

CHAPTER III

PERFORMANCE REVIEWS

3.1 Implementation of Housing Projects for Below Poverty Line Families

Highlights

With the advent of decentralized planning at grass root level from 1997-98, Local Self Government Institutions implemented various housing projects with the objective of providing houses to Below Poverty Line families. Projects were financed from Plan Funds provided by State Government and also through borrowings from financial institutions. Audit review revealed that neither the nodal agencies nor the implementing agencies had exact data on the actual progress of project implementation and utilization of funds deployed. The nodal agencies, apart from channelising the borrowed funds, did not play a lead role in the implementation and execution of the projects.

1. Despite making deposit of Rs 12.54 crore with COSTFORD by 90 LSGIs for construction of 12605 houses, COSTFORD could arrange financial assistance for construction of 3667 houses only of which 2058 houses could be completed.

(Paragraph 3.1.18)

2. In Thrissur the interest liability on borrowed finance was passed on to beneficiaries. Arrears of interest payment amounted to Rs. 4.10 crore.

(Paragraphs 3.1.8 & 3.1.19)

3. Four hundred and six LSGIs deposited Rs.13.62 crore with Kerala State Housing Board (KSHB) without identifying beneficiaries. Further, out of 1.24 lakh beneficiaries identified, 5045 beneficiaries for whom Rs 6.31 crore was deposited with KSHB were ineligible for the assistance. In addition, 2826 eligible beneficiaries for whom Rs 3.53 crore was deposited with KSHB did not claim the assistance. The total excess deposit for which the LSGIs did not take action to get the amount refunded from KSHB worked out to Rs 23.46 crore (Rs 13.62 crore + Rs 6.31 crore + Rs 3.53 crore).

(Paragraphs 3.1.21, 3.1.22, 3.1.23 & 3.1.24)

4. Out of 1.16 lakh beneficiaries only 0.98 lakh beneficiaries completed houses as of March 2004 and 0.18 lakh beneficiaries did not complete their houses despite being provided assistance of Rs.24.70 crore by KSHB.

(Paragraph 3.1.26)

Introduction

3.1.1 On decentralisation of powers by the enactment of the Kerala Panchayat Raj Act, 1994 and the Kerala Municipality Act, 1994, the State Government transferred funds, functions and functionaries to Local Self Government Institutions (LSGIs), to enable them to take up development plans based on local needs and aspirations. One of the major development projects undertaken by LSGIs was providing shelter to Below Poverty Line (BPL) families. According to the survey conducted by Rural Development Department, as of August 2003, the number of BPL families was 17.23 lakh against 18.39 lakh in 1996. Demand for housing in Kerala was assessed to 8.74 lakh in 1991. Even though the LSGIs claimed to have constructed 2.83 lakh houses during 1997-2001, housing demand was assessed as 8.26 lakh in 2001.

Scope of audit

3.1.2 A review of housing projects implemented from 1997 to 2004 by the LSGIs was conducted during April – June 2004 with reference to the records of Kerala State Housing Board (KSHB), three Municipal Corporations, six District Panchayats, three Block Panchayats and 26 Grama Panchayats (Appendix VI). The review covered Joint Housing Projects, viz, Thanal Housing Project, Janakeeya Parpida Padhathi, Janakeeya Bhavana Padhathi, Sampoorana Parpida padhathi implemented by Thiruvananthapuram, Kollam, Ernakulam and Thrissur District Panchayats respectively and other housing projects.

Audit objectives

3.1.3 The review was conducted to ascertain whether:

- (a) the target number of houses could be constructed and whether the shortage, if any, was due to any system lapse;
- (b) identification of beneficiaries was as per the prescribed parameters;
- (c) there was effective financial management in utilization of plan fund, availing institutional finance and loan servicing;
- (d) a suitable mechanism was in place to ensure efficient and economic implementation and monitoring of the projects.

Audit methodology

3.1.4 The data and statistical details were collected directly from selected LSGIs. Joint field visits of house sites were carried out to gather information directly from the beneficiaries. Project-wise information was gathered by circulating questionnaires to LSGIs. Records of KSHB, State Planning Board and Information Kerala Mission were also verified.

Audit findings

Joint Housing Projects

3.1.5 During 1999-2004, four District Panchayats at Thiruvananthapuram, Kollam, Ernakulam and Thrissur undertook separate housing projects jointly with the Municipal Corporations, Municipalities, Block Panchayats and Grama Panchayats in the respective districts as shown below.

