

CHAPTER II

PERFORMANCE REVIEWS

This chapter presents three performance reviews dealing with (a) Computerisation in municipalities, (b) Solid Waste Management by municipalities and corporations and (c) Income from remunerative assets of municipalities.

MUNICIPAL ADMINISTRATION AND WATER SUPPLY DEPARTMENT

2.1 Computerisation in municipalities

Highlights

➤ Of the 18 functions taken up for computerisation, only five to six, on an average, were implemented.

(Paragraph 2.1.5)

➤ Software developed was not fully utilised due to defective planning.

(Paragraph 2.1.6)

➤ Unwarranted supply of programme development tool (Visual Studio .NET software) and Digital Audio Tape Drives to municipalities resulted in avoidable expenditure of Rs 77.63 lakh.

(Paragraphs 2.1.7 and 2.1.8)

➤ Non-raising of demand for Property tax of Rs 39.84 lakh per half year between April 2002 and September 2005 resulted in non-recovery of Rs 2.11 crore.

(Paragraph 2.1.10)

➤ Data relating to the 'Birth and Death Registration' contained a variety of errors and deficiencies rendering the data unreliable.

(Paragraph 2.1.17)

➤ Due to lack of audit trail, causes for inaccuracies in the calculation of Property tax aggregating to Rs 94.43 lakh could not be identified.

(Paragraph 2.1.20)

2.1.1 Introduction

In order to improve the efficiency of municipalities in the discharge of their responsibilities Government decided (December 1996) to computerise their functions¹. This was taken up in 1997 at a total cost of Rs 4.64 crore through a World Bank loan. Additional servers and networking facilities were supplied to the municipalities at a total cost of Rs 10.53 crore in 2003-04.

2.1.2 Functions computerised

An application software in FoxPro encompassing 18 functions¹ of the municipalities was developed by Electronic Corporation of India Limited (ECIL) and supplied to all the municipalities in 1997. The same application was redeveloped by ECIL in client-server environment with Oracle (RDBMS) and Visual Basic (Front end) in 2002.

Software for five crucial functions listed below were further developed in-house on the same platform:

- Property tax
- Water charges
- Professional tax
- Miscellaneous collection
- Personnel management

The software was to be made use of in 102 municipalities (excluding 49 Grade-III municipalities) across the State.

2.1.3 Scope of audit and audit strategy

During the review, conducted from July to September 2005, IT policy, planning, development and implementation of the application software in various municipalities were assessed.

A sample of 20 *per cent* of the municipalities under each grade was selected for detailed examination as indicated below:

¹ (i) Birth and Death Record System, (ii) Buildings Plan Approval, (iii) Census Records, (iv) Electoral Rolls, (v) Financial Accounting System, (vi) Hospital Records Maintenance, (vii) Miscellaneous Collection System, (viii) Mother and Child Welfare, (ix) Movable and Immovable Properties, (x) Non-Tax Revenue, (xi) Personnel Management System, (xii) Professional Tax System, (xiii) Property Tax System, (xiv) Stores and Inventory, (xv) Solid Waste Management, (xvi) Trade License, (xvii) Water Charges System and (xviii) Vehicle Records System.

Grade of Municipality	Actual Number	Number Audited
Special Grade	13	3
Selection Grade	26	5
Grade-I	38	7
Grade-II	25	5
Total	102*	20

* In June 2004, Government upgraded 49 Town Panchayats as Grade-III municipalities. As computerisation there had just begun, these were not taken up for Audit.

2.1.4 Audit objective and methodology

The objective of the review was to assess whether the aim of computerisation, implemented with a view to bringing about an effective management and rendering better services to the public at minimum cost was achieved. Uniform implementation of the software in all municipalities, suitability of its design, adequacy of controls, consistency, correctness and dependability of data to achieve the set objectives were examined.

Information on the status of computerisation was collected through a questionnaire. Data commencing from implementation (November 2003) of the Oracle system till August 2005 was downloaded and examined in audit using SQL Queries and special programmes.

2.1.5 Partial implementation of computerisation

The computerisation taken up in 1997 is yet to become fully operational in the municipalities for all functions on any of the platforms (either FoxPro before 2002 or Oracle). On an average, only five to six² out of the 18 functions were implemented in the municipalities (September 2005) (**Appendix XIII**). There was lack of uniformity in software across the municipalities and monitoring of its implementation was inadequate. Even the implemented modules required corrections and supplementation.

2.1.6 Acquisition of Application Software – defective planning

On commencement of computerisation in 1997, a stand-alone application software encompassing 18 functions was developed by ECIL in 1997 in FoxPro at a cost of Rs 57.95 lakh and installed (September 1998) in all municipalities. At a stage when only four out of these 18 modules had been implemented (2002), a new software for the same functions was developed by ECIL in client-server architecture in 2002 on Oracle at a cost of Rs 26.55 lakh.

² (i) Birth and Death Record System, (ii) Property Tax System, (iii) Water Charges System, (iv) Non-tax Revenue, (v) Professional Tax System and (vi) Miscellaneous Collection System.

Both these softwares were developed without finalising, the requirement of the user in the form of an 'User Requirement Specification' or the assessment of the requirement by ECIL in the form of 'System Requirement Specification'. Even before the Oracle software could be fully developed and supplied by ECIL, the Department resorted to in-house customisation of the same. Accordingly, of the 18 modules developed on Oracle by ECIL, five modules were customised in-house and are under implementation. Efforts are on to customise other modules as well. It is apparent that inadequate planning and inadequate assessment of user and system requirement led to frequent changes in development of software and sub-optimal utilisation of software developed at a cost of Rs 84.50 lakh.

2.1.7 Supply of unwarranted software development tool

Unwarranted supply of software resulting in avoidable expenditure of Rs 44.48 lakh.

Computerisation in the municipalities was to work on a set of centrally developed programmes. Accordingly, only executable versions were to be supplied to them since personnel at the municipalities were neither required to make any alteration in the software supplied, nor develop programmes on their own. Hence they did not require any program development tool. However, one copy of 'Visual Studio .NET' procured from HCL Info Systems Limited at a cost of Rs 43,610 (per copy, excluding taxes) and supplied (October 2003) to all the 102 municipalities. No justification for the purchase was drawn up and placed on record. The expenditure of Rs 44.48 lakh on the supply of this software was avoidable.

2.1.8 Unwarranted supply of Digital Audio Tape drives

Unwarranted supply of backup device resulted in avoidable expenditure of Rs 33.15 lakh.

The server procured from HCL Info Systems Limited and supplied (October 2003) to each municipality contained a Digital Audio Tape (DAT) drive costing Rs 32,500. Each municipality was also supplied (October 2003) with one external CD writer. Though both these devices were for taking backup of data, all the municipalities chose to use the external CD writers only. Thus, the supply of DAT drives did not serve any purpose and expenditure of Rs 33.15 lakh incurred towards its supply was infructuous.

2.1.9 Lack of documentation

Though the software developed in-house was in operation for five crucial functions of the municipalities, no documentation or user manuals were prepared and supplied to the municipalities for any of these modules. This resulted in users committing errors as brought out in paragraphs 2.1.18 to 2.1.20.

2.1.10 Demands not raised in respect of assessed properties

Non-raising of Property tax demands to the tune of Rs 2.11 crore in 622 instances.

Taxes for all properties are assessed by the computer system and demands are raised thereafter. In five municipalities taken up for examination, a comparison of the assessments and the demands disclosed that there were 622 instances where properties were assessed for tax of Rs 39.84 lakh while no

corresponding demands were raised. Half year-wise break up of the instances are given in the table below:

Year	Period of the year	Number of cases	Amount per half year (Rupees in lakh)	No. of half yearly periods	Total amount (Rupees in lakh)
2002-03	I half	80	5.53	7	38.71
2002-03	II half	33	23.92	6	143.52
2003-04	I half	10	0.24	5	1.20
2003-04	II half	50	0.31	4	1.24
2004-05	I half	118	7.78	3	23.34
2004-05	II half	114	0.75	2	1.50
2005-06	I half	217	1.31	1	1.31
Total		622	39.84		210.82

In respect of these cases, demands were not raised, due to lack of referential integrity³ and internal control mechanism resulting in non-recovery of Property tax of Rs 39.84 lakh per half year aggregating to Rs 2.11 crore between April 2002 and September 2005.

Inadequacies in the transfer of Data

The data from the manual system was captured in the FoxPro based application and thereafter the same was transferred to the Oracle based application. However, there were inadequacies in the data transfer as brought out in the following paragraphs.

2.1.11 Non-reconciliation between manual records and computer data

When a computerised system replaced the manual system, all the manual records were transferred to the computerised system. The data thus transferred was to be reconciled with the manual records. However, in respect of all the revenue collection functions in the test checked municipalities, the data captured in the computer system was yet to be reconciled with the manual records. Thus, collection of various dues to the municipalities was carried out based on the unreconciled data on the computer system. As a result, the correctness and completeness of the computer data was not ensured.

³ Ensuring the existence of data in one table with reference to the data already available in another.

2.1.12 Incomplete transfer of data from FoxPro to Oracle

Data captured in FoxPro was not fully transferred to Oracle, rendering the latter data deficient.

