

## Conversion of CCP into

# BUSINESS PLAN FOR THIRUVANAMALAI

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## DRAFT FINAL REPORT

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SUBMITTED TO:

**TNUIFSL**

BY



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## INTRODUCTION

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### 1.1 CONTEXT OF CONVERSION OF CCP INTO BUSINESS PLAN

City Corporate Plan (CCP) was prepared for Tiruvanamalai in 2004 under the Tamil Nadu Urban Development Programme II (TNUUDP-II). The unique feature of the C.C.P is that it is a plan prepared with united efforts and involvement of stake holders- elected representatives, public, private agencies, Non-Governmental Organizations (NGO's) and Community Based Organizations (CBO's). Therefore, C.C.P. focuses on felt needs and priorities of the city, in terms of quality of environment and municipal services. The C.C.P has identified series of projects focusing on economic development, environmental protection, infrastructure improvement and preservation of historical monuments and heritage elements, besides formulating strategies and tasks for mobilization of resources and augmentation of municipal finance. However, the local body could not implement various projects proposed in the C.C.P due to financial constraints, lack of implementing mechanisms, institutional capacity and lack of private investments and resources. Therefore, it is considered pertinent to formulate a strategic plan for effective conversion of C.C.P into a Business Plan (BP).

The BP is a non-conventional and practical plan with economic viability and sustainability. Since the stake holders involved in identifying the developmental needs it creates an ownership and acceptance in terms of the BP identified projects and means of finance. Methodically and systematically, it generates funding through "Business like" means and with the application of innovative techniques and management skills including Private Partnership and improvement of services effectively. Good Business Plans are practical in the sense that it sets concrete goals, responsibilities and deadlines. BP assigns tasks to each involved in the project life cycle or departments and links to milestones. BP also guides to breakdown one strategy to many implementable parts. While the project is on implementation, the BP provides a platform for regular review and course of corrections

## 1.2 OBJECTIVES

In the above context, the following are the primary objectives of the Business Plan (BP):

**1.2.1. To crystallize and prioritize bankable projects from out of the projects identified in the CCP and newly thought Programme,**

**1.2.2. To confirm the so identified projects through consultative process;**

**1.2.3. To workout and test performance indicators to assess the services and financial efficiency of the local body;**

**1.2.4. To formulate Financial Operation Plan (FOP) and design a mechanism of project implementation including identifying potential investors.**

## 1.3 PREPARATION OF BUSINESS PLAN

Business Plan is (a) to augment the financial resources and minimization of expenditure of the local body and (b) to develop Asset Management Plan (AMP) for improving the quality of basic services. These are the two prime components of the Business Plan.

The approach towards BP is essentially the state of art of consultative and stakeholders involvement in preparing and implementation of the plan respectively. The method of realizing the objectives of the plan will be essentially collective and coordinated efforts of planners, local body administrators and participation of stakeholders. It is also to turn the local bodies efforts for the provision of services and facilities from conventional provider role to innovative private investments as under business like environment. This, in turn improves the municipal finance besides improve the service delivery.

## 1.4 METHODOLOGY

### 1.4.1 FINANCIAL STATUS REPORT:

First step in the process of optimization of the financial system of the local body is to prepare a status report on the financial position of the local body, on one side and on improving the quality of basic services on the other. The status report dwells on sources of income and the pattern of expenditure. The main sources of finance of local bodies could be categorized as internal and external. Internal reserve, include 'local taxes',

'user charges', 'fees' and rent or lease amount collected from properties owned by the local body.

Following are some of the taxes collected by local bodies.

- (i) Property tax
- (ii) Registration fee
- (iii) Fair tax
- (iv) yearly tax
- (v) Market tax
- (vi) Profession tax
- (vii) Advertisement tax
- (viii) Entertainment tax

The user charges are directly connected with the services rendered by the local body. This would include lighting tax, water tax and library cess. Fee and duties are stamp duty and land and property registration fee. Part of this amount is made available to the local body from out of the enhanced value of properties. Proceeds from tenants and lessees of municipal properties constitute another source of income. Loans and grants are important components of external source of revenue. Grant-in-aid may be of three types.

- a) An ordinary grant meant to defray administration costs;
- b) Grant in lieu of octroi;
- c) Special grant-in-aid for assistance in development or maintenance.

A lion's share of the income is spent on salary to staff and pension to retired employees. Local bodies have hardly any resource for capital investment or for rehabilitation of existing assets. Maintenance of decaying services becomes responsibilities of municipal councils, whereas, the entire capital input into cities fall to the share of development authorities.

#### **1.4.2 FINANCIAL ASSESSMENT OF THE LOCAL BODY**

The purpose of this BP is to identify issues and problems in the process of augmentation of the municipal resources.

**Basis of levy of taxes:** To examine the principles, in which a particular type of tax is levied. For example, the property tax is levied based on certain principles such as location, land and building use, housing typology, and owner/tenant occupation. This

concept will be examined with reference to all taxes and additional parameters, if any, for any of the tax base will be proposed

**(a) Rationality of revision of taxes:**

Tax structure/ rate has to be periodically revised based on certain logical reasoning. To quote an example, property tax structure has to commensurate with the increase in rental and property value.

**(b) Payment of grants and its predictability:**

Grant-in-aids are mostly paid based on certain formulae as proposed by the State Finance Commission and other concerned agencies. Therefore, it may be possible to predict future grants and plan accordingly.

**(c) Identification of issues in revenue realization:**

This is to consider whether

- the methods of tax assessment is simple and the collection mode is hassle-free;
- Transfer of grants / defrayed amounts are automatic and routine;
- Institutional mechanism for assessment and collection is transparent and accountable.

**(d) Cost- benefits analysis of projects/ assets**

This method is adopted to evaluate economic and social inability of projects. In this method, the ratio of net annual benefits to the net annual cost is determined. The capital cost which is one time cost, is converted into an annual cost by using the Capital Recovery Factor (CRF).

### **1.4.3 FINANCIAL PLAN**

A Financial plan for the local body is formulated based on the outcome of the status report and Financial Assessment.

- Optimization of Existing Resource Base: Existing resource base may be optimized by activating the system, by plugging loopholes, by achieving perfection in recovery, and periodical revision of tax-structures.
- Identification of benchmark cost: Benchmarking is a process of comparing and measuring costs of various services within the local body against with that best in class. The benchmark cost is taken for optimization.

- Institutional Mechanism for Financial Management: The existing institutional mechanism for the financial management may have to be revamped by honing of skills through training, motivation and by the system of incentives and disincentives. Building Management Information System (BMIS) will help to rein accountability and transparency.
- Resource Generation: Additional resource may be generated through non-conventional and innovative methods such as:
  - i. Recycling of municipal land
  - ii. Land use conversion and intensification of development of municipal property.
  - iii. Public- Private Partnership (PPP) for service Provision, BOT (Build, Operate and Transfer), DBFO (Design, Build, Finance and Operate)
  - iv. Higher tariff for excess consumption
  - v. Leasing of Air space
  - vi. Optimization of energy resources

#### 1.4.5. **IMPROVE THE QUALITY OF BASIC SERVICES**

The quality of basic services provided by the local body is improved through the assessment of the level of the basic services and formulation of Asset Management Plan (AMP).

Assessment of Level of Basic Services (LBS): The level of basic services provided by the local body is assessed by development of performance indicators. Performance indicators provide the 'Gauge' to measure the level accomplishment of quality services.

The following may be various elements of performance indicators.

**Coverage** – including that in Economically weaker Section Area (EWSA).

**Economic viability of the service** vis- a- vis tariff/user charges, subsidies, Benefits Cost Ratio(BCR).

Affordability, with particular reference to Economically Weaker Sections /Slum dwellers.

**Participatory process:** whether services system enables and encourages the participation by stakeholders-end users, representation from Non-Governmental Organizations (NGOs), Community Based Organization (CBOs), and private investors in decision making.

**Technical application in the planning, design, development and delivery –** recycling, reuse, .Application of modern techniques such as GIS and Remote Sensing.

**Environmental Impact of the Services:** water- surface and ground water  
Land, Air quality, Noise level, Vibrations, Dust, Soil erosion, Cutting and filling of soil Cutting of trees.

- Institutional constraint
- Dearth of technical know-how
- Lack of accountability and transparency
- Excessive overhead charges.

#### **1.4.4.1 COMPREHENSIVE ASSET MANAGEMENT PLAN**

The principal objective of Comprehensive Asset Management Plan is to prioritize projects for capital investment and for investment for re-habilitation. Various services provided by the local body are examined against a set of performance indicators. Depending upon the level of different services offered by the municipal council, proposals will be formulated to improve the quality of services.

#### **1.4.6 FORMULATION OF BUSINESS PLAN**

Financial Plan and Asset Management plan are dovetailed to have the Business Plan. The BP will be a sustainable one from economic, social, technical and institutional points of view and emulate improve the service delivery.



## 2 TOWN PROFILE

### 2.1 TIRUVANNAMALAI –LOCATION AND STATUS

Tiruvannamalai is a Class I town located about 190 km, south west of Chennai and about 90 km south of Vellore town. It is a district headquarter town and well connected by eight transport arteries connecting various towns in the region. The eight connecting corridors are listed below

TABLE 2.1 LIST OF ROADS RADIATING FROM TIRUVANNAMALAI

S. No	Road Connectivity	Classification of Road
1	Tiruvannamalai -Krishnagiri	National High way
2	Tiruvannamalai-Chittore	State high way
3	Tiruvannamalai-Avalurpet	Other District Road
4	Tiruvannamalai -Pony	National High way
5	Tiruvannamalai -Vettavalam	Major District Road
6	Tiruvannamalai-Cuddalore	State high way
7	Tiruvannamalai-Manalurpet	Other District Road
8	Tiruvannamalai-Kallakurichi	State high way

The town is also linked by meter gauge railway line in the Katpadi- Villupuram Section. Mostly, the road transport serves the movement of goods and people, and rail connection has become only incidental in view of the frequency of rail service and the longer transportation time it takes. The town takes area extends over 13.64 sq.km and a Special grade municipality administers it .Geographically the town is located at 12° latitude and 79° 05' longitude (Fig 2.1)

### 2.2 PHYSICAL FEATURES

The Annamalai hill, which is the part of the Eastern Ghats, is situated to the west of the town and the extension of town in this direction has been restricted on account of this. The Town extends in all other directions and the development is fast along Polur Road, where the new district Collectorate has been established and along Tindivanam Road, which has been recently upgraded as National Highway. The Arunachaleswar Temple is the core focal feature of the town, and the developments have come all around facing the temple. The intensity of development is high in the environs of the temple. The topography of the town is a gentle slope from the west to east. It is situated at a height of 200 meters from the mean sea level.

### **2.3 CLIMATE & RAIN FALL**

The climate of the town is generally dry and hot. The average temperature during 30°C to 19°C and the summer the maximum temperature even goes upto 40°C while, the minimum does not go below 20°C. The humidity in winter ranges between 67 to 86 percent while the same for summer is 40 to 63 percent. The dominant wind direction is from north east to south west. The average rainfall is about 81.5mm per annum.

### **2.4 HISTORY OF THE TOWN**

Tiruvannamalai is considered as one of the important temple towns in the state of Tamil Nadu . The function and growth of the town is closely linked to the famous Arunachaleswar temple in the town, which is one of the biggest and grandest with a scenic beauty of four gopurams in the four directions and the Annamalai hill in the back drop. The history of this town dates back to the Chola period of 8<sup>th</sup> and 9<sup>th</sup> centuries. The Cholas, Pandays, Kulashekavas, Hoysalas, Empire of Vijayanagar, Sevappa Nayaka and the Mysore Odayars were the early rulers of the town before the British. All these regimes contributed for the developments of the town.

### **2.5 HISTORY OF THE MUNICIPALITY**

The municipality of Thiruvannamalai was constituted in the year 1896 and has been growing steadily. It reached the status of second grade and first grade municipality during the years 1959 and 1974 respectively. The status of Special grade was awarded to the town in the year 1998. The municipality functions with an elected council of 39 Ward Councilors and Chairman. Out of 39 wards, women councilors represent 13. The present council term is to expire by October 2001.

## 2.6 LOCAL PLANNING AREA

The Municipal boundary of the town is extended over 13.64 sq.km . At present, the town municipality constitutes the local planning area (single LPA)

## 2.7 DEMOGRAPHIC CHARACTERISTICS

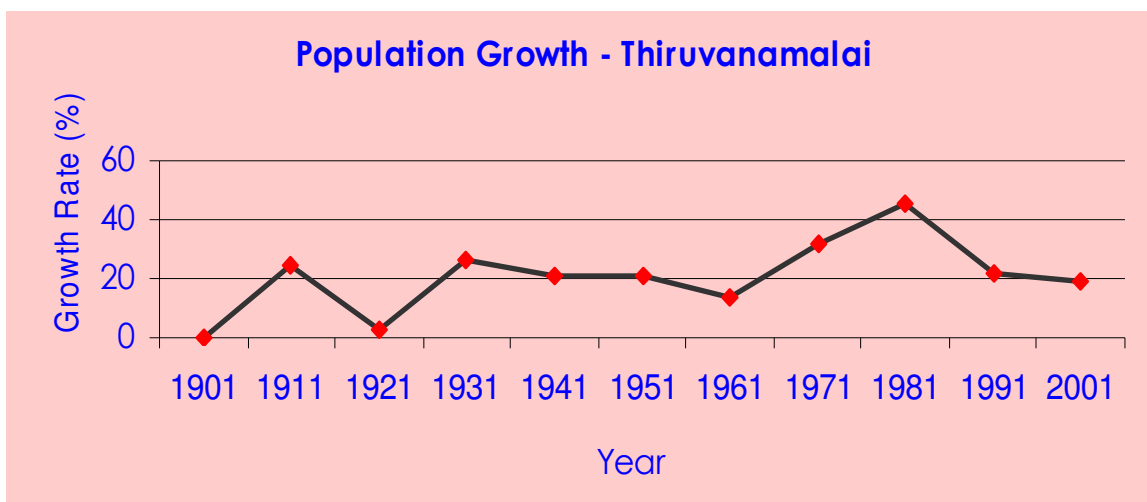
### 2.7.1 POPULATION AND ITS GROWTH

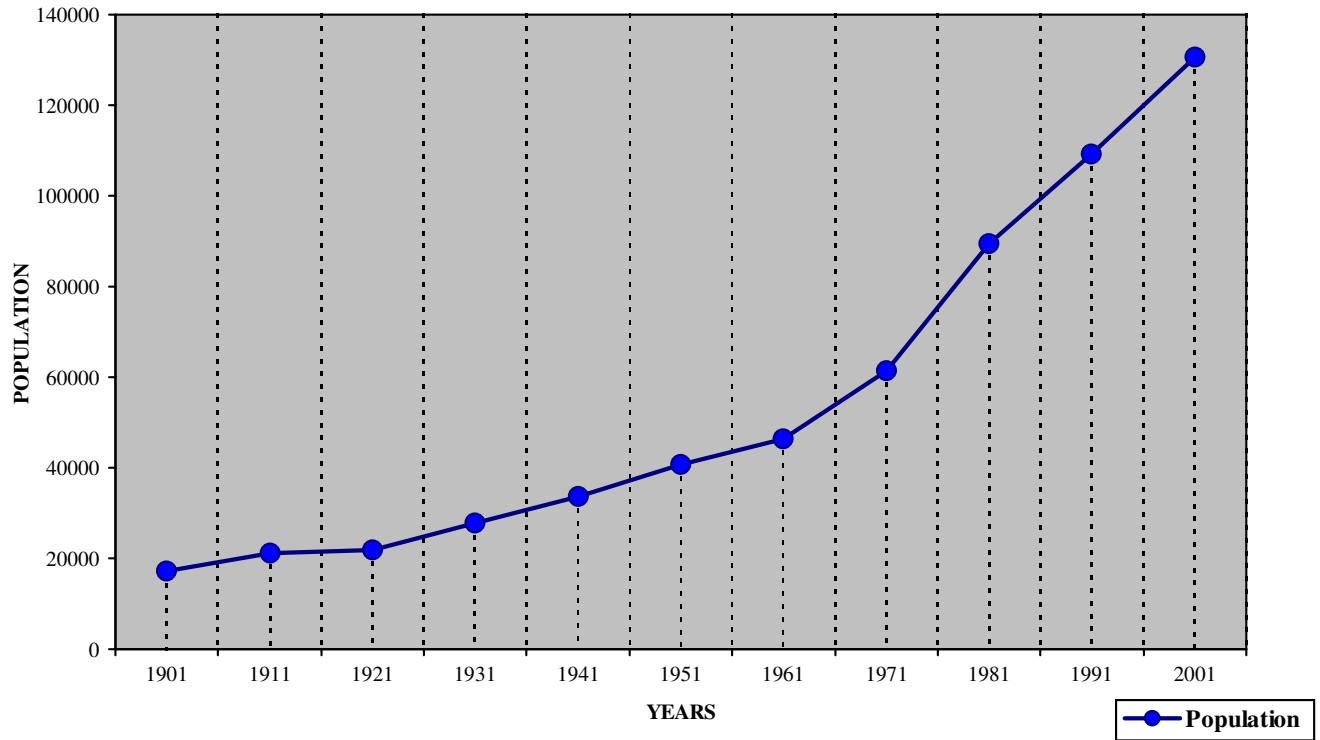
The census during the beginning of the century recorded a population of 17069. The municipality has made a latest assessment of the population in the year 1999 as 130140. The population gain over the years and the growth rates are presented in Table 2.2

TABLE 2.2 POPULATION AND ITS GROWTH-TIRUVANNAMALAI

S.No	Year	Population	Decadal Growth rate in%
1	1901	17069	-
2	1911	21244	24.46
3	1921	21912	3.14
4	1931	27769	26.73
5	1941	33575	20.91
6	1951	40718	21.27
7	1961	46641	14.06
8	1971	61370	32.15
9	1981	89462	45.77
10	1991	109196	22.06
11	2001	130671	19.66

Source 1901-2001 Census Records





A maximum decadal growth rate of 46 percent was registered during 1971-81 and a minimum growth rate of 3 percent in the year 1911- 21 .Since 1981, there is slump in growth rate of the town, which is mainly attributed to the development activities that have taken place outside the town. The town population is distributed over the 39 wards of the municipality as per 1999 assessment the population levels in the wards ranges between 1576 (ward 24) to 4788 (ward 36). The details are shown in Table 2.3

TABLE 2.3 WARD WISE POPULATION DENSITY AND HOUSE HOLDS

S.No	Population	Density	No of House holds
1	4489	37	898
2	2656	74	581
3	3933	141	787
4	3496	39	720
5	2581	32	517
6	2852	78	591
7	2807	60	561
8	4441	168	897
9	3881	108	776
10	1924	132	385
11	2756	216	564
12	2583	390	516
13	2132	231	426
14	329	474	665
15	4240	399	848
16	4493	233	897
17	1640	25	346
18	4716	116	943
19	3308	137	681
20	2704	297	567
21	2359	145	472
22	3069	125	614
23	3139	106	628
24	1576	38	335
25	4511	87	934
26	3302	24	562
27	7437	146	1488
28	3919	167	734
29	3356	115	671
30	3329	184	636
31	3631	234	726
32	4773	233	944
33	2406	110	481
34	2325	177	453
35	2599	124	530
36	4788	152	958
37	3914	69	783
38	2253	84	434
39	2493	86	400
<b>Total</b>	<b>130140</b>	<b>97</b>	<b>25949</b>

The 24<sup>th</sup> ward and the 36<sup>th</sup> ward house the lowest (335) and highest number of house holds in the town.

### 2.7.2 DENSITY PATTERN

The gross density of the town is steadily increasing. The town density, which was 45 pph in the year 1971, has more than doubled by the year 1999. The density pattern which ranges between 25pph to 474 pph. The 17<sup>th</sup> ward where the population density is the lowest, is situated at the periphery of the town and the Tindivanam NH (towards Chennai) is passing through this ward and expecting the developments along the roads, there are large extent of lands still lying vacant. The 14<sup>th</sup> ward where the density is highest is in the centre of the town and close to the municipal office and the temple area are mixed use of residential and commercial activities. Periphery of the town and the Tindivanam NH (towards Chennai) is passing through this ward and expecting the developments along the roads, there is large extent of lands still lying vacant. The 14<sup>th</sup> ward where the density is highest is in the centre of the town and close to the municipal office and the temple area are mixed use of residential and commercial activities.

### 2.7.3 AGE SEX-DISTRIBUTION

As per the 1999 population records, the sex ratio of the town stands at 964. The five – year age groupings of the population shows that the population in the age group 0 to 5 is more (10.5 percent) compared to any other age group. The population in the age group of 60 and above constitutes only 2.7 percent of the total population. The age sex distribution of population is presented in (Table 2.4).

TABLE 2.4 AGE SEX DISTRIBUTION PATTERN-TIRUVANAMALAI

S.No	Age Group	Population		Total	%to total Population
		Male	Female		
1	0-5	6925	6720	13645	10.48
2	10-May	6567	6408	12975	9.97
3	15-Oct	6497	6323	12820	9.85
4	15-20	6199	6048	12247	9.41
5	20-25	5842	5655	11497	8.83
6	25-30	6262	6175	12437	9.55
7	30-35	5900	5747	11647	8.94
8	35-40	5022	4852	9874	7.58
9	40-45	4220	4040	8260	6.34
10	45-50	3921	3772	7693	6.91
11	50-55	3532	3378	6910	5.3
12	55-60	3543	3049	6592	5.06
13	60>	1836	1707	3543	2.72
<b>Total</b>		<b>66266</b>	<b>63874</b>	<b>130140</b>	<b>100.00</b>

Source: Municipal Records

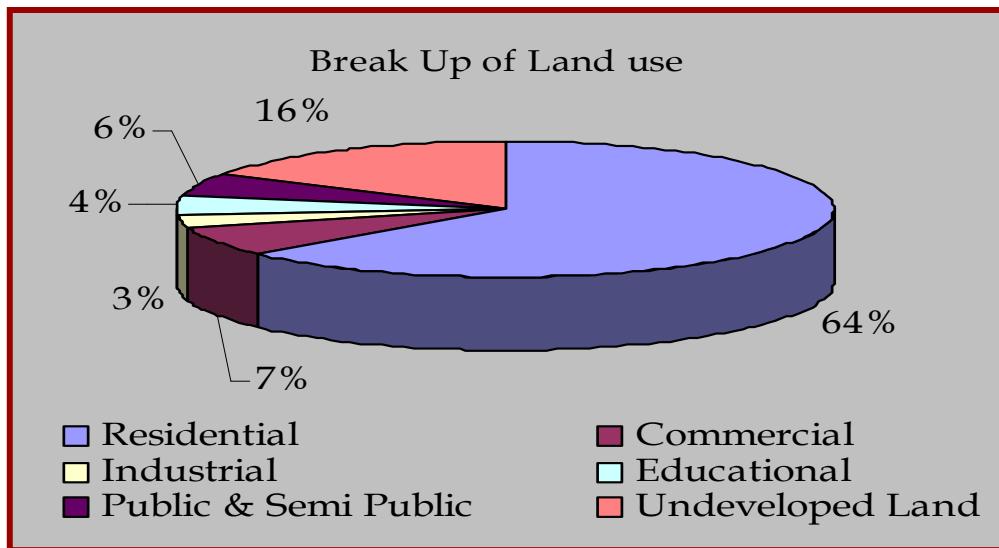
**2.8 LAND USE AND GROWTH MANAGEMENT**

**2.8.1 EXISTING LAND USE**

The total area of the town is 1364 ha. The latest land use pattern available as per Master plan approved in 2001, relates to the year 2000. The DTCP has made land use survey in the year 2000 for the revision of Master Plan and the details are stated in table 2.5. As per the 2000 land use pattern 776.44 ha of land was under non – urban use or water, which accounts to more than 56.94 percent of the total area. The higher proportion of land to be under this category is due to the presence of Annamalai Hills and the more active practice of agriculture during the survey period. The details of land use are shown in Table 2.5

TABLE 2.5 LAND USE PATTERN- TIRUVANNAMALAI 2000

S.No	Land Use	Area(ha)	% to Total Area	% to the developed Area
1	Residential	446.72	32.75	76.03
2	Commercial	48.77	3.58	8.30
3	Industrial	22.34	1.63	3.80
4	Public and Semi Public	39.35	2.88	6.70
5	Educational	30.38	2.22	5.17
6	Non Urban Use – Agriculture, Water bodies, Roads and hills	678.77	56.94	-
	<b>Total</b>	<b>1364.84</b>	<b>100.00</b>	<b>100.00</b>



## **2.8.2 GROWTH DIRECTION**

Generally the town is growing in all direction excepting in the west, where there is the physical constraint for development in the form of Annamalai Hills. Even this barrier has been partly shaken by way of encroachments. In the past, the growth was mainly on the eastern side, along Tindivanam road. The award of district headquarters status during the late 80s and the establishment of new Collectorate at Vengaikal this year 2001, has brought thrust in development on the northern side (towards Vellore) of the town . The development along Tindivanam road also has recently picked up with change in the category of Tindivanam road from State Highway to National Highway (NH66). The developments are coming up all the eight inter towns roads in varying levels of intensity.

### **2.8.2.2 LAND USE PATTERN**

The land use during the year 2000, has established under six categories. The agriculture land and the hill area are classified under non urban use including water bodies and nearly 56.44 percent of total area falls under this category.

#### **a) RESIDENTIAL USE**

The residential use was extended over 446 ha in the year 2000 against 211 ha in 1975 in the town. This works about 32.75 percent of the total area. The main residential area are Gandhipuram , AnnaNagar, Lakshmipuram, New Karkan Road, Agraharam road etc. The portion of land under different uses to the total area is lesser, when compared with towns of similar size. This is due to the fact that only less than half of the town area was developed as of 1975.

#### **b) COMMERCIAL USE**

The major commercial area of the town is around the Arunachaleswarar temple and bus stand area. The commercial activities are seen concentrated in the streets such as Car Street, Big Bazaar Street, Assalaianman Koil Street Sivanpadai Street, Mandi Street, Tiruvoodal Street, Tirumanjanagopuram Street, and Kosamandapam Street. The house hold service activities are spread all over the town. As per 1975 figures around 1 percent of the total area is under the use of commercial activities and 1.63% in 2005. This would be much higher now, as it is seen significant amount



of conversion from residential to commercial use being made along the major transportation corridors. IN addition to the services activities for the pilgrims and tourists, the town provides marketing and supplementary facilities for the production and distribution of the produce of the primary sector.

**c) INDUSTRIAL USE**

There is no major industrial unit or industrial zone in the town, propelling industrial activities. The industrial use relates mainly to the automobile service units, electrical repair shops, small engineering works and petty agro product industries. It occupies about 1.33 percent of the total area and seen along Tindivanam Road, Thandrampattu Road, Chinnakadai Street, and Tirumanjana Gopuram Street.

**d) PUBLIC AND SEMI PUBLIC USE**

The share of public and semi public use of land is sizable. 39.35 ha of land is available for this purpose and this forms 2.88 percent of the total area. Government Offices, Civic Buildings, Religious and Medical Institutions are elements of these category of use . The public offices are distributed partly in Anna Salai and scattered along Polur road and also found in Gandhi Nagar.

**e) EDUCATIONAL USE**

The land under educational use is around 30.38 ha and this about 2.88 percent of the total area of the town. There is a Government Arts College in the Chengam Road. There are also 2 Higher Secondary Schools and 5 High Schools in the town apart from 3 Middle Schools and 18 Primary Schools

**f) TRANSPORTATION NETWORK**

The transportation network encompasses about 8 percent of the total area as per 1975 plan, which is lesser than normally available for transport in many other towns in 2000 year report does not say about transport seperately. Non- availability of more than 50 percent of land development is the for reason for the least proportion under the use. The intensity of traffic is more in Polur road and Tindivanam Road

**g) OPEN SPACES AND PUBLIC UTILITIES**

The area occupied by this category is 31 ha , slightly above 2 percent of the total area as per the master plan 1975 .The open spaces include, parks and play grounds , while the utilities include land use for water supply , electricity and other service station /offices, burial ground etc

**2.8.3 GOALS –LAND USE AND GROWTH MANAGEMENT**

- i) To adequately provide land for all kinds of use for the present and the future with complete functional compatibility and an element of substances for the sustainability in development and improvement in living standards of the people.
- ii) To efficiently manage the growth of the town, taking advantage of the latest computer aided tools available in view of changing scenario in all spheres of human functioning

**2.8.4 ISSUES- LAND USE AND GROWTH MANAGEMENT**

- i) The court has stayed all development works within the radius of 1 km from the temple
- ii) The mushrooming growth of encroachments along the foot of the hill and other places could not be controlled as the land ownership lies with different agencies.
- iii) The adjacency of certain activities, like temple and market brings chaos in both their functioning.
- iv) The space earmarked for certain activities are utilized for other purpose/ encroached.
- v) Large extent of the town is part of the hills, and the land availability for development is thereby reduced.
- vi) The unapproved sub-division of lands are not controlled – adequate circulation pattern is not provided in these areas.
- vii) Lack of computers and related peripherals for management of growth and development.

### **2.8.5 FUTURE REQUIREMENTS- LAND USE AND GROWTH MANAGEMENT**

- i) The court stay has put breaks on all the development activities on the town. The municipality is unable to meet even small sanitation facilities for the public and the pilgrims. The court is to vacate the stay at the earliest and allow the municipality to undertake the required development works for the growth and development of the town.
- ii) The land under the possession of other Govt. departments is to be preserved and maintained by them or necessary control mechanism is to be made available to the municipality.
- iii) The location of the market is too close to the temple and the movement of goods and people generated by it's functioning, disturbs temple and other activities and put pressure on them. Therefore, the market is required to be relocated to the other place identified at Gandhi Nagar,
- iv) A frame work which the lands could be monitored for their earmarked use.
- v) Regularization of unapproved layouts, by incorporating all norms and standards of spatial planning.
- vi) More revenue to the municipality by land development activities.
- vii) Creation of digital maps, electronic database and computer based tools for growth management.