Name of the project	District and Year of project	No. of participating LSGIs						Target		No. of houses actually taken up	
		GP ¹	BP ²	DP ³	Mun ⁴	MC ⁵	Total	Phase I	Phase II	Phase I	Phase II
Thanal Housing Project	Thiruvananthapuram 1999-2000	78	12	1	4	1	96	30000	30000	29872	0
Janakeeya Parpida Padhathi	Kollam 1999-2000	67	13	1	2	1	84	25000	45000	25000	0
Janakeeya Bhavana Padhathi	Ernakulam 2003-04	79	14	1	-	-	94	9600	40400	9600	0
Sampoorna Parpida Padhathi	Thrissur 1999-2000	71	15	1	5	-	92	12605	17395	12605	0
	Total	295	54	4	11	2	366	77205	132795	77077	0

3.1.6 The District Panchayats were the nodal agencies except in Thrissur where it was entrusted to COSTFORD*. Against the assistance of Rs 30000/Rs 35000, beneficiary contribution was Rs 7500/Rs 9000. To provide financial assistance to beneficiaries, the District Panchayats raised loans from financial institutions on Government guarantee as shown below.

District	Name of Scheme	Name of financing institution	Amount of loan raised (Rs. in crore)	Rate of interest (Per centage)	Period of repayment (Year)
Thiruvananthapuram	Thanal Housing Project	KSCB [@]	89.62	10.25	13
Kollam	Janakeeya Parpida Padhathi	HUDCO	87.50	10.00	11
Ernakulam	Janakeeya Bhavana Padhathi	HUDCO	33.60	10.00 ^{&}	9
Thrissur	Sampoorna Parpida padhathi	HUDCO	10.75	9.50 to 11.00	14

¹ Grama Panchayat, ²Block Panchayat, ³District Panchayat, ⁴ Municipality. ⁵Municipal Corporation

* Centre for Science and Technology for Rural Development

[@] Kerala State Co-operative Bank

[&] reduced to 8.5 per cent in February 2004

3.1.7 For repayment of the principal portion of loan, the District Panchayats, Thiruvananthapuram and Kollam made deposits with the financial institutions for specified periods and agreed to share interest on loan till the deposits matured to the principal amount. The initial deposit and interest on loan agreed for sharing were as follows.

(Amount in Rupees)

District	Repayment of loan (deposit share of LSGIs per beneficiary)				Annual interest payment to be shared by LSGIs			
	G P	B P	D P	Total	G P	B P	D P	Total
Thiruvananthapuram	5250	1125	1125	7500	2153	461	461	3075
Kollam	7000	1500	1500	10000	2000	750	750	3500

3.1.8 In Thrissur District each LSGI paid the full deposit of Rs 7500 in respect of houses sponsored by them and the beneficiaries themselves were to bear the interest liability. In the case of Ernakulam, the loan was not deposit linked.

Thanal Housing Project

3.1.9 The District Panchayat, Thiruvananthapuram availed a loan of Rs 89.62 crore from the Kerala State Co-operative Bank (KSCB) for the project. The District Panchayat designated the Project Officer, DRDA and Village Extension Officers respectively as the implementing officers of the project at the District and Village levels. Under the project, the LSGIs identified 29872 beneficiaries out of which 919 beneficiaries did not avail assistance. 24413 beneficiaries completed their houses and 4540 houses were at different stages of construction as of June 2004.

3.1.10 The interest payable on the loan of Rs 89.62 crore for the period 1999-2004 was Rs. 35.51 crore. The district panchayat paid Rs 36.14 crore to KSCB resulting in excess payment of Rs 0.63 crore towards interest. The District Panchayat did not take any action to adjust the excess amount against future interest payments.

3.1.11 Out of the loan of Rs 89.62 crore, Rs. 1.01 crore remained unutilised (July 2004) for 3 ½ years as 5459 beneficiaries did not avail the assistance in full or in part. The avoidable interest liability on this unutilised amount worked out to Rs 36.23 lakh.

3.1.12 The agreement (May 2000) with KSCB did not provide for payment of upfront fee to the bank. However, the bank adjusted upfront fee at the rate of one *per cent* of the loan (Rs 0.90 crore) from the loan amount. The Secretary, District Panchayat, Thiruvananthapuram stated (June 2004) that the matter was taken up with KSCB in July 2003. The amount has not been got refunded (December 2004).

Janakeeya Parpida Padhathi

3.1.13 The District Panchayat, Kollam had availed a loan of Rs 87.50 crore during 2000-01 for construction of 25000 houses. Agreement provided for

recovery of 0.25 *per cent* front end fee if documentation was completed within four months and 0.5 *per cent* otherwise. The documentation was completed within four months. Against Rs 21.88 lakh due on front end fee, HUDCO recovered Rs 93 lakh from the loan sanctioned. The District Panchayat did not take any step to get the excess amount refunded by HUDCO.