Data for all 'Demand, Collection and Balance' based accounting procedures and 'Birth and Death Registration' was captured in 1997 in FoxPro based applications from manual records. When the application was converted to Oracle in 2003-04, the data was migrated using a conversion software. However, in respect of Property Tax System, only the identity of the assessee and the tax payable by him were converted to Oracle leaving out factors like type of construction, age of building, usage, area, annual value, etc. Similarly, in respect of Birth and Death, while the FoxPro application had data from 1992, only data from the year 2000 had been migrated to application based on Oracle. Such incomplete migration of data rendered the present Oracle Database deficient and incomplete. As a result, the calculation of tax during further revisions or making modifications to the existing tax may not be feasible with the current Oracle data.

Deficiency in System Design

The software run in the municipalities had design deficiencies and was unable to function as one integrated unit as brought out in the paragraphs:

2.1.13 Lack of proper integration of modules

The system for collection of dues was claimed to be on-line and fully integrated with all the in-house and external collection counters being linked on LAN and the data centrally stored. However, the collection function was carried out using software developed in-house while the Financial Accounting System being utilised was developed by ECIL. Lack of integration between these modules resulted in tax collection details not reaching the accounting module automatically. As a result, collection details had to be fed manually to the Accounting Module, giving room for errors defeating the purpose of having an integrated system and increasing the time and cost of updation.

2.1.14 Different assessment numbers for the same properties for Property Tax and Water Charges systems

Despite the system being integrated, the same set of properties were given different codes for different functions.

Property tax was due from all properties in a municipality, while Water charges were due only from properties, which had water connections. Thus, payers of Water charges were only a subset of the payers of Property tax. In an integrated computer system it would have been advantageous to have the same code for both Water charges and Property tax. However, the same property was given separate codes for each of these functions thus constituting a deficient data design. As a result, introduction of controls in the form of referential integrity between the two tax collection systems was not possible. A test check, in Ambattur Municipality alone revealed that 2,296 assesseees who were paying Water charges were not correspondingly assessed for

Property tax. Thus, there was a risk of non or short-assessment of Property tax.

2.1.15 Non-assignment of Zones by the computer system

The area under each municipality was divided to fall under three or four different zones depending on its prevalent rental value. Each zone was assigned a different 'basic rental rate' using which the Annual Value (AV) of the property was calculated. In the present system, the user had to feed in the Zone Code manually, based on which the computer selected the related 'basic rental rate' and calculated the AV of the property. Incorrect feeding of the Zone Code would lead to under or over assessment of Property tax, which could be avoided if the Zone Codes were included in the master table(s) and the Zone Code was selected automatically based on the address of the assessee.

An examination of data in respect of 15 streets in the Pallavaram Municipality having 210 properties, disclosed that 51 properties were assigned incorrect Zone Codes. This resulted in short assessment of Rs 0.39 lakh in 36 cases and excess assessment of Rs 0.17 lakh in 15 cases.

2.1.16 Incorrect procedures followed in respect of accountal of cheques

The software provided for the accountal of cheque payments and for their reversal if a cheque got dishonoured. However, all the municipalities test checked resorted to receiving and holding cheques outside the computer accounting system till their realisation. Such methodology defeated the purpose of having Property tax collection on-line. Apart from presenting an inaccurate financial position this procedure is inconsistent with the provisions of the Accounting manual for urban local bodies and provides scope for possible irregularities in the handling and accountal of cheques.

2.1.17 Deficiencies in birth and death data

For the registration of birth and death, different municipalities were using different versions of the software. An examination of 8.75 lakh births and 1.19 lakh deaths registered in the 20 selected municipalities, disclosed errors and omissions in the data. The major discrepancies noticed are tabulated below:

Sl. No.	Discrepancy	Number of cases
1.	Registrations done on dates earlier to the date of their occurrence	4,519 births in 15 municipalities 4,875 deaths in 13 municipalities.
2.	Age of mother at the time of child birth lower than her age at the time of marriage	1.26 lakh birth cases in 15 municipalities constituting 14.35 per cent of the total births (8.75 lakh) in 20 municipalities.
3.	Name of the Father or Mother left blank or filled in with meaningless characters	11,953 births in 18 municipalities. 13,002 deaths in 18 municipalities.

The data on 'Birth and Death Registration' had a variety of errors in large numbers rendering the data unreliable.

Sl. No.	Discrepancy	Number of cases
4.	Name of the deceased left blank	904 instances in 17 municipalities.
5.	Address of the father of the child left blank	5.39 lakh cases in 20 municipalities constituting 61.64 <i>per cent</i> of the total births (8.75 lakh).
6.	PIN code entered as '0'	6.53 lakh cases comprising 74.63 <i>per cent</i> of the total number of records examined in 20 municipalities.
7.	Irrelevant characters and numbers were fed in place of religion	10,100 births in 18 municipalities.
8.	Cause of death left blank	9,210 cases
9.	Cause of death contained meaningless character	4,506 cases
10.	Weight of a child on birth:	
	Remained blank	16,104 cases
	Contained Dots and dashes	4,563 cases
	Given as '0'	1.29 lakh cases

All the above errors and omissions were due to lack of effective validation controls at the data input stage thereby adversely affecting the integrity.

Inconsistencies in the calculation of Property tax

Instead of integrating the constant parameters in the application software itself, the assessment of Property tax was done based on a set of parameters to be keyed in by the user at the time of installation of the software. Several deficiencies were noticed in the application of such parameters besides some inaccuracies in the software itself leading to incorrect Property tax assessments as brought out in the following cases:

2.1.18 Inapplicable discount for RCC buildings

Incorrect discount allowed for RCC buildings resulting in short assessment of tax of Rs 3.34 lakh.

Although no 'roof discount' is applicable for RCC buildings as per existing rules, parameters for roof discount of one *per cent* was given for such buildings in Ambattur and Mayiladuthurai municipalities. While Mayiladuthurai municipality was yet to commence assessments through the Oracle application, Ambattur municipality had assessed 8,445 RCC roofed properties giving a discount of one *per cent*.

Non-incorporation of crucial parameter⁴ into the system resulted in incorrect data entry of the discount rate leading to short assessment of Property tax of Rs 3.34 lakh from the time of introduction of the Oracle application (2003) to the second half year 2005-06.

⁴ Parameter indicating discount based on roof type.

2.1.19 Incorrect calculation of Library cess

Library cess collected in respect of each Municipality is to be calculated at 10 *per cent* of Property tax. Despite it being a constant percentage of the Property tax, 'percentage' was required to be entered as a parameter for calculation of Library cess. This unnecessary procedure gave room for the municipalities keying in wrong parameters and calculating incorrect amounts for Library cess. If this parameter had been incorporated in the software itself, incorrect calculation of Library cess as stated below could have been avoided.

	Municipalities		
	Alandur	Madhavaram	Mannargudi
Basic Tax (<i>per cent</i> of AV)	11	10.5	14
Percentage of AV to be taken as Library cess	1.1	1.05	1.4
Percentage of AV actually taken for calculating Library cess	10	1.5	10
Number of cases of incorrect calculation	548	1,556	184
Library cess actually collected (in Rupees)	1,78,854	1,41,018	11,896
Library cess actually due (in Rupees)	19,672	98,708	1,666
Excess Collection (in Rupees)	1,59,182	42,311	10,230

2.1.20 Error in calculation of Property tax – Lack of Audit Trail

A well defined and complete audit trail is a pre-requisite for ensuring reliability of data and also acts as an effective internal control mechanism. The system under review did not provide a complete audit trail for the calculation of Property tax. As a result, reasons for short or excess assessments involving Rs 94.43 lakh could not be ascertained in audit or explained by the municipalities.

For want of a complete Audit Trail in the data tables, difference of Rs 94.43 lakh in Property tax could not be reconciled.

Municipality	Usage	No. of cases	Excess or short assessment of tax	No. of cases	Difference (amount in Rupees)
Erode	Residential	2,929	Excess	430	3,33,812
Alandur	Commercial	838	Short	483	89,93,865
Alandur	Residential	3,885	Excess	33	45,523
Madhavaram	Residential	1,515	Short	1,408	24,399
Madhavaram	Commercial	29	Short	28	38,418
Madhavaram	Industrial	25	Short	25	6,631
Total		9,221		2,407	94,42,648

Further, lack of an internal control mechanism led to such inaccuracies remaining unidentified.

2.1.21 Deficiency in application software

Property tax is the sum total of 'Basic tax', 'Library cess' and 'Education tax'. The software has to ensure that the Property tax assessed is the sum total of all the three component taxes. However, in 515 cases from Gobichettipalayam and Erode municipalities, the Property tax calculated did not work out to the total of the three component taxes. The break up details of excess and shortfall year wise is as given below:

Year	Excess		Shortfall	
	Number of cases	Amount (In Rupees)	Number of cases	Amount (In Rupees)
2001-02	1	742
2002-03	68	47,969	5	401
2003-04	251	2,31,836	78	1,85,419
2004-05	97	52,639	1	123
2005-06 (first half year)	13	2,315	1	64
Total	430	3,35,501	85	1,86,007

Such errors in totalling in a limited number of cases cannot be attributed to faulty programming. This is possible only if the tax calculated by the computer has been altered by direct access to the back end tables indicating lack of logical security controls.