### **2.8.6 STRATEGIES – LAND USE AND GROWTH MANAGEMENT**

- i) To involve all agencies and institutions holding lands in the town to spatially plan for present functions and determine the future activities for various holdings
- ii) To plead for clearance of court stay orders
- iii) Implement the traffic operation and management plan
- iv) To effectively prevent any unauthorized construction
- v) To encourage co-operative /TNHB land development activities
- vi) To relocate some of the incompatible land use activities such as, market and slaughter house.
- vii) To modernize / computerized the spatial /planning /management system

### **2.8.7 TASKS –LAND USE AND GROWTH MANAGEMENT**

- i) Form a committee consisting members from various land owing agencies , with the patronage of the collector and jointly for requirements
- ii) Active follow up for clearance of court stay at all levels
- iii) Relocate market to Gandhi Nagar
- iv) Relocate the slaughter house
- v) Identify / purchase land for southern bus stand
- vi) Assistance in layout preparations
- vii) Regular site visits by Town Planning Staff to prevent unauthorized constructions
- viii) Implementation of Traffic Operation and Management
- ix) Purchase of computer hardware, software and other peripherals
- x) Computer training to technical staff.

## **2.9 ECONOMIC BASE OF TIRUVANAMALAI**

Tiruvanamalai is one of the important temple town in the state of TamilNadu . As said earlier it is well connected by eight roads and serves as a marketing and service town for the rural hinterland. These apart, the status of the district head quarters promotes more number of workers to be employed in tertiary sector activities than in any other sector. The trade &commerce and other service activities are the major contributors for the economic base of the town.

### **2.9.1 ECONOMIC GROWTH**

The growth and decay of the settlement to large extent depends on the economic base and its buoyancy. The participation rate has fallen from 30% in the year 1971 to 27 %in the year 1991. Between 1971-81 the growth of workers was in the order of 3.83 percent per annum which came down to 1.63 % per annum during the decade 1981-91. However, it may be noted that the growth of employment is almost in tune with the growth rate of population in the town.

## 2.9.2 OCCUPATIONAL PATTERN

Total number of workers as per 1991 census was 29276, which constitutes 27% of the total population. Trade and commerce activities support 33 %of the workforce followed by 26%percent support by the other services. Another 13% and 10%percent of the workforce are involved in manufacturing and transport and communication services respectively. The employment in other categories is not significant. The occupational pattern in the year as of 1991 is presented in Table 2.6

TABLE 2.6 CLASSIFICATION OF MAIN WORKERS BY INDUSTRIAL CATEGORIES  
TIRUVANNAMALAI

S No	Name of Sector	No of Main workers	% to Total
1	Primary Sector	1289	4.41
2	Cultivators	741	2.53
3	Live Stock, Forest Fishing and allied activities	256	0.87
4	Mining and Quarrying	35	0.12
	<b>Sub Total</b>	<b>2321</b>	<b>7.93</b>
	<b>Secondary Sector</b>		
1	Manufacturing	3861	13.04
2	Construction	2431	8.3
	<b>Sub Total</b>	<b>6247</b>	<b>21.34</b>
1	Tertiary Sector Trade and Commerce	10199	34.84
2	Transport storage and Communication	2959	10.11
3	Other Services	7550	25.79
	<b>Sub Total</b>	<b>20758</b>	<b>70.73</b>
	<b>Grand Total</b>	<b>29276</b>	<b>100</b>
	Marginal Workers	277	2.6
	Non Workers	79643	72.1

Source : Census of India 1991

TABLE 2.7 WORK FORCE AT TIRUVANAMALAI

S.No	Year	Total Workers	% to total Population	% to Female workers to total workers	% of Workers involved in		
					Primary	Secondary	Tertiary
1	1971	18194	29.65	11.45	14.52	21.34	63.94
2	1981	25163	28.13	10.91			
3	1991	29276	26.81	10.74	7.93	21.34	70.73

Source : Compiled from Census 1971-1991

Another significant feature in the occupational feature of the town is the participation of females in the production activities .Out of the total workers only 11 % females and there is no change in the share during the last three decades. The workers population, their sex composition and share to total population are shown Table 2.7

### 2.9.3 PRIMARY SECTOR

Only about 8% of the workforce is engaged in primary sector activities .There is a sharp decline in the share of workers in the primary sector (15 to 8%) between the years 1971 and 1991 and the fall has been proportionately added to the tertiary sector, which has gone up from 64 -71 %during the same period . In terms of absolute numbers also, there is a declining trend seen in the quantum of workers involved in the primary sector, which could not be un common in any urban scenario.

### 2.9.4 SECONDARY SECTOR

The secondary sector supports 21 %of the workforce and its activities are confined to certain specialist categories only. Expecting the agriculture produce of the hinterland the resources for development of secondary sector activities are very limited in the town. There are number of rice mills oil mills in and around the town. The other agro based industries include, ice cream manufacturing industries vermicelli industries etc. There is also an industrial estate outside the town limit, in an area of over 25 arces. It is to be noted that a portion of workers identified with primary and secondary sectors may have their work place out side the town and there fore, the composition of the workforce may not accurately depict the true economic productivity of the town.

### **2.9.5 TERTIARY SECTOR**

Tertiary sector constitute as much as 71% as the town attracts large number of tourist and pilgrims and also serves as a service town in the region. The Arunachaleswar temple is daily visited by sizable number of devotees and on full moon day, it is about 5 lakhs people come to the town for worshipping and Girivalam. This has resulted in mushrooming of lodging in houses and eating places. The informal sector activities are proliferating in the town and there are too many road side vendors encroaching the road margins and the platforms in the temple area. The patronage for girivalam being extended by VIPs , constantly raise the status of the town and making it more and more popular and ropes in high volume of devotees. This helps tertiary sector activities to sustain and also offer scope for development.

### **2.9.6 GOAL – ECONOMIC DEVELOPMENT**

- i) To provide opportunities for all the potential workforce, to participate in the economic activities receive their due share of productivity
- ii) To bring in high amount of investment for capital and infrastructure building and development

### **2.9.7 ISSUES- ECONOMIC DEVELOPMENT**

- i) Closeness to Chennai , and location ally sandwiched between two important district head quarters Vellore and Villupuram
- ii) Does not find a place in the major rail or road corridor excepting that of the recently acquired status for the Tiruvanamalai- Tindivanam road.
- iii) The resource for secondary sector development is limited
- iv) The town is to thrive mainly with the help of temple related activities
- v) The economic gains are not adequately achieved through the opportunity provided by the turnout of pilgrims
- vi) There are certain prime municipal lands, like the one held by the fire station –with out bring any revenue returns to their worth.
- vii) The entrepreneurship is generally in the town
- viii) Town is not greatly benefited by the industrial estate just outside the municipal boundary

- ix) About one fourth of the population is under poverty line and central and state schemes on poverty eradications are not integrated with community. Participation

### **2.9.8 REQUIREMENTS – ECONOMIC DEVELOPMENTS**

- i) As tertiary sector will be in disposable means for economic development, the scope for development is to be enlarged by attracting more pilgrims / tourists and providing them adequate infrastructural support
- ii) The economic resources, including the land and the human resources are to be exploited to the fullest
- iii) Since, money and power are the key elements for economic development in the scenario; no stone is to be left unturned in utilizing the patronage extended to the town galaxy of VIPs.
- iv) A positive approach and attitude of the various stake holders including the public, in understanding their responsibilities and willingness to be a part of identifying the solution for various issues to emerge in the process of development or confront the growth towards the set vision of the town

### **2.9.9 STRATEGIES – ECONOMIC DEVELOPMENT**

In view of the very modest scope for expansion of secondary sector development and also taking note of the fact that the consequence of the industrial development would be detrimental to promote pilgrimage tourism and tourism activities, the vision set of the town, the plan postulates the following strategies.

- i) To adequately expand the commercial space to serve the public as well as to capitalize on the demand raised by the locale and the pilgrims
- ii) To expand the economic base of the town by expanding the opportunities and scope for development of the tertiary sector.
- iii) To provide support for the creation, sustenance and growth of the non polluting cottage /households industries.
- iv) To get classified as a backward taluk to become eligible for concessions and other benefits.
- v) To attract more number of tourist and pilgrims –on all days



- vi) To take advantage of the patronage , being extended to the town's religious activities by the VIPs and political personalities for betterment and growth of the town
- vii) To alleviate poverty through implementation of development measures
- viii) To make use of the IT opportunities to bring out fiscal and capital investments for the town and to progress the set vision.

## **2.10 DEVELOPMENTAL TRENDS OF TRIUVANAMALAI TOWN**

Tiruvanamalai is the district head quarters and a special grade municipality. The town has evolved with the temple of Sri Arunachaleeshwarar as the foci, from the ancient period it has been it has been the temple town, encompassing lot of religious activities in and around it. In recent years the development of the town has been taking place at a much faster pace due to the increasing number of devotes and pilgrims come to the town each and every day. The town is slowly evolving into an Temple Tourist Town and as nodal point by attracting people for trade and commerce opportunities from the neighboring villages and towns. The increase in the industries is evident from the increasing share of workers in the tertiary sector of the town over the recent years.

## **2.11 PHYSICAL CONSTRAINTS**

Tiruvanamalai is well connected through road and rail network. The town lies in the rail route connecting Villupuram and Katapadi. It forms the centrally , as it is located in the meeting point of the converging lines of communications ie., eight arterials from major settlements of adjoining districts. Annamalai Hills is located on the western side of the town acting as a physical barrier protecting the growth of town in that direction. The growth of the town happens in all other directions in a much faster pace. The developments are prolonged along the Polur high way in the north , where the collectrate is located and also along Tindivanam road in the south , which as recently upgraded as the National Highway.

The town area is approximately 13.64 Sq. Km. accommodating around 1.3 lakhs population. Geographically the location of hills in the western direction inhibits the growth in that direction.

## **2.12 CURRENT TRENDS OF DEVELOPMENT**

While doing CCP as well as Business Plan Consultative meetings, the common opinion observed is that, the recent mushrooming of developments in the town have started adding on to the infrastructure deficiencies of the town. The commercial activities tend to pack up the central area of the town around the temple causing chaotic developments. The residential areas are held in a threat of being converted into commercial areas. As a result of these changes, many of the residents have moved out of the town, towards the periphery leading to the growth in the fringe area, particularly along the road to Chennai.

## **2.13 THRUST FOR DEVELOPMENTS**

Tiruvanamalai municipal area is compact, thickly built up and congested. The town extends to an area of about 13.64 sq.km only. To make the town carry on its economic activities in future, it has to be supported with various developmental activities in the town, for which there is no land available within the municipal limits and thus the focus for developments should in the following spheres,

- Enhance facilities to promote the town, Tiruvanamalai as a Temple town laid down with better facilities and services for both localities and also pilgrims who visit the town.
- Improvement of the Trade facilities with in the town, like relocation or improvement of the market areas.
- Improvement of the quality of the infrastructural facilities of the town to provide better standard of life for the local inhabitants.
- Regularizing the activities around the temple, without affecting the sanity of the temples .

## **2.14 STRATEGY ADOPTED FOR POPULATION PROJECTION**

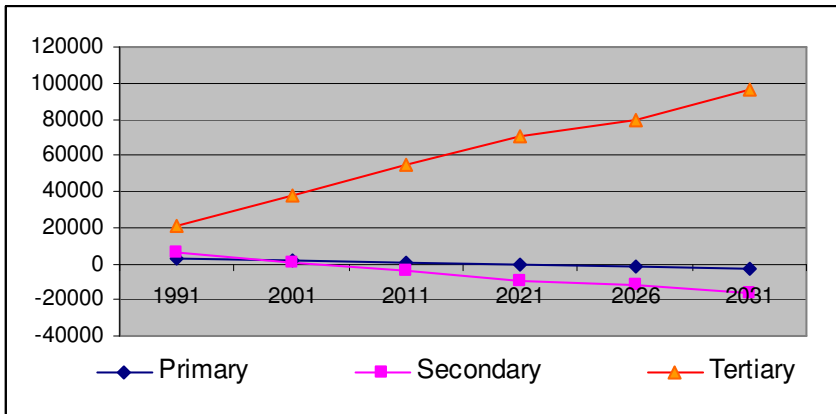
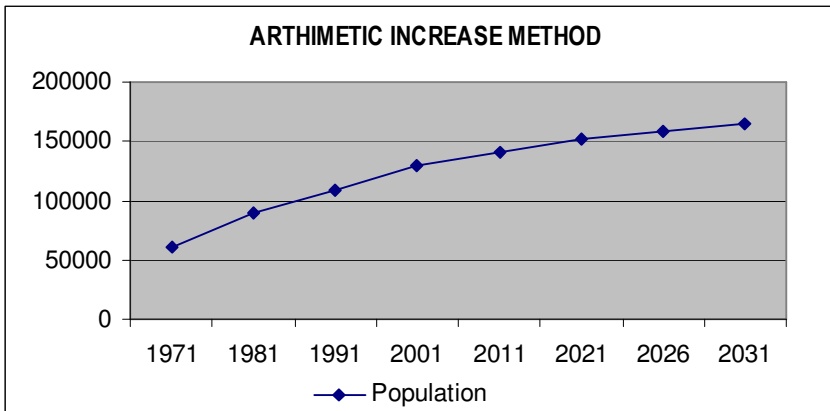
In the event of envisaging development projects for a town, population projections become indispensable. Increase in population of the town is governed by 3 basic factors of population components. They are Birth, Death, and Migration. All the 3 components are influenced heavily by external factors which influences the town development. For e.g. a town population may go high because of in-migration induced by employment opportunities (or) town may decline in population size because of out-migration. This may be a factor due to non availability of employment & facilities. Therefore estimating population for Tiruvanamalai town is done with the following assumptions.

The BP identified projects could attract more employment, and the proposed development could attract more in-migrants to the town, So the estimated population may hold good realization of the town. Considering the size in terms of the population and the land area in one hand and the dynamic growth pattern of the town it is proposed to adopt 3 scenario's in terms of population projection 1. Based on Arithmetic Projection (assuming Natural growth + some amount of investment attraction) 2. Geometric projection (calculated with added project which may likely to induce some amount of employment generation) 3.Exponential projection (Implementation of Large scale long term projects).

**2.14.1 SCENARIO FOR ARITHMETIC PROJECTION METHOD**

Tiruvanamalai town, in last decades have decreasing growth rate in terms of population. It is attributed to the fact that the town experiences a much faster commercial growth slowly changing the residential character of the town. By the way of identifying projects & implementing them during the post CCP period, the living standards of the residents could be improved and a natural check may limit the change in the town. Projects such as Solid Waste Management, Sewerage & Sanitation Improvement, Privatization Of

POPULATION PROJECTION



The scenario of population projection based on arithmetic projection considering the past trend of the population growth rate of 20%. The rate of growth is observed due to trade opportunities ultimately taking multi fold increase in the rate of population. In this scenario total projected population for 1991-2026 is 1.5 lakhs. Workers population forms part of the projected population. It is aimed that workers under tertiary sector are increased & the estimated workers under tertiary sectors are about 50% of the total population of the town.

WORKERS POPULATION PROJECTION

Fig 2.1 Arithmetic Progression method

Street Lights, etc are completed/ being implemented which gives better look to the town as well as serve population better. On conclusion of the Business plan consultative meeting and identifying potentials of Tiruvanamalai additional projects are identified both short term and long term. Short term projects are to be implemented in next 5 years time which is likely to improve the services and trade opportunities of the town. This may results more in migrants and limit people moving out of the town.

**2.14.2 SCENARIO FOR GEOMETRIC PROJECTION METHOD**

The Arithmetic projection method it is assumed that much of the secondary sector projects need not be implemented in short term. If the town is to get attracted and grow better projects under Tourism & Commercial sector have to be pushed through. Primarily Tourism and commerce are under private sector and local body has to find means of attracting the private people to invest. Therefore better terms and conditions for private operators are to be explored to provide service facilities. Some of the innovative projects such as relocation of vegetable markets and Construction of Shopping complexes do form part of Business plan. Tiruvanamalai is having still potentials for more projects under Tourism, Trade, Lodging facilities, Education center, Housing development,

BY Geometric projection method the estimated population up to 2026 is about 2.1 lakhs and the expanded employment as indicated above may result to workers such as secondary, tertiary in the proportion of 0.13%, 66 % respectively.

CCP To Business Plan

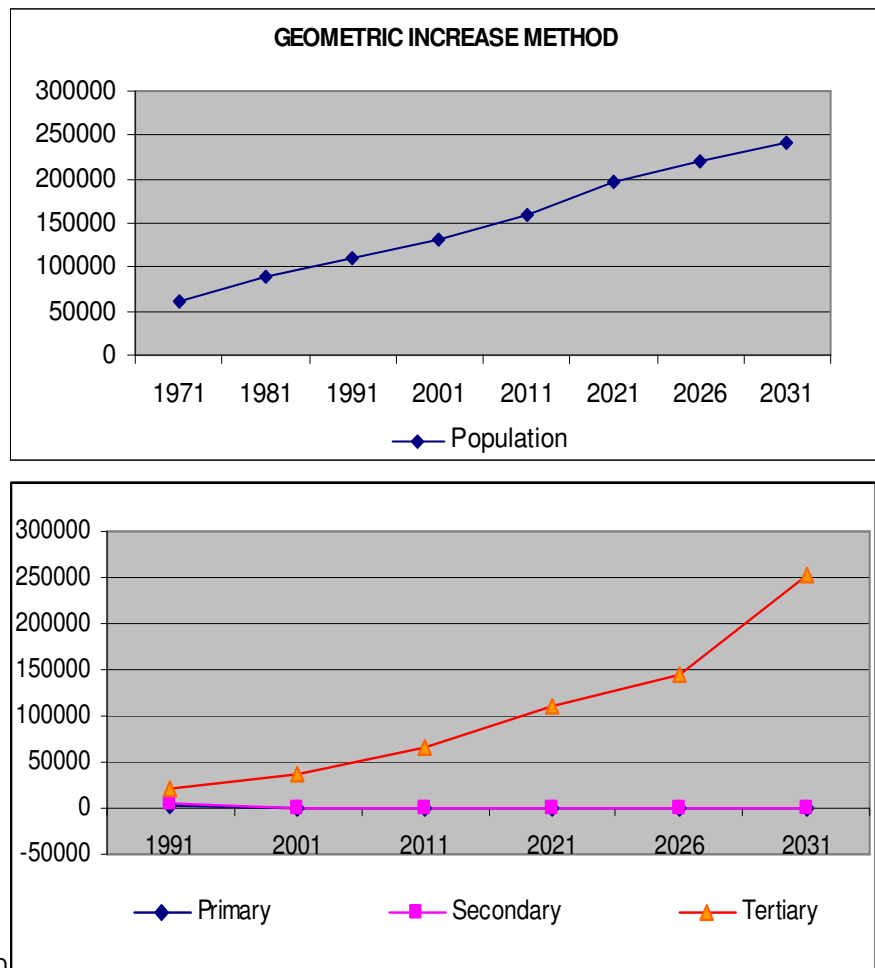


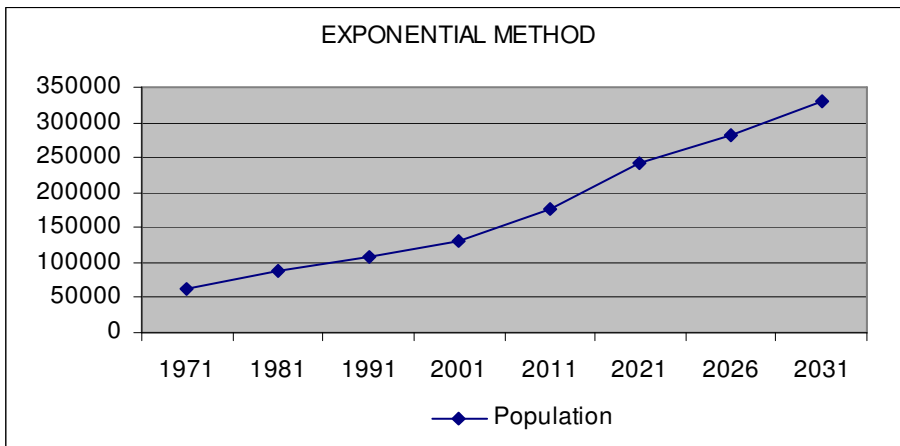
Fig 2.2 Geometric Progression method

Commercial development. If such projects are implemented, Tiruvanamalai may gear up for a higher level of population mostly attracting workers of secondary and tertiary sector.

**2.14.3 SCENARIO FOR EXPONENTIAL PROJECTION METHOD**

The experience of the consultative meetings of CCP & Business Plan highlights that Tiruvanamalai to be a “ Keenly interested Tourist and Pilgrim Town” in the next 20 years. With the Temple of Arunachaleeshwar temple in the centre of the town, Tiruvanamalai has the potentiality to grow as a Temple town at the global level.

Since it is emerging out as an tourist and pilgrim town, it could grow at much faster in Tourist sector provided tourism places within 50 kms radius of Tiruvanamalai towns, like Renugambal temple, Senbaguthoppu reservoir in Padavedu(50 kms away), Raja designed Fort in Gingee(30 kms away) and Sathanur Dam / Pennaiyur river (30 kms away)are developed in networking manner, Another potential area is made visible in this temple town ie., developments of Ashrams within Tiruvanamalai town attracting foreign tourists, Such developments and related activities Imparting yoga, Meditation, Natural cure etc., may attract large amount of national and international tourists . It is seen that If



By Exponential growth method the Erode town may have accommodate about 2.8 lakhs population during 2026 with a composition of .013% of secondary, 99% of tertiary sector respectively.

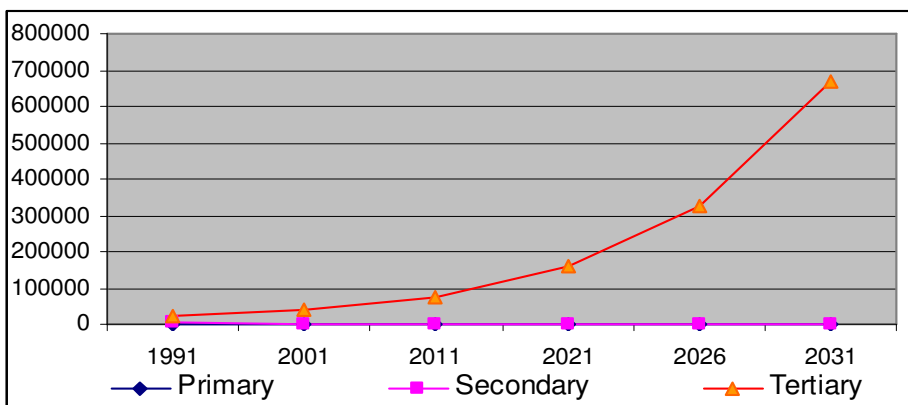


Fig 2.3 Exponential Progression method

at all Tiruvanmalai will grow better with some amount of tourism focused activities to promote overall development of the town. It is anticipated that proper political outlook added with administration thrust, Tiruvanmalai 's population can grow in many folds.

#### 2.14.4 ADOPTED POPULATION FOR THE NEXT 20 YEARS

It is seen a number of possibilities of population growth shifting from one trend to another trend purely based on the kind of inducement anticipated. In order to work out projects that includes service projects expressed by people, selected by Local body some logical projection of population need to be adopted. Since Geometrical method demands small scale short term heavy investment project it is likely that it may be suitable to this municipality. Whereas Arithmetic projection may be simple to adopt the current trend and CCP as well as Business plan anticipate some amount of inducement practically population of Tiruvanmalai is likely to grow more than that of Arithmetic projection. As the municipality is moderated in size having limited resource may not be able to tap huge loans it may not also touch up to Exponential growth rate. Therefore the population adopted to work out business plan for 2026 may be in a measured phase. Thus the population increase may be inline with Geometric **Projection Method** fulfilling the vision of the town to be developed in "*Keenly interested Tourist and Pilgrim Town*".

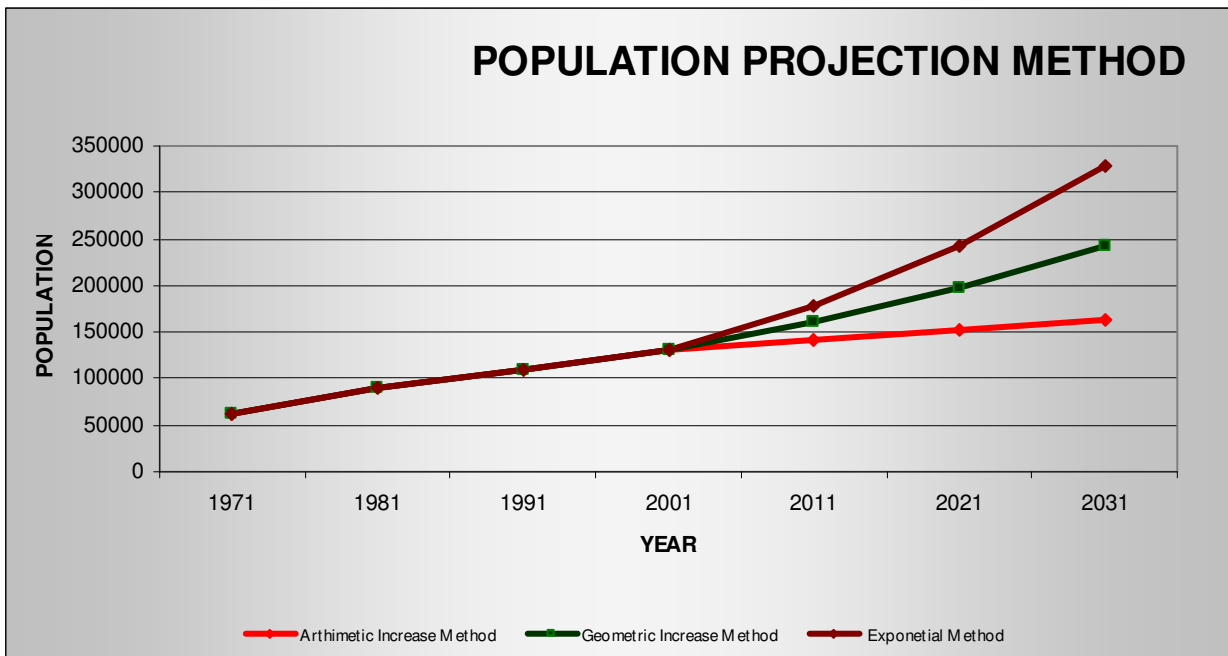


Fig 2.4 Population Projection- Adopted

## **BASIC SERVICES AND INFRASTRUCTURAL FACILITIES**

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### **3.0 GENERAL POSITION**

The access and availability of the services for day to day functions, is generally the prime concern of the people in any town. The municipality alone in Tiruvannamalai town essentially provides these services. The people are satisfied to a large extent, as the most important basic services, namely the water supply has been with least complaints in the town

There has been considerable amount of works, the municipality has undertaken in the recent past. Expecting in few wards, where there are unapproved layouts, and large scale encroachments and slums, there are many works that have been attended to in other areas. Even in unapproved places , the water supply and street lighting have been provide, and the problems are only in road formation and in provision of sewage network The prevailing stay in the Court for any development work. The people do not reveal any serious problems expect that of the silting of drains and water clogging during the rainy season. Other wise, the demand for water supply facilities or formation and surfacing of roads are mainly from the unapproved layouts.

### **3.1 WATER SUPPLY**

#### **3.1.1 PRESENT STATUS**

##### **3.1.1.1 SURFACE WATER SOURCES**

- i) The first supply scheme for Tiruvannamalai town was commissioned in the year 1934 for a population of 38000 to serve 5 gallons of water per head daily. The water source for the scheme included open wells, tube wells and infiltration galleries on the sides of Samuthram Eri, a natural tank.
- ii) The second water supply scheme was implemented in the year 1969 with head works established at Olagalapadai village , 24 km from the town and the water source was from the pick up anicut, construct across Thenpennaiyar. This scheme had the capacity to supply 70lpcd of water to the population. During 1989-90, an important project was undertaken to improve the capacity of this scheme.

- iii) Further, with assistance of the World Bank TWAD Board has implemented an improvement scheme in the year 1992 with the design population of 2.10 lakhs by the year 2021 A.D., to further improve upon the water source at the pick up anicut built across the Thenpennaiyar, situated 7 km, off from Sathanur dam. This has come to the town as the third water supply scheme and the benefit has been achieved since the year 1995. Thus the present water supply of 12.5 mld is from the schemes as given below:

Samuthiram Eri Scheme : 0.2 MLD

Olagalapadai Head Works-Scheme I : 4.8 MLD

Olagalapadai Head Works –Scheme II: 7.5 MLD

### 3.1.1.2 PIPED WATER SUPPLY SYSTEM

The town is having a gentle slope down from foot of the Annamalai hills in the east. Towards the west, the entire town is classified under three major zones, namely high level zone, low level zone and the middle level zone. Further, the middle level, where the intensity of population is high, is further divided in to the zones namely middle zone, north zone and south zone. Water from the head works at Olagalapadi is passed on to Sirupakkam ground level reservoir of 0.7 MLD capacity, which is around 13km, away from the town and carried to the pumping station Thandampet road. From this point, it is pumped to 8 over head tanks located in different water supply zones for distribution. The location and the capacity of the OHTs are detailed below. The water is being supplied through 9670 house connections, and 595 stand points, besides 93 deep bore wells put up by the municipality. Out of the total number of street, 153 streets are provided with water supply installations. Fig 3.1

TABLE 3.1 DETAILS OF OHT- TIRUVANAMALAI

Sl.No	Location	Capacity/Lts in Lakhs
1	Somawarakula St	6.82
2	Somawarakula St	4.50
3	V.O.C Nagar	6.82
4	Paegopuram	10.00
5	Tindivanam Road	18.00
6	Muthu Vinayagar Koil St	10.00
7	Pomathakulam Street	8.00
8	Somawarakula St	3.00
	<b>Total</b>	<b>67.14</b>

Source: Tiruvanamalai Municipality – Booklet on “Water supply salient feature”



**3.1.2 GOALS- WATER SUPPLY**

- I. to provide adequate water supply to the minimum requirements of the public, at regular timings and with adequate pressure
- II. to check wastage and misuse of water
- III. to generate more revenue for better operation and maintenance of the systems and to supplement the capital works, in order to render the delivery of the service self sustaining over a period of time

**3.1.3 ISSUES – WATER SUPPLY**

**3.1.3.1 TOWN LEVEL**

**A) WATER SUPPLY – QUANTITY-ADEQUACY**

The water supply systems pump 12 MLD of water to the town everyday. It works out to 90 lpcd of supply, which matches the norms fixed by the State Government. Therefore, there is no major issue as far as the sources for water supply is concerned and if at all, it is only the regular O&M activities.