HUDCO adjusted initial deposit of Rs 15 crore for Phase II refundable to various LSGIs against interest on loan for Phase I

3.1.14 Under phase II of the project, the District Panchayat, Kollam collected Rs 14.83 crore from various LSGIs during 2000-2001 as initial deposit for providing assistance to 17053 beneficiaries. The District Panchayat issued cheques for Rs 15 crore to HUDCO in March and April 2001 for providing financial assistance to 15000 beneficiaries, but the cheques could not be cleared immediately due to treasury restrictions. Meanwhile the validity period (April 2002) of the loan sanctioned by HUDCO expired. On clearance of cheque after 15 months, HUDCO adjusted the amount of Rs 15 crore against interest on loan availed of for phase I. As the implementation of phase II did not materialize, the deposit amount was refundable to the respective LSGIs after getting refund from HUDCO. Thus, due to treasury restrictions and resultant delay in furnishing deposit amount to HUDCO within the validity period of the loan, financial assistance to 15000 beneficiaries could not be provided under Phase II of the project.

Janakeeya Bhavana Padhathi

3.1.15 Ernakulam District Panchayat implemented Janakeeya Bhavana Padhathi with the assistance of HUDCO during 1999-2000. Under the project financial assistance of Rs 35000 was provided to each beneficiary in four instalments. The loan amount with interest was repayable in nine years.

Injudicious deposit of Rs 11.52 crore resulted in blocking of plan funds

3.1.16 The District Panchayat, Ernakulam had collected Rs 11.65 crore as initial deposit at the rate of Rs 12500 in respect of 9320 beneficiaries to avail of the deposit-linked loan from HUDCO. Meanwhile, HUDCO stopped deposit-linked loan. Later, Government had given guarantee in November 2002, for the principal amount and interest. According to the loan agreement executed on 12 November 2002, no amount was to be deposited with HUDCO. After a lapse of more than four months from the date of execution of agreement, HUDCO demanded (26 March 2003) the District panchayat to deposit the amount of Rs 11.65 crore collected from various LSGIs in their public deposit scheme. The District Panchayat deposited Rs 11.52 crore for seven years with HUDCO at an interest rate of 7.75 *per cent* against 10 *per cent* on the amount borrowed (Rs.33.60 crore). Since the Government had given guarantee for the principal, interest and any other incidental expenditure in getting financial assistance for the beneficiaries, no deposit was required to be made with HUDCO by the LSGIs. This resulted in blocking of plan funds which could have been utilized for other development activities.

3.1.17 The beneficiary list prepared by five Grama Panchayats contained names of 149 beneficiaries who did not satisfy the eligibility conditions, which resulted in deprival of assistance to other eligible beneficiaries.

Sampoorna Parpida Padhathi

Poor achievement due to spreading the assistance disproportionately to large number of beneficiaries

3.1.18 The District Panchayat, Thrissur entrusted the implementation of the project to COSTFORD in September 1999. Ninety LSGIs paid (1999-2000) Rs 12.54 crore to COSTFORD to deposit with HUDCO to obtain loan for construction of 12605 houses. Even though COSTFORD did not deposit the requisite initial deposit, HUDCO sanctioned (April – October 2000) loan of Rs.10.75 crore to COSTFORD for providing assistance to 3667 beneficiaries and released Rupees eight crore adjusting the initial deposit of Rs 2.75 crore from the loan amount. Out of Rs 20.54 crore available, COSTFORD distributed Rs 20.48 crore to 86 LSGIs. Four LSGIs did not get any assistance though Rs 23.20 lakh was deposited. Out of 86 LSGIs, only two LSGIs (Pazhayannur Block Panchayat and Perinjanam Grama Panchayat) got full assistance as envisaged in the project. Despite getting loan for construction of 3667 houses against the targeted 12605 houses, the LSGIs distributed assistance to 9682 beneficiaries in the first instalment at the rate of Rs.12000 to each beneficiary. Second instalment of Rs 15000 was restricted to 5751 beneficiaries and the third instalment of Rs 3000 was paid to 2058 beneficiaries. Thus, physical achievement was only 2058 houses against 12605 planned under the scheme. Had the assistance been restricted to 3667 beneficiaries, 1609 more houses could have been completed.

3.1.19 The interest payable to HUDCO was Rs 4.40 crore as on 31 March 2004 against which payment of Rs.0.30 crore was made. The arrears in payment of interest amounted to Rs 4.10 crore, which was attributable to non-remittance of interest by the respective LSGIs. The LSGIs could not collect the interest from the beneficiaries to whom assistance could not be disbursed in full.