2.1.22 All residential properties treated as occupied by the owner

Rented residential properties in large numbers were declared as owner occupied resulting in short levy of Property tax.

Owner occupied residential properties were due for a discount of 30 *per cent* on Property tax. It was seen from the data tables relating to 15 municipalities that the number of rented residences were grossly under-projected in 11 municipalities and ranged between zero to two *per cent* (**Appendix XIV**). In the other four municipalities this ranged between 17 and 30 *per cent*. It was apparent that rented residences have been declared as owner occupied in many municipalities as gauged from the following facts.

- Statistics collected at the Municipality of Pallavaram in the year 1999 indicated that 12.8 *per cent* of the residential buildings were rented.
- Similarly, an examination of data of the same municipality relating to the earlier FoxPro based system (2002-03) indicated that 11.7 *per cent* of their residential buildings were rented.
- The Pallavaram Municipality had not even created a provision in their application software to assess rented residential properties. Consequently, the municipality recorded a '0' *per cent* residential rented accommodation in the

4,803 residential properties assessed using the Oracle system. The municipality in its reply (September 2005) offered to correct the omission in the software and data.

It is thus apparent that municipalities had grossly under-projected the number of rented residences.

2.1.23 Collections of Property tax not accounted for against individual's accounts

An examination of the data relating to collection and account of Property tax for the period 1994-95 to 2005-06 disclosed the following discrepancies.

The account of amounts received against Property tax demands was deficient.

- 10,369 half yearly demands aggregating to Rs 1.33 crore were reduced despite there being no corresponding receipts, indicating that demands were reduced even without collections.
- In respect of 626 half yearly demands, the reduction of demands were more than the corresponding collections by Rs 7.11 lakh.
- 5,502 receipts aggregating to Rs 65.36 lakh though recorded as received were not accounted for as collections against demands.
- In respect of 6,858 half yearly demands, the reduction of demands were less than the corresponding collections by Rs 70.96 lakh.

Such inaccuracies in the treatment of collections indicated complete mismatch between demand and collection data leading to the inconsistencies in the database apart from making the data itself unreliable.

2.1.24 Conclusions

On account of the deficiencies in planning, the computerisation in the municipalities that started in 1997 is incomplete even after incurring an expenditure of Rs 15.17 crore. Though the software was developed twice by ECIL on different platforms, the Department proceeded with customising the same in-house. The software customised in-house was also deficient resulting in lack of data integrity. Lack of documentation resulted in users being unable to make correct use of the software. Unnecessary hardware and software valued at Rs 77.63 lakh were supplied to the municipalities resulting in avoidable expenditure. Demands amounting to Rs 2.11 crore were not raised and inapplicable discounts were allowed to the tune of Rs 3.34 lakh. Incorrect data design, non-availability of audit trail, lack of referential integrity and internal control mechanism resulted in incorrect tax assessments.

2.1.25 Recommendations

For proper implementation of computerisation in the municipalities, the following is recommended:

- Proper planning should precede any computerisation effort, focusing on the in-house expertise available.
- Documentation of computerisation in terms of design documents, user manuals, etc., should be ensured.
- An effective internal control mechanism to monitor the implementation and operation of the computerisation process may be put in place.
- System should have an in-built mechanism to capture audit trail of transactions in view of its criticality to the functioning of the organisation.
- Referential integrity in the database should be ensured.
- Reconciliation of the computer data with the manual data should be carried.
- As the basic rates of the tax, Zone Codes, etc., do not change frequently, their entry at the data entry stage should be avoided by automating the same.
- User manual should be obtained from the software developer.

The above points were referred to Government in December 2005; reply had not been received (January 2006).

MUNICIPAL ADMINISTRATION AND WATER SUPPLY DEPARTMENT

2.2 Solid Waste Management by municipalities and corporations

Highlights

➤ **Out of 151 municipalities in the State, only two have established waste processing and disposal facilities and only 45 have obtained authorisation from Tamil Nadu Pollution Control Board for setting up such a facility.**

(Paragraph 2.2.6)

➤ **Out of 102 municipalities (excluding the 49 Grade III municipalities), five had no land for dumping solid waste while 36 had inadequate land for this purpose.**

(Paragraph 2.2.7)

➤ **Rupees 1.12 crore spent by three municipalities towards acquisition of land remains blocked as the land could not be put to use due to its proximity to an Air Force Station.**

(Paragraph 2.2.8)

➤ **Corporation of Madurai failed to initiate early action for obtaining approval of the State Government for reclassification of the site where solid waste bio-conversion treatment facility was to be set up as 'industrial zone' resulting in delay in getting approval. Non-setting up of the facility resulted in loss of revenue of Rs 35.10 lakh during December 2002 to November 2005.**

(Paragraph 2.2.9)

➤ **The quantity of garbage cleared by a private agency in the zones where garbage collection was privatised by Corporation of Chennai was inexplicably higher by 21 to 66 *per cent* and resulted in excess expenditure of Rs 37.07 crore during the years 2001 to 2004.**

(Paragraph 2.2.14)

➤ **All the 313 Government hospitals and 1,852 (out of 2,255) private health care units did not obtain authorisation for disposal of bio-medical waste from Tamil Nadu Pollution Control Board as required under Bio-medical Waste (Management and Handling) Rules, 1998.**

(Paragraph 2.2.15)

➤ **Private scavenging fee to the extent of Rs 2.07 crore was not collected by Corporation of Chennai during 1999-2005 from marriage halls, shops and trade establishments. There was shortfall in collection of Rs 18.58 lakh during 2002-05 by Corporation of Madurai towards periodical conservancy charges from bulk garbage generators like marriage halls, hotels, lodges, etc.**

(Paragraph 2.2.16)

2.2.1 Introduction

Proper disposal of solid waste is essential for avoiding health hazards posed by the flies and rodents feeding on the exposed garbage which could result in spread of diseases and contamination of surface and ground water. In order to combat this menace, the Supreme Court of India issued (January 1998) directions regarding proper collection and disposal of solid waste.

In the context of the above, Government of India (GOI) notified (September 2000) the Municipal Solid Waste (Management and Handling) Rules, 2000 (MSW Rules) in exercise of the powers conferred under the Environment (Protection) Act, 1986. The Rules provide for safe disposal of municipal waste to prevent contamination of ground water, surface water and ambient air quality and fix the responsibilities on municipal authorities, District administration, State Pollution Control Board and the State Government. The Rules also specified a time schedule for implementing the solid waste management (SWM) and recommended biomethanisation, composting or pelletisation as methods of disposal of solid wastes. The Rules required all municipalities to set up complete waste processing and disposal facilities by end of December 2003. The Government of Tamil Nadu had issued orders for implementation of the MSW Rules, by the municipalities and corporations in December 2001.

2.2.2 Organisational set up

The Commissioners of municipalities and corporations are in charge of implementing the MSW Rules, 2000. The Commissioner of Municipal Administration (CMA) releases the grants sanctioned by the State Government and guides and controls the overall implementation of SWM in 151¹ municipalities in the State. The Tamil Nadu Pollution Control Board (TNPCB) issues necessary authorisation to the municipalities for the sites selected for the disposal of municipal wastes after ensuring the compliance of the conditions stipulated by it.

¹ Special Grade: 13, Selection Grade: 28, I Grade: 36, II Grade: 25 and III Grade (came into existence from June 2004 due to upgradation of Town Panchayats): 49.

2.2.3 Audit Coverage

The implementation of provisions of MSW Rules, 2000 and solid waste management was studied in the offices of the CMA, TNPCB, 22 municipalities (out of 102 municipalities excluding Grade III) (**Appendix XV**) and three corporations (*viz.*, Chennai, Madurai and Salem) out of six corporations during July and August 2005, covering the period 2000-05.

2.2.4 Financial performance

No grant was received from GOI during 2000-05 for SWM. The details of grants released by the State Government to 68 municipalities, which either had no land or had inadequate land to set up compost yard for purchase of land and the expenditure incurred by them till December 2005 were as below:

Three municipalities and three corporations did not utilise the grant of Rs 2.25 crore received during 2003-05.

(Rupees in lakh)

Year	Number of municipalities	Grant released	Amount spent	Balance	Percentage of utilisation
2000-01	19	175	99.10	75.90	57
2003-04	29	150	69.93	80.07	47
2004-05	20	150	2.72	147.28	2
Total	68	475	171.75	303.25	36

(No grants were released during 2001-02 and 2002-03).

The non-utilisation of the grants by the urban local bodies is commented upon under appropriate paragraph.

In addition, the State Government had also allocated 50 *per cent* of the Incentive Funds to the municipalities and corporations under the Second State Finance Commission's (SSFC) recommendations for subsidising the cost of SWM projects. The following amounts were released during 2003-04 and 2004-05 to 91 municipalities and six corporations:

(Rupees in crore)

Year	Number of		Amount
	Municipalities	Corporations	
2003-04	64	6	8.57
2004-05	89	6	33.59
Total			42.16

Out of 25 urban local bodies test checked, 13 municipalities and the three corporations had received Rs 2.95 crore in March 2004 (**Appendix XVI**). Out of this, Rs 2.25 crore released to three corporations (Chennai, Madurai and Salem at Rs 68.10 lakh each) and three municipalities (Chidambaram, Manapparai and Tindivanam at Rs 7.00 lakh each) remained unutilised (December 2005). The municipalities and corporations generally stated

(September 2005 and January 2006) that the grants would be utilised once the projects for SWM are taken up after loans from various agencies such as Tamil Nadu Urban Finance and Infrastructure Development Corporation Limited and Tamil Nadu Urban Infrastructure Financial Services Limited are sanctioned to meet their full cost.