**B) WATER SUPPLY –PRESSURE**

The pressure at the points of supply at tail end areas is too less. In some cases the pressure weakens as the distribution lines are not to be laid according to the gradient /gravity. It is also due to the fact that the water is drawn using motors and hence the supply pressure could not be maintained uniformly. Appropriate actions such as relaying of distribution lines, direct link to the OHT and prevention of clandestine water drawl will be taken to correct the imbalance in pressure.

**C) WATER SUPPLY-TIMING & INTENSITY**

Water could not be supplied at the same and convenient time to the entire town. As the water is drawn from the source which is 24km, away and only about 50 %of the water supply could be stored with the available capacity of the OHTs, water is to be supplied at odd hours. Also, water could be supplied only on alternative days in high level zone. These kinds of deficiencies are to be corrected by construction of additional OHTs at appropriate locations.

**3.1.3.2 ISSUES AT WARDS/ STREET LEVELS – WATER SUPPLY**

- i) It may be noted first, there is no major issue of concern in regard to water supply in the town.
- ii) Though the municipality supplies around 90 lpcd of piped water supply and provides 100 % coverage in the system, the sub surface water is also tapped by the public. The large scale un approved developments and encroachments have blocked the water bodies to receive the storm water in full. This gradually lowers the water table at the town.
- iii) Water Supply pressure in wards 6&9 is to improved
- iv) The water supply timing is to be regulated ,especially in the wards like 9&23
- v) For 21820 houses, in the town, 9670 in –house connections are provided, which implies about half the town population is served by stand point and hand pumps. There are 688 stand points /hand pumps in the town, and this number is to be adequately increased.
- vi) Nearly 60% of the house connections are not metered, which acts as against the judicious use of water.
- vii) The collection of water charges helps only O&M activities and does not support capital works

**3.1.4 FUTURE REQUIREMENTS- WATER SUPPLY**

**3.1.4.1 TOWN LEVEL**

**A) QUANTITY**

The present water supply scheme is designed for the period 2021 A.D with the projected population of 2.10 lakhs. Up to this level of population, at present source can supply 90 lpcd of water. The level of 2.10 lakhs of population is expected to be realized only beyond 2021.A.D with the current trends seen in the growth of population. Therefore there is no priority needed to plan for additional water supply sources at present.

**B) SUPPLY**

In order to reach the water to the consumers in adequate pressure and at convenient times, it is required that three more OHTs – one each in ward 5, 33 and 39 are constructed within the next 2 to 3 years.

### 3.1.4.2 REQUIREMENTS AT WARD/ STREET LEVELS

At ward and street levels, water supply requirements are in the form of laying or extension of water supply distribution lines, particularly in unapproved layouts, provision of standpoints and hand pumps.

### 3.1.5 STRATEGIES –WATER SUPPLY

Strategies for an effective and efficient supply of water will include:

- i) To create awareness and control for judicious use of water and prevention of wastage of water
- ii) To provide for extension of distribution work
- iii) To create storages i.e. OHTs with suitable capacity to meet the quantum and pressure requirements
- iv) To plan for innovative operation and maintenance mechanism
- v) To generate more revenue by way of levying user charges for water supply related capital works
- vi) To plan for improvements in water table

### 3.1.6. IMPROVEMNTS TO EXISTING WATER SUPPLY

Improvements to the existing water supply in Tiruvanmalai has been prepared by the municipality at the estimated cost of 320.04 lakhs. Council's resolution No 2 dated 30.6.05 has been passed. Funds / loans can be raised from TNUFISL to implement on scheme. The salient feature of the of the improvement to water supply in Tiruvanmalai is given in the following table 3.2

TABLE 3.2 COMPONENTS OF IMPROVEMENT SCHEME TO THE EXISTING WATER SUPPLY IN TIRUVANAMALAI

Sl.No.	Name of the Works	Estimate Cost in Rs
1.	Improvement to the machineries attached to the pumping station (untreated water station)	16.94
2.	Improvements to water treatment equipments	12.15
3.	Improvements to the motor pumps of protected water	10.43
4.	Improvements to the booster	10.31
5	Improvements of feeder mains	20.81
6.	Construction of ESR at Kariyan Chettiyar street (3.5 lakh litres) and at Theni malai (4.5 lakh litres)	31.39
7.	Provision of new distribution lines, proposition of more diameter pipes in places of less diameter pipes	100.63
8.	Road cutting and setting of the Same	45.58
9.	Total	278.24
	Miscellaneous	41.80
	Grand Total	320.04

## **3.2 SEWERAGE, DRAINAGE AND SANITATION**

### **3.2.1 EXISTING STATUS**

#### **3.2.1.1. TOWN LEVEL- SEWERAGE AND DRAINAGE**

There is no separate system for carrying the sewage and storm water separately in the towns. The roadside drains are used for carrying both sullage and rain water. Of the 27580 households, only around 50% houses have their own septic tanks. In rest of the cases, the night soil with sullage water is let into the drains. Even, in cases where the septic tanks are available, the overflowing water is let in to the drains. Under ground drainage system does not exist in the town. Open drains are available in most parts of the town to a total length of 115 km., against the road length of 94 km

Of 115 km, drains, 55 km., of length constitutes pucca drains and the remaining 60 km., kutchra drains. Nearly two thirds of the roads, existing in the unapproved layouts have the drains. The town has two disposal points namely Nochimalai Eri & Kilnathur Eri for letting out sewage and storm water. The main drain of Annai Salai collects the sullage water from the feeder roads and lets out at Nochimalai Eri. Another main drain at Vettavalam roads joins at Kilnathur Eri. Both these drains run in the direction of the natural slope, towards the east from of the foot hills on west, The Olaiyar, a natural channel running west to east outside the town limit, on the southern side also collects the waste water from the wards lying in the southern side of the town. There are no drains connecting the Olaiyar River, but the water flows to the river because of the natural slope in terrain.

#### **3.2.1.2 WARD/ STREET: SEWERAGE AND DRAIN**

An analysis of the availability of drains street wise in the town reveals that, excluding the un approved layouts, and encroached land areas, in all other areas in 39 wards, only few of the streets and cross streets which are still of mud or WBM surface, do not have drains. The total length of the drains is 115 km., against the total length of the road of 94 km. This means, at least 21 km., of roads do have drains on both sides

#### **3.2.1.3 QUANTITY – SEWERAGE & DRAINAGE**

The quantum of sewage is not measured and also not treated. But assuming 90 lpcd supply of water, and 80% return as waste water, the estimated sewage is in the order of around 90 lakh liters a day. Annexure 4 shows the type, length and its items of drains in the town.

**3.2.2 ISSUES: SEWERAGE AND DRAINAGE**

**3.3.2.1 TOWN LEVEL**

- i) There is no separate system of sewerage or drainage, and the existing system is a combined one
- ii) The drains do not carry the sewage or storm water, as the drains throughout the town are completely silted or encroached. In some cases, the drains are even paved over by the shopkeepers, leaving no room for cleaning
- iii) As the town is situated in the foot of the hill and the natural slope from the foot of the hills towards the east brings a lot of water in to the town during the rains. As the vegetation in the hills has now been reduced, there is soil erosion and storm water carries all the sand to the town and silts the drains.
- iv) An estimated around 1000 families do not have sanitary provision of their own
- v) The natural drainage system that existed two decades back in the town has been badly tampered with. The natural flow of the waste and rain water has been blocked and built upon resulting in pools and ponds of the waste / rain water stagnating at a number of places in the town liberally breeding mosquitoes.
- vi) The stagnant waste water becomes septic and putrefaction takes place emanating foul smell in the area besides presenting a filthy environment; Environmental health is greatly affected by these pools of pollution.
- vii) Seepage of the polluted putrefied waste water pollutes the ground water
- viii) Many of the water bodies belong to the revenue department, with the result, the position of the municipality becomes precarious in the sense, that though these drains lie within the limits of the municipal town, the municipality is not in a position to do much including prevention of encroachments, protection of drainage lands, construction of drains along the drain courses to provide an environmentally better and mosquito-free living environment
- ix) Nearly 5 lakhs of devotees come to town on full moon day. The temporary toilets being put up for them are inadequate and not environmentally hygienic.

**3.3.2.2 WARD / STREET LEVEL ISSUES: SEWERAGE AND DRAINAGE**

- i) As the municipality has not constructed drains in the un approved layouts , the households let loose the sewage on the street and the flow to the near by kuttais or theerthams causing several deterioration of physical environment
- ii) Some of the mud or WBM roads are not provided with side drains
- iii) In some parts of the town, the drains are not constructed with proper gradient to facilitate a smooth flow of the waste water.
- iv) The encroachments along the foot hills, particularly in ward numbers 25 and 7 have blocked the natural drainage channels.

**3.3.3 FUTURE REQUIREMENTS : SEWAGE AND DRAINAGE**

**3.3.3.1 TOWN LEVEL**

- i) The long stretch of mountain on the western side of the town brings huge quantity of rain water in to the town. This storm water comes with silt and silts the entire drainage system of the town. Therefore, in order to prevent flooding of the town during the rainy season, it is required construct an exclusive storm water drain along the foot hills of Annamalai hills and links it to the drainage outlets.
- ii) The northern end of this proposed channel has to be linked to Samuthiram Eri while on the southern side it is to be linked to Agni theertham. Further, the Agni theertahm will be connected to Tamarai kulam and from there to Olaiyar to carry the excess storm water.
- iii) An intensive and extensive education campaign is to be launched to educate the public and make them fully aware of their duties in keeping the environment hygienic and livable , and also to solicit their co-operation with the municipality in the up keep and protection of appurtenances provide infrastructural facilities,

**3.3.3.2 WARD/ STREET LEVEL REQUIREMENTS : SEWERAGE AND DRAINAGE**

- i) Ward level and street level requirements in respect of sewerage and drainage as expressed by the respective councilors and general public are listed and included in capital improvements programme for 5 years starting from 2001-2001.

The priorities have been fixed on the basis of importance of a service and technical /economic feasibility.

### **3.3.4 STRATEGIES – SEWERAGE AND DRAINAGE**

Strategic plan for 2001 envisages 100% underground sewerage systems for the town and treated sewage let in to the disposal points. Further strategies would include,

- i) To prevent water from hills to enter in to the town
- ii) To link the water bodies to store storm water and increase the ground water table
- iii) To provide adequate sanitation facilities for the pilgrim and tourist
- iv) To act as facilitator in construction of slumps for collection of sewage at street levels, where the local body has not constructed the sewage channels
- v) To make the sanitary workers to work in coordination with the councilors under the control of the municipal health officer.
- vi) To strengthen the operation and maintenance machinery by updating the know –how and methods and techniques of handling waste water and even privatizing the O&M
- vii) To educate the citizens about the need for scientific methods of sanitary uses and the need for environmental hygiene.
- viii) To cover the entire population by sanitary measure and facilities by 2011.

### **3.2.5 UNDER GROUND DRAINAGE SCHEME**

Under ground drainage system scheme is proposed in Tiruvanamalai town. The scheme has been prepared by TWAD board at the estimated cost of Rs.58.66 crores. It is prepared to implement the scheme in two phases. The area which falls under part I of zone II and zone III in the core and key area of the town and this area has been proposed to be taken up as phase I. The rest of the area will be in Phase II. Fig 6.6 shows the areas under phase I and phase II.

The total quantity of sewage anticipated from this town from ultimate stage is 19.006 mld and this sewage quantity will be collected in the suction well of main pumping station proposed at pandra kulam near Vetlavelam road in zone III as will be pumped to the proposed STP at Kilnathur,

### 3.2.5.2 DESIGN PARAMETERS

Sewers	Adopting 90 cpcd of sewage contribution
Self cleansing velocity	1. Minimum 0.6 m/sec (for the present stage) 2. Min 0.8 m/sec (or the ultimate stage)
Min, Size of sewer	200mm dia.
Material of sewer	1. upto 375mm dia - Stone ware pipe 2. 400mm and above - R.C.C NP3 class pipe
Manholes	Every 30m intervals and at every street junction
Screen Wall	3 DWF
Grit Wall	3 DWF
Suction well	10 minutes storage at 1 DWF
Pump set	1 DWF : 2 Nos 2 DWF : 1 No
Pumping Main	: Peak Factor 2.25 D.I. Pipes and PSC Pipes
Treatment	: Waste Stabilization Pond

### 3.2.6 SUSTAINABILITY INDICATORS

- 1) Underground sewage system : by 2021
- 2) 100% cover by sewage /drainage network: by 2011

## 3.4 SOLID WASTE MANAGEMENT

### 3.3.1 EXISTING STATUS

#### A) QUANTITY

As per the vision plan 2004, amount of solid waste being generated is 53 mts per day by the local body, or in other way it is estimated that about 400 gms of solid waste is being produced a day per capita and as such for population of 1.30 lakhs as of 2001, the total generation of solid waste is about 53 tones a day. On a full moon day the quantity of waste generated is more than double, in view of the large number of devotees coming to the town.



### B) COLLECTION

The collection of garbage is managed by sanitary inspectors (3), supervisors (7), drivers (8) and 191 sanitary workers. All these personnel workers under the control of municipal health officer. The municipality uses 6 Lorries, 2 mini Lorries and 10 tricycles for the service. The Lorries carry 6 trips a day, while the mini Lorries and the carts / tricycles are used for 4 trips. The average travel distance per trip for the carts / tricycles will be around 5 km, while the same for Lorries and mini Lorries would be around 20 km. There are about 250 dustbin located in various street of the town. The amount of solid waste cleared every day is roughly estimated to be in the range of 80 - 75 %of the total waste generated.

### C) DISPOSAL METHOD

The town has compost yards – one on the northern side at Manalurpet road and the road is located in the southern side at Esanum. The extent of these compost yards are 8 acres and 3 acres respectively. No scientific treatment facility is available at the compost yard. For about Rs. 3000, the manure was generated and sold in the year 1998-99.

### D) WARD WISE GENERATION / COLLECTION / UNCOLLECTED WASTE

Table 3.3.shows the ward wise generated, collected and un-collected waste

TABLE 3 WARD WISE POPULATION AND GENERATING & COLLECTING OF WATER IN TIRUVANNAMALAI

Ward	Wastes			Remarks
	Generated kgs	Collected Kgs	Un collected Kgs	
1	1795	1525	270	-
2	1060	900	160	-
3	1360	1100	260	Girivalam Path/Bus stand
4	1400	1200	200	Girivalam Path Area
5	1035	900	135	Girivalam Path Area
6	1140	940	200	Girivalam Path Area
7	1120	1000	120	Girivalam Path Area
8	1275	1000	275	Girivalam Path Area
9	2055	1855	200	Temple Area
10	970	790	180	-
11	3105	2990	1115	Market
12	1035	900	135	-
13	850	800	50	-
14	1295	1100	195	-
15	1695	1550	195	-
16	1800	1600	200	-
17	655	600	55	-

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18	1886	1700	186	-
19	1325	1100	125	-
20	1080	1000	80	-
21	945	900	45	Market
22	3230	2500	130	-
23	1255	1150	105	Girivalam Path Area
24	630	500	130	Girivalam Path Area
25	1805	1600	205	Girivalam Path Area
26	1320	1100	120	Girivalam Path Area
27	2975	2600	375	Girivalam Path Area
28	1570	1350	220	Girivalam Path Area
29	1345	1150	195	Girivalam Path Area
30	1330	1100	230	Girivalam Path Area
31	1450	1200	250	Girivalam Path Area
32	1910	1700	210	Girivalam Path Area
33	960	850	110	Girivalam Path Area
34	930	870	60	Girivalam Path Area
35	1040	850	190	Girivalam Path Area
36	1915	1700	215	Girivalam Path Area
37	1565	1450	115	Girivalam Path Area
38	900	750	150	Girivalam Path Area
39	1000	855	145	Girivalam Path Area

Note:

- Generation of waste is based on percapita waste generation (0.4 kg)
- Un collected waste is based on an average % of uncollected wastes in the town
- It is said that during auspicious & full moon days the waste generated are double the normal days generation

### 3.4.2 ROLE OF PRIVATE AND NGO'S IN SOLID WASTE MANAGEMENT

Waste generated from Jothi market and vegetable markets are estimated as 1.5 MT and 4 MT respectively. Wards 27 and 28 have been brought MATURE Program for the purpose of vermin composting. At the time of stake holders meetings on 12.07.06 and visits to their wards and sites, it is made known that unit manufacturing vermin compost has almost become un-functional due to certain reasons. There are wards (27& 28) alone used to collect 2 to 2.5 MT daily through RESHMA NGO, to which the municipality used to pay Rs.60,000 per month .Remaining 37 wards, street sweeping and cleaning of drains are carried out by the municipality workers while the collection and disposal of waste from the houses have been privatized and the agency that carries out collection and disposal is Annamalaiyar environmental Protection Agency of Nammakal. The municipality is paying 6.66 lakhs per month towards this privatization. This private sector uses 210 workers for collection and disposal purposes. In the compost yard, agency prepares compost at the rate of 100 MT per year and is sold at Rs.200 per MT compost.

Medical waste generated from Hospital and dispensaries (20) are collected by EXNORA- another NGO towards proper disposal.

### **3.4.3 ISSUES – SOLID WASTE MANAGEMENT**

#### **3.3.3.1 TOWN LEVEL –ISSUES**

- i) There is room for improvement of garbage collection performance
- ii) Both compost yards at the town do not have compound walls , allowing the garbage to be strewn even beyond the yards by wind and animals/birds
- iii) Compost yards in close proximity to the residential / commercial area.
- iv) The devotees of girivalam do not properly deposit the garbage in bins and throw as they want, making it very difficult for collection and the environment.
- v) The garbage contains more of inorganic matter rendering it difficult for composting unless segregated.
- vi) Difficulties in monitoring and supervision of garbage clearance

#### **3.3.3.2 WARD/ STREET LEVEL-ISSUES**

- i) Placement of dustbins is an issue, though the residents demand dustbins in the street as individuals, they avoid keeping the dustbins in front of their houses. Placement of permanent dust chambers also faces the same problem.

### **3.4.4 FUTURE REQUIREMENTS**

#### **3.4.4.1 TOWN LEVEL**

- i) As of immediate need, compound wall is to be erected for the compost yards as shown in the project 6.6 Solid Waste Management
- ii) The segregation of organic wastes and conversion in to manure are to be scientifically planned and executed, though they are partly carried out at present.
- iii) The compost yards when originally identified were identified were situated far from the heart of the town .Now the town has extended and the yard s have become part and parcel of the town .Suitable sites for relocation are to be purchased and the existing yards to be closed and used fore other purposes.

**3.4.4.2 STREET / WARD LEVELS**

- i) Collection should be systematized by giving each house a polythene or a biodegradable bag so that it can be kept at the gate on the street for easy collection. Contrarily, the residents may be instructed to carry their garbage wastes to the vehicle passing through the streets at fixed timings with signals, through alarms and the like in the collection vehicles.
- ii) As a first step, dustbin as required by the residents may be supplied to be placed at vantage points or constructed with the consent of the residents.

**3.4.5 STRATEGIES – SOLID WASTE MANAGEMENT**

- i) To actively pursue recycling of waste and segregation of organic/biodegradable from inorganic wastes.
- ii) To train the operation and maintenance staff to handle the garbage scientifically
- iii) To privatize the solid waste management in full swing (at present partly done)
- iv) To computerize the solid waste management in order to have effective monitoring management as the issue is of great health concern.
- v) To provide support to give field instruction to the sanitary workers.
- vi) To set up compost yards outside the town boundary with scientific recycling facilities.
- vii) To educate the locale through cable media and hand bills, meetings etc , about the important public hygienic and the methods they have to follow in solid waste management and their cooperative attitude.
- viii) To impress upon devotees to maintain the holiness of the town by keeping its environment clean

**3.4.6 SUSTAINABILITY INDICATORS**

- i) Proportion of garbage lifted :90%
- ii) Proportion of vehicle capacity 100% to waste generated
- iii) Spacing of dustbins :50 M
- iv) Road length per conservancy staff :250 M

### 3.4 ROADS AND STREETS

#### 3.4.1 EXISTING STATUS

There are eight major roads leading from and to the town. Of these, two are national highways, three are state highway, and one is a major district road and other district roads. The total length of these roads is 20.9 km. In addition to these inter town roads; there are internal roads of 73 km., which constitutes the road network of the town. The buses ply on all important roads of the town. The roads occupy 8% percent of the total area as per 1975 land use study. The details regarding the roads maintained by the municipality are given in table 3.4.

TABLE 3.4 DETAILS OF ROAD UNDER MUNICIPAL MAINTENANCE-  
TIRUVANAMALAI

Sl.No	Types of Roads	Length in km	% to Total
1	CC Roads	6.038	9
2	B T Roads	50.056	69
3	WBM Roads	7.339	10
4	Mud Roads	8.793	12
	<b>Total</b>	<b>73.026</b>	<b>100</b>

The town is also linked by meter gauge rail line in the Katpadi - Villupuram Section. Tiruvanamalai railway station is located away from the core area of the town. Mostly the road transport serves the movement of goods and people and rail connection has become only incidental in view of the frequency of rail service and longer travel time it takes.

Annexure 5 shows the conditions and types of roads/ street, ward wise. They are the assets of the municipality too. Annexure 5 indicates number of culverts ward /street wise. They are also the assets of the municipality

#### 3.4.2 ISSUES-ROADS AND STREETS

##### 3.4.2.1 TOWN LEVEL

- i) The town does not have by pass road. Therefore, the by-passable traffic from all the eight inter town roads pass through the town
- ii) Tiruvanamalai , being a temple town a service town with a catchments area of about 20-30 km radius , it attracts huge floating population , The traffic

within the town is mixed , and congestion and choking of traffic are commonly seen

- iii) Absence of traffic signals and implementation of traffic regulatory measures such as one way parking etc.
- iv) There is a large amount of pedestrian traffic. This creates problems, especially in the bus and temple area.
- v) As there are eight major inter town roads radiating from the town, the heavy vehicle traffic is and they make deafening noise, which disturbs the quality of life in one form or the other.

#### **3.4.3.2 WARD/STREET LEVELS: ROADS**

- i) None of the major arteries do have foot path an encroachments have come on the road margins
- ii) There is a mix up of vehicular and pedestrian traffic near main gopuram
- iii) Nearly 22 % of the roads are WBM or Mud roads
- iv) Roads are not formed properly in the unapproved layouts , such as Tamil Min Nagar and Andal Nagar
- v) Some of the activities in certain locations create traffic congestion – School near the bus station market near the temple area etc.

#### **3.4.4 FUTURE REQUIREMENTS**

##### **3.4.4.1 TOWN LEVEL**

- i) A by –pass road on NH66- Tindivanam road is required immediately- Further a circular ring road intersecting all the eight arteries is to be developed.
- ii) A second bus stand in the south of the town and an express bus stand in the NH by pass are to be planned
- iii) Creation of parking lots –for regular traffic and for girivalam days
- iv) A traffic management plan for the town.

##### **3.4.4.2 STREET / WARD LEVEL**

At Street level, the following measures are required

- i) Traffic signals at periyar junction and Sakthi Theater- Kamaraj Road Junction
- ii) Foot path is to be provided/widened at Chinnakadai street
- iii) One way traffic is to be allowed in Chinnakadai Street.

- iv) Railway over bridge on NH 66 and Vettavalam road
- v) Auto Stand near Bus Stand and TirumanjanaGopuram entrance
- vi) Concreting and BT surfacing of roads as required.

#### **3.4.5 STRATEGIES – ROADS AND STREETS**

- i) To implement traffic management plan for the town
- ii) To pursue with NH for formation of by pass road
- iii) To actively co- ordinate with the Police Department to implement the traffic regulatory measures
- iv) To control speed of the vehicles on specific locations in the local body maintained roads
- v) To properly surface all roads in the town
- vi) To prevail upon the NH and SH Departments to provide footpaths, road dividers, and other street furniture in the roads maintained by them and to clear encroachments.
- vii) To relocate some of the activities to ease congestion.

### **3.5 STREET LIGHTING**

#### **3.5.1 EXISTING STATUS**

The municipality has provided 3584 street lights for the safety and replaced for the benefit of the people. Every year new street lights are added to the stock and around 200 or 300 lights are added during the year 1998-99. The types street lights provided in the town are as follows.

Mercury Lights	- 41
Sodium Vapour Lamps	- 540
Tube Lights	- 2903

There is one street light for every 33 m of road length and this is very close to the norms of 30 m. In un-approved layouts the number of street lights have to be and in critical junctions and spots tube lights have to be replaced by sodium vapour. There are three wire men employed by the municipality to attend to the function of street lighting. Municipality pays around Rs. 30 lakh per annum as electricity charges for street lights. In addition for maintenance, around Rs. 3 lakh is spent on workers and another Rs. 2 lakh is spent for the purchase of electrical fittings and bulbs for new lighting or replacements.

Annexure shows the type of street lights ward wise. It is noted that more crowded wards are provided with more Street lights.

### **3.5.6 ISSUES**

- i) The town is having a large number of floating populations in view of its religious importance and service capabilities. The movement of the pilgrims is not restricted only to the main roads also take the internal roads as short routes to each are different places in the town and certain services are also available for them in the internal roads. The intensity of traffic especially the pedestrian is high and therefore, street lights are required more than the required norms.
- ii) A street lighting is a non remunerative service for the municipality, the increase in O&M Capital expenditure in view of replacements and new lighting is felt by the municipality.
- iii) Inadequate number of street lights in the un approved layouts
- iv) Overhead open electrical wiring.

### **3.5.7 FUTURE REQUIREMENTS – STREET LIGHTING**

- i) The roads without street lighting are to be provided at least tube lights on a priority basis
- ii) Replacement of bulbs not burning is to be attended immediately.
- iii) More illumination near bus stand and temple area
- iv) Under ground electricity power supply system

### **3.5.8 STRATEGIES – STREET LIGHTING**

To adequately illuminate all streets and important locations (with reference to norms)

- i) To get the participation of welfare association in O&M activities
- ii) Further , the strategic plan would include provision of under ground electricity system by 2021 A.D

### **3.5.9 SUSTAINABILITY INDICATORS – STREET LIGHTING**

i)	Spacing of Street lights at present	30 m
ii)	Percentage of SV lights	90%
iii)	No of lights / sq.km	220
iv)	No of lights /1000 population	22
v)	Under ground electricity system	By 2021 A.D



### **3.7 EDUCATIONAL INSTITUTIONS**

#### **3.7.1 EXISTING STATUS**

- i) There are 18 primary schools in the town for around 13000 children in the age group of 5-10. Also there are 2 middle schools and 2 high schools, one each for boys and girls in the town which are administered by the government since the year 1990. The municipality only maintains the buildings of these institutions, while the salary is paid by the State Government.
- ii) In addition to these facilities, there are number of private matriculation schools and higher secondary schools maintained by Christian missions
- iii) There is one Government Arts College inside the town , and there are two Arts Colleges one Engineering College, one Pharmacy College and two polytechnics in the immediate surroundings of the town

#### **3.6.2 FUTURE REQUIREMENTS**

- i) The requirements for additional facilities in comparison with norms could be arrived only on taking account of all these institutions maintained outside the jurisdiction of the government. There were no requests for additional school from the public
- ii) Many of the school are to be improved and additional space created

#### **3.6.4 ISSUES**

- i) The municipality faces financial burden in incurring capital investment on the maintenance and expansion of schools
- ii) The court has stayed construction activities with in the girirvalam area

#### **3.6.5 STRATEGIES**

- i) To involve NGOs building improvement activities
- ii) To make other stake holders and line agencies to inopportune these activities in their programme
- iii) To provide municipal support for some of the relocation and improvement activities.