Participation of LSGIs in Mythri Housing Scheme

3.1.20 Audit had mentioned in Paragraph 7.12 of the Report of the Comptroller and Auditor General of India for the year ended 31 March 2001(Civil) about the participation of LSGIs in Mythri Housing Scheme implemented by the KSHB and irregular utilization of funds deposited by LSGIs. Further scrutiny of the records of LSGIs revealed that LSGIs failed to select the eligible beneficiaries and monitor the implementation of the scheme. The details are given below.

3.1.21 Four hundred and six LSGIs deposited Rs 13.62 crore with KSHB without identifying 10894 beneficiaries. Of these, five LSGIs failed to identify even a single beneficiary although they deposited Rs 19.15 lakh.

3.1.22 Further, out of 1.24 lakh beneficiaries identified, 5045 beneficiaries selected by LSGIs were not eligible to receive the assistance. Wrong selection of beneficiaries by LSGIs resulted in avoidable deposit and blockage of Plan fund of Rs 6.31 crore.

3.1.23 Two thousand eight hundred and twenty six beneficiaries on whose behalf LSGIs deposited an amount of Rs 3.53 crore did not turn up to receive the assistance sanctioned by KSHB.

3.1.24 The LSGIs did not initiate action (July 2004) to get Rs 23.46[^] crore refunded from KSHB as 18765^{^^} beneficiaries did not receive any assistance.

3.1.25 Apart from making deposits, failure on the part of LSGIs to actively involve themselves in the construction of houses /monitoring the projects, resulted in the following irregularities:

17524 beneficiaries to whom assistance of Rs 24.70 crore was disbursed did not complete construction

3.1.26 Of the 116203 beneficiaries who received assistance from KSHB, only 98679 beneficiaries could complete construction of houses. 17524 beneficiaries did not complete the construction even after a lapse of seven years although they received assistance totalling Rs 24.70 crore.

3.1.27 KSHB disbursed assistance in instalments based on stage certificates* issued by MP/MLA/Authorised Officer of KSHB/ President/ Secretary and members of Grama/Block/District Panchayats, Councillors of Municipalities and Corporations/ KSHB members/ Presidents of Co-operative banks and Agricultural Rural Development bank. Due to multiplicity of persons authorised to issue stage completion certificates, it was not difficult to obtain the certificate without proper verification of stage of construction and get the assistance released. In Pathanamthitta District, 3 members of the same family availed of the assistance without constructing any house. In Palakkad District, one beneficiary availed assistance while having habitable house with air conditioned room.

3.1.28 KSHB had detected 576 cases of malpractices, misappropriation, fraud etc. to the tune of Rs 1.61 crore in 11 districts. The cases were referred to Government for vigilance enquiry in November 2003, the results of which were awaited (July 2004).

Other Housing Projects

3.1.29 The Municipal Corporation, District Panchayat, three Block Panchayats and four Grama Panchayats in Kozhikode District incurred an expenditure of Rs 14.99 crore for construction of houses during 1997-2004. Of the targeted 5785 houses, 1998 were completed and 3787 houses on which Rs 9.18 crore was spent remained incomplete. The LSGIs did not take any step to encourage the beneficiaries to complete the houses.

3.1.30 Kozhikode Municipal Corporation implemented 14 projects for providing houses to 722 SC beneficiaries during 1997-2004. The implementing officer did not release any amount to 349 (48 *per cent*) beneficiaries out of 722 selected by the Corporation as they were not eligible for assistance. Some of the beneficiaries did not belong to SC category. Of the remaining 373 houses, it could construct 180 houses (25 *per cent*) and 193 houses were at different stages of construction as of June 2004. This resulted not only in lapse of funds but also deprivation of assistance to other eligible SC

[^] Total excess deposit with KSHB (Rs 13.62 crore + Rs 6.31 crore + Rs 3.53 crore = Rs 23.46 crore)

^{^^} Beneficiaries who did not receive any assistance (10894 + 5045 + 2826 = 18765)

* Certificates of completion at different stages of construction

beneficiaries. The Corporation could offer no justification for including ineligible beneficiaries in the list.

Other points of interest

3.1.31 In the housing projects mentioned above, one of the general conditions for giving assistance to a beneficiary was that he should possess at least two cents of land (1 ½ cent in municipal area) and that he should not alienate the building constructed, within 10 years. It was noticed that in three LSGIs six beneficiaries alienated the houses in violation of the conditions for grant of assistance. In Kochi Corporation, one beneficiary who constructed the house during March 2003, disposed of his house and the new owner demolished it and started construction of a new building there. Had a suitable provision regarding hypothecation of property been there, such violation could have been avoided.