2.2.5 Unutilised grants in belt municipalities

The State Government released Rs 14 crore² as grant during 2001-05 to eight belt³ municipalities for purchase of vehicles for transportation of solid waste and to set up compost yard/transfer stations. The details of expenditure incurred till December 2005 by the three test checked belt municipalities are indicated below.

(Rupees in lakh)

Sl.No.	Name of municipality	Amount released	Expenditure	Balance
1.	Ambattur	148.50	76.00	72.50
2.	Avadi	134.50	12.50	122.00
3.	Pallavaram	224.50	43.27	181.23
Total		507.50	131.77	375.73

Thus, despite the availability of funds these municipalities could not build required infrastructure for implementing provisions of solid waste management.

2.2.6 Setting up of waste disposal facilities

Out of 151 municipalities in the State only two have established waste processing and disposal facilities.

The quantity of solid waste generated per day in the six corporations and 102 municipalities in the State was 5,070 MT and 3,125 MT (2001 data) respectively. As of September 2005, only two municipalities (Namakkal and Tiruppur) in the State had established waste processing and disposal facilities and commenced composting operations. Further, only 45 out of 151 municipalities had obtained authorisation from TNPCB for commencement of operations, while the setting up of waste processing and disposal facilities should have been completed on 31 December 2003 or earlier as per the time schedule in MSW Rules, 2000. Thus, 98 *per cent* of the municipalities had not set up the required facilities even two years after the due date. As a result the solid waste generated in the test checked three corporations (3,885 MT per day) and 22 municipalities (893.50 MT per day) was being transported to dumping sites without any treatment.

² December 2001:Rs one crore; March 2004: Rs six crore and March 2005: Rs seven crore.

³ Belt municipalities: municipalities abutting Corporation of Chennai viz., Alandur, Ambattur, Avadi, Kathivakkam, Madhavaram, Pallavaram, Tambaram and Tiruvottiyur.

The CMA in his Strategy and Action Plan Report stated (October 2004) that as there were problems in identification and acquisition of land and development/installation of appropriate technologies for waste processing, the time schedule indicated in the MSW Rules, 2000 could not be adhered to. Hence, he sought revision of time schedule till 2007 for setting up of the facilities.

In this context, it is noted that the State Government issued orders (December 2001) for implementation of MSW Rules more than a year after they were notified (September 2000) by GOI. Moreover, as brought out in paragraph 2.2.8 below, the delay in identifying suitable land for disposal of MSW was partly due to failure of the Government and the urban local bodies in building up a favourable opinion for scientific disposal of MSW.

MSW Rules, 2000 provide that wastes from slaughter houses, meat and fish markets, fruits and vegetable markets being biodegradable in nature should be collected and made use of. The Rules contemplate that such wastes be processed by composting, vermi-composting, anaerobic digestion or any other appropriate biological processing for stabilisation. However, these provision of the MSW Rules, 2000 were not given effect to as no facility for processing of biodegradable waste has been set up.

2.2.7 Procurement of land for composting

Out of 102 municipalities 41 did not have adequate land for dumping solid waste.

The Tenth Five Year Plan contemplated (March 2003) requirement of one acre of land for compost yard for every 10,000 population in municipalities/corporations. The status regarding availability of land for dumping solid waste in 102 municipalities⁴ as of December 2005 was as below:

Municipalities which had adequate land	61
Municipalities which required additional land	36
Municipalities which had no land for dumping	5

The normative requirement of land of the five municipalities that had no land is 25.01 acres. Similarly, the normative requirement of the 36 municipalities with a shortfall in this regard was 346.53 acres against 202.74 acres available. Of these 36 municipalities, 17 municipalities had a shortfall exceeding 50 *per cent* (**Appendix XVII**).

Out of Rs 3.25 crore released by the State Government during 2000-04 to 48 municipalities for acquisition of land, only 27 municipalities had spent Rs 1.63 crore (December 2005) towards purchase of 230.11 acres of land. The fact that nearly 50 *per cent* of the amount released for purchase of land is still to be utilised indicates that the implementation of the programme would further be delayed.

⁴ Before upgradation of 49 town panchayats as Grade III municipalities in June 2004.

Of the Rs 22.83 lakh released by the State Government to four⁵ municipalities in March 2001 for purchase of land, the municipalities acquired (between June 2001 and October 2003) the required land at a cost of Rs 15.53 lakh. The unutilised grant, Rs 7.30 lakh had not been refunded to Government so far (September 2005).

2.2.8 Non-availability or inadequacy of land for dumping waste

Out of 22 test checked municipalities, land was available with 16, was inadequate in five and the remaining one did not have any land for setting up of a waste disposal facility. Of the three corporations test checked, Corporation of Salem did not have adequate land for composting operations. The status in respect of few such local bodies is discussed in the succeeding paragraphs.

Ambattur and Avadi Municipalities

Ambattur and Avadi Municipalities jointly acquired (October 2004) 10.40 acres at Sekkadu village at a cost of Rs 32.58 lakh for dumping solid waste. However, this land was not put to use due to protest from public.

Alandur, Pallavaram and Tambaram Municipalities

MSW Rules, 2000 stipulate that the land fill site should be located at least 20 km away from any air station. However, Alandur, Pallavaram and Tambaram municipalities jointly acquired 50 acres of land at Vengadamangalam village (October 2004) at a cost of Rs 1.12 crore without prior approval of Air Force though Tambaram Air Force Station is just six kms away. This site could not be put to use as there was objection from the Air Force authorities. Thus, Rs 1.12 crore spent by the three municipalities for acquisition of the land remains blocked and has not served the purpose for which it was spent.

Government stated (March 2006) that the issue has been taken up with the GOI for resolving the matter.

2.2.9 Delay in setting up of facility

Corporation of Madurai

The Corporation of Madurai awarded (August 2000) the work for setting up of a solid waste bio-conversion treatment facility for producing organic manure at its compost yard in Avaniapuram on build, own, operate and transfer basis. The Corporation was to provide 30 acres of land on lease for 15 years and supply 200 MT of solid waste daily at a price of Rs 3.50 per MT to the facilitator. The lease rent was fixed at Rs 30,000 per acre for the first year and

Expenditure of Rs 1.12 crore on acquisition of 50 acres of land for use as land fill site has not served the purpose due proximity to an Air Force Station.

Failure of the Corporation to get reclassification of site resulted in non-setting up of bio-conversation treatment facility and also in loss of revenue of Rs 35.10 lakh.

⁵ Kulithalai, Sirkali, Tiruvallur and Vandavasi.

gradually increased to Rs 60,000 in the fifteenth year. The Corporation gave 'enter upon' permission to the facilitator in May 2001 and the plant was to be set up within 18 months.

As the power requirement of the compost making machine was 150 HP, the location where the facility was to be set up was to be reclassified as 'industrial zone' from the existing 'mixed residence zone' where machine up to five HP only can be set up. The Corporation addressed the Government in May 2002 and obtained approval in May 2004. In the meantime, the clearance obtained from TNPCB in May 2003 (valid up to March 2004) for setting up the facility expired.

Accordingly, the agreement with the facilitator was terminated (March 2005) and the Corporation decided to set up the plant on its own. Later the Council of the Corporation resolved to entrust the work to the same facilitator (September 2005). The delay in initiating action for getting approval of reclassification from Government resulted in, besides the health hazard caused due to unscientific disposal of MSW, loss of revenue of Rs 35.10 lakh for the period from December 2002 (18 months from May 2001) to November 2005 towards the lease rent (Rs 28.80 lakh) and sale of waste to facilitator (Rs 6.30 lakh).

Dindigul Municipality

Despite availability of its own land, the Municipality made futile efforts for acquisition of land elsewhere and delayed the creation of a compost yard.

Though the Municipality had 100 acres of its own land at Odukkam village, it proposed to acquire land from the Madurai Market Committee for setting up a compost yard by exchanging a portion of the land from its existing dumping yard at Murugabhavanam, Palani Road. The proposal was dropped as TNPCB did not approve the site proposed to be acquired. Another attempt (August 2002) by the Municipality to acquire land from a private individual also failed as the owner of the land refused to sell the land stating that the cost fixed by the Municipality was very low. Ultimately, the Municipality decided (June 2004) to set up compost yard utilising 25 acres out of its own land in Odukkam village. The action of the Municipality for acquisition of land while it had its own land enough to set up the compost yard resulted in avoidable delay in setting up of the facility. The grant of Rs eight lakh received (January 2003) from CMA for purchase of land was not surrendered (November 2005).

