Management																		
Door to door collection of garbage at household level and segregation of waste at source	Door to door collection in 16 out of 27 wards																	
Private Sponsorship of bins for waste segregation at source	Not done																	
Introduction of user charges for Non-Domestic assesses	Not done																	
Introduction of user charges for Domestic assesses	Not done																	
Annual Maintenance Contract for Vehicles used in SWM	Not done																	
Potential for getting carbon credit benefit through the Clean Development Mechanism (CDM) need to be studied in making a comprehensive solid waste management scheme	Not undertaken																	
Periodic Training to Public Health Staff	Regularly																	
Roads, Traffic & Transportation																		
Relaying Bitumen roads once in three years with patch works to be undertaken based on the need in between years (Through use of recyclable materials)	Adhoc basis																	

Figure 19-1: Reforms Implementation Schedule for Manapparai

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
Street Lighting																
Meeting the norms of one pole per 30 meters by 2012	41 meters															
Energy Audit Studies	Not initiated															
Private parties can be involved for financing, operation and maintenance of energy efficient street light projects to reduce the cost incurred for the same.	O & M maintenance of street lights															
Municipal Assets																
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															
Accounting Reforms																
Comprehensive Budgeting incorporating O&M costs of various assets	Not Done															
Periodic Training to Accounting Staff	Regular training															
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															