### **3.7 HEALTH**

#### **3.7.1 EXISTING STATUS**

- i) The town has the services of e government general hospital and one the hospital administered and maintained by the government
- ii) There are also two siddha hospitals being run by the municipality
- iii) Under the 5<sup>th</sup> Indian Population Plan, two nagara nala vazhvu centers have been commissioned for the welfare of the people at Anna Nagar Kilnathur
- iv) The municipality achieves around 90 %of the fixed target fixed by the collector in family planning operations. Also under the national vaccination programme, the municipality gives BCG DPT and other vaccinations for the children and women
- v) The municipality in its own premises runs mother rand child welfare centre. Apart from a doctor attached to this centre, females are working in this centre of five maternity assistants.
- vi) A health officer serves the municipality and he is ably supported b 5 sanitary inspectors and 9 sanitary supervisors
- vii) There are also number of private physicians attending to the health care services of the people
- viii) The municipality is divided in to three zones, the government under takes works for control of mosquitoes by spray of DDT in drains and stagnant water. The municipality maintains the third zone, and the government reimburses one third of the expenditure for the municipality

#### **3.7.2 ISSUES**

- i) Some of health facilities such as Government general Hospital and Chest Hospital have become central places of commercial or residential activities causing mutual strains in functioning of the people and the intuitions.
- ii) Lack of specialized treatment facilities in the Govt. hospital for want of space or other resources
- iii) Absence of inpatient facilities at the Siddha hospital.
- iv) Environment hazards created by health intuitions

### **3.7.3 FUTURE REQUIREMENTS – MEDICARE**

- i) To suitably plan for relocation of medical facilities in consultation with concerned agencies
- ii) To educate and create awareness among people about preventative and curative health care
- iii) To press upon health department for creation of specialized / new facilities and expansion of existing facilities
- iv) To keep a vigil over the medical intuitions disposal of wastes.

## **3.8 PARKS**

### **3.8.1 EXISTING STATUS**

The recreational and play facilities in the town are very limited. The municipality has two parks are under its control, one Gandhi Nagar and another at Avalurpet road near bus Stand. The extent of both these parks is around 0.1 ha. However, for many reasons they could not be maintained to the level of its objective. The list of water bodies are shown in the map 3.4

### **3.8.2 REQUIREMENTS**

Unlike metropolitan towns, the recreational options are limited in the town of the size of Tiruvanmalai. Therefore, in order to fill in gap more space for leisure and play are to be created and the existing places are to be well maintained, particularly for the young and the old. The municipality is to take up the following capital improvements works in this aspect. All the ponds in the town numbering 55 or so is improved with side walls and compound walls would act as open spaces and breathing spaces.

## FUTURE VISION OF TIRUVANMALAI

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The essence of the process of Corporate Planning is the involvement and participation of the target population in the process of plan preparation. The idea of the Corporate Planning emanates from the conception of the idea of 'Corporate Mechanism' in planning, execution and maintenance of the plan in sustainable mode.

The plan ultimately is a "a Plan by them, for them and of them". The Corporate Plan also suggests a five year phasing for the proposals of the plan and it is intended to address the "essential" needs in terms of services, in a order of street –wise priority, so that a sound base would be built at the end of five years as a stable launching pad, to leap forward towards attainment of the 'Vision' of the future as evolved by the stake holders in the consultative meetings. It is in the context that a plan of realistic approach with user's participation has become relevance provided the plan is also implemented before the spirit of aspirations of the people who contributed to it and their memory fades away.

The 'Vision' is an expression of the people as what they wish the town 'to become, and to be' over a period of 15 or 20 years. As mentioned early, preparing the base ready in terms of fulfilling the service requirement is absolutely necessary to achieve the desired 'Vision' for the city. The city corporate plan is short plan within a long term perspective plan.

### 4.2. FUTURE VISION

As a first priority step, a consultative process was evolved involving all he elected councilors who are the responsible representatives of the public to reflect the collective wish of their respective sectors of development to build the city. In two open meetings, one for the councilors and other for the line agencies, presided over the Chairman of the town council and in the presence Municipal Commissioner and all concerned from Municipality, the participants deliberated at length the issues relating to the town, the town's present status and its future for the purpose of consolidating their considered views, they have given in writing in the questionnaire provided for this purpose . Finally the vision for the town was evolved as ***"popular and keenly desired town for pilgrimage and tourism"***.

## **Department of Planning, School of Architecture and Planning, Anna University**

The stake holders meeting on 12.2.06 and number of meeting with officials and senior citizens, the consultancy had prior to the stake holder meeting emporium that the town should grow as pilgrimage and tourism based town.

The town at present is a service town for the hinterland in the region. For most of the Agricultural commodities produced in the region and the inputs required for the production, this town acts as a collection and distribution centre. More so, the town is known for its religious identity than its service capabilities. The congregation of devotees was mainly for the Karthigai Deepam festival in the town till few years ago. Since, the last 10 years there is a growing volume of pilgrims for 'Girivalam' worshipping and the pilgrim number is constantly increasing on all days. Nearly 5 lakhs of persons visit the town on 'Girivalam' day and the town has attained a special status in the religious map of the country, yet another activity, if proper fore thought is given namely, tourism in and around the Tiruvanamalai town within 50 kms radius can also be developed. This way people visiting Tiruvanamalai town may be staying a few more days to go around the tourist places like Sathanur dam, Renugambal temple, Sengpakka thoppu reservoir (Padavedu), Raja Designed Fort (Gingee).

The requirements at area level expressed by the councilors and other stake holders including the public at the series of consultative meeting at ward level mostly relate to building a city with a target of making it to fulfill the vision for the city.

### **i) URBAN GOVERNANCE**

The organization has to be developed in such away that it is responsive to the citizens needs with an understanding of the aspiration of the people and provide the services and facilities to an acceptable and at least minimum satisfactory level in a transparent mode of operation.

### **ii) MUNICIPAL FINANCE**

The organizational resources have to be managed in a way to meet the strategic and corporate plan capital and other requirements through an optimal assessment method of raising resources, so that the citizens are conscious and willing to pay and

contribute as when required. This is to be done with a well thought out financial and operating Plan considering the short term and long term capital and O&M requirements

**iii) ECONOMIC DEVELOPMENT**

The secondary sector activities are limited in the town. Also, the scope for this development is restricted. Further, the development of secondary sector activities will end up in conflict with the promotion of Pilgrimage and tourism activities. There fore, the economic development of the town is to be mainly derived from its tertiary services.

**iv) LAND USE**

The master plan use was prepared more than 25 years back. The revision of the Master Plan, for which survey works have been completed, has not come into force. It is expected that the revised Master Plan keeps in view the growth dynamics of the town.

**v) TRAFFIC AND TRANSPORTATION**

The town is traversed by eight arterial roads and railway lines and because of its location in the regional setting the town's roads become increasingly congested and polluting the town's atmosphere. By –passable traffic has to be diverted and the town roads will be made as far as possible dust free and less congested.

**vi) ESSENTIAL SERVICES**

Basic services such as Water supply, Sewerage, Sanitation, Street lighting, Solid waste management will be provided to the satisfaction of the citizens, so that it meets the social economic, environmental norms and needs.

**VII) ENVIRONMENT**

The town's land, hill water and air will be kept environmentally acceptable through concerted efforts to mitigate pollution and contamination of them by wastes, dust and

noise. This effort in this direction will ensure sustaining the good environment of the town.

**viii) PRIVATIZATION**

For proper efficiency in managing services and commercial ventures of sizable capital investment, private sector has to be involved, where the local body will play a role of facilitator or enabler.

**ix) COMMUNITY PARTICIPATION AND DEVELOPMENT**

Community's participation will be utmost importance in the development of the town an accordingly the efforts in planning for the town over short and long term will be oriented.

**4.2 MISSION STATEMENT**

The mission statement for the local body is to provide a conducive environment for the devotees, tourists and the local residents reflecting comfort/ease, efficiency and safety in their functioning and performance. This would mean a careful, conscious and sincere attempt by the municipality towards creation of adequate /appropriate infrastructure and its maintenance apart from projecting the image of the town in terms of its religious significance and quality of the services.

## ASSETS MANAGEMENT PLAN

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### 5.0 INTRODUCTION

The local bodies like families and individuals, persons certain assets and properties. In order to retain and strengthen the same as to earn income or provide needful service out of them, they should maintain and preserve them atmost. The exercise to maintain and preserve them is what we may call Asset Management Plan (AMP). These assets may be of movable and immovable items. Specifically the roads, parks, water supply sources and river pumping stations, storm water drains, sewerage lines, street lights, lands, buildings, markets, shopping complexes etc... are immovable assets and vehicles and others can come under movable assets.

As to draw AMP, we need to have information on the conditions, costs, values, extent of area in case of land or building, performance and management/ maintenance standards if any.

### 5.1 INVENTORY OF ASSETS

The basic aspects of the assets the AMP should have are types of assets in terms of quantity and quality, location and locational distribution of assets, procurement age of the assets, life cycle of the assets. Almost all assets either increase or decrease in their values through the time and space and use. Thus the values as particularly the value updating are yet other aspects of AMP.

Annexure II indicates conditions, types and location of bore well and hand pump streetwise/ ward wise while annexure V states the conditions and types of roads and length of each road street wise. It is understood that 50 – 60 % of bore well and hand pumps are functional. Annexure IV shows the storm water drains ward/ streetwise in terms of type, length and conditions (good, fair, bad).



TABLE 5.1 NUMBER AND TYPE OF VEHICLE UNDER SWM

S.No	Type of vehicles	No. of vehicles
1	Tricycles	10
2	Mini lorries	2
3	Lorries	6

TABLE 5.2: BUILDING OF SCHOOLS, HOSPITALS AND PARKS

S.No	Buildings	No.
1	Municipal school buildings	22
2	Hospitals	2
3	Municipal Parks	2

## 5.6 STREET LIGHTS

Tiruvanamalai municipality, as of 2002 has provided 3584 streetlights in the Town.

## 5.7 ROADS AND STREETS

Tiruvanamalai has roads to a length of 73,026 Kms, as asset to its credit. Of these roads, 75 percent of the roads are either BT or CC surfaced.

## 5.8 WATER SUPPLY SYSTEM

All the units relating to water supply systems covering Head works, Transmission Ducts, OHT's, Reservoirs, Supply and distribution mains, House connections, Treatment units and other related appurtenances belong to the corporation.

## 5.9 OTHERS

The corporation owns vehicles for the officials, for lifting of garbage and in addition owns compost yards for dumping of garbage.

## BUSINESS PLAN – PROJECT PROFILE

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### 6.1 INTRODUCTION

It is clear from the vision statement collected at the instance of CCP, the stakeholders anticipated town to be a

*“A proper and keenly desired town for pilgrimage and tourism”*

To achieve this, investments need to be routed at appropriate projects. As the vision statement do not directly lead to a specific project concerted efforts are to be plowed in to achieve the vision. Business Plan is one such effort to review the projects that are identified in CCP and later implemented and to formulate additional innovative projects. It is achieved by means of consultative process where due importance is given to the stock holders involvement in the decision making towards the development of the Town. So the development initiatives will take place very much with in the perspective of the ownership of the stock holder of the town.

The Business Plan looks at the local body as a resource center rather than only a service provider and tries to emulate projects that are feasible to attract private investments. To execute this, a second stockholders meeting was called to assess the new innovative projects in Thiruvanamalai during July 2006. The projects that are listed by the stakeholders are assessed for implementation. The consultants also went around and identified innovative projects of market driven.

The BP is strongly advocates the development of the identified projects with not only economic returns but also promoting a social cause such as the buildings roads, Bus Stands and Tourism improvement by adopting universal design principles and inclusive planning approach. These are the new developments in terms of the spatial planning attempts around the World.

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The following are the workable projects proposed and that are considered under the Business Plan for the development of the town to enhance the town as an industrial town while keeping in mind achieving the quality of life of the people in the town.

- Commercial complex at fire station
- Improvements at the Bus Stand
- Jothi market – improvement
- Expansion of Lodge and Vegetable market
- Under ground Sewerage Systems
- Solid Waste Management
- Thamarai Kulam Boating Project

The identified projects are as basic services and specialized service for the improvement of the quality of living of the people of Thiruvanamalai town. The details of the above said projects are presented in the subsequent pages following an order in each project such as a brief introduction, need assessment, component courses, and operating parameters according to phase wise, expenses, revenue, debt services, and cash flow.

## 6.1

# COMMERCIAL COMPLEX at FIRE STATION

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### 6.1.1 INTRODUCTION

Thiruvannamalai, is a historical temple town in TamilNadu, situated about 190 kms south west of Chennai and 86 kms south of Vellore town. The function and growth of the town is closely linked to the famous Arunachaleswarar temple. The economic base of the town revolves mainly on the trade and commerce activities. Twenty seven per cent of the population, constitute the workforce of the town, of which more than two third of the workers are involved in tertiary sector activities, major contributors for the economic base of the town.

### 6.1.2 NEED ASSESSMENT

- The status of the district headquarters promotes more number of workers to be indulged in tertiary sector activities than in any other sector.
- The town grows constantly with its religious importance and around 3 to 5 lakhs of devotees visit the town for “Girivalam” on every full moon day. This has resulted in mushrooming of lodging houses and eating places.
- The informal sector activities are proliferating in the town and there are too many road side vendors encroaching the road margins and the platform in the temple area.
- The patronage for Girivalam being extended by VIPs constantly raise the status of the town and making it more and more popular and ropes in high volume of devotees. This helps tertiary sector activities to sustain and also offer scope for development.
- The major issues in the economic development of the town are that the economic gains are not adequately achieved through the opportunity provided by the huge turnout of pilgrims.

Hence there exists a strong need to adequately expand the commercial space to serve the public as well as to capitalize on the demand raised by the locale and the pilgrims. A commercial complex has to be built in prime municipal lands, like the fire station site which is worth bringing out the revenue returns.

### 6.1.3 COMPONENT COURSES

The project, "Commercial Complex at Fire station" is carried out in a single phase. The major component of the project includes, Construction of the Shops in both ground and first floors. A total of 50 shops has to be constructed in the site of area 501.5 sq.ft. Each shop which is to constructed measures to 100 Sq.ft each.

### 6.1.4 OPERATING PARAMETERS

The project cost has to be sourced from the finance institution, TUFIDCO and the total cost of the project is Rs.79.56 lakhs. The project has to be executed in a single phases pertaining to provide better commercial activities of the town.

### 6.1.5 EXPENSES

The execution of project, which is done in a single phase, for which the cost is worked out as 75.00 lakhs. The development costs of the project involves O&M Charges at 2% of the total project cost and the inflation rate of 4% of the total project cost, thus the total project cost is expected to be **79.56 lakhs**.

Table 6.1.1. Distribution of Development Components

<b>COMMERCIAL COMPLEX @ FIRE STATION</b>		
<b>S.No</b>	<b>Development Component</b>	<b>Rs. in Lakhs</b>
1	Construction of Commercial Complex (60 Shops) in Ground and First floor	75.00
<b>Development costs (a)</b>		<b>75.00</b>
1	O&M Charges @ 2% of (a)	1.50
2	Inflation @ 4% of (a)	3.06
<b>Over heads (b)</b>		<b>4.56</b>
<b>GRAND TOTAL (a+b)</b>		<b>79.56</b>

The project cost is loaned TUFIDCO at the interest rate of 8.25% per annum for a repayment period of about 20 years in which the moratorium period is 5 years. The loan money is obtained in two phases.

The total repayment is made at the end of 2026 is about Rs.108.91 lakhs for a total loan of about Rs.71.60 lakhs in the base year 2007. The details of the repayment schedule is given in the below table 6.1.2., in which the cash inflow in the repayment schedule is shown in detail

Table 6.1.2. CASH FLOW STATEMENT OF REPAYMENT PERIOD

<b>REPAYMENT SCHEDULE - CASH INFLOW (Rs in lakhs)</b>						<b>Repayment starting year: 2012</b>	
No. of years for Repayment: <b>20</b>							
Moratorium period: <b>5 Years</b>							
Repayment starting year: <b>2008</b>							
<b>Loan</b>	<b>Repayment year</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>	<b>Balance</b>	<b>Year</b>	<b>Total Repaym ent</b>
71.60	<b>2007</b>	0.00	0.00	0.00	71.60	<b>2007</b>	0.00
	<b>2008</b>	3.77	0.00	3.77	67.84	<b>2008</b>	3.77
	<b>2009</b>	3.77	0.00	3.77	64.07	<b>2009</b>	3.77
	<b>2010</b>	3.77	0.00	3.77	60.30	<b>2010</b>	3.77
	<b>2011</b>	3.77	0.00	3.77	56.53	<b>2011</b>	3.77
	<b>2012</b>	3.77	4.66	8.43	52.76	<b>2012</b>	8.43
	<b>2013</b>	3.77	4.35	8.12	48.99	<b>2013</b>	8.12
	<b>2014</b>	3.77	4.04	7.81	45.22	<b>2014</b>	7.81
	<b>2015</b>	3.77	3.73	7.50	41.45	<b>2015</b>	7.50
	<b>2016</b>	3.77	3.42	7.19	37.69	<b>2016</b>	7.19
	<b>2017</b>	3.77	3.11	6.88	33.92	<b>2017</b>	6.88
	<b>2018</b>	3.77	2.80	6.57	30.15	<b>2018</b>	6.57
	<b>2019</b>	3.77	2.49	6.26	26.38	<b>2019</b>	6.26
	<b>2020</b>	3.77	2.18	5.95	22.61	<b>2020</b>	5.95
	<b>2021</b>	3.77	1.87	5.63	18.84	<b>2021</b>	5.63
	<b>2022</b>	3.77	1.55	5.32	15.07	<b>2022</b>	5.32
	<b>2023</b>	3.77	1.24	5.01	11.31	<b>2023</b>	5.01
	<b>2024</b>	3.77	0.93	4.70	7.54	<b>2024</b>	4.70
	<b>2025</b>	3.77	0.62	4.39	3.77	<b>2025</b>	4.39
	<b>2026</b>	3.77	0.31	4.08	0.00	<b>2026</b>	4.08
		<b>71.60</b>	<b>37.31</b>	<b>108.91</b>			<b>108.91</b>

### 6.1.6 REVENUE

On completion of this project, the major avenues in which the revenue can be generated is by the rent amount collected from the 50 shops, which are to be constructed there. Base rate has been aimed for the first five years by considering the prevailing market rate and is proposed to increase 10% for the consecutive three years through out the repayment period. The total recovery is arrived at 2026 by means of collection is about Rs.358.78 lakhs.

### **6.1.7 DEBT SERVICES**

Debt servicing for this project starts with the principal of Rs.3.77lakhs from the year 2008. The debt charges become Rs.8.43 along with the interest. The total debt servicing for the project works out at Rs.108.91 lakhs in a loan amount of 79.56 lakhs including the grants and the total services are in the ratio of 79.56:108.91.

### **6.1.8 CASH FLOW**

From the cash flow chart it is evident that the cash flow is surplus through out the project. Recovery Vs. Repayment ratio starts at 3.82 in the year 2008 and those of the project it is 3.29. Whereas the debt charges and recovery remains under 0.30 indicating the project revenue is surplus over the debt servicing throughout the repayment period.

TABLE 6.1.3. TABLE SHOWING THE CASH OUTFLOW OF THE PROJECT

Particulars	Rent from the Shops	TOTAL (A)	Debt charges	TOTAL (B)	Surplus/ Deficit	CUMULATIVE SURPLUS/ DEFICIT	Recovery/ Repayment (A/B)	Debt Charges/ Recoveries (B/A)
2007	0	0	0	0	0	0	0	0
2008	14.4	14.4	3.77	3.77	10.63	10.63	3.82	0.26
2009	14.4	14.4	3.77	3.77	10.63	21.26	3.82	0.26
2010	14.4	14.4	3.77	3.77	10.63	31.89	3.82	0.26
2011	15.84	15.84	3.77	3.77	12.07	43.97	4.20	0.24
2012	15.84	15.84	8.43	8.43	7.41	51.37	1.88	0.53
2013	15.84	15.84	8.12	8.12	7.72	59.09	1.95	0.51
2014	17.42	17.42	7.81	7.81	9.61	68.70	2.23	0.45
2015	17.42	17.42	7.50	7.50	9.92	78.62	2.32	0.43
2016	17.42	17.42	7.19	7.19	10.23	88.85	2.42	0.41
2017	19.16	19.16	6.88	6.88	12.28	101.14	2.79	0.36
2018	19.16	19.16	6.57	6.57	12.59	113.73	2.92	0.34
2019	19.16	19.16	6.26	6.26	12.90	126.63	3.06	0.33
2020	21.08	21.08	5.95	5.95	15.13	141.77	3.55	0.28
2021	21.08	21.08	5.63	5.63	15.45	157.21	3.74	0.27
2022	21.08	21.08	5.32	5.32	15.76	172.97	3.96	0.25
2023	23.19	23.19	5.01	5.01	18.18	191.15	4.63	0.22
2024	23.19	23.19	4.70	4.70	18.49	209.64	4.93	0.20
2025	23.19	23.19	4.39	4.39	18.80	228.44	5.28	0.19
2026	25.51	25.51	4.08	4.08	21.43	249.87	6.25	0.16
<b>TOTAL</b>	<b>358.78</b>	<b>358.78</b>	<b>108.91</b>	<b>108.91</b>	<b>249.87</b>		<b>3.29</b>	<b>0.30</b>



## 6.2 IMPROVEMENT OF EXISTING BUS STAND

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### 6.2.1 INTRODUCTION

Tiruvanmalai town is Special grade municipality and a district head quarters town. The NH 66 (Pondicherry – Kirshnagiri) and State Highway (Cuddalore –Chittoor road) pass through the Tiruvanmalai town and meet each other in the heart of the town. The extent of the town is about 13.20 Sq.km. and divided into 39 wards. The total length of the streets and roads in he town is around 105 kms.



Fig 6.2 View of Existing Bus Stand

The population of the town as per 2001 census is 1,30,301. The main occupation of the people is trade, services and agriculture, yet it is well known town for its popular Arunachaleeshwar temple and other tourism related activities in around the town. Because of this tourism and pilgrim activity based town, there is a steady increasing a floating population daily (40000) and seasoned population (5 to 6 lakh people) during full moon day. For this permanent population (1.20 lakhs) and floating population daily (40000) daily and seasonal population 5 to 6 lakhs during full moon days and other auspicious days in the year. The facilities particularly the bus stand and their standard are to be high and efficient.

### 6.2.2 NEED ASSESSMENT

The existing bus stand situated in Avalurpet road is recently established. However, a large number of tourists and pilgrims visit the temple town and day by day this floating population is steadily an increasing trend. The facilities available in the Bus stand are inadequate and also certain existing facilities need to be improved as to keep in touch with modern times. Hence the improvement of existing bus stand, at present is an immediately required task to meet the requirements of the local population and also the floating population to create an conducive environment.

### 6.2.3 COMPONENT COURSES

The project, "Improvement Of Existing Bus Stand" is carried out in a single phase. The major components of the project include, provision of RCC roofs to existing waiting sheds, provision of modern sanitary facilities in pay and use toilets, Improvements to Waiting Halls and Cloak rooms, improving the parking lot area.

### 6.2.4 OPERATING PARAMETERS

The project cost has to be sourced from the finance institution, TUFIDCO supplemented by 10% contribution from the local body and the total cost of the project is Rs. 38.00 lakhs. The project has to be executed in a single phase pertaining to provide better infrastructural facilities improving the standard of service in the town.

### 6.2.5 EXPENSES

The execution of project, which is done in a single phase, for which the cost is worked out as 35.75 lakhs. The development costs of the project involves O&M Charges at 2% of the total project cost and the inflation rate of 4% of the total project cost, thus the total project cost is expected to be **38.00 lakhs**.

Table 6.2.1. Distribution of Development Components

<b>IMPROVEMENT OF EXISTING CENTRAL BUS STAND</b>		
<b>S.No</b>	<b>Development Component</b>	<b>Rs. in Lakhs</b>
1	Laying of new RCC roof to the existing waiting sheds Providing weathering course with Pressed tiles over the RCC roof Construction of Modernized sanitary complex Construction of new cloak rooms and widening the parking lots	35.75
<b>Development costs (a)</b>		<b>35.75</b>
1	O&M Charges @ 2% of (a)	0.76
2	Inflation @ 4% of (a)	1.49
<b>Over heads (b)</b>		<b>2.25</b>
<b>GRAND TOTAL (a+b)</b>		<b>38.00</b>

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The project cost is loaned TUFIDCO at the interest rate of 8.25% per annum for a repayment period of about 20 years in which the moratorium period is 5 years. The loan money is obtained in two phases.

The total repayment is made at the end of 2026 is about Rs.52.02 lakhs for a total loan of about Rs.71.60 lakhs in the base year 2007. The details of the repayment schedule is given in the below table 6.1.2., in which the cash inflow in the repayment schedule is shown in detail

Table 6.2.2. CASH FLOW STATEMENT OF REPAYMENT PERIOD

<b>REPAYMENT SCHEDULE - CASH INFLOW (Rs in lakhs)</b>						<b>Repayment starting year: 2012</b>	
No. of years for Repayment: <b>20</b>							
Moratorium period: <b>5 Years</b>							
Repayment starting year: <b>2008</b>							
<b>Loan</b>	<b>Repayment year</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>	<b>Balance</b>	<b>Year</b>	<b>Total Repayment</b>
34.20	<b>2007</b>	0.00	0.00	0.00	34.20	<b>2007</b>	0.00
	<b>2008</b>	1.80	0.00	1.80	32.40	<b>2008</b>	1.80
	<b>2009</b>	1.80	0.00	1.80	30.60	<b>2009</b>	1.80
	<b>2010</b>	1.80	0.00	1.80	28.80	<b>2010</b>	1.80
	<b>2011</b>	1.80	0.00	1.80	27.00	<b>2011</b>	1.80
	<b>2012</b>	1.80	2.23	4.03	25.20	<b>2012</b>	4.03
	<b>2013</b>	1.80	2.08	3.88	23.40	<b>2013</b>	3.88
	<b>2014</b>	1.80	1.93	3.73	21.60	<b>2014</b>	3.73
	<b>2015</b>	1.80	1.78	3.58	19.80	<b>2015</b>	3.58
	<b>2016</b>	1.80	1.63	3.43	18.00	<b>2016</b>	3.43
	<b>2017</b>	1.80	1.49	3.29	16.20	<b>2017</b>	3.29
	<b>2018</b>	1.80	1.34	3.14	14.40	<b>2018</b>	3.14
	<b>2019</b>	1.80	1.19	2.99	12.60	<b>2019</b>	2.99
	<b>2020</b>	1.80	1.04	2.84	10.80	<b>2020</b>	2.84
	<b>2021</b>	1.80	0.89	2.69	9.00	<b>2021</b>	2.69
	<b>2022</b>	1.80	0.74	2.54	7.20	<b>2022</b>	2.54
	<b>2023</b>	1.80	0.59	2.39	5.40	<b>2023</b>	2.39
	<b>2024</b>	1.80	0.45	2.25	3.60	<b>2024</b>	2.25
	<b>2025</b>	1.80	0.30	2.10	1.80	<b>2025</b>	2.10
	<b>2026</b>	1.80	0.15	1.95	0.00	<b>2026</b>	1.95
		<b>34.20</b>	<b>17.82</b>	<b>52.02</b>			<b>52.02</b>

### **6.2.6 REVENUE**

On completion of this project, the major avenues in which the revenue can be generated is by the tendered amount collected from the pay and use Toilets at the rate of 3 lakhs per annum and the cloak room fees about Rs.10 per bag for about 150 bags / day . Base rate has been aimed for the first five years by considering the prevailing market rate and is proposed to increase about 10% for the consecutive three years through out the repayment period. The total recovery is arrived at 2026 by means of collection is about Rs.52.02 lakhs.

### **6.2.7 DEBT SERVICES**

Debt servicing for this project starts with the principal of Rs.1.80 lakhs from the year 2008. The debt charges become Rs.2.23 lakhs along with the interest. The total debt servicing for the project works out at Rs.52.02 lakhs in a loan amount of 34.20 lakhs including the grants and the total services are in the ratio of 34.20: 52.02 lakhs.

### **6.2.8 CASH FLOW**

From the cash flow chart it is evident that the cash flow is surplus through out the project. Recovery Vs. Repayment ratio starts at 3.04 in the year 2008 and those of the project it is 2.62, whereas the debt charges and recovery remains under 0.38 indicating the project revenue is surplus over the debt servicing throughout the repayment period.

TABLE 6.2.3. TABLE SHOWING THE CASH OUTFLOW OF THE PROJECT

Year	RECOVERY	Pay and Use Toilets	Cloak Room Fees	Parking Fees	TOTAL (A)	REPAYMENT	Debt charges	TOTAL (B)	Surplus/ Deficit	C SUR
2007		0	0	0	0		0.00	0.00	0.00	
2008		3	5.47	1.82	10.29		1.80	1.80	3.67	
2009		3	5.47	1.82	10.29		1.80	1.80	3.67	
2010		3	5.47	1.82	10.29		1.80	1.80	3.67	
2011		3.3	6.02	2	11.32		1.80	1.80	4.22	
2012		3.3	6.02	2	11.32		4.03	4.03	1.99	
2013		3.3	6.02	2	11.32		3.88	3.88	2.14	
2014		3.63	6.62	2.2	12.45		3.73	3.73	2.89	
2015		3.63	6.62	2.2	12.45		3.58	3.58	3.04	
2016		3.63	6.62	2.2	12.45		3.43	3.43	3.19	
2017		3.99	7.28	2.42	13.69		3.29	3.29	4.00	
2018		3.99	7.28	2.42	13.69		3.14	3.14	4.14	
2019		3.99	7.28	2.42	13.69		2.99	2.99	4.29	
2020		4.39	8.01	2.66	15.06		2.84	2.84	5.17	
2021		4.39	8.01	2.66	15.06		2.69	2.69	5.32	
2022		4.39	8.01	2.66	15.06		2.54	2.54	5.47	
2023		4.83	8.81	2.93	16.57		2.39	2.39	6.42	
2024		4.83	8.81	2.93	16.57		2.25	2.25	6.56	
2025		4.83	8.81	2.93	16.57		2.10	2.10	6.71	
2026		5.31	9.69	3.22	18.22		1.95	1.95	7.74	
TOTAL		74.73	136.32	45.31	256.36		52.02	52.02	84.30	

## 6.3

### IMPROVEMENT OF JOTHI MARKET

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#### 6.3.1 INTRODUCTION

Tiruvanmalai town is situated 87 kms away from Chennai in the south western direction. It has a railway station on Katpadi –Villupuram meter gauge rail route. It is connected by national highway from Chennai and well connected by eight transport arterials. Tiruvanmalai, besides as district head quarters, is surrounded by important places with tourist attraction with 50 kms radius namely Padavedu in north, Gingee in the east, Thandrapatti in south, Sathanur dam/ Pennaiyur river in south west. Shopping and Commercial activities in Tiruvanmalai town are concentrated along the Chinnakadai street. Big bazaar Street and other surrounding streets. Jothi market carrying out transactions in Flowers, Vegetables and Fish is located abutting Chinna kadai Street.