2.2.10 Abandoning of composting yard - infructuous expenditure

Erode Municipality proposed (April 2004) to set up a compost yard at Lakkapuram at a cost of Rs 92.50 lakh and identified a 10 acres site within the 51.75 acres of land given by it to the Tamil Nadu Water Supply and Drainage (TWAD) Board in February 2002 for setting up a sewage treatment plant. The

Municipality constructed (August 2004) concrete windrow⁶ platform at a cost of Rs 9.61 lakh on the above site without obtaining authorisation from TNPCB. As the sewage treatment plant set up by TWAD Board developed leaks in the cut off wall, the site selected for composting got flooded with waste water. Accordingly, the Municipality decided (September 2005) not to take up composting activity on that site. The expenditure of Rs 9.61 lakh from the general funds of the Municipality on construction of windrow platform became infructuous.

2.2.11 Shortfall in house-to-house collection of waste

The MSW Rules, 2000 stipulate that the municipal authority should organise house-to-house collection of solid waste to segregate MSW between biodegradables and non-biodegradables. Out of the 25 local bodies test checked, in 11 municipalities and three corporations house-to-house collection and segregation of waste as required was not done in 345 out of 623 wards. Even segregation of waste in the remaining 278 wards was inconsequential as the segregated waste was not made use of for compost preparation, rendering the whole exercise futile.

2.2.12 Shortfall in privatisation of garbage clearance

The Tenth Five Year Plan envisages privatisation of 20 per cent of the conservancy operations by 2004-05 in urban areas. Out of 25 urban local bodies test checked, ten municipalities and Corporation of Salem did not privatise the conservancy operations, Corporation of Madurai privatised 7.5 per cent of the operations and others had achieved the target.

2.2.13 Hiring of private vehicles for transportation of waste

Corporation of Madurai

The Corporation of Madurai had been hiring private tractors for transportation of garbage for a long time as far back as 1984. In order to reduce the usage of tractors as their capacity to carry garbage was low and to accelerate removal of garbage, the Corporation decided (August 1999) to engage lorries. Number of vehicles hired during 2002-04 and rates per trip as settled through tenders were as follows:

Year	Tractor		Lorry	
	No.	Amount per trip (Rupees)	No.	Amount per trip (Rupees)
2002-03	50	220	13	605
2003-04	40	220	13	605

Due to engagement of lorries instead of tractors, the Corporation of Madurai had to spend Rs 39.53 lakh in excess.

⁶ Windrow: Stocking of solid waste in rows to a height of about one metre and breadth of two metres on cement concrete platform for watering and turning for compost preparation.

The average carrying capacity of a tractor and lorry through three trips was 4.05 MT and 6.75 MT per day respectively. The rate for transportation of waste worked out to Rs 163 and Rs 269 per MT for tractor and lorry respectively. The Corporation did not maintain a compilation indicating the quantity of garbage cleared and the amount paid contractor-wise. Had tractors been engaged instead of the lorries, the Corporation could have saved Rs 9,301 per day during the 17 months i.e. Rs 39.53 lakh during the period November 2002 - April 2004. Incidentally, on the basis of fresh tenders floated for 2004-05, the rates per MT were Rs 207 for tractor and Rs 132 for lorry which indicates that rate paid during 2002-04 for lorries was unreasonably high.

Erode Municipality

Due to non-utilisation of own vehicles to the optimum, Rs 88.80 lakh was incurred on hiring charges of private vehicles.

The average quantity of waste generated in the Municipality ranged from 85 MT to 104 MT per day during 2000-05. The total carrying capacity of the eight vehicles owned by the Municipality was 87 MT per day for transportation of the waste. The Municipality spent Rs 1.60 crore for hiring of private vehicles for transportation of waste at rates ranging from Rs 149.75 per MT to Rs 189.75 per MT during 2000-05. Had the Municipality utilised its vehicles and manpower to the optimum it would have been able to clear 26,100 MT⁷ per annum and clearance through private vehicles would have been significantly lower as indicated below:

Year	Annual quantity of waste generated (MT)	Waste to be cleared by private vehicles (MT)	Hire charges payable for private vehicles	
			Rate per MT (Rupees)	Amount (Rupees in lakh)
2000-01	31,051	4,951	149.75	7.41
2001-02	35,116	9,016	149.75	13.50
2002-03	35,355	9,255	167.95	15.54
2003-04	38,006	11,906	186.75	22.23
2004-05	32,698	6,598	189.75	12.52
Total	1,72,226	41,726		71.20

Thus, expenditure to the extent of Rs 88.80 lakh towards hire charges of private vehicles in excess of requirement was avoidable.

2.2.14 Excess quantity of garbage cleared by private agency in Corporation of Chennai

Quantity of garbage cleared by a private agency was inexplicably higher by 21 to 66 per cent resulting in excess expenditure of Rs 37.07 crore.

Corporation of Chennai privatised (March 2000) garbage collection in its Zone VI, VIII and X. A comparison of waste generated in these zones and cleared by the private agency with that in other zones revealed that the waste generated in the privatised zones was more by 21 to 66 per cent during the years 2001 to 2004. Due to excess quantity of waste depicted to be cleared by the private agency there was excess expenditure of Rs 37.07 crore to the Corporation as tabulated below:

⁷ Calculated for 300 working days in a year at the rate of 87 MT per day.

Year	Waste cleared (MT)		Waste generated Per capita ⁸ per year (in kgs.)			Excess quantity cleared in privatised zones (MT) ⁹	Rate per MT (Rupees)	Excess expenditure (Rupees in crore)
	Privatised zones	Other zones	Other zones	Privatised zones	Excess (Percentage)			
2001	4,19,168	6,67,660	221	317	43	1,27,227	712	9.06
2002	4,39,385	6,02,726	193	321	66	1,75,837	760	13.36
2003	3,95,815	6,92,443	213	279	31	93,037	860	8.00
2004	4,00,632	7,61,097	226	273	21	67,834	980	6.65
Total	16,55,000	27,23,926				4,63,935		37.07

The Corporation justified (September 2005) the excess generation of waste quoting migration of people from rural areas, floating population, change in style of living, etc., as reasons. However, the above reasons did not hold good as the excess generation in the privatised zones, which was 66 *per cent* during 2002 has come down to 31 *per cent* in 2003 and 21 *per cent* in 2004. Further, the waste generation is pronounced only in the zones privatised.

2.2.15 Bio-medical waste management

All the 313 Government hospitals and 1,852 private health care units did not obtain authorisation for disposal of bio-medical waste.

The Government of India notified the Bio-Medical Waste (Management & Handling) Rules, 1998 (amended in 2000) under the Environment (Protection) Act, 1986 which was enforced in Tamil Nadu by TNPCB. According to the Annual report of the TNPCB, health care units in Tamil Nadu were generating (May 2005) 57,461.50 kgs of Bio-medical waste (BMW) per day out of which only 2,382 kgs (4.15 *per cent*) alone get treated and disposed of as envisaged in the Rules. A review was undertaken in October 2005 at seven¹⁰ Government Medical College Hospitals to assess the extent of implementation and compliance to the above Rules.

Test check revealed the following:

- None of the seven hospitals had submitted the prescribed application for obtaining authorisation for disposal of waste from the TNPCB.

⁸ Waste generated per capita was arrived at with reference to population as per 2001 census compounded at 3.6 *per cent* per annum.

Population as per 2001 census:	Privatised zones	13,21,476
	Other zones	30,22,169

⁹ Calculations based on waste generated in other zones divided by Population in other zones multiplied by population in private zones and resultant figure to be deducted from the waste cleared in private zones. Example: 6,67,660/30,22,169 X 13,21,476 = 2,91,941 MT (4,19,168 MT – 2,91,941 MT = 1,27,227 MT).

¹⁰ (1) Government General Hospital, Chennai; (2) Kilpauk Medical College Hospital, Chennai; (3) Thanjavur Medical College Hospital, Thanjavur; (4) Rajah Mirasudar Hospital, Thanjavur; (5) Annal Gandhi Memorial Hospital, Tiruchirappalli; (6) Mohan Kumaramangalam Medical College Hospital, Salem and (7) Rajaji Medical College Hospital, Madurai.

- Further, these hospitals had not taken any action either to set up their own treatment facility nor had any proposal to utilise the nearest common treatment facility as suggested by the TNPCB.
- All the seven hospitals except Madurai dispose of the anatomical waste by deep burial either inside the hospital complex or at the municipal dumping grounds. In Madurai, only the placenta is collected and incinerated in a private incinerator set up in the Corporation burial ground and there is no indication regarding the disposal of other type of anatomical waste. As far as Government Hospitals in Chennai are concerned, deep burial at Kodungaiyur dumping grounds for disposal of BMW, which was permitted (July 2004) by TNPCB only as a temporary measure for three months was being continued (October 2005). The other type of BMW were treated as municipal waste. According to BMW Rules, 1998 deep burial of anatomical waste is recommended for towns having population less than five lakh and for rural areas only. All the seven hospitals are situated in district head quarters having population more than five lakh and hence they cannot adopt burial as method of disposal.
- In three of the seven hospitals, dedicated autoclaves for treating needles and syringes were not available. Only one hospital has needle shredder to dispose the used needles.
- No records on the receipt and disposal of the BMW are maintained by six hospitals as required under the Rules.