3.1.32 In Thiruvananthapuram, Kollam, Ernakulam and Thrissur Districts, where joint projects involving 366 LSGIs were implemented, the system of monitoring was far from satisfactory. The nodal agencies did not maintain proper records to monitor the progress of completion of the houses and did not insist upon regular feed back from the Grama Panchayats/Block Panchayats. The information available with the LSGIs was scanty or not reliable.

3.1.33 In the case of houses constructed under MHS also the monitoring was poor. Though LSGIs were primarily responsible for monitoring their housing projects implemented through KSHB, no LSGI had maintained proper records to show beneficiary-wise progress of construction of houses.

3.1.34 Ineligible persons were included in the beneficiary list indicating defective system of identification.

3.1.35 Financial management of LSGIs in mobilising funds and its utilization was not efficient, resulting in excess/avoidable expenditure.

3.1.36 There is no mechanism to prevent alienation of houses constructed under the housing schemes and obtaining assistance from another LSGI on subsequent occasion.

3.1.37 Recommendations

- ❖ **Government may consider issuing guidelines regarding unit cost, cost sharing and parameters for availing assistance from financial institutions so as to ensure a uniform pattern throughout the State and in the interest of availing cost effective financial assistance.**
- ❖ **Financial management of District Panchayats may be strengthened to enable them to play a lead role in project execution.**
- ❖ **In the case of schemes implemented throughout the State, it is advisable to have a centralized monitoring agency.**
- ❖ **Adequate controls may be installed in the system of beneficiary identification to eliminate ineligible persons.**
- ❖ **Adequate controls may be evolved to ensure prevention of alienation of houses by beneficiaries and to restrain them from availing further assistance.**

LSGIs did not maintain proper records to show progress of construction of house

Response of Government

3.1.38 The points were discussed with the secretary to Government, Local Self Government Department on 18 October 2004. The Secretary agreed with the recommendations of Audit.

3.1.39 The Government agreed (December 2004) to consider the recommendation of audit (i) by constituting a committee to evolve a common strategy for cost sharing and assistance from financial institutions (ii) constitution of a committee for monitoring the implementation of housing at District level and (iii) consider modalities for prevention of alienation of houses by beneficiaries. The Government also stated that the post of the Finance Officer in each District Panchayat for finance management had been created and operated.

3.2 Solid Waste Management by Municipal Corporations

Highlights

Under the Kerala Municipality Act 1994, the Urban Local Bodies are responsible for collection, segregation, storage, transportation, processing and disposal of solid waste generated in their areas giving care for environmental aspects. Ministry of Environment and Forests has also brought into effect the MSW (M & H) Rules 2000 for the management of Solid Waste by Municipal corporations.

1. *None of the Municipal Corporations had evolved adequate system for collection/segregation/removal of waste. In Thiruvananthapuram and Kozhikode Municipal Corporations, adequate number of storage bins were not provided.*
[Paragraph 3.2.6 & 3.2.7]
2. *In Kollam, Kochi and Kozhikode Municipal Corporations, the number of sweepers employed was far below the required norms.*
[Paragraph 3.2.8]
3. *In Thiruvananthapuram, Thrissur and Kozhikode Municipal Corporations, pre- processing and post-processing rejects were allowed to decay in the premises of processing plants due to lack of proper infrastructure facilities for safe containment and disposal of waste.*
[Paragraph 3.2.11]
4. *Thiruvananthapuram Municipal Corporation passed on the Central assistance of Rs 40 lakh to POABS, a private company, though the agreement was on BOOM basis.*
[Paragraph 3.2.14]
5. *Advance of Rs 1.55 crore to KAICO towards running charges of processing plant remained to be settled.*
[Paragraph 3.2.15]
6. *Kozhikode Municipal Corporation had not demanded lease rent of Rs 40 lakh.*
[Paragraph 3.2.17]
7. *As of April 2004, Kozhikode Municipal Corporation claimed only Rs 2.46 lakh as royalty against Rs 43.80 lakh.*
[Paragraph 3.2.18.]
8. *In Thrissur Municipal Corporation, 790 tonnes of manure costing Rs 11.85 lakh had not been accounted.*
[Paragraph 3.2.20]

Introduction

3.2.1 With rapid urbanisation, the problem of disposal of solid waste has become a matter of prime concern to the Urban Local Bodies (ULBs). Ministry

of Environment and Forests has brought into effect the MSW (M&H) Rules, 2000¹ for the management of solid waste by Municipal Corporations.

Audit objective

3.2.2 The review was conducted during April-June 2004 to evaluate the effectiveness of Solid Waste Management measures taken by the five Municipal Corporations² (MCs) of the State.