#### 6.3.2 NEED ASSESSMENT

The existing Jothi market is a daily market situated in an extent of 10000 sq.ft.(971sq.m) in Chinnakadai street which is in the center of the town. Utilization of this space as observed the consultant's team is not proper and effective in tune of the town's growth and activities. It is rather under utilized, under deteriorated environment Mostly flowers shops and vegetable shops are run un remuneratively according to the enquirers made and cite that vegetable shops on Siva Padam Street and others are doing good business by throwing the traffic and pedestrian flow along the central part of the town disorderly manner. As to maximize the returns from the scare urban land of the Jothi market and set right the disorderly arrangement of the present shopping activities, it is necessary that the present Jothi market is remodeled and reconstructed so that an orderly development, more shops to be put, more revenue to be obtained to the municipality. In order to smoother the traffic flow along the Chinnakadai street, a provision of basement parking be planned which will also fetch an income to the municipality. In a phased manner, the on street Vegetable market in Sivam padam streets and other streets need to be relocated in appropriate locality of the town.

### 6.3.3 COMPONENT COURSES

The project, "Improvement of Jothi market" is carried out in a single phase. The major components of the project include, construction of about 60 shops in first and ground floors and construction of basement parking for both two and four wheelers

### 6.3.4 OPERATING PARAMETERS

The project cost has to be sourced from the finance institution, TUFIDCO supplemented by 10% contribution from the local body and the total cost of the project is Rs. 159.12 lakhs. The project has to be executed in a single phase pertaining to provide better scope for the trade and commercial activities improving the standard of services offered in the town.

### 6.3.5 EXPENSES

The execution of project, which is done in a single phase, for which the cost is worked out as 150.00 lakhs. The development costs of the project involves O&M Charges at 2% of the total project cost and the inflation rate of 4% of the total project cost, thus the total project cost is expected to be **159.12 lakhs**.

Table 6.3.1. Distribution of Development Components

<b>J O T H I   M A R K E T</b>		
<b>S.No</b>	<b>Development Component</b>	<b>Rs. in Lakhs</b>
1	Construction of Commercial Complex (60 Shops) in Ground and First floor with Parking facilities in the Basement floor	150.00
<b>Development costs (a)</b>		<b>150.00</b>
1	O&M Charges @ 2% of (a)	3.00
2	Inflation @ 4% of (a)	6.12
<b>Over heads (b)</b>		<b>9.12</b>
<b>GRAND TOTAL (a+b)</b>		<b>159.12</b>

The project cost is loaned TUFIDCO at the interest rate of 8.25% per annum for a repayment period of about 20 years in which the moratorium period is 5 years. The loan money is obtained in two phases.

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The total repayment is made at the end of 2026 is about Rs.219.21 lakhs for a total loan of about Rs144.12 lakhs in the base year 2007. The details of the repayment schedule is given in the below table 6.1.2., in which the cash inflow in the repayment schedule is shown in detail

Table 6.3.2. CASH FLOW STATEMENT OF REPAYMENT PERIOD

<b>REPAYMENT SCHEDULE - CASH INFLOW (Rs in lakhs)</b>						<b>Repayment starting year: 2012</b>	
No. of years for Repayment: <b>20</b>							
Moratorium period: <b>5 Years</b>							
Repayment starting year: <b>2008</b>							
<b>Loan</b>	<b>Repayment year</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>	<b>Balance</b>	<b>Year</b>	<b>Total Repayment</b>
144.12	<b>2007</b>	0.00	0.00	0.00	144.12	<b>2007</b>	0.00
	<b>2008</b>	7.59	0.00	7.59	136.53	<b>2008</b>	7.59
	<b>2009</b>	7.59	0.00	7.59	128.95	<b>2009</b>	7.59
	<b>2010</b>	7.59	0.00	7.59	121.36	<b>2010</b>	7.59
	<b>2011</b>	7.59	0.00	7.59	113.78	<b>2011</b>	7.59
	<b>2012</b>	7.59	9.39	16.97	106.19	<b>2012</b>	16.97
	<b>2013</b>	7.59	8.76	16.35	98.61	<b>2013</b>	16.35
	<b>2014</b>	7.59	8.14	15.72	91.02	<b>2014</b>	15.72
	<b>2015</b>	7.59	7.51	15.09	83.44	<b>2015</b>	15.09
	<b>2016</b>	7.59	6.88	14.47	75.85	<b>2016</b>	14.47
	<b>2017</b>	7.59	6.26	13.84	68.27	<b>2017</b>	13.84
	<b>2018</b>	7.59	5.63	13.22	60.68	<b>2018</b>	13.22
	<b>2019</b>	7.59	5.01	12.59	53.10	<b>2019</b>	12.59
	<b>2020</b>	7.59	4.38	11.97	45.51	<b>2020</b>	11.97
	<b>2021</b>	7.59	3.75	11.34	37.93	<b>2021</b>	11.34
	<b>2022</b>	7.59	3.13	10.71	30.34	<b>2022</b>	10.71
	<b>2023</b>	7.59	2.50	10.09	22.76	<b>2023</b>	10.09
	<b>2024</b>	7.59	1.88	9.46	15.17	<b>2024</b>	9.46
	<b>2025</b>	7.59	1.25	8.84	7.59	<b>2025</b>	8.84
	<b>2026</b>	7.59	0.63	8.21	0.00	<b>2026</b>	8.21
		<b>144.12</b>	<b>75.09</b>	<b>219.21</b>			<b>219.21</b>



### **6.3.6 REVENUE**

On completion of this project, the major avenues in which the revenue can be generated is by the amount collected as rent from the shops. Base rate has been aimed for the first five years by considering the prevailing market rate and is proposed to increase about 10% for the consecutive three years through out the repayment period. The total recovery is arrived at 2026 by means of collection is about Rs.358.78 lakhs.

### **6.3.7 DEBT SERVICES**

Debt servicing for this project starts with the principal of Rs.7.59 lakhs from the year 2008. The debt charges become Rs.9.39 lakhs along with the interest. The total debt servicing for the project works out at Rs.219.21 lakhs in a loan amount of 159.12 lakhs including the grants and the total services are in the ratio of 159.12: 219.21 lakhs.

### **6.3.8 CASH FLOW**

From the cash flow chart it is evident that the cash flow is surplus through out the project. Recovery Vs. Repayment ratio starts at 1.90 in the year 2008 and those of the project it is 1.64, whereas the debt charges and recovery remains under 0.61 indicating the project revenue is surplus over the debt servicing throughout the repayment period .

TABLE 6.3.3. TABLE SHOWING THE CASH OUTFLOW OF THE PROJECT

Year	RECOVERY	Rent from the Shops	TOTAL (A)	REPAYMENT	Debt charges	TOTAL (B)	Surplus/ Deficit	CUMULATIVE SURPLUS/ DEFICIT	Recovery/ Repayment (A/B)	Debt Charges/ Recoveries (B/A)	
2007		0	0		0	0	0	0	0	0	0
2008		14.4	14.4		7.59	7.59	6.81	6.81	1.90	0.53	
2009		14.4	14.4		7.59	7.59	6.81	13.63	1.90	0.53	
2010		14.4	14.4		7.59	7.59	6.81	20.44	1.90	0.53	
2011		15.84	15.84		7.59	7.59	8.25	28.70	2.09	0.48	
2012		15.84	15.84		16.97	16.97	-1.13	27.57	0.93	1.07	
2013		15.84	15.84		16.35	16.35	-0.51	27.06	0.97	1.03	
2014		17.42	17.42		15.72	15.72	1.70	28.76	1.11	0.90	
2015		17.42	17.42		15.09	15.09	2.33	31.09	1.15	0.87	
2016		17.42	17.42		14.47	14.47	2.95	34.04	1.20	0.83	
2017		19.16	19.16		13.84	13.84	5.32	39.35	1.38	0.72	
2018		19.16	19.16		13.22	13.22	5.94	45.30	1.45	0.69	
2019		19.16	19.16		12.59	12.59	6.57	51.86	1.52	0.66	
2020		21.08	21.08		11.97	11.97	9.11	60.98	1.76	0.57	
2021		21.08	21.08		11.34	11.34	9.74	70.72	1.86	0.54	
2022		21.08	21.08		10.71	10.71	10.37	81.08	1.97	0.51	
2023		23.19	23.19		10.09	10.09	13.10	94.19	2.30	0.44	
2024		23.19	23.19		9.46	9.46	13.73	107.91	2.45	0.41	
2025		23.19	23.19		8.84	8.84	14.35	122.27	2.62	0.38	
2026	25.51	25.51	8.21	8.21	17.30	139.57	3.11	0.32			
<b>TOTAL</b>	<b>358.78</b>	<b>358.78</b>	<b>219.21</b>	<b>219.21</b>	<b>139.57</b>		<b>1.64</b>	<b>0.61</b>			

## 6.4

### IMPROVEMENT OF LODGE & VEGETABLE MARKET

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#### 6.4.1 INTRODUCTION

Tiruvanmalai town is situated 87 kms away from Chennai in the south western direction. It has a railway station on Katpadi –Villupuram meter gauge rail route. It is connected by national highway from Chennai and well connected by eight transport arterials. Tiruvanmalai, besides as district head quarters, is surrounded by important places with tourist attraction with 50 kms radius namely Padavedu in north, Gingee in the east, Thandrapatti in south, Sathanur dam / Pennaiyur river in south west.

Tiruvanmalai town, in particular located within 50 kms radius, next only to Chennai district and Vellore district, in northern districts of Tamil Nadu state attract local, regional, national as well as international tourists in a large number. The tourist flow is steadily increasing because the town has the famous Arunachaleeshwarar temple and a number of ashrams. Daily 40,000 people visit the town in ordinary days and five lakh people visit the town on full moon day.

#### 6.4.2 NEED ASSESSMENT

All tourists and visitors who stay more than one day need to stay in the town. This sojourn stay by tourists, visitors and those who are on pilgrimage, is met by construction of additional lodges and necessities to bring in additional services like Shopping, Transport facilities. Restaurants etc., More such facilities will make the tourist stay for few more days in the town. This way the town is benefited directly or indirectly .As to meet the growing demand for above facility, the site available next to the new bus stand will be used for construction of new lodge cum vegetable market. The area available here is 2.5 acres of land owned by the municipality. The ground floor to be provided with the vegetable market 120 shops each measuring about 100 to 120 sq.ft. with necessary parking facilities, and other facilities while the first floor is provided with lodging rooms. Separate entry points can be provided so that people concerned will not meet and mingle.

#### 6.4.3 COMPONENT COURSES

The project, "Expansion of Lodge and Vegetable Market" is carried out in a single phase. The major components of the project include, Construction of Lodge Complex of about

20 rooms in the ground floor and also Construction of Shops of about 120 nos. which costs in total of about 2 crores.

#### 6.4.4 OPERATING PARAMETERS

The project cost has to be sourced from the finance institution, TUFIDCO supplemented by 10% contribution from the local body and the total cost of the project is Rs. 200 lakhs. The project has to be executed in a single phase pertaining towards improving the standard of services offered in the town.

#### 6.4.5 EXPENSES

The execution of project, which is done in a single phase, for which the cost is worked out as 188.16 lakhs. The development costs of the project involves O&M Charges at 2% of the total project cost and the inflation rate of 4% of the total project cost, thus the total project cost is expected to be **200.00 lakhs**.

Table 6.4.1. Distribution of Development Components

<b>LODGE &amp; VEG. MARKET</b>		
<b>S.No</b>	<b>Development Component</b>	<b>Rs. in Lakhs</b>
1	Construction of Lodge Rooms (20 nos) and veg. market (120 shops)	188.16
<b>Development costs (a)</b>		<b>188.16</b>
1	O&M Charges @ 2% of (a)	4.00
2	Inflation @ 4% of (a)	7.84
<b>Over heads (b)</b>		<b>11.84</b>
<b>GRAND TOTAL (a+b)</b>		<b>200.00</b>

The project cost is loaned TUFIDCO at the interest rate of 8.25% per annum for a repayment period of about 20 years in which the moratorium period is 5 years. The loan money is obtained in two phases.

The total repayment is made at the end of 2026 is about Rs.273.79 lakhs for a total loan of about Rs180.00 lakhs in the base year 2007. The details of the repayment schedule is given in the below table 6.1.2., in which the cash inflow in the repayment schedule is shown in detail

Table 6.4.2. CASH FLOW STATEMENT OF REPAYMENT PERIOD

<b>REPAYMENT SCHEDULE - CASH INFLOW</b> <b>(Rs in lakhs)</b>						<b>Repayment starting year: 2012</b>	
No. of years for Repayment: <b>20</b>							
Moratorium period: <b>5 Years</b>							
Repayment starting year: <b>2008</b>							
<b>Loan</b>	<b>Repayment year</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>	<b>Balance</b>	<b>Year</b>	<b>Total Repayment</b>
180.00	<b>2007</b>	0.00	0.00	0.00	180.00	<b>2007</b>	0.00
	<b>2008</b>	9.47	0.00	9.47	170.53	<b>2008</b>	9.47
	<b>2009</b>	9.47	0.00	9.47	161.05	<b>2009</b>	9.47
	<b>2010</b>	9.47	0.00	9.47	151.58	<b>2010</b>	9.47
	<b>2011</b>	9.47	0.00	9.47	142.11	<b>2011</b>	9.47
	<b>2012</b>	9.47	11.72	21.20	132.63	<b>2012</b>	21.20
	<b>2013</b>	9.47	10.94	20.42	123.16	<b>2013</b>	20.42
	<b>2014</b>	9.47	10.16	19.63	113.68	<b>2014</b>	19.63
	<b>2015</b>	9.47	9.38	18.85	104.21	<b>2015</b>	18.85
	<b>2016</b>	9.47	8.60	18.07	94.74	<b>2016</b>	18.07
	<b>2017</b>	9.47	7.82	17.29	85.26	<b>2017</b>	17.29
	<b>2018</b>	9.47	7.03	16.51	75.79	<b>2018</b>	16.51
	<b>2019</b>	9.47	6.25	15.73	66.32	<b>2019</b>	15.73
	<b>2020</b>	9.47	5.47	14.94	56.84	<b>2020</b>	14.94
	<b>2021</b>	9.47	4.69	14.16	47.37	<b>2021</b>	14.16
	<b>2022</b>	9.47	3.91	13.38	37.89	<b>2022</b>	13.38
	<b>2023</b>	9.47	3.13	12.60	28.42	<b>2023</b>	12.60
	<b>2024</b>	9.47	2.34	11.82	18.95	<b>2024</b>	11.82
	<b>2025</b>	9.47	1.56	11.04	9.47	<b>2025</b>	11.04
	<b>2026</b>	9.47	0.78	10.26	0.00	<b>2026</b>	10.26
		<b>180.00</b>	<b>93.79</b>	<b>273.79</b>			<b>273.79</b>

#### 6.4.6 REVENUE

On completion of this project, the major avenues in which the revenue can be generated is by the amount collected as rent from the shops and the lodge rooms. Rent is

collected at the rate of Rs.1500 per shop for one month and from the lodge charges of about Rs.100 per day is collected. Base rate has been aimed for the first five years by considering the prevailing market rate and is proposed to increase about 10% for the consecutive three years through out the repayment period. The total recovery is arrived at 2026 by means of collection is about Rs.717.66 lakhs.

#### **6.4.7 DEBT SERVICES**

Debt servicing for this project starts with the principal of Rs.9.47 lakhs from the year 2008. The debt charges become Rs.21.20 lakhs along with the interest. The total debt servicing for the project works out at Rs.273.79 lakhs in a loan amount of 200 lakhs including the grants and the total services are in the ratio of 200: 273.79 lakhs.

#### **6.4.8 CASH FLOW**

From the cash flow chart it is evident that the cash flow is surplus through out the project. Recovery Vs. Repayment ratio starts at 0.76 in the year 2008 and those of the project it is 0.66, whereas the debt charges and recovery remains under 1.53 indicating the project revenue is surplus over the debt servicing throughout the repayment period.

TABLE 6.4.3. TABLE SHOWING THE CASH OUTFLOW OF THE PROJECT

YEAR	RECOVERY	Rent from the market Shops	Rent from the Lodge rooms	TOTAL (A)	REPAYMENT	Debt charges	TOTAL (B)	Surplus/ Deficit	CUMULATIVE SURPLUS/ DEFICIT	Recovery/ Repayment (A/B)	Debt Charges/ Recoveries (B/A)	
2007		0	0	0		0.00	0.00	0.00	0.00	0.00	0.00	0.00
2008		21.6	7.2	28.8		9.47	9.47	19.33	19.33	0.76	1.32	
2009		21.6	7.2	28.8		9.47	9.47	19.33	38.65	0.76	1.32	
2010		21.6	7.2	28.8		9.47	9.47	19.33	57.98	0.76	1.32	
2011		23.76	7.92	31.68		9.47	9.47	22.21	80.19	0.84	1.20	
2012		23.76	7.92	31.68		21.20	21.20	10.48	90.67	0.37	2.68	
2013		23.76	7.92	31.68		20.42	20.42	11.26	101.93	0.39	2.58	
2014		26.14	8.71	34.85		19.63	19.63	15.22	117.15	0.44	2.25	
2015		26.14	8.71	34.85		18.85	18.85	16.00	133.15	0.46	2.16	
2016		26.14	8.71	34.85		18.07	18.07	16.78	149.92	0.48	2.07	
2017		28.75	9.58	38.33		17.29	17.29	21.04	170.96	0.55	1.80	
2018		28.75	9.58	38.33		16.51	16.51	21.82	192.79	0.58	1.72	
2019		28.75	9.58	38.33		15.73	15.73	22.60	215.39	0.61	1.64	
2020		31.62	10.54	42.16		14.94	14.94	27.22	242.61	0.71	1.42	
2021		31.62	10.54	42.16		14.16	14.16	28.00	270.60	0.74	1.34	
2022		31.62	10.54	42.16		13.38	13.38	28.78	299.38	0.79	1.27	
2023		34.79	11.6	46.39		12.60	12.60	33.79	333.17	0.92	1.09	
2024		34.79	11.6	46.39		11.82	11.82	34.57	367.74	0.98	1.02	
2025		34.79	11.6	46.39		11.04	11.04	35.35	403.10	1.05	0.95	
2026	38.27	12.76	51.03	10.26	10.26	40.77	443.87	1.24	0.80			
TOTAL	538.25	179.41	717.66	273.79	273.79	443.87		0.66	1.53			

## 6.6

### SOLID WASTE MANAGEMENT

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#### 6.6.1 INTRODUCTION



Fig 6.7 View of Existing Solid Waste Yard

Tiruvanmalai town is Special grade municipality and a district head quarters town. The NH 66 (Pondicherry – Kirshnagiri) and State Highway (Cuddalore –Chitoor road) pass through the Tiruvanmalai town and meet each other in the heart of the town. The extent of the town is about 13.20 Sq.km. and divided into 39 wards. The total length of the streets and roads in he town is around 105 kms.

The population of the town as per 2001 census is 1,30,301. The main occupation of the people is trade, services and agriculture, yet it is well known town for its popular Arunachaleeshwar temple and other tourism related activities in around the town. Because of this tourism and pilgrim activity based town, there is a steady increasing a floating population daily (40000) and seasoned population ( 5 to 6 lakh people) during full moon day. For this permanent population (1.20 lakhs) and floating population daily (40000)daily and seasonal population 5 to 6 lakhs during full moon days and other auspicious days in the year. The facilities particularly solid waste management as to be higher standards to meet the demand of the living and floating population of the town.

#### 6.6.2 NEED ASSESSMENT

Managing the quality of life of the people in cities is also based upon the effective and efficient collection and disposal of solid waste generated in the city by its various sources such as the domestic, commercial, public utilities and industrial sectors in the city. Salem is the city is not fully successful in managing the waste in the city due to the fact that there is no proper planning for the disposal in a comprehensive way. Even though the city adopts number of means to dispose the solid waste, intensive awareness campaigns etc. still there lot of garbage pail on the roads and streets. So it is essential to take up a proper way to dispose the waste. The proposed project attempts to improve



the existing standards of solid waste collection systems which were implemented by the Mature Project. Thus for the better and efficient functioning of the existing system, the improvement of the services thereby in the town becomes indispensable.

### **6.6.3 COMPONENT COURSES**

The project, " Solid Waste Management " is carried out in a single phase. The major components of the project include, the improvements to the existing systems such as providing compound walls to the compost yards, incurring new machinery, Establishment of basic infrastructural services at the management yard. These improvements helps in improving the standard of services offered to the people in the town and also better functioning of the municipality.

### **6.6.4 OPERATING PARAMETERS**

The project cost has to be sourced from the finance institution, TUFIDCO supplemented by 10% contribution from the local body and the grant of 30%, thus the total cost of the project is estimated as Rs.126.24 lakhs. The project has to be executed in a single phase pertaining towards improving the standard of services offered in the town.

### **6.6.5 EXPENSES**

The execution of project, which is done in a single phase, for which the cost is worked out as 119 lakhs. The development costs of the project involves O&M Charges at 2% of the total project cost and the inflation rate of 4% of the total project cost, thus the total project cost is expected to be **126.24 lakhs**.

Table 6.5.1. Distribution of Development Components

<b>IMPROVEMENT OF COMPOST YARD</b>		
<b>S.No</b>	<b>Development Component</b>	<b>Rs. in Lakhs</b>
1	Purchase of JCB 3D super machine	25.00
2	Compound wall to Essanyam compost yard	15.00
3	Compound wall to Manalurpet Road Compost yard	15.00
4	Improvements of Manalurpet Road compost yard	10.00
5	Providing weigh bridge	12.00
6	Greenaries to compost yard at Manalurpet Road and Essanyam	5.00

7	Providing lightening facilities to compost yard at Manalurpet Road and Essanyam	10.00
8	Watchman shed to compost yard at Manalurpet Road and Essanyam	5.00
9	Water facilities to compost yard at Manalurpet Road and Essanyam	3.00
10	Water service station, Lorry maintenance shed	12.00
11	Providing BT surface to compost yard at Manalurpet Road and Essanyam	7.00
<b>Development costs (a)</b>		<b>119.00</b>
1	O&M Charges @ 2% of (a)	2.38
2	Inflation @ 4% of (a)	4.86
<b>Over heads (b)</b>		<b>7.24</b>
<b>GRAND TOTAL (a+b)</b>		<b>126.24</b>

The project cost is loaned TUFIDCO at the interest rate of 8.25% per annum for a repayment period of about 20 years in which the moratorium period is 5 years. The loan money is obtained in two phases.

Table 6.5.2. CASH FLOW STATEMENT OF REPAYMENT PERIOD

<b>REPAYMENT SCHEDULE - CASH INFLOW (Rs in lakhs)</b>						<b>Repayment starting year: 2012</b>	
No. of years for Repayment: <b>20</b>							
Moratorium period: <b>5 Years</b>							
Repayment starting year: <b>2008</b>							
<b>Loan</b>	<b>Repayment year</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>	<b>Balance</b>	<b>Year</b>	<b>Total Repayment</b>
79.54	<b>2007</b>	0.00	0.00	0.00	79.54	<b>2007</b>	0.00
	<b>2008</b>	4.19	0.00	4.19	75.35	<b>2008</b>	4.19
	<b>2009</b>	4.19	0.00	4.19	71.17	<b>2009</b>	4.19
	<b>2010</b>	4.19	0.00	4.19	66.98	<b>2010</b>	4.19
	<b>2011</b>	4.19	0.00	4.19	62.79	<b>2011</b>	4.19
	<b>2012</b>	4.19	5.18	9.37	58.61	<b>2012</b>	9.37
	<b>2013</b>	4.19	4.84	9.02	54.42	<b>2013</b>	9.02
	<b>2014</b>	4.19	4.49	8.68	50.24	<b>2014</b>	8.68
	<b>2015</b>	4.19	4.14	8.33	46.05	<b>2015</b>	8.33

	<b>2016</b>	4.19	3.80	7.99	41.86	<b>2016</b>	7.99
	<b>2017</b>	4.19	3.45	7.64	37.68	<b>2017</b>	7.64
	<b>2018</b>	4.19	3.11	7.29	33.49	<b>2018</b>	7.29
	<b>2019</b>	4.19	2.76	6.95	29.30	<b>2019</b>	6.95
	<b>2020</b>	4.19	2.42	6.60	25.12	<b>2020</b>	6.60
	<b>2021</b>	4.19	2.07	6.26	20.93	<b>2021</b>	6.26
	<b>2022</b>	4.19	1.73	5.91	16.75	<b>2022</b>	5.91
	<b>2023</b>	4.19	1.38	5.57	12.56	<b>2023</b>	5.57
	<b>2024</b>	4.19	1.04	5.22	8.37	<b>2024</b>	5.22
	<b>2025</b>	4.19	0.69	4.88	4.19	<b>2025</b>	4.88
	<b>2026</b>	4.19	0.35	4.53	0.00	<b>2026</b>	4.53
		<b>79.54</b>	<b>41.44</b>	<b>120.98</b>			<b>120.98</b>

The total repayment is made at the end of 2026 is about Rs.120.98 lakhs for a total loan of about Rs79.54 lakhs in the base year 2007. The details of the repayment schedule is given in the above table 6.5.2., in which the cash inflow in the repayment schedule is shown in detail

#### 6.5.6 REVENUE

Since the project is a service project only, no revenue is generated from this project. So there is no recovery from this particular project and the repayment has to worked out from the surplus of the other projects

#### 6.5.7 DEBT SERVICES

Debt servicing for this project starts with the principal of Rs.4.16 lakhs from the year 2008. The debt charges become Rs.9.37 lakhs along with the interest. The total debt servicing for the project works out at Rs.120.98 lakhs in a loan amount of 79 lakhs including the grants and the total services are in the ratio of 79:120.98 lakhs.

#### 6.5.8 CASH FLOW

From the cash flow chart it is evident that the cash flow is surplus through out the project. Recovery Vs. Repayment ratio starts at in the year 2008 and those of the project it is 0.66, whereas the debt charges and recovery remains under 1.53 indicating the project revenue is surplus over the debt servicing throughout the repayment period.

TABLE 6.5.3. TABLE SHOWING THE DEBT CHARGES OF THE PROJECT

CASH- FLOW STATEMENT																					(Rs. In Lakhs)																				
Particulars	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	TOTAL																				
<b>REPAYMENT</b>																																									
Debt charges	0.00	4.19	4.19	4.19	4.19	9.37	9.02	8.68	8.33	7.99	7.64	7.29	6.95	6.60	6.26	5.91	5.57	5.22	4.88	4.53	<b>120.98</b>																				
<b>TOTAL (B)</b>	<b>0.00</b>	<b>4.19</b>	<b>4.19</b>	<b>4.19</b>	<b>4.19</b>	<b>9.37</b>	<b>9.02</b>	<b>8.68</b>	<b>8.33</b>	<b>7.99</b>	<b>7.64</b>	<b>7.29</b>	<b>6.95</b>	<b>6.60</b>	<b>6.26</b>	<b>5.91</b>	<b>5.57</b>	<b>5.22</b>	<b>4.88</b>	<b>4.53</b>	<b>120.98</b>																				

## 6.7

### THAMARAI KULAM BOATING PROJECT

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#### 6.7.1 INTRODUCTION

Tiruvanamalai town, besides its popularity with Arunachaleswarar Temple and a number of ashrams is not only naturally endowed with Annamalai hill in north eastern direction but also a number of ponds (kulams ) through out the town. They are 66 in number and their size varies from very small to big. The interesting fact of these ponds is that they have water almost throughout the town. It is spread like ornamental chain in the foot hills and many other parts of the town as observed in the fig. These ponds however small they are required to be protected and preserved towards human welfare of the town.



Fig 6.8 View of Thamarai Kulam

#### 6.7.2 NEED ASSESSMENT

As to protect and preserve the ponds, the state and central governments through their tourism development departments with help of Tiruvanamalai municipality have taken keen interest in investing money regularly to make more of such investments in Tiruvanamalai town is to be known as MATURE

project. A component of this project is Thamarai kulam boating project. Thamarai kulam spreading to an area of about 15 acres is located along the Thandampet road in southern part of the town. This thamarai kulam is endowed with over flowing water through out the year. Infact overflow more often inundated a number of houses, put up by TNHB, Tamarai Nagar besides damaging the standing crops and structures . Under MATURE in harnessing the kulam and protecting the houses, crops, through the construction of drains with cover, retaining walls along the kulam, rain water harvesting structures along the length of Thandampet road ( 1.28 km). this project after completion has been much appreciated by the local people and the government.

This protected and preserved Tamarai kulam is an asset to the municipality and its people. As to strengthen the same, popularize the same , and reap revenue from the

assets, the Tamarai kulam boating project is proposed at present . Conducive environment and feasibility of operating boating entertainment on Tamarai kulam thorough proper landscaping the embankments of the kulam , CC. pavements, lighting facilities, Boating, Cloak rooms and rest rooms can fetch revenue to the municipality and enhance the quality of life of the people of all categories. In we do not make this Tamarai Kulam as a natural, economical and environmental asset.