Though the BMW Rules are in force from July 1998, the implementation of the same had not made any significant progress both in the Government sector as well as in private sector as 1,852 out of 2,255 private health care units and all the 313 Government hospitals have not obtained authorisation from TNPCB. The fact that only 2,382 kgs out of 57,461.50 kgs of BMW generated per day in the State is treated and disposed is indicative of the fact that despite the availability of seven common treatment facilities functioning in the State, the provisions of the BMW Rules, 1998 were not adhered to in disposal of BMW.

2.2.16 Private scavenging fee not collected

Corporation of Chennai

As empowered in the Chennai Municipal Corporation Act, 1919, Corporation of Chennai levied private scavenging fee on marriage halls at various rates fixed with reference to their capacity. A test check of records by Audit in Zone V of the Corporation revealed that this fee was not being collected. Similar scavenging fee was being collected from hotels and lodges by the Health department of the Corporation. However, the Health department did not maintain any records for demand and collection of the fee from marriage halls nor maintained a list of marriage halls. Number of marriage halls within the Corporation as ascertained from Revenue department of the Corporation

Private scavenging fee of Rs 55.32 lakh from marriage halls and Rs 1.51 crore from the shops and trade establishments not collected.

with reference to Property tax assessments was 461. The private scavenging fee not collected during 2002-05 worked out to Rs 55.32 lakh adopting the minimum rate of fee of Rs 4,000 *per annum* per marriage hall. As the marriage halls were assessed to Property tax, the Corporation could have collected the fee along with the Property tax.

The private scavenging fee was also leviable on shops and trade establishments at 25 *per cent* of the licence fee or at Rs 500 whichever was higher. However, there was shortfall in collection of the above fee to the extent of Rs 1.51 crore for period 1999-2002 as tabulated below:

(Rupees in lakh)

Year	Licence fee collected	Private Scavenging fee		Shortfall
		Due	Collected	
1999-2000	316.68	79.17	23.87	55.30
2000-2001	302.67	75.67	26.77	48.90
2001-2002	328.81	82.20	34.94	47.26
Total	948.16	237.04	85.58	151.46

During 2002-05, the collection exceeded 25 *per cent* of the licence fee. However, the Corporation had not taken action to recover the arrears of the previous years.

Corporation of Madurai

The Corporation of Madurai introduced (June 1999) levy of conservancy charges (periodical charges) on bulk garbage generators like marriage halls, hotels, lodges, etc. The Corporation did not maintain any demand, collection and balance records for this item of revenue. With reference to details of bulk garbage generators, the periodical charges leviable at the minimum rates was Rs 41.73 lakh for 2002-05, whereas the actual amount collected was Rs 23.15 lakh only. The reasons for shortfall of Rs 18.58 lakh were not analysed by the Corporation.

There was shortfall of Rs 18.58 lakh in collection of periodical conservancy charges by Corporation of Madurai from marriage halls, hotels, lodges, etc., during 2002-05.

2.2.17 Purchase of an ineligible item

Tiruchengode Municipality utilised the grant of Rs seven lakh released (April 2004) under SSFC recommendations for SWM purposes for purchase of sullage tanker. As the sullage tanker could be used only for clearance of septic tanks, the utilisation of grant was not for SWM purposes.

2.2.18 Information, Education and Communication activities

MSW Rules, 2000 stipulated that municipal authority should organise awareness programmes for segregation of wastes, to promote recycling or reuse of segregated materials and undertake phased programme to ensure community participation in waste segregation. For this purpose regular meetings at quarterly intervals were required to be arranged by the municipal

authorities with the representatives of local resident welfare associations and NGOs. However, out of 25 test checked local bodies, only 17 carried out Information, Education and Communication (IEC) activities. No activity was undertaken by five municipalities and one corporation (Salem) and information was not furnished by one municipality and one corporation (Madurai) regarding IEC activities undertaken by them.

2.2.19 Conclusions

Though the MSW Rules, 2000 required that waste disposal facilities should be set up by the municipalities by 31 December 2003 or earlier, only two municipalities have set up such facilities. Five municipalities did not possess any land and 59 municipalities had inadequate land for disposal of solid waste. There was avoidable expenditure on hiring private vehicles for transportation of waste. Further, privatisation of conservancy operations was not achieved to the extent envisaged in the Tenth Five Year Plan. Most of the units generating BMW did not obtain authorisation from the TNPCB for their disposal and only 4.15 *per cent* of BMW generated was being treated and disposed of as envisaged in the rules. Thus there was tardy progress in the implementation of MSW Rules, 2000 and BMW Rules, 1998 by the municipalities and corporations.

2.2.20 Recommendations

- Concerted action should be taken for acquisition of land and setting up waste disposal facilities with the authorisation of TNPCB.
- House-to-house collection of waste, modernisation of garbage collection and privatisation of conservancy operations to the extent envisaged should be given due priority.
- Action should be taken to ensure that all units generating BMW obtain authorisation from TNPCB for disposal of BMW in the manner envisaged in the Rules.
- Optimum utilisation of vehicles available with the local bodies should be ensured before hiring private vehicles for transportation of solid waste.
- Private scavenging fee and conservancy charges should be collected with out any let up through watching the progress of collection through appropriate records. Municipalities which did not levy and collect such fee should take action to levy and collect appropriate fee from bulk refuse generators.

The above points were referred to Government in December 2005; reply had not been received (January 2006).

MUNICIPAL ADMINISTRATION AND WATER SUPPLY DEPARTMENT

2.3 Income from remunerative assets of municipalities

Highlights

➤ **Eight municipalities could not realise projected rental income aggregating Rs 1.26 crore due to construction of shopping and office complexes without assessment of demand.**

(Paragraph 2.3.6)

➤ **Three municipalities suffered a shortfall in projected revenue to the extent of Rs 1.03 crore due to construction of shops, stalls, offices, etc., in remote locations.**

(Paragraph 2.3.7)

➤ **Delay in allotment of new shops, constructed on land adjoining old shops that were demolished, to the previous lessees despite such a promise, resulted in Tirupattur Municipality suffering rental loss of Rs 40.88 lakh.**

(Paragraph 2.3.9)

➤ **Coonoor Municipality suffered a revenue loss of Rs 29.48 lakh for the period from April 2001 to August 2005 due to non-collection of enhanced rent in respect of 452 shops run by legal heirs and nominees of original lessees.**

(Paragraph 2.3.10)

➤ **Failure of four municipalities to renew or obtain recognition of bus stand from Regional Transport Authority resulted in non-collection of bus stand fee of Rs 23.85 lakh during April 1997 to March 2005.**

(Paragraph 2.3.13)

2.3.1 Introduction

Projects undertaken by municipalities are classified as 'Service Projects' or 'Remunerative Projects'. Assets created under the latter called remunerative assets in this review include bus stands, cycle stands, shopping complexes, marriage halls, godowns, etc. Revenue from such assets constitute approximately 25 per cent of the total revenue of the municipalities in the State.

2.3.2 Organisational set up

There are 151 municipalities categorised¹ under various grades in the State. The municipalities come under the administrative control of Secretary, Municipal Administration and Water Supply Department at Government level. The Commissioner of Municipal Administration (CMA) is the head of the department and is assisted by seven Regional Directors of Municipal Administration (RDMA) at regional level.

The management of municipal assets is the responsibility of the Commissioners of municipalities concerned duly assisted by Municipal Engineers, Town Planning Officers, Revenue Officers, etc.

2.3.3 Audit objectives

The overall objective was to examine whether the remunerative assets created were put to their intended use and the projected income therefrom was derived.

2.3.4 Scope of Audit

During the review conducted from April 2005 to July 2005, records at Directorate of Municipal Administration and 23 municipalities (**Appendix XVIII**) were test checked. The review covered the period from 2000-01 to 2004-05, but earlier periods were also covered in respect of assets created earlier if found improperly managed. In addition, information from two Government Companies viz. Tamil Nadu Urban Finance and Infrastructure Development Corporation Limited (TUFIDCO) and Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL), which gives loans to municipalities for creation of assets was also obtained.

2.3.5 Funding

Municipalities create assets not only from Government grants and loans but also from their own resources and borrowings from financial institutions such as TUFIDCO and TNUIFSL. The loans are expected to be serviced out of the income earned from the remunerative assets. Delayed repayment of loan instalments attracts penal interest.

During 2000-05, the municipalities of the State obtained loans aggregating Rs 241.72 crore for creation of assets and earned a Non-tax revenue of Rs 452.91 crore derived from remunerative assets e.g. market fees, rent from shopping complexes, etc. Year wise details are given below:

¹ Special Grade: 13; Selection Grade: 28; I Grade: 36; II Grade: 25 and III Grade (came into existence from June 2004 due to upgradation of Town Panchayats) : 49.

Year	Loans obtained	Total revenue	Non-tax revenue [@]	Percentage of non-tax revenue to total revenue
2000-01	36.02	300.40	64.31	21
2001-02	21.74	364.68	95.52	26
2002-03	22.52	415.80	103.54	25
2003-04	73.14	358.94	90.99	25
2004-05*	88.30	384.16	98.55	26
Total	241.72	1823.98	452.91	25

* Figures of 2004-05 are provisional.

@ Excludes grants-in-aid from Government of India, State Government and others.

2.3.6 Creation of remunerative assets without assessment of demand

Pallavaram Municipality

Creation of remunerative assets without assessment of demand resulted in shortfall of projected revenue collection of Rs 1.26 crore in eight municipalities.