Audit methodology

3.2.3 The data and statistical details were collected directly from the five Municipal Corporations. Records of Pollution Control Board (PCB) were also verified.

Audit findings

Financial outlay

3.2.4 The details of budget provision and expenditure incurred by the five MCs during the period covered by the review were as follows.

Name of Corporation	1999-2000		2000-2001		2001-2002		2002-2003		2003-2004	
	Budget provision	Expenditure	Budget provision	Expenditure	Budget provision	Expenditure	Budget provision	Expenditure	Budget provision	Expenditure
	(Rupees in crore)									
Thiruvananthapuram	5.91	4.85	6.29	6.11	7.04	6.30	10.64	6.24	13.63	7.35
Kollam	1.37	1.36	1.57	1.44	1.82	1.63	2.20	2.19	2.51	1.77
Kochi	7.00	6.77	8.17	7.97	13.45	4.05	13.16	7.63	7.72	7.54
Thrissur	2.79	1.86	2.34	1.77	2.89	2.69	3.00	2.06	2.92	2.85
Kozhikode	6.04	4.74	5.72	5.35	5.56	4.68	8.34	6.85	6.32	4.48

Under utilisation of budget provision was mainly due to non finalisation of project for modern treatment plant at Kochi and delay in land acquisition at Thiruvananthapuram.

Collection and segregation of solid waste

3.2.5 MSW (M&H) Rules, 2000 stipulate that MCs, after assessing quantities of waste generated and the population density in a given area, have to create storage facility easily accessible to the users of that area. Quantity of waste generated as assessed by the five MCs and the density of population are given below.

¹ Municipal Solid Waste (Management and Handling) Rules 2000

² Kozhikode, Thrissur, Kochi, Kollam and Thiruvananthapuram

Name of Municipal Corporation	Area (Sq. KM)	Population*	Density	Waste generated Tonne/Day
Thiruvananthapuram	141.74	744739	5254	300
Kollam	57.34	361441	6303	80-100
Kochi	94.88	596473	6287	350-420
Thrissur	101.42	317474	3130	25-35
Kozhikode	84.29	436527	5178	300

3.2.6 PCB recommended to have 200 dual loaders of 2.5 m³ capacity and 80 containers of 7 m³ capacity (in addition to litter bins) for collection of 350 tonnes of solid waste. Number of bins provided by the MCs during the period 1997-2004 for handling waste generated *viz-a-viz* the norms prescribed was as follows:

Name of Municipal Corporation	Quantity of waste generated (in tonnes per day)	No. of bins as per PCB norms	Number of bins provided			Shortage
			Dumper bins	RCC/Metallic bins	Total bins	
Thiruvananthapuram	300	240	4	20	24	216
Kollam	80-100	80	-	200	200	-
Kochi	350-420	336	58	564	622	-
Thrissur	25-35	28	-	400	400	-
Kozhikode	300	240	9	20	29	211

* Source: Census 2001

Disorganised collection of primary waste in Kozhikode Corporation



Absence of dumper bins for collection of primary waste



Waste strewn around by the road side enabling easy access to stray dogs, pigs, rodents, etc



Dumper bins in dilapidated condition

Inadequate number of storage facilities

3.2.7 The number of storage/litter bins provided in Kozhikode and Thiruvananthapuram Corporations was inadequate when compared to the large quantity of waste generated daily in those corporations. The inadequacy of bins had resulted in open throwing, overflowing of bins and thereby providing easy access to rag pickers, stray dogs, rodents, etc. None of the MCs had segregated at source the waste into biodegradable, recyclable, hazardous etc. and stored them in different coloured bins for proper disposal.

Road sweeping

Number of sweepers was far below the norms

3.2.8 According to a study conducted by PCB, one sweeper was required for every one km of road length. In Thiruvananthapuram, Kochi and Thrissur MCs, number of sweepers employed was far below the required norms as shown below.

Name of Corporation	Total length of road (in kms)	No. of road sweepers	Shortage against norms	No. of sweeper carts
Thiruvananthapuram	1809	1004	805	150
Kollam	334	271	63	150
Kochi	1665	199	1466	120
Thrissur	718	242	476	-
Kozhikode	800	732	68	174

Deficiency in sweepers had contributed to the shortfall in primary collection of waste generated in their jurisdictions

Transportation of waste

Inadequacy of vehicles was a major constraint

3.2.9 As per the study report of PCB, 39 vehicles (Dumper Placer: 8, Dual Loader: 8, Tractor: 23) were required for Kozhikode MC for removal of 350 tonnes of solid waste. The number of vehicles available for transportation of waste in Kozhikode MC was inadequate, which adversely affected the removal of garbage. But in Thiruvananthapuram MC, removal of garbage was only 50 per cent of waste generated even though sufficient number of vehicles were available as detailed below:

Name of Municipal corporation	Quantity of waste to be transported daily	Quantity of waste actually transported daily	No. of vehicles provided (including hired)			
			Tractors	Tippers/Dumper	Lorries	Total
in tonnes per day						
Thiruvananthapuram	300	150-170	5	43	-	48
Kollam	80-100	60-80	10	8	2	20
Kochi	350-420	350-420	6	9	25	40
Thrissur	25-35	20-30	4	-	17	21
Kozhikode	300	220	23	2	5	30

Processing and disposal of waste

3.2.10 Rules stipulate that when waste is stored in an open area, it shall be provided with an impermeable base with facility for collection of leachate and surface water run off into lined drains leading to leachate treatment and disposal facility. However, pre-processing and post-processing rejects were allowed to decay in the premises of the processing plants. During breakdown periods, storage was done in open area, without taking adequate precautions to minimise pollution of air, water etc.

3.2.11 Thiruvananthapuram, Thrissur and Kozhikode Municipal Corporations had adopted different technologies for processing biodegradable wastes by composting, anaerobic digestion or any other appropriate biological processing for stabilisation of wastes. There were inadequate infrastructure facilities for safe containment and disposal in those plant sites. The solid waste plants installed in these cities were not working regularly.

Solid waste processing plant

3.2.12 Thiruvananthapuram, Thrissur and Kozhikode MCs had installed processing plants at Vilappilsala, Laloor and Njeliamparamba respectively. A study of the projects implemented by these three MCs disclosed the following.

Irregular grant of assistance

3.2.13 Mention was made in paragraph 3.1.9 (iii) (a) of the Report of the Comptroller and Auditor General of India for the year ended March 2001(Civil) about the establishment of Waste Disposal Plant at Vilappilsala by M/s Poabs Enviro Tech (P) Ltd (POABS) under Build-Own-Operate-Maintain (BOOM) basis. Eventhough there were sufficient number of vehicles, the Thiruvananthapuram MC could deliver to the plant only 150-170 tonnes out of 300 tonnes of solid waste generated daily.

3.2.14 Government of India (GOI) launched a scheme of extending financial assistance under Centrally Sponsored Scheme ‘Balance and Integrated use of Fertilizers’. The scheme provided for assistance at 25 *per cent* of the estimated cost of plant of minimum 100 Tonnes Per Day capacity subject to a maximum of Rs 40 lakh. GOI released (May 2003) financial assistance of Rs 80 lakh to the State Government for setting up mechanical compost making plants in Thiruvananthapuram and Kozhikode. The State Government allotted the assistance to the two MCs at Rs 40 lakh each. Even though the plant installed at Vilappilsala was under BOOM scheme, the agreement with the company contained a clause ‘ POABS shall apply for utilities, fiscal incentives, financial assistance grant-in-aid etc to concerned authority, institutions shall render all help by way of providing necessary NOC, permission, sanctions, certification, endorsement and recommendation as may be required from time to time. Accordingly Thiruvananthapuram Corporation extended the fiscal incentive of Rs 40 lakh to the firm. It was irregular since the agreement was under BOOM

**Irregular assistance
of Rs 40 lakh to
POABS**

basis, which enable the investing company to recover full investment with suitable interest and profit. In Kozhikode Corporation no incentive was extended to the firm.

Advance of Rs 1.55
crore remained
unsettled

3.2.15 As per agreement for installation and running of the treatment plant, Thrissur MC had to pay Rs 4.17 lakh per month to Kerala Agro Industries Corporation (KAICO), the contractors, for the first three months as advance towards running charges to be adjusted on actual operating cost. In all, Rs 1.55 crore had been paid as advance between December 2001 to June 2003 and KAICO had not calculated the actual operating cost and settled the advance.

Failure to demand lease rent/royalty

3.2.16 The Kozhikode MC proposed (January 1997) a project for conversion of solid waste into bio-organic manure using the 'Celrich technology'. The MC entered (November 2000) into an agreement with M/s.Excel Industries, Mumbai for installation of plant having treatment capacity of 300 tonnes per day. The firm installed the plant and machinery at Njelianparamba. The MC had incurred an expenditure of Rs 4.77 crore on the project including the cost of Rs 1.22 crore on the plant and machinery till June 2002.