### **6.7.3 COMPONENT COURSES**

The project, " Thamarai Kulam Boating Project " is carried out in order to provide an lung space in the rapidly changing townscape of Thiruvanamalai. The major components of the project include, the promotion of recreational activity like boating facility, Formation of landscape and parks in the bank s of the Thamarai kulam adding on the tourism potential of the town.

### **6.7.4 OPERATING PARAMETERS**

The project cost has to be sourced from the finance institution, TUFIDCO supplemented by 10% contribution from the local body and the total cost of the project is Rs.75 lakhs. The project has to be executed in a single phase pertaining towards improvement of the standard of recreational facilities offered in the town.

### **6.7.5 EXPENSES**

The execution of project, which is done in a single phase, for which the cost is worked out as 70.56 lakhs. The development costs of the project involves O&M Charges at 2% of the total project cost and the inflation rate of 4% of the total project cost, thus the total project cost is expected to be **75.00 lakhs.**

Table 6.7.1. Distribution of Development Components

<b>THAMARAI KULAM - BOATING PROJECT</b>		
<b>S.No</b>	<b>Development Component</b>	<b>Rs. in Lakhs</b>
1	Boating Activities, Formation of CC roads, Landscaping and Improvement of lighting facilities and street furniture's.	70.56
<b>Development costs (a)</b>		<b>70.56</b>
1	O&M Charges @ 2% of (a)	1.50
2	Inflation @ 4% of (a)	2.94
<b>Over heads (b)</b>		<b>4.44</b>
<b>GRAND TOTAL (a+b)</b>		<b>75.00</b>

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The project cost is loaned TUFIDCO at the interest rate of 8.25% per annum for a repayment period of about 20 years in which the moratorium period is 5 years. The loan money is obtained in two phases.

The total repayment is made at the end of 2026 is about Rs.102.67 lakhs for a total loan of about Rs.67.50 lakhs in the base year 2007. The details of the repayment schedule is given in the below table 6.7.2., in which the cash inflow in the repayment schedule is shown in detail

Table 6.7.2. CASH FLOW STATEMENT OF REPAYMENT PERIOD

<b>REPAYMENT SCHEDULE - CASH INFLOW (Rs in lakhs)</b>						<b>Repayment starting year: 2012</b>	
No. of years for Repayment: <b>20</b>							
Moratorium period: <b>5 Years</b>							
Repayment starting year: <b>2008</b>							
<b>Loan</b>	<b>Repayment year</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>	<b>Balance</b>	<b>Year</b>	<b>Total Repayment</b>
67.50	<b>2007</b>	0.00	0.00	0.00	67.50	<b>2007</b>	0.00
	<b>2008</b>	3.55	0.00	3.55	63.95	<b>2008</b>	3.55
	<b>2009</b>	3.55	0.00	3.55	60.39	<b>2009</b>	3.55
	<b>2010</b>	3.55	0.00	3.55	56.84	<b>2010</b>	3.55
	<b>2011</b>	3.55	0.00	3.55	53.29	<b>2011</b>	3.55
	<b>2012</b>	3.55	4.40	7.95	49.74	<b>2012</b>	7.95
	<b>2013</b>	3.55	4.10	7.66	46.18	<b>2013</b>	7.66
	<b>2014</b>	3.55	3.81	7.36	42.63	<b>2014</b>	7.36
	<b>2015</b>	3.55	3.52	7.07	39.08	<b>2015</b>	7.07
	<b>2016</b>	3.55	3.22	6.78	35.53	<b>2016</b>	6.78
	<b>2017</b>	3.55	2.93	6.48	31.97	<b>2017</b>	6.48
	<b>2018</b>	3.55	2.64	6.19	28.42	<b>2018</b>	6.19
	<b>2019</b>	3.55	2.34	5.90	24.87	<b>2019</b>	5.90
	<b>2020</b>	3.55	2.05	5.60	21.32	<b>2020</b>	5.60
	<b>2021</b>	3.55	1.76	5.31	17.76	<b>2021</b>	5.31
	<b>2022</b>	3.55	1.47	5.02	14.21	<b>2022</b>	5.02
	<b>2023</b>	3.55	1.17	4.73	10.66	<b>2023</b>	4.73
	<b>2024</b>	3.55	0.88	4.43	7.11	<b>2024</b>	4.43
	<b>2025</b>	3.55	0.59	4.14	3.55	<b>2025</b>	4.14
	<b>2026</b>	3.55	0.29	3.85	0.00	<b>2026</b>	3.85
		<b>67.50</b>	<b>35.17</b>	<b>102.67</b>			<b>102.67</b>

### **6.7.6 REVENUE**

On completion of this project, the major avenues in which the revenue can be generated is by the amount collected as entrance ticket fees and boating fees . Rent is collected at the rate of Rs.15 per person for about 2500 persons in one month. Base rate has been aimed for the first five years by considering the prevailing market rate and is proposed to increase about 10% for the consecutive three years through out the repayment period. The total recovery is arrived at 2026 by means of collection is about Rs.112.04lakhs.

### **6.7.7 DEBT SERVICES**

Debt servicing for this project starts with the principal of Rs.3.55 lakhs from the year 2008. The debt charges becomes Rs.7.95 lakhs along with the interest . The total debt servicing for the project works out at Rs.102.67 lakhs in a loan amount of 67.90 lakhs including the grants and the total services are in the ratio of 67.90:102.67 lakhs.

### **6.7.8 CASH FLOW**

From the cash flow chart it is evident that the cash flow is surplus through out the project. Recovery Vs. Repayment ratio starts at 1.27 in the year 2008 and those of the project it is 1.09, whereas the debt charges and recovery remains under 0.92 indicating the project revenue is surplus over the debt servicing throughout the repayment period .



TABLE 6.7.3. TABLE SHOWING THE CASH OUTFLOW OF THE PROJECT

Year	Recovery collected as a entrance ticket and Boating fees	TOTAL (A)	Debt charges	TOTAL (B)	Surplus/ Deficit	CUMULATIVE SURPLUS/ DEFICIT	Recovery/ Repayment (A/B)	Debt Charges/ Recoveries (B/A)
2007	0	0	0	0	0	0	0	0
2008	4.5	4.5	3.55	3.55	0.95	0.95	1.27	0.79
2009	4.5	4.5	3.55	3.55	0.95	1.89	1.27	0.79
2010	4.5	4.5	3.55	3.55	0.95	2.84	1.27	0.79
2011	4.95	4.95	3.55	3.55	1.40	4.24	1.39	0.72
2012	4.95	4.95	7.95	7.95	-3.00	1.24	0.62	1.61
2013	4.95	4.95	7.66	7.66	-2.71	-1.47	0.65	1.55
2014	5.44	5.44	7.36	7.36	-1.92	-3.39	0.74	1.35
2015	5.44	5.44	7.07	7.07	-1.63	-5.02	0.77	1.30
2016	5.44	5.44	6.78	6.78	-1.34	-6.35	0.80	1.25
2017	5.98	5.98	6.48	6.48	-0.50	-6.86	0.92	1.08
2018	5.98	5.98	6.19	6.19	-0.21	-7.07	0.97	1.04
2019	5.98	5.98	5.90	5.90	0.08	-6.99	1.01	0.99
2020	6.58	6.58	5.60	5.60	0.98	-6.01	1.17	0.85
2021	6.58	6.58	5.31	5.31	1.27	-4.74	1.24	0.81
2022	6.58	6.58	5.02	5.02	1.56	-3.18	1.31	0.76
2023	7.24	7.24	4.73	4.73	2.52	-0.66	1.53	0.65
2024	7.24	7.24	4.43	4.43	2.81	2.14	1.63	0.61
2025	7.24	7.24	4.14	4.14	3.10	5.24	1.75	0.57
2026	7.97	7.97	3.85	3.85	4.12	9.37	2.07	0.48
<b>TOTAL</b>	<b>112.04</b>	<b>112.04</b>	<b>102.67</b>	<b>102.67</b>	<b>9.37</b>		<b>1.09</b>	<b>0.92</b>

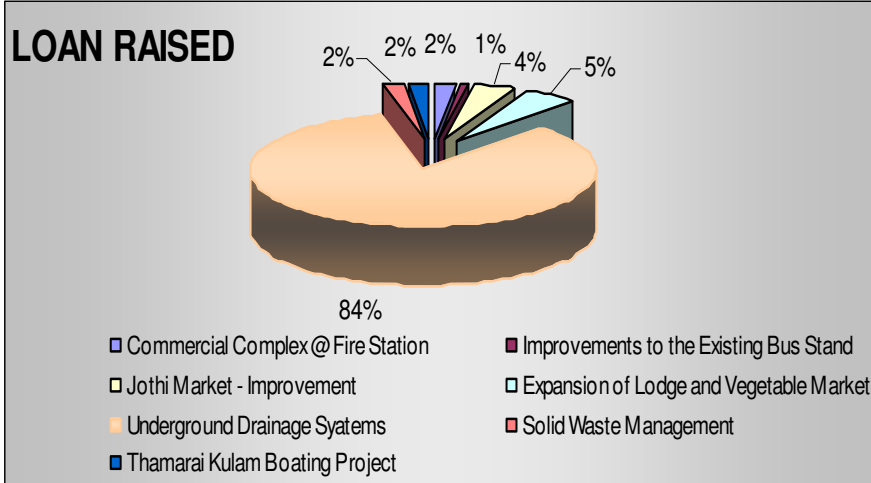
## 6.8

**STATUS OF BUSINESS PLAN PROJECTS**

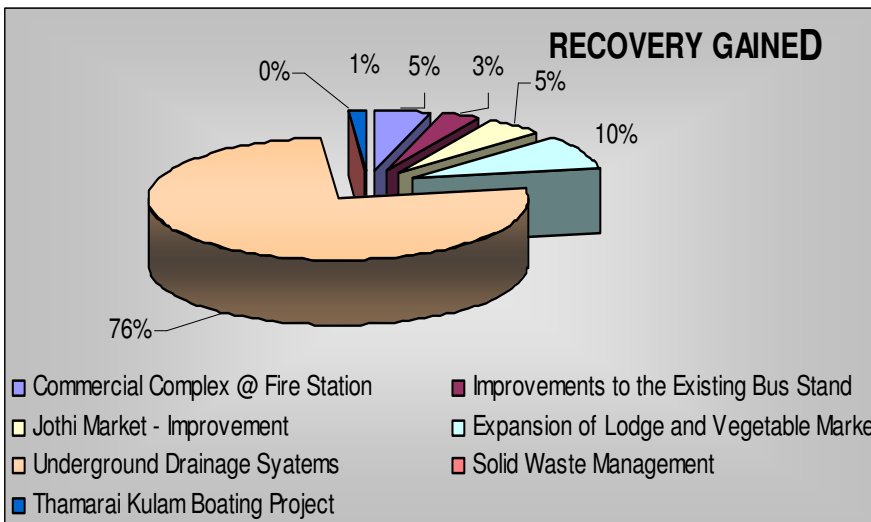
Under this assignment 7 projects are identified in Thiruvanamalai Municipality. Each project is backed with cash flow statement describing recoveries out of the project and repayment of loan (Principle + Interest) over a period of time is worked out elaborately considering the interest rate and moratorium period which is applicable for obtaining loan. Table 6.8.2 describes the cash flow statement worked out for this business plan. At the end of 2027, Rs.6170.90 lakhs of money has to be repaid including principle & interest for the loan amount Rs.3717.99 lakhs at 8.25 % rate of interest for projects including a moratorium period of 5 years. A total recovery out of business plan projects is 7522.58 lakhs at the end of year 2027. Therefore at the end of the repayment year business plan projects ends at a surplus of Rs.1352.81 lakhs.

TABLE. 6.8.1. LOAN DETAILS OF BUSINESS PLAN PROJECTS

S.No,	Name of the Project	Loan Raised	Recovery	Repayment	Surplus/ Deficit
1	Commercial Complex @ Fire Station	71.60	358.78	108.91	249.87
2	Improvements to the Existing Bus Stand	34.20	256.36	52.02	84.30
3	Jothi Market - Improvement	144.12	358.78	219.21	139.57
4	Expansion of Lodge and Vegetable Market	180.00	717.66	273.79	443.87
5	Underground Drainage Systems	3141.03	5719.00	5293.31	425.84
6	Solid Waste Management	79.54	-	120.98	-
7	Thamarai Kulam Boating Project	67.50	112.00	102.67	9.27
<b>TOTAL</b>		<b>3717.99</b>	<b>7522.58</b>	<b>6170.89</b>	<b>1352.81</b>



Out of identified projects execution of Under ground Drainage systems takes nearly 84% of the total loan amount which accounts to about 3141.03 lakhs. All the other project takes up only very small portion of the loan amount only of which the improvements to bus stand takes up only 34.20 lakhs ie.,1% of the loan amount Expansion of lodge and vegetable market



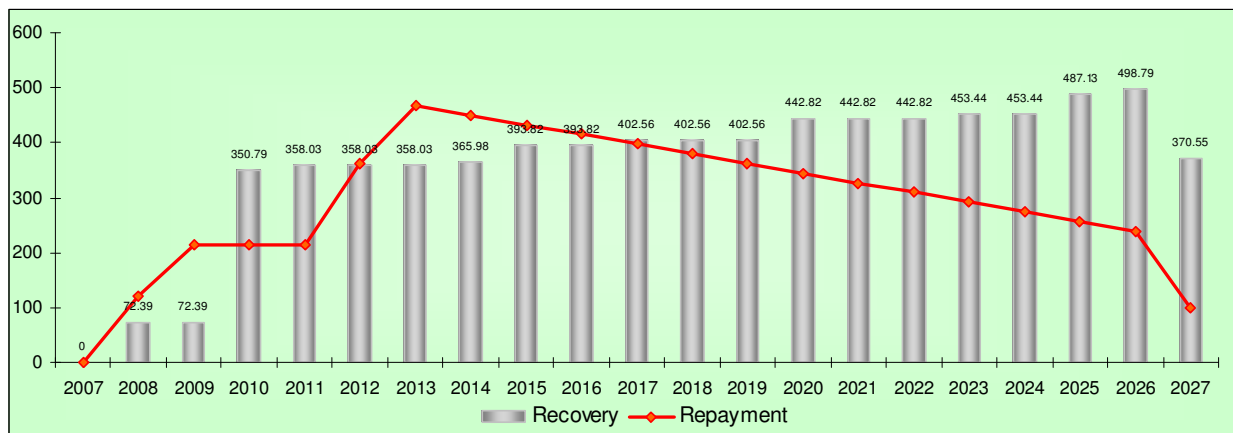
takes about 5% of the loan amount but returns about double the cost (10%).thus the Sum of recovery from all the projects is about 21% more than the sum of the debt charges the municipality has to pay as the loan amount.

TABLE. 6.8.2 CASH FLOW STATEMENT FOR THE BUSINESS PLAN PROJECTS

Year	Recovery	Repayment	Surplus/ Deficit
2007	0	0	0
2008	72.39	120.76	-49.01
2009	72.39	213.53	-141.77
2010	350.79	213.53	136.63
2011	358.03	213.53	143.39
2012	358.03	362.97	-0.87

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2013	358.03	467.80	-106.05
2014	365.98	450.19	-81.36
2015	393.82	432.57	-36.25
2016	393.82	414.95	-18.98
2017	402.56	397.34	6.45
2018	402.56	379.72	23.72
2019	402.56	362.11	40.99
2020	442.82	344.49	97.88
2021	442.82	326.87	115.15
2022	442.82	309.26	132.42
2023	453.44	291.64	159.61
2024	453.44	274.03	176.88
2025	487.13	256.41	227.84
2026	498.79	238.79	256.00
2027	370.55	100.42	270.13
<b>Total</b>	<b>7522.77</b>	<b>6170.90</b>	<b>1352.81</b>



During the repayment period from 2008 to 2027, the recoveries are more than the repayment for the loan raised, and the maximum surplus is achieved during the year 2027 (i.e. Rs 270.13 lakhs ).

### 6.8.1 ASSET MANAGEMENT

Asset management of ULBs could be classified into three categories; one, optimization of land, energy, water resources by adopting technical and management skills, two, prioritizing capital investments and three, self generating improvements and up gradation of facilities. In the case of where, Thiruvanamalai is concerned, it is blessed with building assets, parks, play grounds, streetlights, roads & streets, water supply system and establishments of local body (Chapter 5). But for capital investments are concern Thiruvanamalai is trying to improve its services through capital investments by

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local body though are not always economically profitable which are also supported by the funds by private organizations as an contribution of the Lord Arunachaleswar temple. Self generative facilities adopted for the Thiruvanamalai town are Solid waste, Resources management, Tourism supporting activities and Energy Saving Projects.

### **6.8.2. MANAGEMENT OF PHYSICAL PROPERTIES**

Thiruvanamalai possess fixed assets of value about Rs. crores, mainly used for schools, markets, bus stand and shopping complexes it also possess about 3784 street lights and roads spreading over 72,028 Kms in length.. Thiruvanamalai also possess good water supply system running about 39,420 m length. Of all these some of them like shopping, bus stand earning good revenue while schools, toilets, buildings of establishments are the least revenue earning assets by properly planning these assets would generate considerably amount of revenue in one hand and up keeping of facilities in the other. As this Business Plan envisaged to improve some of the assets like market and bus stand many of the asset management are policy oriented issues.

### **6.8.3. PRIORITIZING CAPITAL INVESTMENTS**

As a first step in prioritizing the capital investments is the identification of potential projects which would yield better revenue with in the reach of the local body. In this business plan such projects are identified namely, Improvement of Jothi market and Expansion of Vegetable market and lodge. Thamarai Kulam redevelopment project is totally a non conventional, but with low capital investment gives better returns. As this project yields a good investment return, this could be implemented either municipality paying front-end high investment enjoying a long term revenue or allowing private partners to invest at the front-end and accumulate revenue and asset at the back end. As these projects are innovative in nature to be adopted by the local body it would be definitely a sure pattern of such investment for future.

## THIRUVANAMALAI MUNICIPAL FINANCE

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### 7.0 THIRUVANAMALAI MUNICIPAL FINANCE

The finances of ULBs are operated under the general account of “Income and Expenditure”. Some times these accounts are classified depending on the sources as “revenue” and “capital”. Therefore, the outgoing items relate to “revenue expenditure” and “capital expenditure” and, the incoming to “revenue receipt” and “capital receipt”. However, for a medium sized municipality like Tiruvanamalai, the capital expenditure is not to be sizable, which otherwise may effect the municipal finance heavily; the “revenue” and “capital” (receipt and expenditure) are not dealt separately. Therefore, municipal finance is classified as “Income” and “Expenditure”.

### 7.1 REVENUE RECEIPTS

Under this head taxes, fees, grants, income from properties and special services are included. The amount under most of these heads is growing however their share to the revenue receipts in respective years is unstable. Revenue receipts accounts to Rs.709 lakhs in 2000-01 grown to Rs.842 lakhs in 2005-06 with 4 percent average annual growth rate over past 6 years.

I) **TAXES - OWN SOURCES** - Taxes are collected by the Municipality and also by other agencies. Municipality collects property tax and profession tax. In 2005-06, the tax receipts accounted for Rs.155 Lakhs.

II) **TAXES - ASSIGNED REVENUE** - Taxes collected by other agencies include entertainment tax, duty on transfer of property, taxes on carts and animals which amounted to Rs. 104 1akhs in 2005-06.

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TABLE 7.1 REVENUE RECEIPTS: 2000-01 TO 2005-06, THIRUVANAMALAI

(Rs in lakhs)

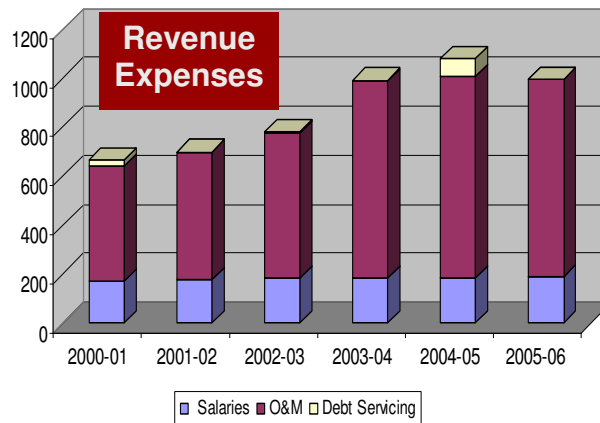
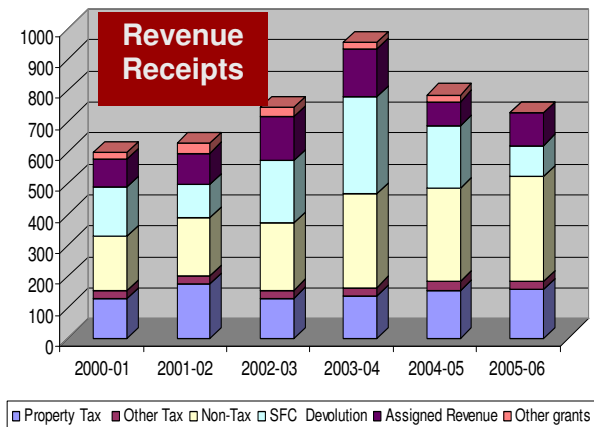
Sl. No.	Code No.	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
		Actual					
<b>INCOME STATEMENT</b>							
1	Property Tax	126.67	176.08	129.23	135.00	151.82	155.92
2	Other Taxes						
	a. Professional Tax	17.48	18.78	19.82	21.32	23.72	20.46
	b. Other Taxes (excluding Professional Tax)	7.54	6.40	6.38	7.09	7.15	7.20
3	Assigned Revenue	88.21	99.69	140.50	154.07	78.13	104.00
4	Devolution Fund	160.00	108.27	202.34	313.03	202.77	101.17
5	Service Charges and Fees						
	a. Water Charges	22.92	26.16	30.70	60.00	62.00	65.00
	b. Service Charges and Fees (excluding Water Charges)	57.14	58.55	69.25	82.22	82.69	96.13
6	Grants and Contributions	20.86	32.23	30.73	20.86	20.86	0.00
7	Sale and Hire Charges	40.40	41.72	45.21	42.03	44.21	44.38
8	Other Income	56.28	60.44	71.14	119.11	111.13	132.15
9	Deposits & Advances	112.36	112.26	111.98	113.19	114.63	115.89
	<b>Total Income</b>	<b>709.86</b>	<b>740.58</b>	<b>857.28</b>	<b>1067.92</b>	<b>899.11</b>	<b>842.30</b>

TABLE 7.2 REVENUE RECEIPTS AS PERCENTAGE OF TOTAL REVENUE RECEIPTS  
(in %)

Sl. No.	Code No.	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average
		Actuals						
<b>INCOME STATEMENT</b>								
1	Property Tax	17.84	23.78	15.07	12.64	16.89	18.51	17.46
2	Other Taxes							
	a. Professional Tax	2.46	2.54	2.31	2.00	2.64	2.43	2.40
	b. Other Taxes (excluding Professional Tax)	1.06	0.86	0.74	0.66	0.80	0.85	0.83
3	Assigned Revenue	12.43	13.46	16.39	14.43	8.69	12.35	12.96
4	Devolution Fund	22.54	14.62	23.60	29.31	22.55	12.01	20.77
5	Service Charges and Fees							
	a. Water Charges	3.23	3.53	3.58	5.62	6.90	7.72	5.10
	b. Service Charges and Fees (excluding Water Charges)	8.05	7.91	8.08	7.70	9.20	11.41	8.72
6	Grants and Contributions	2.94	4.35	3.58	1.95	2.32	0.00	2.52
7	Sale and Hire Charges	5.69	5.63	5.27	3.94	4.92	5.27	5.12
8	Other Income	7.93	8.16	8.30	11.15	12.36	15.69	10.60
9	Deposits & Advances	15.83	15.16	13.06	10.60	12.75	13.76	13.53
	<b>Total Income</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

III) **NON-TAX REVENUE** - This head includes income from Fees, Properties, Special services & Miscellaneous. This head amounts to Rs. 183 lakhs in the year 2005-06.

iv) **GRANTS & CONTRIBUTIONS** - Following 74<sup>th</sup> CAA grants in aid of revenue expenditure got boosted, since '97-98'; the effect of the CAA is substantially felt in UBLs resource. It accounts to Rs. 202 lakhs during the year 2004-05 also grants and contribution accounts for Rs 20 Lakhs in 2004-05.



## 7.2 REVENUE EXPENDITURE

Thiruvanamalai municipality uses the resources for general administration, operation and maintenance of services along with public works, obligatory, discretionary and remunerative and education. Revenue expenditure during 2000-01 was Rs.713 lakhs and in 2005-06 it accounts to Rs. 1079 lakhs. It has grown nearly two times over 6 years.

I) **PERSONAL COST** - This constitutes one of the major components of expenditure accounting for Rs. 366 lakhs during 2005-06. It goes on increasing from Rs. 309 lakhs in 2000-01 to Rs. 1027 lakhs in 2005-06 at a average growth of 8 percent each year.

II) **OPERATING EXPENSES** - This head includes the O&M of core services and it accounts to Rs. 227 lakhs in 2005-06 at a share of 27 percent of total expenses.



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III) **ADMINISTRATIVE EXPENSES** - This is an important head in which nearly Rs. 575 lakhs of money spend during 2005-06. It achieves a rapid pace over past 6 yrs. In an average it takes a share of 50% of total expenses.

TABLE 7.3 BREAK – UP OF REVENUE EXPENDITURE: 1999-00 TO 2003-04  
(Rs in Lakhs)

Sly. No.	Code No.	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
		Actual					Budget
<b>EXPENDITURE STATEMENT</b>							
1	Personnel Cost	171.18	181.49	182.86	184.05	185.18	191.00
2	Terminal and Retirement Benefits	35.95	31.41	44.35	46.96	31.94	12.10
3	Operating Expenses	130.98	234.13	188.39	204.08	214.29	227.68
4	Administrative Expenses	339.46	284.76	406.74	604.28	609.79	575.07
5	Finance Expenses						
	a. Interest on Loans	23.17	0.00	7.06	0.97	70.93	1.51
6	Deposits & Advances	12.53	14.50	17.88	18.44	19.32	19.81
	<b>Total Expenses</b>	<b>713.27</b>	<b>746.29</b>	<b>847.28</b>	<b>1058.78</b>	<b>1131.45</b>	<b>1027.17</b>

TABLE 7.4 REVENUE EXPENDITURE AS PERCENTAGE OF TOTAL REVENUE EXPENSES

(In %)

Sly. No.	Code No.	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	Average
		Actual					Budget	
<b>EXPENDITURE STATEMENT</b>								
1	Personnel Cost	24.00	24.32	21.58	17.38	16.37	18.59	20.37
2	Terminal and Retirement Benefits	5.04	4.21	5.23	4.44	2.82	1.18	3.82
3	Operating Expenses	18.36	31.37	22.23	19.28	18.94	22.17	22.06
4	Administrative Expenses	47.59	38.16	48.01	57.07	53.89	55.99	50.12
5	Finance Expenses							
	a. Interest on Loans	3.25	0.00	0.83	0.09	6.27	0.15	1.76
6	Deposits & Advances	1.76	1.94	2.11	1.74	1.71	1.93	1.86
	<b>Total Expenses</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

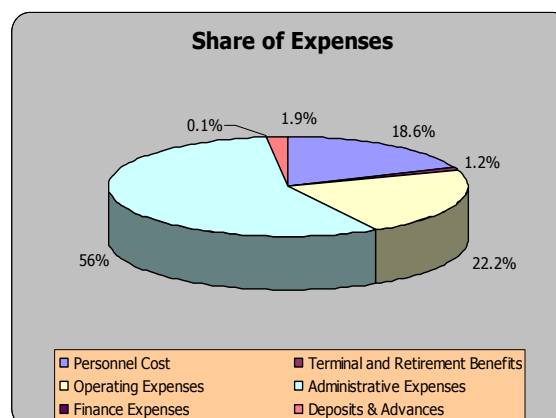
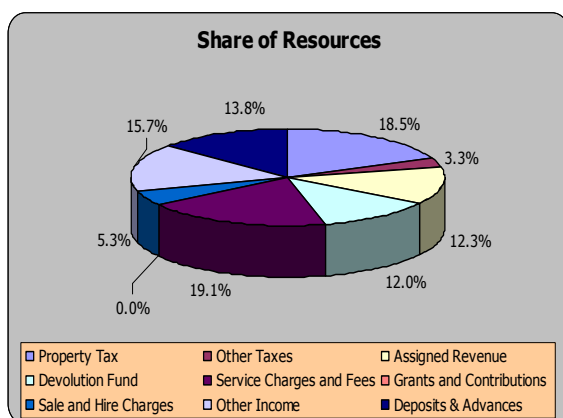
The debt and overdue of the municipality in terms of outstanding Principal is from Government of Tamil Nadir, MUDF/ TNUDF and TUFIDCO to the tune of Rs. 549 lakhs in the year 2003-04.

TABLE 7.5. LOAN OUTSTANDING – THIRUVANAMALAI TOWN  
(Rs. in Lakhs)

Sl. No.	Loan Particulars	Total Amount Drawn	Loan Period	Rate of Interest	Total Principal & Interest Repaid	Outstanding as on March 31, 2004
All financial figures in Rs. Lakhs						
1	Government Of Tamil Nadir	1043.30	40	13.50	84.74	195.97
2	Mudf / Tnudf	65.45	20	13.50	79.28	13.74
3	Others (Specify) – Special Road Works	368.22	40	12.00	36.99	331.23
4	Others (Specify) - Idsmt	80.00	20	8.00	139.14	8.61
	<b>Total</b>	<b>1556.97</b>			<b>340.15</b>	<b>549.55</b>

### 7.3 SHARE OF INCOME & EXPENDITURE – TIRUVANAMALAI MUNICIPALITY

When aggregated under major heads of income and expenditure it shows (Table 7.2 & 7.4) major incomes are from property tax and devolution fund which together accounts for about 37% of total revenue of the municipality (Table 7.4). It is followed by Assigned revenue at a contribution of 12% to total revenue of the ULB. Property tax is the single largest resource of the Tiruvanamalai town with the average share of 23% to total revenue over past six years. On expenditure side about 35% spends on personal cost and 33% on debt servicing. Operation & Maintenance expenses during 2001 to 2005 accounts to an average of 19% of total expenses.