Pallavaram Municipality, Kanchipuram District constructed (October 2000) a shopping-cum-office complex in Keelkattalai at a cost of Rs 71.27 lakh, by availing loan of Rs 30.50 lakh at 15 *per cent* interest from TUFIDCO and Rs 30.50 lakh at 11 *per cent* interest from TNUIFSL under Mega City Programme. The complex comprised a ground and a first floor. Though all the shops on ground floor, except one, were leased out, the first floor, built for leasing office space and a restaurant remained unoccupied (August 2005) in spite of 22 auctions notified in newspapers and through public notice boards.

Due to failure of the Municipality to properly assess the demand for office space and restaurant before taking up the construction, the projected revenue of Rs 20.30 lakh for the period from November 2000 to August 2005 (at Rs 30,000 per month for office space and Rs 5,000 per month for the restaurant) was not realised. Further, the proportionate expenditure for construction of first floor, Rs 33.50 lakh, was also infructuous.

Again, the Municipality constructed (May 2002) another office complex at a cost of Rs 17.25 lakh (comprising ground and first floors) within its premises at Chrompet by utilising the loan of Rs 17.50 lakh taken in April 1997 from TNUIFSL at 15.50 *per cent* interest for construction of an office complex at Hastinapuram. Instead of following open tender system for leasing it out, the Municipality informed (between July 2002 and March 2003) various Government offices functioning in the locality about the availability of office space. The Commercial Tax Department offered (March 2003) to pay a monthly rent of Rs 22,990 for the premises and the Municipality referred (April 2003) the matter to CMA. The RDMA, Chengalpattu fixed (November 2003) the rent as Rs 37,500 per month based on the norms of Public Works Department. As CMA declined (January 2004) to reduce the rent, the Municipality conducted three auctions between July and September 2005.

However, as there was no response to the auctions, the facility remains unutilised (August 2005).

Thus, failure of the Municipality to ascertain the demand of office space before starting its construction led to it having to bear an interest liability of Rs 2.71 lakh per annum. This liability was less than Rs 2.76 lakh that could have been earned per annum by renting to Commercial Tax Department. Incidentally, the Municipality had already paid Rs 15.90 lakh (September 2004) towards interest and Rs 1.32 lakh was pending payment as of September 2005.

Sattur Municipality

Sattur Municipality, Virudhunagar District constructed (October 2000) a shopping-cum-office complex² at Kamarajapuram by availing a loan (December 1995) of Rs 30.21 lakh at 14 *per cent* interest from Municipal Urban Development Fund (MUDF). Though the time frame for completion of the work was only six months, the work which commenced in October 1995 was completed belatedly in October 2000. The anticipated revenue from the complex was Rs 4.78 lakh per annum. Despite 13 public auctions conducted from December 2000 onwards, only 10 shops were leased out (August 2005) at rents (Rs 300 to Rs 375 per month) far lower than the projected rent (Rs 900 per month). Though one office room was let out to Department of Telecommunications from August 2001 to September 2003, the rent for this period (Rs 72,190) was yet to be realised (August 2005). The two godowns and the other office space etc., could not be let out (August 2005). The shortfall in the anticipated revenue from the complex during January 2001 to August 2005 was Rs 20.81 lakh.

Due to failure to assess the demand for such a facility before taking up construction, the Municipality had accumulated a liability of Rs 30.83 lakh towards interest on the loan availed, whereas the revenue realised was Rs 0.76 lakh only (August 2005).

Other municipalities

In eight shopping complexes constructed by six municipalities with Rs 3.66 crore of borrowed funds (interest paid up to March 2005: Rs 2.88 crore) at least 25 *per cent* of the shops were vacant as of March 2005. In aggregate, 126 out of 311 shops were not occupied due to lack of demand for period ranging from eight to 83 months resulting in loss of revenue of Rs 85.13 lakh (**Appendix XIX**).

² Comprising 12 shops, two godowns and a cycle stand on the ground floor and six shops and two office rooms on the first floor.

2.3.7 Creation of assets in remote or inconvenient locations

Alandur Municipality

Remunerative assets created in remote or inconvenient locations resulted in non-realisation of projected revenue of Rs 1.03 crore by three municipalities.

Alandur Municipality, Kanchipuram District constructed 34 shops³ at a cost of Rs 10.03 lakh and leased them out in November 2000 and February 2001. As 27 lessees did not pay the lease amount regularly, the Municipality cancelled their lease agreement (July 2003). Thereafter, the Municipality could lease out only nine out of the above 27 shops through four auctions conducted between August 2003 and October 2003. Based on monthly rent at which these shops were initially leased out (Rs 700 to Rs 1,050), the revenue not earned from the 18 vacant shops is Rs 3.38 lakh during the period August 2003 to August 2005. The Commissioner of the Municipality attributed the absence of demand for these shops to their remote location.

Erode Municipality

Erode Municipality, Erode District constructed (January 2000) a complex comprising (a) 19 open stalls and two auction platforms on the ground floor and (b) seven shops and one godown on the first floor at a cost of Rs 20.48 lakh at Hemmingway Market, Netaji Road by availing a loan of Rs 18.43 lakh at 16.5 per cent interest from TNUIFSL. The Municipality could lease out only one out of the seven shops from June 2000 to March 2001. Despite frequent auctions none of the stalls, shops and auction platforms has been leased out (August 2005). The Commissioner of the Municipality attributed (June 2005) this to the remote location of the complex.

Thus, due to inappropriate site for the complex, the Municipality could not earn the projected revenue of Rs 25.92 lakh during the period from January 2000 to August 2005. Further, the Municipality has paid Rs 20.92 lakh as interest to TNUIFSL from the General Fund so far and liability towards loan pending repayment was Rs 13.49 lakh (March 2005).

Ranipet Municipality

Ranipet Municipality, Vellore District constructed (July 2001) a complex for 60 lorry booking offices, a restaurant, a service station, an air and grease filling unit, 30 truck terminal bays and a toilet on the outskirts of Ranipet town. The Municipality met the expenditure of Rs 75.11 lakh through a loan from TUFIDCO (Rs 67 lakh at 15 per cent interest) and balance from its General Fund. Though parts of the complex was leased out between July 2001 and January 2002 for a period of three years, all but 12 lessees surrendered the facilities between March 2004 and January 2005 without paying their dues aggregating Rs 5.87 lakh towards lease rent. The truck terminal was not made use of by the truck owners as it was located outside the town. Further action

³	Phase I completed in September 2000	:	18 shops
	Phase II completed in April 2001	:	<u>16 shops</u>
			34 shops

taken by the Municipality to lease out the facility were not fruitful. A proposal to dispose of the facility to repay the loan taken was approved by the Municipal Council (July 2005).

As the complex was located outside the town, the Municipality earned only Rs 12.14 lakh upto August 2005 as against the projected revenue of Rs 85.50 lakh resulting in shortfall in projected revenue to the extent of Rs 73.36 lakh. Besides, there was a liability of Rs 94.61 lakh towards loan (Rs 67 lakh) and interest (Rs 27.61 lakh) at the end of September 2005.

2.3.8 Asset without basic amenities

Due to non-provision of required amenities, a marriage hall was used only on two occasions in three years.

Kanchipuram Municipality, Kanchipuram District converted Arignar Anna Arangam⁴ into a marriage hall after carrying out improvement works at a cost of Rs 29 lakh from out of Member of Parliament Local Area Development Fund (Rs 12 lakh) and District Decentralised Plan funds (Rs 17 lakh) during 1998-2001. However, the revenue realised from the hall was Rs 1.04 lakh, Rs 1.33 lakh and Rs 0.69 lakh during 2002-03, 2003-04 and 2004-05 respectively. The hall was booked for marriages on two occasions only during the period from February 2003 to April 2005. The Commissioner of the Municipality attributed the poor response to the dais not facing East and non-availability of required vessels, dining tables, chimney facility in kitchen, etc.

2.3.9 Shops not leased out

Loss of lease rent of Rs 40.88 lakh due to non-allotment of newly constructed shops to old lessees as agreed to.

To expand its bus stand, Tirupattur Municipality, Vellore District demolished 39 shops after vacating the lessees of its 22 shops situated within the bus stand complex and 17 shops on the adjacent Vaithiyar Chennamurthy Street (V.C. Street). To facilitate this vacation, the Municipality passed a resolution (October 1994) that the lessees would be allotted lease of new shops to be constructed within the expanded bus stand and the V.C. Street. Apprehending that the Municipality may not adhere to its October 1994 resolution, the lessees of the bus stand shops approached (June 1995) the High Court for allotment of new shops to them and obtained orders (June 2002) in their favour.

The Municipality constructed five shops on V.C. Street (April 1997) and 28 shops within the bus stand (February 2001). Despite its resolution of October 1994 passed prior to construction, it resorted to auctioning (April 1997) the five shops constructed on V.C. Street. Aggrieved, the old lessees of V.C. Street approached (April 1997) the District Munsif Court, Tirupattur and obtained stay order in June 2000 and final order in March 2003 in their favour.