3.2.17 As per the agreement, M/s Excel or its franchisee could hold possession of the plant and machinery and manage the project for a period of five years and had to pay the MC, in advance, annual lease rent of Rs 20 lakh in two equal half yearly instalments. Further, they had to pay royalty of Rs 200 per tonne of the organic manure produced and despatched from the project site. The MC, in turn, had to make available all solid waste including waste from vegetable market, slaughter house, fish market etc., regularly at the project site, free of cost. The MC approved Wynsum Agritech Limited as the franchisee and they started operation of the plant from 1 December 2000. Neither the franchisee remitted nor the MC demanded the lease rent of Rs 40 lakh for the two years.

Shortage in claim of
royalty

3.2.18 The report of the Technical Committee placed (April 2003) before the MC, Kozikode showed that the plant had operated to a capacity of 100 to 150 tonnes per day. Taking the average quantity of waste treated per day as 100 tonnes, the manure produced during December 2000 to November 2002 would work out 21900 tonnes (minimum 30 per cent of 73000 tonnes of treated waste), for which the MC was eligible to get royalty of Rs 43.80 lakh. However, the Secretary of MC had recorded production of only 1228 tonnes of manure during the above period. The MC had claimed only Rs 2.46 lakh towards royalty.

Unjustifiable fixation of royalty

3.2.19 As per the agreement executed with Thrissur MC, KAICO had to undertake the sale of manure for a minimum value of Rs 1500 per tonne. But the price of the organic manure produced in Kozhikode under the brand name 'Celrich' by M/s Excel Industries was Rs 20,000 per tonne in the open market.

Thrissur MC could not produce any basic data justifying the comparatively low price for their manure.

Shortage of manure

Shortage of manure worth Rs 11.85 lakh

3.2.20 Though the Thrissur MC had transported 20-30 tonnes of waste daily from the primary collection point to the processing site the quantity of waste treated was only 6.8 TPD. During 2002-03, 136 tonnes of manure was reported as sold after processing 3088 tonnes of waste. Considering a minimum yield of 30 per cent manure there was shortage of 790 tonnes of manure worth Rs 11.85 lakh.

Landfill Projects

Land fill sites were used without adhering to rules

3.2.21 As per the specifications given in Schedule II of the MSW (M&H) Rules 2000, land filling was to be restricted to non-biodegradable, inert waste and other wastes which were not suitable either for recycling or for biological processing. Land filling of mixed waste was to be avoided unless the same was found unsuitable for processing. Kollam and Kochi MC resorted to 'Land filling' with the entire quantity of waste collected.

3.2.22 As per specification number 19 of Schedule III of MSW (M & H) Rules 2000, the minimum thickness of soil to cover the waste was 10 cms. But, the landfill works executed in Kochi MC during the period from March 1997 to March 2004 revealed that the minimum thickness of soil used for covering the waste was 15 cm for no reason on record. The extra expenditure incurred on the excess quantity of red earth used worked out to Rs 91.56 lakh.

3.2.23 In spite of audit pointing out (Paragraph 3.1.9 (iii)(b)) in the Report of the Comptroller and Auditor General of India for the year 2001(Civil) the directions of the PCB to shift the dumping yard of Kureepuzha in Kollam MC, it could not be shifted, causing pollution of ground water thereby increasing health hazards to the population.

Training

Investment of Rs 12 lakh for imparting training to officials did not fructify

3.2.24 Though the Kozhikode MC had paid (1998) Rs 12 lakhs to M/s Excel Industries for imparting training to the officials, training programme was not initiated till April 2004.

Internal control

3.2.25 Adequate internal control did not exist in the MCs for efficient management of solid waste. Separate establishment having sufficient number of Health Inspectors and cleaning staff exclusively for Solid Waste Management had not been formed. Secretaries of the Corporations had not issued separate orders specifying work responsibilities of Health Inspectors and cleaning staff in relation to Solid Waste Management.

Conclusions

3.2.26 The review revealed that sufficient number of bins were not provided for primary segregation and collection and resultantly solid waste generated was not completely removed. Even the waste removed was not fully treated. The quantity of bio-manure produced was not properly assessed. Internal controls were not commensurate with the scale of operations.

3.2.27 Recommendations

The Municipal Corporations should:

- ❖ **Evolve adequate system for primary collection and clearance of waste daily.**
- ❖ **Provide coloured bins to ensure segregation of the waste at source into bio-degradable, recyclable, hazardous etc.**
- ❖ **Create awareness for disposal of waste with the participation of Residents Associations.**
- ❖ **Replace open storages by covered storages.**
- ❖ **Establish modern solid waste treatment plants in all Municipal Corporations.**

Response of Government

3.2.28 The points were discussed with the Secretary to Government, Local Self Government Department on 18 October 2004. The Secretary agreed with the recommendations of Audit.

3.2.29 The above points were referred to Government in August 2004; reply is awaited. (December 2004).