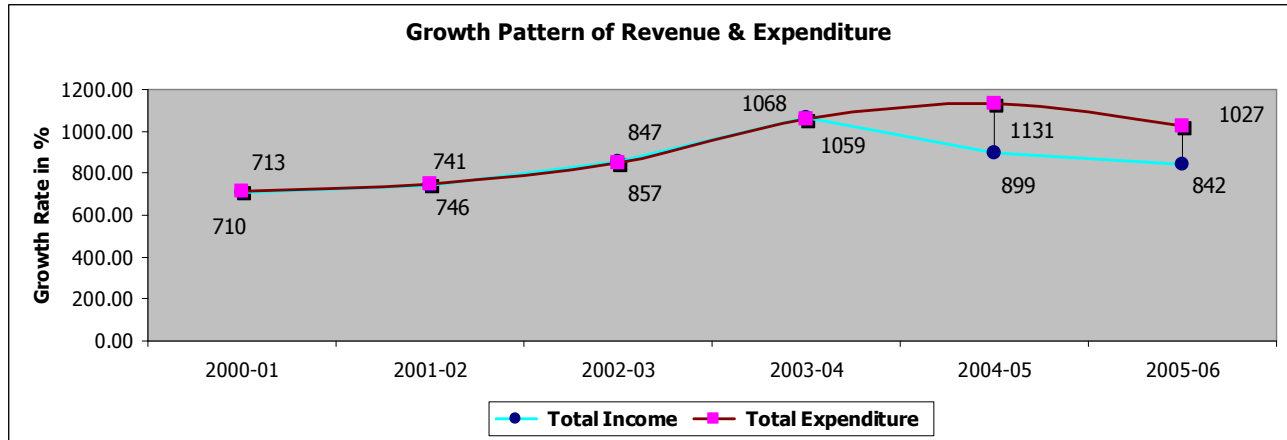


7.4 TREND OF INCOME & EXPENDITURE – TIRUVANAMALAI MUNICIPALITY

Income increased at an average of 4 % over past few years in other hand expenses increases at a trend of 8 % growths during 2000-01 to 2005-06. All the revenue heads shows a positive trend especially property tax and assigned revenue shows a trend of 6% and 9% respectively over the years. Income & Expenditure trend of the municipality is shown in the following fig.

TABLE 7.6. INCOME AND EXPENDITURE UNDER MAJOR HEADS GROWTH TREND 2000-01 TO 2005-06

Sl. No.	Code No.	( in %)					
		2001-02	2002-03	2003-04	2004-05	2005-06	Average
<b>INCOME STATEMENT</b>		Actuals				Budget	
1	Property Tax	39.01	-26.61	4.46	12.46	2.70	6.40
2	Other Taxes						
	a. Professional Tax	7.44	5.54	7.57	11.26	-13.74	3.61
	b. Other Taxes (excluding Professional Tax)	-15.12	-0.31	11.13	0.85	0.70	-0.55
3	Assigned Revenue	13.01	40.94	9.66	-49.29	33.11	9.49
4	Devolution Fund	-32.33	86.88	54.70	-35.22	-50.11	4.79
5	Service Charges and Fees						
	a. Water Charges	14.14	17.35	95.44	3.33	4.84	27.02
	b. Service Charges and Fees (excluding Water Charges)	2.47	18.27	18.73	0.57	16.25	11.26
6	Grants and Contributions	54.51	-4.65	-32.12	0.00	-100.00	-16.45
7	Sale and Hire Charges	3.27	8.37	-7.03	5.19	0.38	2.03
8	Other Income	7.39	17.70	67.43	-6.70	18.91	20.95
9	Deposits & Advances	-0.09	-0.25	1.08	1.27	1.10	0.62
	<b>Total Income</b>	<b>4.33</b>	<b>15.76</b>	<b>24.57</b>	<b>-15.81</b>	<b>-6.32</b>	<b>4.51</b>
<b>EXPENDITURE STATEMENT</b>							
1	Personnel Cost	6.02	0.75	0.65	0.61	3.14	2.24
2	Terminal and Retirement Benefits	-12.63	41.20	5.89	-31.98	-62.12	-11.93
3	Operating Expenses	78.75	-19.54	8.33	5.00	6.25	15.76
4	Administrative Expenses	-16.11	42.84	48.57	0.91	-5.69	14.10
5	Finance Expenses						
	a. Interest on Loans	-100.00	--	-86.26	7212.37	-97.87	1732.06
6	Deposits & Advances	15.72	23.31	3.13	4.77	2.54	9.89
	<b>Total Expenses</b>	<b>4.63</b>	<b>13.53</b>	<b>24.96</b>	<b>6.86</b>	<b>-9.22</b>	<b>8.15</b>



### 7.5 DEMAND COLLECTION BALANCE SCENARIO

It is seen from the Income and Expenditure statement that the major source of income for the municipality is through the taxes. The DCB of major sources of incomes are from (i) Property Taxes (ii) Professional Taxes and (iii) Water Taxes.

#### I) PROPERTY TAX

In 2004-05, the total demand for property tax (including arrears and current) stood at Rs.380 lakhs of which Rs. 159 lakhs has been collected. The collection performance was 41% and, on an average around 45% of property tax has been collected yearly.

Coming to arrears and current demand collection, 28% and 63% has been collected on an average in last five years. (Table 7.7)

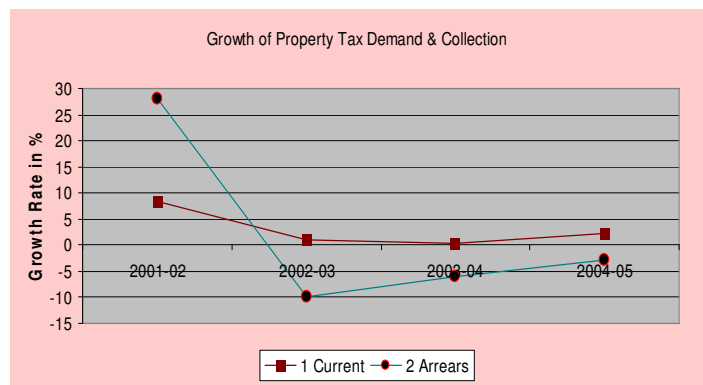
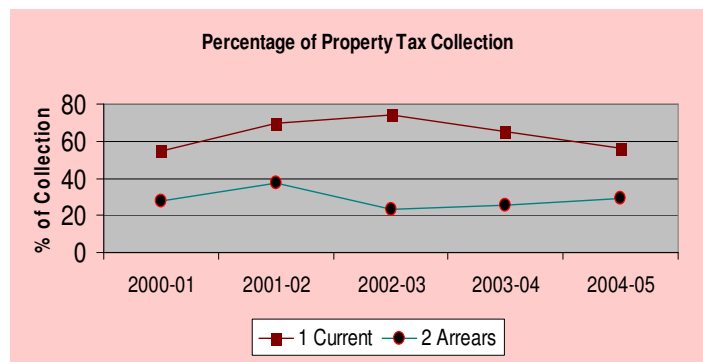


TABLE 7.7. DCB FOR PROPERTY TAX OF THIRUVANAMALAI 2000-01 TO 2004-05

Sl. No.	Particulars	2000-01	2001-02	2002-03	2003-04	2004-05
Figures Rs. In lakhs						
<b>I. Property Tax - Demand, Collection and Balance</b>						
	Total Number of Assessments	22471	23139	23637	24273	25633
	Growth in Assessments	--	2.97	2.15	2.69	5.60
A.	Demand					
	1. Arrears	173.30	199.41	199.49	197.28	200.41
	2. Current	163.41	167.85	171.35	174.60	180.43
	3. Total	336.71	367.26	370.84	371.88	380.84
B.	Collection					
	1. Arrears	48.44	74.32	46.98	49.63	57.73
	2. Current	88.78	116.45	126.58	113.98	101.45
	3. Total	137.22	190.77	173.56	163.61	159.18
C.	Balance					
	1. Arrears	124.86	125.09	152.51	147.65	142.68
	2. Current	74.63	51.43	44.77	60.62	78.98
	3. Total	199.49	176.52	197.28	208.27	221.66
D.	Collection Analysis					
	1. Arrears (%)	27.95	37.27	23.55	25.16	28.81
	2. Current (%)	54.33	69.38	73.87	65.28	56.23
	3. Total (%)	40.75	51.94	46.80	44.00	41.80

## II) PROFESSION TAX

The total demand under this item in 2004-05 was RS. 56 lakhs and the amount collected was only RS. 25 lakhs, with a collection performance of 44%. On an average nearly 40% of profession tax has been collected an average the growth was 0.9%. (Table 7.8).

The arrear amount in 2004-05 was Rs.27 lakhs, while the current demand was Rs.28 lakhs of which's 1.3 lakhs and Rs.23 lakhs have been collected by the Municipality, which accounts for 4% and 82% respectively. On an average, the collection performance for arrears and current demand is 2% and, 87% respectively.

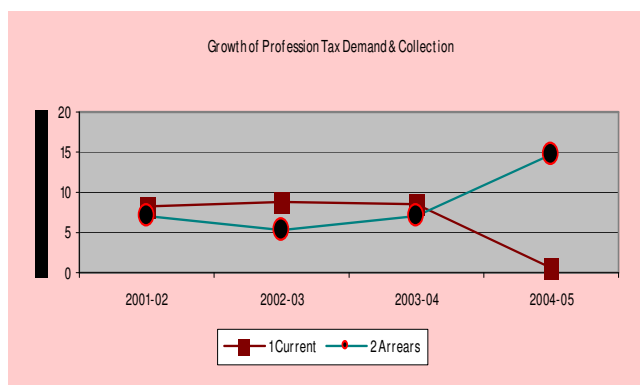
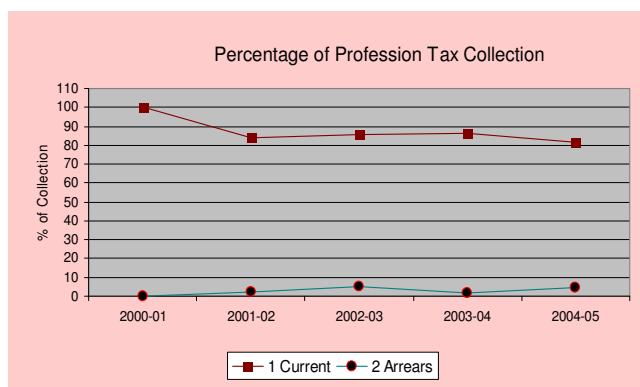


TABLE 7.8. DCB FOR PROFESSIONAL TAX OF THIRUVANAMALAI 2000-01 TO 2004-05

Sl. No.	Particulars	2000-01	2001-02	2002-03	2003-04	2004-05
Figures Rs. In lakhs						
<b>II. Profession Tax - Demand, Collection and Balance</b>						
	Total Number of Assesses	4650	4775	4850	4675	4827
	Growth in Assessments	--	2.69	1.57	-3.61	3.25
A.	Demand					
	1. Arrears	25.30	25.30	29.70	31.87	27.17
	2. Current	17.48	21.32	21.36	23.95	28.90
	3. Total	42.78	46.62	51.06	55.82	56.07
B.	Collection					
	1. Arrears	0.00	0.68	1.55	0.64	1.31
	2. Current	17.48	18.10	18.27	20.68	23.72
	3. Total	17.48	18.78	19.82	21.32	25.03
C.	Balance					
	1. Arrears	25.30	24.62	28.15	31.23	25.86
	2. Current	0.00	3.22	3.09	3.27	4.99
	3. Total	25.30	27.84	31.24	34.50	30.85
D.	Collection Analysis					
	1. Arrears (%)	0.00	2.69	5.22	2.01	4.82
	2. Current (%)	100.00	84.90	85.53	86.35	82.08
	3. Total (%)	40.86	40.28	38.82	38.19	44.64

### III) WATER CHARGES

The total demand in 2004-05 was Rs.99 lakhs and Rs.50 lakhs have been collected (50% of demand) and on an average this component has been found to be increasing at 4% yearly.

The collection performance was at 41% and 60% for arrears and current demand respectively. (Table 7.9)

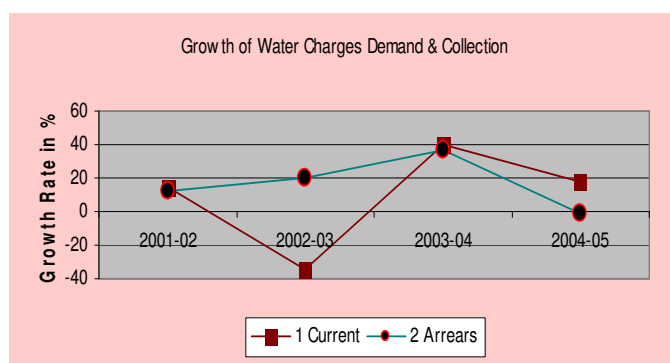
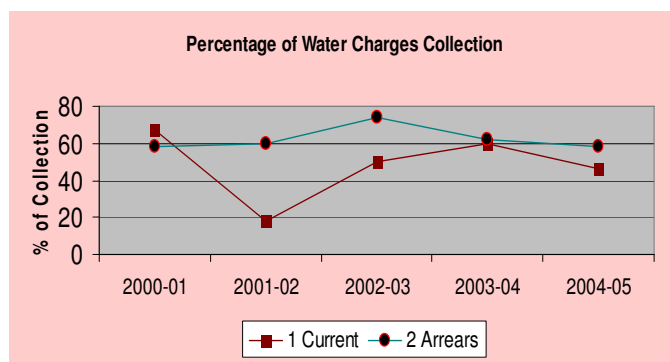


Table 7.9. DCB of Water Charges of Thiruvanamalai 2000-01 to 2004-05

Sl. No.	Particulars	2000-01	2001-02	2002-03	2003-04	2004-05
Figures Rs. In lakhs						
<b>III. Water Charges - Demand, Collection and Balance</b>						
	Total Number of Assessments	10483	11089	11644	12072	12440
	Growth in Assessments	--	5.78	5.00	3.68	3.05
A.	Demand					
	1. Arrears	26.69	34.32	18.66	16.29	31.62
	2. Current	30.92	32.77	31.28	66.28	68.14
	3. Total	57.61	67.09	49.94	82.57	99.76
B.	Collection					
	1. Arrears	4.98	6.31	9.34	9.87	18.77
	2. Current	17.93	19.85	23.16	41.08	31.39
	3. Total	22.91	26.16	32.50	50.95	50.16
C.	Balance					
	1. Arrears	21.71	28.01	9.32	6.42	12.83
	2. Current	13.00	12.93	8.12	25.20	36.75
	3. Total	34.71	40.94	17.44	31.62	49.58
D.	Collection Analysis					
	1. Arrears (%)	18.66	18.39	50.05	60.59	59.36
	2. Current (%)	57.99	60.57	74.04	61.98	46.07
	3. Total (%)	39.77	38.99	65.08	61.71	50.28

## 7.6 ASSESSMENT OF PERFORMANCE OF MUNICIPAL FINANCE

From the actuals, Thiruvanamalai revenue account stand for about 6 crores in the year 2005-2006. This includes OB of about 5.4 crores and the trend shows an increasing amount of revenue which is favorable to the municipality for any investment. The Operating Ratio (RE / RI) shows less than 1 for all the years between 2000-01 to 2005-06 except in 2001-02 which has crossed 1 mark (Table 7.10). In the same year, DS to income was 23% but in rest of the years are under control and very much comfortable in the year 2005-06 which was 1.80 percentage to income.

TABLE 7.10. PERFORMANCE OF THIRUVANAMALAI MUNICIPAL FINANCE, 2000-01 TO 2004-05

(Figures Rs. In lakhs)

Sl. No.	Account Head	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
							Budget
		Actuals					
1	Revenue Account Status (Incl. OB)	14.43	8.72	18.72	27.86	-204.48	-389.35
2	Operating Ratio (Rev. Expen./Rev. Inc.)	1.00	1.01	0.99	0.99	1.26	1.22
3	Debt Servicing - Percentage of Income (%)	3.26	0.00	0.82	0.09	7.89	0.18

## **7.8 FINANCIAL OPERATIONAL PLAN (FOP)**

The Financial Operating Plan (FOP) is essentially a multi-year forecast of finances of the urban local body. The FOP can be generated for a short-medium term of 5-8 years and also for a long-term for 20 years period. In this context, the FOP is envisaged with short-term period of 5 years (2006-07 to 2010-11) and a long-term period of 20 years (2006-07 to 2025-26). A salient feature of the FOP is that all outstanding dues including debt and non-debt liabilities have been taken into account. It needs mention that the identified investments are phased from the year 2006-07.

The FOP is essentially a financial forecast, developed on the basis of the growth trends of various components of income and expenditure, based on the time-series data. It is noteworthy that several assumptions need to be made while forecasting the finances of the ULBs. The immense care have been taken to adopt various assumptions based on the current growth trends, contribution pattern of various revenue drivers and utilization pattern of various expenditure drivers. In addition, various quantifiable assets and liabilities of the ULBs were also taken into account and phased out over a period of time. The following section provides an insight into the various assumptions made, necessary logic and justifications for such assumptions.

### **7.8.1 ASSUMPTIONS**

The financial forecast for the horizon period has been made based on the analysis of the growth trend, sectoral contribution (for receipts/income) and utilization (for expenses) and other externalities likely to impact the forecast like pay commission revisions, flow of devolution fund, etc. The FOP is prepared for a short-term & long-term horizon periods with sustainable level of capital investments in both the terms. Following are some of the assumptions adopted while projecting the FOP of Thiruvanamalai town.

### **7.8.2 REVENUE RECEIPTS / INCOME**

It has been projected under the following heads:

- Property Tax
- Other Taxes
  - Professional Tax
  - Other Taxes (excluding Professional Tax)
- Assigned Revenue



- Devolution Fund
- Service Charges and Fees
  - Water Charges
  - Service Charges and Fees (excluding Water Charges)
- Grants and Contributions
- Sale and Hire Charges

**PROPERTY TAX**

Property tax accounts for an amount of about Rs. 155 lakhs in the year 2005-06. It accounts on an average for about 17 percent of the total income of the municipality. Property tax is one of the major revenue sources of the Thiruvanamalai Municipality. The projection for future is based on the forecast demand and the current demand of year 2005-06 is taken as the base. Its trend for the past 5 years shows at 6 percent increase and it is assumed to grow at the rate of 2.0 percent per year for the projected period.

Further, it is also assumed that the general ARV revision (which was due last year) would be undertaken during the year 2005-06. The other assumptions underlying projection of revenue from property tax are presented in the table below:

**TABLE 7.11. ASSUMPTIONS FOR THE FINANCIAL PROJECTIONS –  
PROPERTY TAX**

<b>Sl. No.</b>	<b>Items/Particulars</b>	<b>Assumption</b>	<b>Basis</b>
1.	ARV Revision	<ul style="list-style-type: none"> <li>▪ Next revision during the year 2006-07</li> <li>▪ Increase at a rate of 30 percent per revision</li> </ul>	<ul style="list-style-type: none"> <li>▪ Revision once in 5-years as per the Act</li> </ul>
2.	Growth in Assessments	<ul style="list-style-type: none"> <li>▪ Increase annually</li> <li>▪ Existing trend or maximum of 5% p.a. for ULB</li> </ul>	<ul style="list-style-type: none"> <li>▪ Existing or nominal growth</li> </ul>
3.	Collection Performance	<ul style="list-style-type: none"> <li>▪ Existing trend or maximum of 95 percent</li> </ul>	<ul style="list-style-type: none"> <li>▪ Average collection performance (both current &amp; arrear demand)</li> <li>▪ Current demand - 75-85 percent</li> <li>▪ Arrear demand - 50-60 percent</li> </ul>

**PROFESSIONAL TAX**

Professional tax is one of the major revenue sources among the other taxes levied by the ULB. The projection for future is based on the forecast demand and the current demand of year 2005-06 is taken as the base. Further, it may be noted that the last revision was done during 2002-03 and thus the next revision is assumed after 10-12 years (2014-15). The professional tax scored at Rs. 20.46 lakhs (2005-06) having an average growth of 2.40 percent. It is assumed that this would grow at the rate of 5 percent for the projected period.

The other assumptions underlying projection of revenue from professional tax are presented in the table below:

TABLE 7.12. ASSUMPTIONS FOR THE FINANCIAL PROJECTIONS -  
PROFESSIONAL TAX

Sl. No.	Items/Particulars	Assumption	Basis
1.	Revision	<ul style="list-style-type: none"> <li>▪ Next revision during the year 2014-15</li> <li>▪ Increase at a rate of 30 percent</li> </ul>	<ul style="list-style-type: none"> <li>▪ Revision generally once in 10-12 years</li> </ul>
2.	Growth in Assessments	<ul style="list-style-type: none"> <li>▪ Increase annually</li> <li>▪ Existing trend or maximum of 7 % p.a. for ULB</li> </ul>	<ul style="list-style-type: none"> <li>▪ Existing or nominal growth</li> </ul>
3.	Collection Performance	<ul style="list-style-type: none"> <li>▪ Existing trend or maximum of 90 percent</li> </ul>	<ul style="list-style-type: none"> <li>▪ Average collection performance (both current &amp; arrear demand)</li> <li>▪ Current demand - 70-80 percent</li> <li>▪ Arrear demand - 45-50 percent</li> </ul>

**WATER CHARGES**

The projection of water charges for future is based on the forecast demand and the current demand of year 2005-06 is taken as the base. The water charges scored at Rs. 65 lakhs (2005-06) having an average growth of 5.10 percent. It is assumed that this would grow at the rate of 2 percent for the projected period. The other assumptions underlying projection of revenue from professional tax are presented in the table below:

TABLE 7.13. ASSUMPTIONS FOR THE FINANCIAL PROJECTIONS - WATER CHARGES

Sl. No.	Items/Particulars	Assumption	Basis
1.	Revision	<ul style="list-style-type: none"> <li>▪ Next revision during the year 2005-06</li> <li>▪ Increase at a rate of 20 percent per revision</li> </ul>	<ul style="list-style-type: none"> <li>▪ Revision allowed once in 3 years as per the Act</li> </ul>
2.	Growth in Assessments	<ul style="list-style-type: none"> <li>▪ Increase annually</li> <li>▪ Existing trend or maximum of 3 % p.a. for ULB</li> </ul>	<ul style="list-style-type: none"> <li>▪ Existing or nominal growth</li> </ul>
3.	Collection Performance	<ul style="list-style-type: none"> <li>▪ Existing trend or maximum of 85 percent</li> </ul>	<ul style="list-style-type: none"> <li>▪ Average collection performance</li> <li>▪ Current demand - 75-85 percent</li> <li>▪ Arrear demand - 50-55 percent</li> </ul>

## DEVOLUTION FUNDS

Devolution funds are projected based on the formula adopted by the GoTN to devolve SFC grants. The State's official projection of Sales Tax for next 10 years is considered as the base. As per the formula, about 8 percent of the State's Sales tax would be devolved for the local bodies (both urban and rural). About 42 percent of the total amount available for the devolution would be devolved to the urban local bodies at the following rate:

- Municipal Corporations -31percent
- Municipalities - 34 percent
- Town Panchayats - 35 percent

Further, it may be observed that the base population figure considered for SFC devolution is the latest Census figures and accordingly, the SFC devolution per capita has been calculated for ULB, at the State level. This per capita devolution has been adopted to project the SFC devolutions for the Thiruvanamalai town, keeping the population of the ULB as per the 2001 Census as the base.

## OTHER REVENUE RECEIPTS / INCOME

The assumptions for forecast of other revenue items are presented in the table below. The growth rate under each item of receipt is adopted based on the average trend of all the ULBs under different categories. In case of abnormalities in the growth trend, a nominal growth rate has been adopted.

TABLE 7.14. ASSUMPTIONS FOR THE FINANCIAL PROJECTIONS - OTHER REVENUE RECEIPTS

Sl. No.	Items/Particulars	Unit	Assumptions for Forecast
1.	Other Taxes (excluding Professional Tax)	Percent	8.00
2.	Assigned Revenue	Percent	8.00
3.	Service Charges and Fees (excluding Water and Sewer Charges)	Percent	10.00
4.	Grants and Contributions	Percent	5.00
5.	Sale and Hire Charges	Percent	5.00
6.	Other Income	Percent	15.00

### 7.8.3 REVENUE EXPENDITURE

It has been projected under the following heads:

- Personnel Cost
  - Salaries
  - Others
- Terminal and Retirement Benefits
- Operating Expenses
- Repairs and Maintenance
- Program Expenses
- Administrative Expenses
- Finance Expenses
  - Finance Expenses (excluding Interest n Loans)
  - Interest on Loans
- Phasing of Non-Debt Liability

**PERSONNEL COST (INCLUDING SALARIES AND OTHER ESTABLISHMENT EXPENDITURE)**

The present average growth in establishment expenditure is about 1-6 percent per annum. However, for the future, the annual growth rate in Personnel Cost is arrived based on the increase in following sub-components:

- Net salary increase - 3 percent per annum
- Revision of DA - 4 to 5 percent per annum
- Others (new recruitments, etc) - 2 to 3 percent per annum

Accordingly, the Personnel Cost is assumed to be growing at the rate of 10 percent per annum.

**OTHER EXPENDITURE**

The assumptions for forecast of other revenue expenditure items are presented in the table below. The growth rate under each item of expenditure is adopted based on the average trend in this local body over last five years. In case of abnormalities in the growth trend, a nominal growth rate has been adopted.

**TABLE 7.15. ASSUMPTIONS FOR THE FINANCIAL PROJECTIONS – OTHER REVENUE EXPENSES**

<b>Sl. No.</b>	<b>Items/Particulars</b>	<b>Unit</b>	<b>Assumptions for Forecast</b>
1.	Terminal and Retirement Benefits	Percent	10.00
2.	Operating Expenses	Percent	10.00
3.	Repairs and Maintenance	Percent	8.00
4.	Program Expenses	Percent	10.00
5.	Administrative Expenses	Percent	10.00
6.	Finance Expenses (excluding Interest on Loans)	Percent	10.00

It is noteworthy that the revenue expenditure item 'Depreciation' is not considered for financial projection, as it is just a notional item

**FINANCE EXPENSES - DEBT SERVICING**

Debt servicing component has been dealt separately in detail as per the terms and conditions of the loan. The debt servicing of both existing proposed loans have been taken into consideration. While calculating the debt servicing, the principal repayment and interest payable on the loans have been calculated separately. The interest on loans has been considered as the revenue

expenditure item while the principal repayment has been taken as cash-flow item. However, for calculating the Debt-Service Coverage (DSC) ratio, both principal repayment and interest payable on the loans have been taken into account.

#### **7.8.4. FINANCIAL OPERATIONAL PLAN: (INCLUDING BUSINESS PLAN PROJECTS)**

Based on the above assumptions, FOP has been formulated for a short term period of 2006-07 to 2010-11 and in that the total revenue receipt has been estimated to reach to Rs. 2135 lakhs in 2010-11 from Rs.842 lakhs in 2005-06. The total revenue expenditure has been increased from Rs.1027 lakhs (2005-06) to Rs. 1924 Lakhs (2010-11). It is observed that in all the years Operating ration (RE/RI) remains (more than 0.9) in a critical position. But in other hand debt serving over the total revenue is well within 20 percent indicating ease of the municipal finance in repayment of loan (Table 7.16). For a Long term period of 2006-07 to 2025-26, total revenue receipt has been estimated to reach to Rs. 9107 lakhs in 2025-26 from Rs.842 lakhs in 2005-06. The total revenue expenditure has been increased from Rs.1027 lakhs (2005-06) to Rs. 7171 Lakhs (2025-26). In long term also Operating ration (RE/RI) is around 0.88. The debt serving over the total revenue is well within 20 percent indicating ease of the municipal finance in repayment of loan (Table 7.17).