As of December 2003, ten of the old lessees of shops in V.C. Street and 17 of the old lessees of bus stand shops were eligible for allotment and willing to occupy the new shops. Ultimately, as instructed by Secretary to Government, Municipal Administration and Water Supply Department, during an inspection

⁴ A hall specifically designed for conducting Government functions and cultural programmes on rental basis.

in March 2005 the Municipality decided (April 2005) to allot the shops to these 27 old lessees. Thus, the failure of the Municipality to allot the shops to the old lessees as agreed prior to construction, resulted in estimated loss of revenue of Rs 40.88 lakh calculated at rent of Rs 85 per day per shop as approved by Municipal Council in June 2003 from May 1997 to April 2005 for the five shops on V.C. Street and 22 shops from March 2001 to April 2005.

2.3.10 Lease rent not enhanced for shops occupied by legal heirs

In terms of the Tamil Nadu District Municipalities Rules issued under Tamil Nadu District Municipalities Act, 1920 relating to receipts and expenditure of Municipal Councils, lease of any municipal building or land would be valid for three years and further lease would be through public auction. Government in Municipal Administration and Water Supply Department instructed (December 2000) that if any lessee wants to retain the property beyond the lease period of three years, they may be allowed to do so subject to enhancement of the lease amount at least by 15 *per cent*. However, such renewal was not to be allowed in respect of properties held by the legal heirs or nominees of the original lessees, in which case, the property should be brought to public auction for leasing.

Non-collection of enhanced rent of Rs 29.48 lakh.

In the daily market owned by the Coonoor Municipality, out of 829 shops, lease period of 452 run by legal heirs or nominees of the original lessees had expired (March 2001). The Municipal Council had resolved (March 2001) to renew the lease of the above 452 shops in favour of the legal heirs or nominees after enhancing the rent by 20 *per cent* and further enhanced upto 100 *per cent* subsequently. However, CMA advised (January 2002) to allot the shops as per the orders in force. In the meantime, the rent in respect of other 377 shops was enhanced by 25 *per cent* in April 2001 and further enhanced by 20 *per cent* in April 2004. Though the matter was taken up with CMA and Government repeatedly by the Municipality for allotting the shops in favour of the legal heirs or nominees of the original lessees, Government is yet to approve the proposal (August 2005). This has resulted in non-collection of enhanced rent of Rs 29.48 lakh calculated at the rates applicable to other lessees.

2.3.11 Lease amount not collected

Uzhavar Sandhai

Lease rent for land allotted to Uzhavar Sandhai was not received by six municipalities.

Government in Agriculture Department ordered (November 1999) opening of 100 Uzhavar Sandhais (Farmers' market) in municipal and town panchayat areas. They were to be maintained by the marketing committees and a nominal lease amount was to be paid to the local bodies concerned. CMA issued (July 2000) instructions to collect 14 *per cent* of the market value of the land allotted to the Uzhavar Sandhais as annual lease rent based on the orders issued (June 1998) by the Government in Revenue Department in respect of

Government lands occupied for commercial purposes. However, the marketing committees did not pay the lease rent. The Commissioner of Agricultural Marketing and Agricultural Business stated (February 2005) that orders of Government in Agriculture Department fixing the nominal lease rent payable by the Uzhavar Sandhais were awaited.

In six municipalities⁵ test checked, lease rent of Rs 5.09 crore (calculated at 14 *per cent* of the market value of the land allotted as annual lease rent for the period from the month of opening⁶ to March 2005) was pending collection.

Tiruvannamalai Municipality

Tiruvannamalai Municipality, Tiruvannamalai District constructed an office building comprising ground and first floors at an estimated cost of Rs 26.70 lakh under Tamil Nadu Urban Development Project (TNUDP). As there was no response in the auctions conducted for leasing out the premises in May and June 1996, the Municipality leased (25 September 1996) it to Judicial Department at a monthly rent of Rs 24,400 with the approval of CMA. The Judicial Department has not paid the rent due up to May 2005 aggregating Rs 25.42 lakh. The Municipality took up (November 2004) the matter with the Registrar, High Court, Chennai. Meanwhile, the Municipality has paid interest of Rs 10.78 lakh (February 2005) on the loan of Rs 20 lakh obtained at 13.5 *per cent* interest from MUDF for the construction of the building.

2.3.12 Non-collection of dues from allottees

Instalments of Rs 16.68 lakh were pending collection in 57 plots.

Arcot Municipality, Vellore District developed 369 plots (35 HIG plots; 71 MIG plots and 263 LIG plots) and allotted 14 HIG plots on outright purchase and the rest on instalment basis between August and November 1993. Twenty five *per cent* of the cost of the plots was to be paid as initial payment and the balance in four, eight and sixteen half yearly instalments by the allottees of HIG, MIG and LIG plots respectively. However, as of July 2005 an amount of Rs 16.68 lakh (Principal: Rs 8.81 lakh; Interest: Rs 7.87 lakh) is pending collection from 57 allottees (Two HIG, five MIG and 50 LIG) and some dues date back to April 1994. As per conditions of allotment, non-payment of instalments on or before the prescribed date would entail recovery of the dues as per Revenue Recovery Act, cancellation of the allotment, forfeiture of the amounts already paid and/or eviction under the provisions of Tamil Nadu District Municipalities Act, 1920. However, none of the above conditions were invoked by the Municipality so far.

⁵ Coonoor, Kumbakonam, Mannargudi, Palani, Paramakudi and Tiruppur.

⁶ This varied between February to October 2000 in the six municipalities.

2.3.13 Bus stand fee not collected

Due to failure to obtain or renew recognition from Regional Transport Authorities, bus stand fee of Rs 23.85 lakh was foregone by four municipalities.

A bus stand fee at prescribed rates can be collected by the local bodies, provided their bus stand is recognised by the Regional Transport Authority (RTA) under the Tamil Nadu Motor Vehicle Rules, 1989. Bus stands are classified into four categories viz. A, B, C and D depending on the parking capacity of the buses and amenities available in the bus stand. The recognition obtained from the RTA is valid for a period of three years at a time and subject to further renewal for not more than three years. The bus stand fee leviable on buses in A, B, C and D classes of bus stands was Rs four, three, two and 1.50 per bus per day respectively which was enhanced to Rs 15, 12, eight and five with effect from 11 March 2002.

Due to delay in obtaining or renewing recognition and not being able to obtain or renew recognition due to inadequate amenities, four municipalities could not collect bus stand fee aggregating Rs 23.85 lakh as tabulated below:

(Rupees in lakh)

Sl.No.	Name of municipality	Category	Bus stand fee not collected	
			Period	Amount
1.	Arcot (Vellore District)	B	April 1997 to March 2002	10.96
2.	Krishnagiri (Krishnagiri District)	C	April 1999 to March 2005	6.79
3.	Palani (Dindigul District)	B	18 June 2001 to 20 June 2002	2.10
4.	Tiruppur (Coimbatore District)	A	1 July 2001 to 23 April 2003	4.00
Total				23.85

2.3.14 Maintenance of Assets

The following assets were not in use due to lack of proper maintenance.

Sl.No.	Name of municipality	Nature of assets	Period of non-utilisation	Reason for non-utilisation
1.	Coonoor	Two travellers' bungalows	More than five years	Assets in dilapidated condition
2.	Panruti	Travellers' bungalow	More than ten years	
3.	Tiruppattur	Travellers' bungalow	Last 20 years	
4.	Ranipet	Two residential quarters	One from June 1995 and another from August 1995	
5.	Krishnagiri	One vegetarian restaurant in Old Pettai bus stand	From 2000-01	
6.	Kanchipuram	Nine staff quarters	Information not available	Repairs not carried out as the cost of repair is not commensurate with rent receivable

2.3.15 Register of Assets

It was noticed that the 1,033 remunerative assets⁷ created by six municipalities⁸ were not recorded in the Register of Assets. The Commissioners of municipalities concerned stated (May and June 2005) that the omitted assets would be recorded in the Register of Assets (**Appendix XX**).

2.3.16 Conclusions

Assets had been created without assessing their demand in the respective areas and also without provision of basic amenities leading to loss of revenue. Effective follow-up action was not taken by municipalities to collect rental arrears due from the leased out assets. Failure to take prompt action by certain municipalities to obtain or renew the recognition of bus stands from RTAs led to non-payment of bus stand fees by transport corporations and private fleet operators. Due to lapses in periodical maintenance, assets and travellers bungalows were not being used in certain municipalities.

2.3.17 Recommendations

- Selection of sites for creation of remunerative assets should be made after conducting a detailed demand survey.
- Prompt action should be taken to collect the lease amount and also to obtain renewal of recognition of bus stands from RTAs before the expiry of the current approval or renewal.
- All the remunerative assets created by municipalities should be recorded in a separate Register of Assets to have proper control over them.
- Periodical maintenance of assets had to be undertaken to prevent their dilapidation.
- Proper checks and balances to monitor creation, usage and maintenance of assets should be put in place to bring about better asset management.

The above points were referred to Government in December 2005; reply had not been received (January 2006).

⁷ Shops and bunks (kiosks): 954; Hotels: 3; Lodge: 3; Toilets: 2; Godowns: 32; Cloak room: one and Other buildings: 38.

⁸ Coonoor, Namakkal, Palani, Theni Allinagaram, Tiruppur and Tiruvannamalai.