#### **7.8.5. SUMMARY STATUS**

<b>Key Indicators</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Average</b>
<b>Existing (2000-01 to 2005-06)</b>			
OR (Ratio)	0.99	1.22	1.08
DSR (%)	0.00	7.89	2.32
<b>Short-Term (2006-07 to 2010-11)</b>			
OR (Ratio)	0.90	1.05	0.96
DSR (%)	6.44	18.65	13.40
<b>Long-Term (2006-07 to 2025-26)</b>			
OR (Ratio)	0.80	0.98	0.87
DSR (%)	3.12	18.32	10.53

TABLE. 7.16. FINANCIAL OPERATIONAL PLAN (FOP) – SHORT TERM PERIOD (2006-07 TO 2010-11)

Figures Rs. In lakhs

Sl. No.	Account Head	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
		Actuals =====>						Est.	Short-term Projections =====>			
	<b>Opening Balance</b>	<b>17.84</b>	<b>14.43</b>	<b>8.72</b>	<b>18.72</b>	<b>27.86</b>	<b>-204.48</b>	<b>-403.65</b>	<b>-364.65</b>	<b>-372.86</b>	<b>-471.71</b>	<b>-282.77</b>
	<b>Revenue Receipts</b>											
1	Property Tax	126.67	176.08	129.23	135.00	151.82	155.92	201.94	205.98	210.10	214.30	218.59
2	Other Taxes											
	a. Professional Tax	17.48	18.78	19.82	21.32	23.72	20.46	15.47	16.25	17.06	17.91	18.81
	b. Other Taxes (excluding Professional Tax)	7.54	6.40	6.38	7.09	7.15	7.20	7.78	8.40	9.07	9.80	10.58
3	Assigned Revenue	88.21	99.69	140.50	154.07	78.13	104.00	112.32	121.31	131.01	141.49	152.81
4	Devolution Fund	160.00	108.27	202.34	313.03	202.77	101.17	405.08	445.26	489.13	532.71	580.16
5	Service Charges and Fees											
	a. Water Charges	22.92	26.16	30.70	60.00	62.00	65.00	48.40	49.37	50.35	61.63	62.86
	b. Service Charges and Fees (excluding Water Charges)	57.14	58.55	69.25	82.22	82.69	96.13	105.74	116.32	127.95	140.74	154.82
6	Grants and Contributions	20.86	32.23	30.73	20.86	20.86	0.00	19.02	19.97	20.97	22.02	23.12
7	Sale and Hire Charges	40.40	41.72	45.21	42.03	44.21	44.38	46.60	48.93	51.38	53.94	56.64
8	Other Income	56.28	60.44	71.14	119.11	111.13	132.15	151.97	174.77	200.98	231.13	265.80
9	Deposits & Advances	112.36	112.26	111.98	113.19	114.63	115.89	133.27	153.26	176.25	202.69	233.10
10	Recoveries from Projects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.39	72.39	350.79	358.03
	<b>Total Revenue Receipts</b>	<b>709.86</b>	<b>740.58</b>	<b>857.28</b>	<b>1067.92</b>	<b>899.11</b>	<b>842.30</b>	<b>1247.59</b>	<b>1432.19</b>	<b>1556.64</b>	<b>1979.15</b>	<b>2135.31</b>
	<b>Revenue Expenditure</b>											
1	Personnel Cost	171.18	181.49	182.86	184.05	185.18	191.00	210.10	231.11	254.22	279.64	307.61
2	a. Terminal and Retirement Benefits	35.95	31.41	44.35	46.96	31.94	12.10	13.31	14.64	16.11	17.72	19.49
3	Operating Expenses	130.98	234.13	188.39	204.08	214.29	227.68	250.45	275.49	303.04	333.35	366.68
4	Administrative Expenses	339.46	284.76	406.74	604.28	609.79	575.07	632.58	695.83	765.42	841.96	926.16
5	Finance Expenses											
	a. Interest on Loans	23.17	0.00	7.06	0.97	70.93	1.51	66.07	64.29	62.51	60.73	58.94
	b. Debt service on new investments	0.00	0.00	0.00	0.00	0.00	0.00	0.00	120.76	213.53	213.53	213.53
6	Deposits & Advances	12.53	14.50	17.88	18.44	19.32	19.81	21.79	23.97	26.37	29.00	31.90
	<b>Total Revenue Expenditure</b>	<b>713.27</b>	<b>746.29</b>	<b>847.28</b>	<b>1058.78</b>	<b>1131.45</b>	<b>1027.17</b>	<b>1194.30</b>	<b>1426.10</b>	<b>1641.19</b>	<b>1775.92</b>	<b>1924.31</b>
	<b>Revenue Surplus / Deficit</b>	<b>-3.41</b>	<b>-5.71</b>	<b>10.00</b>	<b>9.14</b>	<b>-232.34</b>	<b>-184.87</b>	<b>53.29</b>	<b>6.09</b>	<b>-84.55</b>	<b>203.23</b>	<b>211.01</b>
	<b>Principle Payment (Earlier Loan)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.30</b>	<b>14.30</b>	<b>14.30</b>	<b>14.30</b>	<b>14.30</b>	<b>14.30</b>
	<b>Net Surplus / Deficit</b>	<b>-3.41</b>	<b>-5.71</b>	<b>10.00</b>	<b>9.14</b>	<b>-232.34</b>	<b>-199.17</b>	<b>39.00</b>	<b>-8.21</b>	<b>-98.84</b>	<b>188.94</b>	<b>196.71</b>
	<b>Closing Balance</b>	<b>14.43</b>	<b>8.72</b>	<b>18.72</b>	<b>27.86</b>	<b>-204.48</b>	<b>-403.65</b>	<b>-364.65</b>	<b>-372.86</b>	<b>-471.71</b>	<b>-282.77</b>	<b>-86.06</b>

## KEY FINANCIAL INDICATORS

Account Head	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	
	Actuals =====>						Est.	Short-term Projections =====>				
Status of Accounts (incl. OB, PP and CC but exc. Dep)	14.43	8.72	18.72	27.86	-204.48	-403.65	-364.65	-372.86	-471.71	-282.77	-86.06	
Operating Ratio (Rev. Expen./Rev. Inc.)	1.00	1.01	0.99	0.99	1.26	1.22	0.96	1.00	1.05	0.90	0.90	
Cash Debt-Service Coverage Ratio (DSCR)	0.62	0.00	2.65	28.72	-2.88	-25.54	-4.54	-1.87	-1.62	-0.98	-0.30	
DS/TR (Debt Service/Total Revenue)	3.26	0.00	0.82	0.09	7.89	1.88	6.44	13.92	18.65	14.58	13.43	

TABLE. 7.17. FINANCIAL OPERATIONAL PLAN (FOP) – LONG TERM PERIOD (2006-07 TO 2025-26)

Figures Rs. In lakhs

Sl. No.	Account Head	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
		Long-term Projections=====>														
<b>Opening Balance</b>		<b>-86.06</b>	<b>33.37</b>	<b>70.48</b>	<b>146.48</b>	<b>285.81</b>	<b>482.96</b>	<b>869.92</b>	<b>1317.64</b>	<b>1865.46</b>	<b>2538.38</b>	<b>3311.69</b>	<b>4379.06</b>	<b>5601.96</b>	<b>6996.55</b>	<b>8664.84</b>
<b>Revenue Receipts</b>																
1	Property Tax	289.85	295.64	301.55	307.59	313.74	442.02	450.86	459.87	469.07	478.45	634.43	647.12	660.06	673.26	686.73
2	Other Taxes															
	a. Professional Tax	19.75	20.74	21.77	22.86	24.00	35.77	38.28	40.96	43.83	46.89	50.18	53.69	57.45	61.47	65.77
	b. Other Taxes (excluding Professional Tax)	11.43	12.34	13.33	14.39	15.54	16.79	18.13	19.58	21.15	22.84	24.67	26.64	28.77	31.07	33.56
3	Assigned Revenue	165.03	178.24	192.50	207.90	224.53	242.49	261.89	282.84	305.47	329.91	356.30	384.80	415.59	448.83	484.74
4	Devolution Fund	634.89	694.79	760.34	832.07	910.56	996.46	1090.47	1193.34	1305.92	1429.12	1563.94	1711.49	1872.95	2049.64	2243.00
5	Service Charges and Fees															
	a. Water Charges	64.12	78.48	80.05	81.66	99.95	101.95	103.98	134.76	137.46	140.21	171.62	175.05	178.55	218.54	222.91
	b. Service Charges and Fees (excluding Water Charges)	170.30	187.33	206.06	226.67	249.34	274.27	301.70	331.87	365.05	401.56	441.71	485.89	534.47	587.92	646.71
6	Grants and Contributions	24.27	25.49	26.76	28.10	29.50	30.98	32.53	34.15	35.86	37.65	39.54	41.51	43.59	45.77	48.06
7	Sale and Hire Charges	59.47	62.45	65.57	68.85	72.29	75.90	79.70	83.69	87.87	92.26	96.88	101.72	106.81	112.15	117.75
8	Other Income	305.67	351.52	404.25	464.89	534.62	614.81	707.04	813.09	935.05	1075.31	1236.61	1422.10	1635.42	1880.73	2162.84
9	Deposits & Advances	268.06	308.27	354.51	407.69	468.84	539.17	620.04	713.05	820.00	943.00	1084.45	1247.12	1434.19	1649.32	1896.72
10	Recoveries from Projects	358.03	358.03	365.98	393.82	393.82	402.56	402.56	402.56	442.82	442.82	442.82	453.44	453.44	487.13	498.79
<b>Total Revenue Receipts</b>		<b>2370.88</b>	<b>2573.31</b>	<b>2792.67</b>	<b>3056.47</b>	<b>3336.73</b>	<b>3773.17</b>	<b>4107.17</b>	<b>4509.77</b>	<b>4969.56</b>	<b>5440.04</b>	<b>6143.14</b>	<b>6750.57</b>	<b>7421.28</b>	<b>8245.83</b>	<b>9107.58</b>
<b>Revenue Expenditure</b>																
1	Personnel Cost	338.37	372.20	409.43	450.37	495.40	544.95	599.44	659.38	725.32	797.85	877.64	965.40	1061.94	1168.14	1284.95
2	a. Terminal and Retirement Benefits	21.44	23.58	25.94	28.53	31.38	34.52	37.97	41.77	45.95	50.54	55.60	61.16	67.27	74.00	81.40
3	Operating Expenses	403.35	443.68	488.05	536.86	590.54	649.60	714.56	786.01	864.61	951.08	1046.18	1150.80	1265.88	1392.47	1531.72
4	Administrative Expenses	1018.77	1120.65	1232.71	1355.98	1491.58	1640.74	1804.82	1985.30	2183.83	2402.21	2642.43	2906.67	3197.34	3517.08	3868.78
5	Finance Expenses															
	a. Interest on Loans	57.16	55.38	53.60	51.82	50.03	48.25	46.47	44.69	42.90	41.12	39.34	37.56	35.78	33.99	32.27
	b. Debt service on new investments	362.97	467.80	450.19	432.57	414.95	397.34	379.72	362.11	344.49	326.87	309.26	291.64	274.03	256.41	238.79
6	Deposits & Advances	35.09	38.60	42.46	46.71	51.38	56.52	62.17	68.39	75.23	82.75	91.03	100.13	110.14	121.16	133.27
<b>Total Revenue Expenditure</b>		<b>2237.15</b>	<b>2521.90</b>	<b>2702.38</b>	<b>2902.84</b>	<b>3125.29</b>	<b>3371.92</b>	<b>3645.15</b>	<b>3947.65</b>	<b>4282.34</b>	<b>4652.43</b>	<b>5061.48</b>	<b>5513.37</b>	<b>6012.39</b>	<b>6563.25</b>	<b>7171.20</b>
<b>Revenue Surplus / Deficit</b>		<b>133.73</b>	<b>51.41</b>	<b>90.30</b>	<b>153.63</b>	<b>211.45</b>	<b>401.26</b>	<b>462.02</b>	<b>562.12</b>	<b>687.22</b>	<b>787.60</b>	<b>1081.66</b>	<b>1237.20</b>	<b>1408.89</b>	<b>1682.59</b>	<b>1936.38</b>
<b>Principle Payment (Earlier Loan)</b>		14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	13.18
<b>Net Surplus / Deficit</b>		<b>119.43</b>	<b>37.11</b>	<b>76.00</b>	<b>139.33</b>	<b>197.15</b>	<b>386.96</b>	<b>447.72</b>	<b>547.82</b>	<b>672.92</b>	<b>773.31</b>	<b>1067.37</b>	<b>1222.90</b>	<b>1394.59</b>	<b>1668.29</b>	<b>1923.20</b>
<b>Closing Balance</b>		<b>33.37</b>	<b>70.48</b>	<b>146.48</b>	<b>285.81</b>	<b>482.96</b>	<b>869.92</b>	<b>1317.64</b>	<b>1865.46</b>	<b>2538.38</b>	<b>3311.69</b>	<b>4379.06</b>	<b>5601.96</b>	<b>6996.55</b>	<b>8664.84</b>	<b>10588.04</b>

## KEY FINANCIAL INDICATORS

Account Head	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
	Long-term Projections=====>														
Status of Accounts (incl. OB, PP and CC but exc. Dep)	33.37	70.48	146.48	285.81	482.96	869.92	1317.64	1865.46	2538.38	3311.69	4379.06	5601.96	6996.55	8664.84	10588.04
Operating Ratio (Rev. Expen./Rev. Inc.)	0.94	0.98	0.97	0.95	0.94	0.89	0.89	0.88	0.86	0.86	0.82	0.82	0.81	0.80	0.79
Cash Debt-Service Coverage Ratio (DSCR)	0.08	0.13	0.28	0.57	1.01	1.89	2.99	4.43	6.32	8.66	12.07	16.31	21.59	28.44	37.25
DS/TR (Debt Service/Total Revenue)	18.32	20.89	18.55	16.32	14.36	12.19	10.72	9.34	8.08	7.03	5.91	5.09	4.37	3.70	3.12



### 7.8.6. FINANCIAL OPERATIONAL PLAN: (EXCLUDING BUSINESS PLAN PROJECTS)

Based on the FOP formulated excluding the identified projects in the business plan it is evident that ULBs revenue resources is fall short by Rs. 358 lakhs in short term and Rs. 498 lakhs in long term period. By way of projecting the revenue base of the local body it is estimated that total revenue receipt is estimated to reach to Rs. 1777 lakhs in 2010-11 from Rs.842 lakhs in 2005-06.

The total revenue expenditure is also increased from Rs.1027 lakhs (2005-06) to Rs. 1710 Lakhs (2010-11). It is observed that in all the years Operating ration (RE/RI) remains (more than 0.9) in a critical position. The debt serving over the total revenue is well within 8 percent indicating ease of the municipal finance in repayment of loan (Table 7.18). For a Long term period of 2006-07 to 2025-26, total revenue receipt has been estimated to reach to Rs. 8608 lakhs in 2025-26 from Rs.842 lakhs in 2005-06. The total revenue expenditure has been increased from Rs.1027 lakhs (2005-06) to Rs. 6932 Lakhs (2025-26). It is observed that in all the years Operating ration (RE/RI) remains well within operating feasibility of (less than 1). The debt serving over the total revenue is well within 4 percent indicating ease of the municipal finance in repayment of loan (Table 7.19).

### 7.8.7. SUMMARY STATUS

Key Indicators	Minimum	Maximum	Average
<b>Existing (2000-01 to 2005-06)</b>			
OR (Ratio)	0.99	1.22	1.08
DSR (%)	0.00	7.89	2.32
<b>Short-Term (2006-07 to 2010-11)</b>			
OR (Ratio)	0.96	0.96	0.96
DSR (%)	4.12	6.44	5.22
<b>Long-Term (2006-07 to 2025-26)</b>			
OR (Ratio)	0.81	0.93	0.87
DSR (%)	0.53	3.55	1.67

TABLE. 7.18. FINANCIAL OPERATIONAL PLAN (FOP) – SHORT TERM PERIOD (2006-07 TO 2010-11) - (EXCLUDING BUSINESS PLAN PROJECTS)

Figures Rs. In lakhs

Sl. No.	Account Head	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
		Actuals =====>						Est.	Short-term Projections =====>			
	<b>Opening Balance</b>	<b>17.84</b>	<b>14.43</b>	<b>8.72</b>	<b>18.72</b>	<b>27.86</b>	<b>-204.48</b>	<b>-403.65</b>	<b>-364.65</b>	<b>-324.49</b>	<b>-282.20</b>	<b>-230.53</b>
	<b>Revenue Receipts</b>											
1	Property Tax	126.67	176.08	129.23	135.00	151.82	155.92	201.94	205.98	210.10	214.30	218.59
2	Other Taxes											
	a. Professional Tax	17.48	18.78	19.82	21.32	23.72	20.46	15.47	16.25	17.06	17.91	18.81
	b. Other Taxes (excluding Professional Tax)	7.54	6.40	6.38	7.09	7.15	7.20	7.78	8.40	9.07	9.80	10.58
3	Assigned Revenue	88.21	99.69	140.50	154.07	78.13	104.00	112.32	121.31	131.01	141.49	152.81
4	Devolution Fund	160.00	108.27	202.34	313.03	202.77	101.17	405.08	445.26	489.13	532.71	580.16
5	Service Charges and Fees											
	a. Water Charges	22.92	26.16	30.70	60.00	62.00	65.00	48.40	49.37	50.35	61.63	62.86
	b. Service Charges and Fees (excluding Water Charges)	57.14	58.55	69.25	82.22	82.69	96.13	105.74	116.32	127.95	140.74	154.82
6	Grants and Contributions	20.86	32.23	30.73	20.86	20.86	0.00	19.02	19.97	20.97	22.02	23.12
7	Sale and Hire Charges	40.40	41.72	45.21	42.03	44.21	44.38	46.60	48.93	51.38	53.94	56.64
8	Other Income	56.28	60.44	71.14	119.11	111.13	132.15	151.97	174.77	200.98	231.13	265.80
9	Deposits & Advances	112.36	112.26	111.98	113.19	114.63	115.89	133.27	153.26	176.25	202.69	233.10
	<b>Total Revenue Receipts</b>	<b>709.86</b>	<b>740.58</b>	<b>857.28</b>	<b>1067.92</b>	<b>899.11</b>	<b>842.30</b>	<b>1247.59</b>	<b>1359.80</b>	<b>1484.25</b>	<b>1628.36</b>	<b>1777.28</b>
	<b>Revenue Expenditure</b>											
1	Personnel Cost	171.18	181.49	182.86	184.05	185.18	191.00	210.10	231.11	254.22	279.64	307.61
2	a. Terminal and Retirement Benefits	35.95	31.41	44.35	46.96	31.94	12.10	13.31	14.64	16.11	17.72	19.49
3	Operating Expenses	130.98	234.13	188.39	204.08	214.29	227.68	250.45	275.49	303.04	333.35	366.68
4	Administrative Expenses	339.46	284.76	406.74	604.28	609.79	575.07	632.58	695.83	765.42	841.96	926.16
5	Finance Expenses											
	a. Interest on Loans	23.17	0.00	7.06	0.97	70.93	1.51	66.07	64.29	62.51	60.73	58.94
6	Deposits & Advances	12.53	14.50	17.88	18.44	19.32	19.81	21.79	23.97	26.37	29.00	31.90
	<b>Total Revenue Expenditure</b>	<b>713.27</b>	<b>746.29</b>	<b>847.28</b>	<b>1058.78</b>	<b>1131.45</b>	<b>1027.17</b>	<b>1194.30</b>	<b>1305.34</b>	<b>1427.66</b>	<b>1562.40</b>	<b>1710.78</b>
	<b>Revenue Surplus / Deficit</b>	<b>-3.41</b>	<b>-5.71</b>	<b>10.00</b>	<b>9.14</b>	<b>-232.34</b>	<b>-184.87</b>	<b>53.29</b>	<b>54.46</b>	<b>56.59</b>	<b>65.97</b>	<b>66.50</b>
	<b>Principle Payment (Earlier Loan)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.30</b>	<b>14.30</b>	<b>14.30</b>	<b>14.30</b>	<b>14.30</b>	<b>14.30</b>
	<b>Net Surplus / Deficit</b>	<b>-3.41</b>	<b>-5.71</b>	<b>10.00</b>	<b>9.14</b>	<b>-232.34</b>	<b>-199.17</b>	<b>39.00</b>	<b>40.16</b>	<b>42.29</b>	<b>51.67</b>	<b>52.21</b>
	<b>Closing Balance</b>	<b>14.43</b>	<b>8.72</b>	<b>18.72</b>	<b>27.86</b>	<b>-204.48</b>	<b>-403.65</b>	<b>-364.65</b>	<b>-324.49</b>	<b>-282.20</b>	<b>-230.53</b>	<b>-178.32</b>

## KEY FINANCIAL INDICATORS

Account Head	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	
	Actuals =====>						Est.	Short-term Projections =====>				
Status of Accounts (incl. OB, PP and CC but exc. Dep)	14.43	8.72	18.72	27.86	-204.48	-403.65	-364.65	-324.49	-282.20	-230.53	-178.32	
Operating Ratio (Rev. Expen./Rev. Inc.)	1.00	1.01	0.99	0.99	1.26	1.22	0.96	0.96	0.96	0.96	0.96	
Cash Debt-Service Coverage Ratio (DSCR)	0.62	0.00	2.65	28.72	-2.88	-25.54	-4.54	-4.13	-3.67	-3.07	-2.43	
DS/TR (Debt Service/Total Revenue)	3.26	0.00	0.82	0.09	7.89	1.88	6.44	5.78	5.17	4.61	4.12	

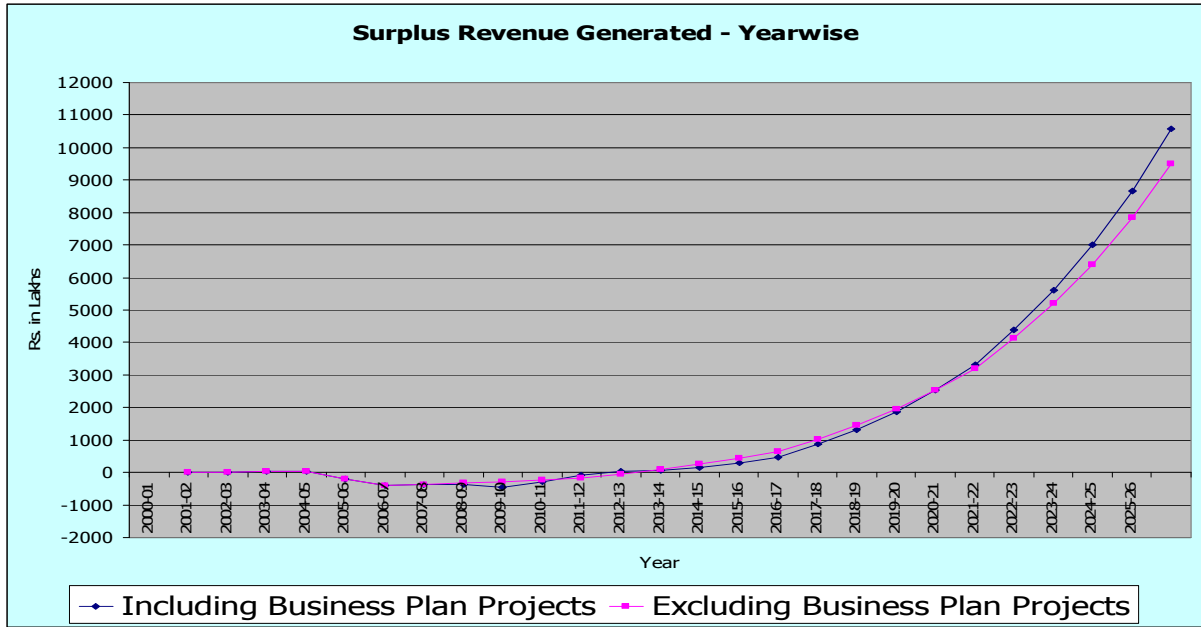
TABLE. 7.19. FINANCIAL OPERATIONAL PLAN (FOP) – LONG TERM PERIOD (2006-07 TO 2025-26) - (EXCLUDING BUSINESS PLAN PROJECTS)

Figures Rs. In lakhs

Sl. No.	Account Head	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
		Long-term Projections=====>														
<b>Opening Balance</b>		<b>-178.32</b>	<b>-53.95</b>	<b>92.93</b>	<b>253.14</b>	<b>431.22</b>	<b>649.51</b>	<b>1031.24</b>	<b>1456.13</b>	<b>1963.49</b>	<b>2538.08</b>	<b>3195.44</b>	<b>4129.25</b>	<b>5190.35</b>	<b>6405.53</b>	<b>7843.10</b>
<b>Revenue Receipts</b>																
1	Property Tax	289.85	295.64	301.55	307.59	313.74	442.02	450.86	459.87	469.07	478.45	634.43	647.12	660.06	673.26	686.73
2	Other Taxes															
	a. Professional Tax	19.75	20.74	21.77	22.86	24.00	35.77	38.28	40.96	43.83	46.89	50.18	53.69	57.45	61.47	65.77
	b. Other Taxes (excluding Professional Tax)	11.43	12.34	13.33	14.39	15.54	16.79	18.13	19.58	21.15	22.84	24.67	26.64	28.77	31.07	33.56
3	Assigned Revenue	165.03	178.24	192.50	207.90	224.53	242.49	261.89	282.84	305.47	329.91	356.30	384.80	415.59	448.83	484.74
4	Devolution Fund	634.89	694.79	760.34	832.07	910.56	996.46	1090.47	1193.34	1305.92	1429.12	1563.94	1711.49	1872.95	2049.64	2243.00
5	Service Charges and Fees															
	a. Water Charges	64.12	78.48	80.05	81.66	99.95	101.95	103.98	134.76	137.46	140.21	171.62	175.05	178.55	218.54	222.91
	b. Service Charges and Fees (excluding Water Charges)	170.30	187.33	206.06	226.67	249.34	274.27	301.70	331.87	365.05	401.56	441.71	485.89	534.47	587.92	646.71
6	Grants and Contributions	24.27	25.49	26.76	28.10	29.50	30.98	32.53	34.15	35.86	37.65	39.54	41.51	43.59	45.77	48.06
7	Sale and Hire Charges	59.47	62.45	65.57	68.85	72.29	75.90	79.70	83.69	87.87	92.26	96.88	101.72	106.81	112.15	117.75
8	Other Income	305.67	351.52	404.25	464.89	534.62	614.81	707.04	813.09	935.05	1075.31	1236.61	1422.10	1635.42	1880.73	2162.84
9	Deposits & Advances	268.06	308.27	354.51	407.69	468.84	539.17	620.04	713.05	820.00	943.00	1084.45	1247.12	1434.19	1649.32	1896.72
<b>Total Revenue Receipts</b>		<b>2012.85</b>	<b>2215.28</b>	<b>2426.69</b>	<b>2662.65</b>	<b>2942.91</b>	<b>3370.61</b>	<b>3704.61</b>	<b>4107.21</b>	<b>4526.74</b>	<b>4997.22</b>	<b>5700.32</b>	<b>6297.13</b>	<b>6967.84</b>	<b>7758.70</b>	<b>8608.79</b>
<b>Revenue Expenditure</b>																
1	Personnel Cost	338.37	372.20	409.43	450.37	495.40	544.95	599.44	659.38	725.32	797.85	877.64	965.40	1061.94	1168.14	1284.95
2	a. Terminal and Retirement Benefits	21.44	23.58	25.94	28.53	31.38	34.52	37.97	41.77	45.95	50.54	55.60	61.16	67.27	74.00	81.40
3	Operating Expenses	403.35	443.68	488.05	536.86	590.54	649.60	714.56	786.01	864.61	951.08	1046.18	1150.80	1265.88	1392.47	1531.72
4	Administrative Expenses	1018.77	1120.65	1232.71	1355.98	1491.58	1640.74	1804.82	1985.30	2183.83	2402.21	2642.43	2906.67	3197.34	3517.08	3868.78
5	Finance Expenses															
	a. Interest on Loans	57.16	55.38	53.60	51.82	50.03	48.25	46.47	44.69	42.90	41.12	39.34	37.56	35.78	33.99	32.27
6	Deposits & Advances	35.09	38.60	42.46	46.71	51.38	56.52	62.17	68.39	75.23	82.75	91.03	100.13	110.14	121.16	133.27
<b>Total Revenue Expenditure</b>		<b>1874.18</b>	<b>2054.10</b>	<b>2252.19</b>	<b>2470.27</b>	<b>2710.33</b>	<b>2974.58</b>	<b>3265.43</b>	<b>3585.54</b>	<b>3937.85</b>	<b>4325.56</b>	<b>4752.22</b>	<b>5221.73</b>	<b>5738.36</b>	<b>6306.84</b>	<b>6932.40</b>
<b>Revenue Surplus / Deficit</b>		<b>138.67</b>	<b>161.18</b>	<b>174.50</b>	<b>192.38</b>	<b>232.58</b>	<b>396.03</b>	<b>439.18</b>	<b>521.66</b>	<b>588.89</b>	<b>671.66</b>	<b>948.10</b>	<b>1075.40</b>	<b>1229.48</b>	<b>1451.87</b>	<b>1676.39</b>
<b>Principle Payment (Earlier Loan)</b>		14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	14.30	13.18
<b>Net Surplus / Deficit</b>		<b>124.37</b>	<b>146.89</b>	<b>160.21</b>	<b>178.08</b>	<b>218.28</b>	<b>381.74</b>	<b>424.88</b>	<b>507.36</b>	<b>574.59</b>	<b>657.36</b>	<b>933.80</b>	<b>1061.10</b>	<b>1215.18</b>	<b>1437.57</b>	<b>1663.21</b>
<b>Closing Balance</b>		<b>-53.95</b>	<b>92.93</b>	<b>253.14</b>	<b>431.22</b>	<b>649.51</b>	<b>1031.24</b>	<b>1456.13</b>	<b>1963.49</b>	<b>2538.08</b>	<b>3195.44</b>	<b>4129.25</b>	<b>5190.35</b>	<b>6405.53</b>	<b>7843.10</b>	<b>9506.31</b>

## KEY FINANCIAL INDICATORS

Account Head	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
	Long-term Projections=====>														
Status of Accounts (incl. OB, PP and CC but exc. Dep)	-53.95	92.93	253.14	431.22	649.51	1031.24	1456.13	1963.49	2538.08	3195.44	4129.25	5190.35	6405.53	7843.10	9506.31
Operating Ratio (Rev. Expen./Rev. Inc.)	0.93	0.93	0.93	0.93	0.92	0.88	0.88	0.87	0.87	0.87	0.83	0.83	0.82	0.81	0.81
Cash Debt-Service Coverage Ratio (DSCR)	-0.75	1.33	3.73	6.52	10.10	16.49	23.96	33.29	44.37	57.66	76.98	100.09	127.92	162.42	209.14
DS/TR (Debt Service/Total Revenue)	3.55	3.15	2.80	2.48	2.19	1.86	1.64	1.44	1.26	1.11	0.94	0.82	0.72	0.62	0.53



By way of implementing the suggested projects in the Business plan the local body attain a position were they could sustain their revenue base in long run and in turn civic services could be improved by means of their own resources without getting engrossed in debts.